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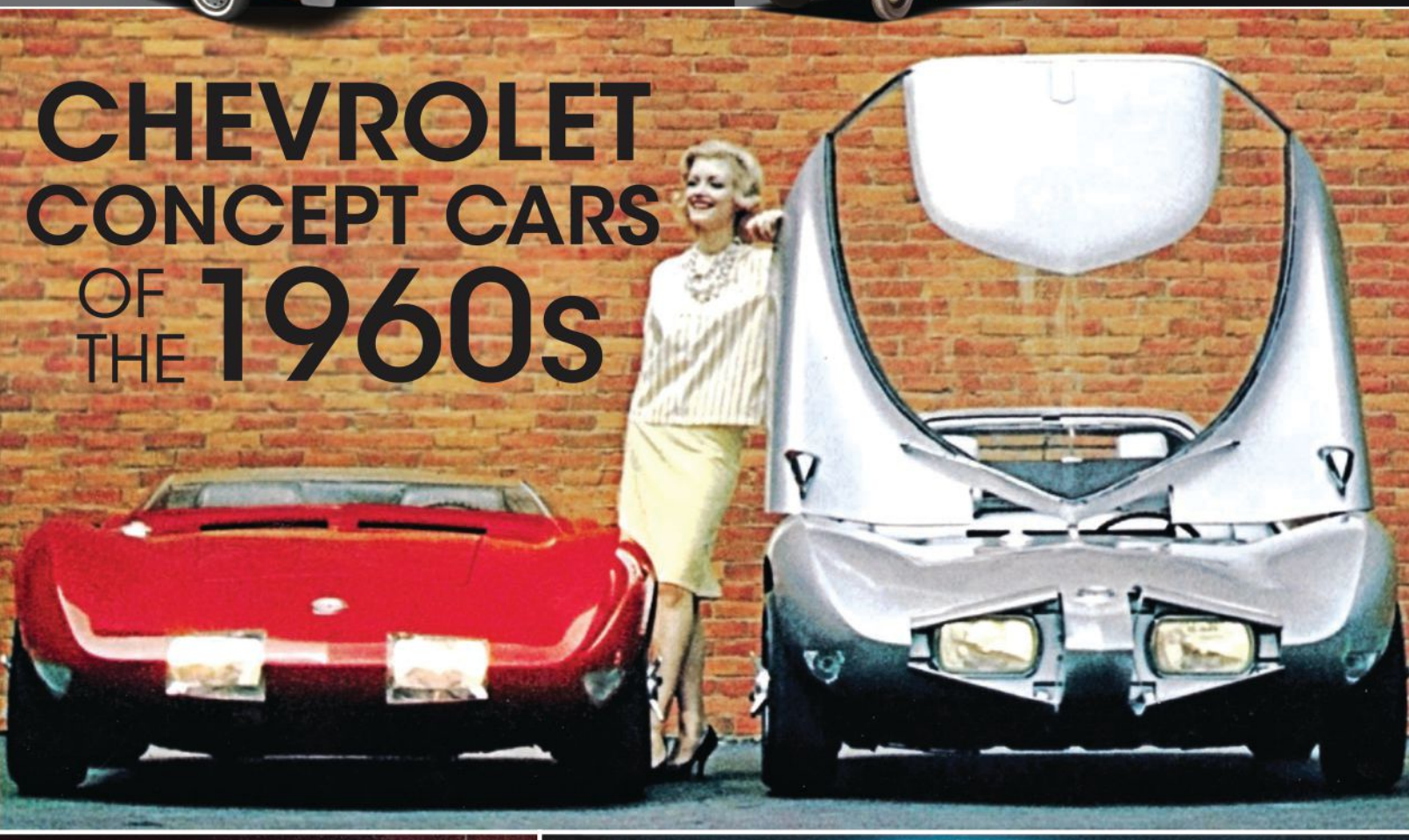

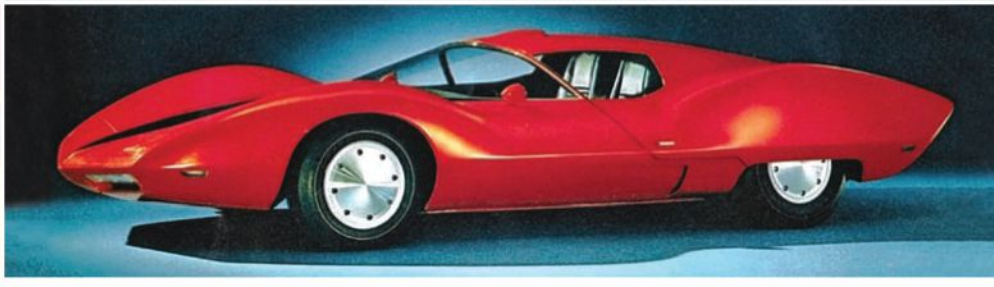

RESTORATION PROFILE
MAJOR OVERHAUL OF A 1964 STUDEBAKER HAWK GRAN TURISMO—PART I

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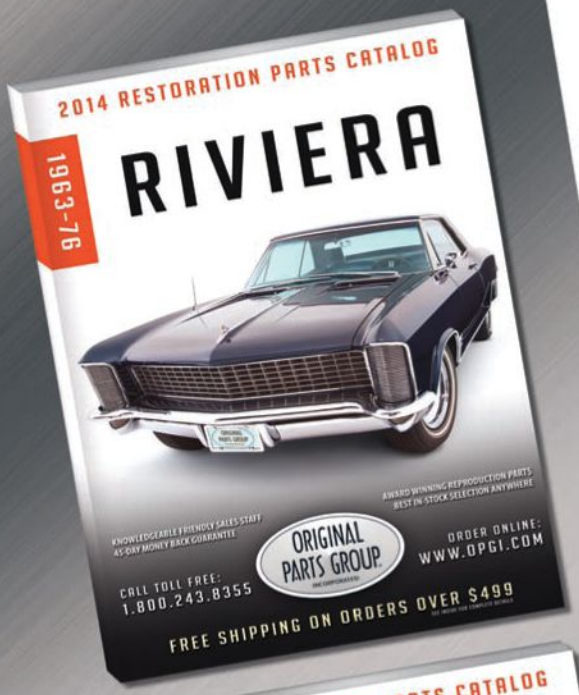

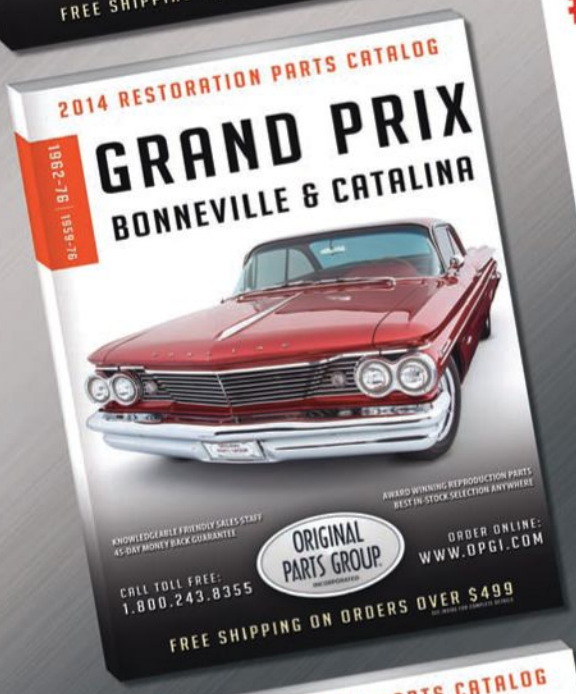

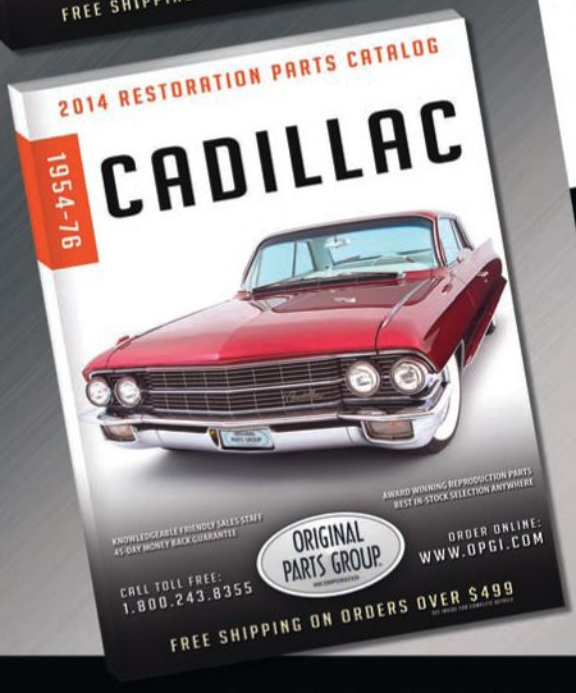

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JUST RELEASED:
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First Ever Curved American Coin

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richard lentinello

"Too often, we assume that everybody knows what all the collector car terminology means..."

Naming the Terms

I received quite a bit of mail regarding last month's column on the real meanings of the most frequently used and exploited words in the collector car hobby, as everyone, it seems, appreciated reading the truth. Too often, we assume that everybody knows what all the collector car terminology means, and fail to realize that many of our readers who are new to the hobby may be unfamiliar with them. So here's a brief explanation of terms, phrases, acronyms and other references that are commonly seen in classified ads.

AACA – These are the initials of the Antique Automobile Club of America, which is based in Hershey, Pennsylvania; the club has nearly 60,000 members.

Bloomington Gold Certified – Refers to the Bloomington Gold Corvette show in Illinois, and is awarded to Corvettes that have been restored to factory-correct production standards for their particular year and model. These are "correct" cars, not perfect cars.

Body-off Restoration – This involves taking the body of the car off its chassis/frame for a thorough restoration. This implies that the restoration is of a high quality, usually to concours standards. Other similar terms that mean the same thing are Ground-up Restoration and Frame-off Restoration.

Broadcast Sheet – For owners of Mopars, this piece of paper details all the equipment and options that the car was originally ordered with.

Brookville Body – A reproduction all-metal 1928-'32 Ford roadster body made by a company based in Brookville, Ohio. It also makes a 1932 three-window coupe body.

Build Sheet – A piece of paper printed by the manufacturer of a car listing all of the equipment and options that a particular car was built with.

CCCA – These are the initials of the Classic Car Club of America, which is based in Chicago, Illinois; the club has about 6,000 members.

Duntov Award – An award created by the NCRS in honor of former Corvette Chief Engineer Zora Arkus-Duntov. It's given to owners who have restored a 1953-'74 Corvette and who have gone on to score at least a 97 percent out of a possible 100 percent based on an original "as-manufactured" standard at an NCRS event.

Galen's Tag Service (aka **"GTS"**) – Like PHS and Marti, this is a documentation service specializing in cars made by a particular manufacturer, in this case Mopars. Located in Wisconsin, the company is owned by Galen Govier and decodes VIN fender tags and also reproduces rusty or missing fender tags for all 1962-'74 Dodge, Plymouth and Chrysler automobiles.

L-B Interior – High-quality replacement interior upholstery and carpeting made by LeBaron Bonney, a well-known Model A Ford interior supply company located in Amesbury, Massachusetts.

Marti Auto Works – This is a documentation service. Based in Arizona, the company, which was started by Kevin Marti, owns the entire database of 1967-'79 Ford, Mercury and Ford trucks produced during that period. Each "Marti Report" details all the pertinent production information for a specific vehicle.

Matching Numbers – This term denotes that the car's engine (and sometimes other major components') serial numbers match that of the chassis, which really signifies that the engine is original to that car. Be advised that in some cases an original engine may have a serial number that differs from the chassis.

NCRS – Formed in 1974, the National Corvette Restorers Society is based in Ohio. Run by a group of serious Corvette enthusiasts and experts, the club is dedicated to the restoration, preservation and history of 1953-'93 Corvettes.

NOM – Usually found in Corvette ads, this means non-original motor.

NOS – New old stock refers to parts that are just that, new, but old stock. In other words, they are brand-new original-equipment parts that have never been used, and are usually found still in their factory wrapping and/or original boxes.

PHS Documented – Located in Michigan, the Pontiac Historic Service provides the same type of documentation as the Marti Report, but it caters only to Pontiac-built automobiles. PHS also provides a duplication of the car's original factory build sheet.

Protect-o-Plate – Also called p-o-p, this is a small metal plate that was included in the warranty book, with the name of the car's first purchaser on it. The plate was imprinted at the assembly plant with information about the type of engine, transmission, rear axle and body color that the car was built with.

Roller – A vehicle without an engine and/or drivetrain.

Rotisserie Restoration – A rotisserie is a mechanical device that allows a car body to be rotated so the restorer can have total access to its underside. Like the term body-off restoration, this too implies that the restoration has been done to a very high standard.

Tank Sticker – The build sheet for a Corvette that lists all the car's options; in most cases it was glued atop the gas tank.

Top Flight Award – This is the NCRS's top award that is given to Corvettes that have been best restored to the factory-correct specifications.

Write to our executive editor at rlentinello@hemmings.com.

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BY TOM COMERRO

MARK J. McCOURT

Big Eights

THE MURPHY AUTO MUSEUM will proudly display *Big American 8-Cylinder Power* from October 5-December 28. These cars were all about large engine displacements. This upcoming exhibit will feature big cars from the 1940s, '50s and '60s, which spared nothing in size, interior space and excessive trim, fins and metals. Expect to see some sizable Chryslers, Packards, Lincolns and Cadillacs among this collection of behemoths. The Murphy Auto Museum is located in Oxnard, California, and features several different exhibits and car shows year round. Please visit www.murphyautomuseum.org for more information.

OCTOBER Calendar

1-4 • Texas T Party
San Angelo, Texas • 325-651-7132
www.mtfca.com

1-5 • Fall Carlisle
Carlisle, Pennsylvania • 717-243-7855
www.carsatcarlisle.com

5 • Sumter Swap Meet
Bushnell, Florida • 800-438-8559
www.floridaswapmeets.com

8-11 • AACA Fall Meet
Hershey, Pennsylvania • 717-534-1910
www.aaca.org

11 • MAFCA Model A Roundup
Orcutt, California • 805-598-8133
www.mafca.com

11-13 • HCCA Hershey Hangover
Myerstown, Pennsylvania
717-269-5508 • www.hcca.org

12 • All Chevrolet Car Show
Tustin, California • 949-786-7875
www.vcca.org

18 • Palm Springs Casual Concours
Cathedral City, California
www.greatautos.org

20-24 • AACA Founders Tour
New Jersey • 717-534-1910
www.aaca.org

23-25 • NCRS Lone Star Regional
Frisco, Texas • 214-693-3959
www.ncrstexas.org

26 • Antique Auto Show
Amherst, New Hampshire • 603-673-2093
www.cruisingamherstnhauto.com

Bob McDorman Auto Museum Opens

LONGTIME CORVETTE COLLECTOR Bob McDorman auctioned off his collection four years ago and, in early July, opened a new museum to the public in Canal Winchester, Ohio. The museum features an array of GM cars and trucks ranging from a 1936 Chevrolet coupe to a Corvette C6. The collection now contains 38 cars and the facility will fit as many as 50. McDorman has been collecting cars since 1965, while running a Corvette dealership for nearly 50 years. The new museum will be open from Wednesday through Saturday. For more information and photos, go to www.facebook.com/BobMcDormanMuseum.

IRONSTONE Concours d'Elegance

Ironstone Concours d'Elegance to celebrate Dodge

THE IRONSTONE WINERY near Murphys, California, is the setting for this September's Ironstone Concours d'Elegance. Over 300 antiques, classics, trucks, motorcycles and vintage race cars will be on display. This year's special marque will be Dodge, as the make celebrates its centennial. There will be over 25 categories in addition to Dodge cars and trucks, making for a diverse selection at this year's event. The gates open at 10 a.m. on September 27. For tickets and more information, go to www.ironstonefoundation.org.

We found our most important watch in a soldier's pocket

It's the summer of 1944 and a weathered U.S. sergeant is walking in Rome only days after the Allied Liberation. There is a joyous mood in the streets and this tough soldier wants to remember this day. He's only weeks away from returning home. He finds an interesting timepiece in a store just off the Via Veneto and he decides to splurge a little on this memento. He loved the way it felt in his hand, and the complex movement inside the case intrigued him. He really liked the hunter's back that opened to a secret compartment. He thought that he could squeeze a picture of his wife and new daughter in the case back. He wrote home that now he could count the hours until he returned to the States. This watch went on to survive some harrowing flights in a B-24 bomber and somehow made it back to the U.S. Besides the Purple Heart and the Bronze Star, my father cherished this watch because it was a reminder of the best part of the war for any soldier—the homecoming.

He nicknamed the watch *Ritorno* for homecoming, and the rare heirloom is now valued at $42,000 according to *The Complete Guide to Watches*. But to our family, it is just a reminder that nothing is more beautiful than the smile of a healthy returning GI.

The hunter's back

The Ritorno watch back opens to reveal a special compartment for a keepsake picture or can be engraved.

We wanted to bring this little piece of personal history back to life in a faithful reproduction of the original design. We've used a 27-jeweled movement reminiscent of the best watches of the 1940s and we built this watch with $26 million worth of Swiss built precision machinery. We then test it for 15 days on Swiss made calibrators to insure accuracy to only seconds a day. The movement displays the day and date on the antique satin finished face and the sweep second hand lets any watch expert know that it has a fine automatic movement, not a mass-produced quartz movement. If you enjoy the rare, the classic, and the museum quality, we have a limited number of *Ritornos* available. We hope that it will remind you to take time to remember what is truly valuable. If you are not completely satisfied, simply return it within 30 days for a full refund of the purchase price.

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BY DANIEL STROHL

Which Way's Reverse?

WE HAD A PUSHMEPULLYU-TYPE CAR show up at one of our cruise nights earlier this summer, and we even ran an article on them, rounding up several examples, back in our *Special Interest Autos* days (see *SIA* #38), but this one's new to us.

Paul Jahner of Meridian, Idaho, sent us the picture of the double-ender 1957 Ford with trim from a four-door Custom 300, which he said his father photographed in the 1970s in Idaho Falls. It's a new one to us, so we don't know who built it or why, or even what purpose the two small posts on the roof served. We can appreciate, however, that whoever built it finished it off nicely with a full set of hubcaps and some pretty decent bodywork.

Does this which-way Ford ring any bells? And if so, could it still be around today?

Skylark II and III

CADILLAC ENTHUSIASTS surely know about the company's late 1950s relationship with coachbuilder-design house Pinin Farina (see *HCC* #56), but the latter's ties to General Motors apparently ran deeper than that, as we see from these photos of the Pinin Farina-built Skylark II/III design proposal that we recently came across.

Information on the cars is scarce, but from what we can gather, the two-seater coupe's design originated in 1957 within GM—borrowing heavily from the shapes that would appear on the 1959 production Buicks—and was designated XP-75, but was also known as Skylark II. Somebody at GM (probably Bill Mitchell) then called in Pinin Farina to have two running and driving versions built, one silver and one white, both called the Skylark III. The white one was apparently scrapped a few years later, but the silver one's fate remains unknown.

If the silver Skylark III remains extant, it's been well hidden; nobody has reported seeing it in decades.

RE: Zippo Snuffed?

WE'VE HEARD FROM A FEW READERS regarding the Zippo Chrysler from a couple months ago (*HCC* #119), and at least a couple recalled seeing such a car at a restoration shop in Tennessee, so we called the shop—Joe Griffin's Custom Upholstery—to get the scoop.

Unfortunately, we didn't come any closer to tracking down the original 1947 Chrysler Saratoga-based Zippo car, but that doesn't mean we came away empty-handed. Joe Griffin did indeed build the replacement car for Zippo 18 years ago, this time using a 1947 Chrysler New Yorker four-door sedan. "It was the only car similar to it that we could find, so I had to do a lot of fabricating to get it to look like the original car," Joe said. "I cut the top of the car off at the drip rails and moved it back to fabricate the trunk because it had that nice crown to it."

So that puts us back to square one looking for the original Zippo Chrysler. Anybody recall seeing it lately?

Recently discovered a unique or noteworthy classic car? Let us know. Photographs, commentary, questions and answers should be submitted to Lost & Found, c/o *Hemmings Classic Car*, P.O. Box 196, Bennington, Vermont 05201 or emailed to dstrohl@hemmings.com. For more Lost & Found, visit http://blog.hemmings.com/index.php/category/lost-and-found/.

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BY MIKE BUMBECK

Military Mart

BIDDERS FROM AROUND THE COUNTRY and the globe helped the Auctions America Littlefield hit $10.24 million in sales, with 98 percent of lots sold. All proceeds from the sale will fund the relocation of the military collection of the late Jacques Littlefield to the Collins Foundation in Stow, Massachusetts. A new 66,000 square foot facility, scheduled to open in summer 2015, will host 80 of Littlefield's most significant vehicles collected over three decades.

An American Sherman tank and an M5 Stuart tank were in the top five sales, but for the buyer who didn't have time to waste choosing between a car, 4x4, or boat there was this all-in-one GMC DUKW (aka "Duck") amphibious craft, which sold for $78,775. Here's hoping the DUKW is giving a whole new meaning to the phrase "Gone fishing."

Contact: www.auctionsamerica.com

American Treasure

LOWERING THE CENTER OF GRAVITY of a car on its chassis has a long history of making a car not only handle better but look sportier. The tradition is clear in Pennsylvania oilman F.C. Deemer's 1907 American Underslung Roadster. This rare American beauty will be offered at the Bonhams *Preserving the Automobile* auction on October 6th, with a sale price projected in excess of $900,000.

Bonhams says the seller is an ardent supporter of the Simeone Foundation Museum, and stipulated that a portion of the proceeds be donated to the institution; Bonhams will also make a donation. Consignments are currently being accepted for this third annual event on October 6th at the Simeone Foundation Museum in Philadelphia.

Contact: www.bonhams.com

AUCTION **PROFILE**

CHANCES OF A CAR having had some part of its body repainted or suffer ham-fisted repairs are better than average over the 25 years it travels from new to collectible. There is far less chance a car will remain in as-manufactured condition and fall into the "unrestored" category. This Cadillac Eldorado Biarritz needed no restoration, and sold for an above-average price. It is unknown if the Cadillac had been exercised during its reported 20-year storage, but it looked like it would be ready to roll in maximum personal luxury after just a mechanical sorting.

CAR	1978 Cadillac Eldorado Biarritz	**CONDITION**	2/Original
AUCTIONEER	Mecum	**RESERVE**	Yes
LOCATION	Seattle, Washington	**AVERAGE SELLING PRICE**	$8,000
DATE	June 13th, 2014	**SELLING PRICE**	$11,000
LOT NUMBER	F112		

OCTOBER Calendar

1-5 • Fall Carlisle • Carlisle, Pennsylvania • 717-243-7855
www.carlisleevents.com
4 • VanDerBrink Auctions • Minden, Nebraska • 605-201-7005
www.vanderbrinkauctions.com
6 • Bonhams • Philadelphia, Pennsylvania • 415-391-4000
www.bonhams.com
9-10 • RM Auctions • Hershey, Pennsylvania • 519-352-4575
www.rmauctions.com
9-11 • Mecum • Schaumburg, Illinois
262-275-5050 • www.mecum.com
9-11 • Vicari • Biloxi, Mississippi
504-875-3563 • www.vicariauction.com
17-18 • The Branson Auction
Branson, Missouri • 800-335-3063
www.bransonauction.com
18 • Specialty Auto Auctions
Loveland, Colorado • 970-266-9561
www.saaasinc.com
24-25 • GPK Auctions • Atlantic City, New Jersey • 800-227-3868
www.acclassiccars.com

Cars in Carlisle

THE HUMID DAYS OF SUMMER will soon give way to crisp autumn weather and the annual classic car bonanza known as Fall Carlisle. An auction hosted by Carlisle Auctions will be held in conjunction with a massive swap meet and car corral on the storied 150-acre Carlisle Fairgrounds in Carlisle, Pennsylvania. Make sure to get a fresh pretzel before making any final decisions on big purchases. The auction takes place on Thursday, October 2 and Friday, October 3. Bidding begins at 3 p.m.

Contact: www.carlisleevents.com

View and search through thousands of upcoming auction vehicles in one place at the Hemmings Auction Showroom, www.hemmings.com/auctions/.

BY MARK J. McCOURT

Timely and Personal

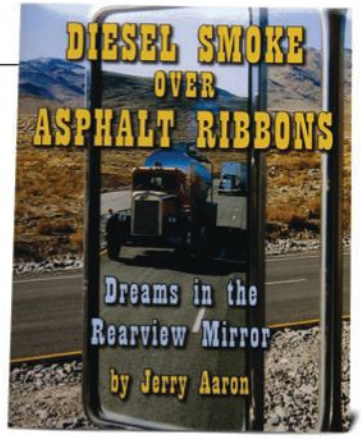
FEW UNIVERSAL AUTOMOTIVE COMPONENTS represent their era as much as do bias-ply tires, be they understated blackwalls or attention-grabbing whitewalls. Garage Art has a new line of custom personalized 14-inch clocks accented with 28-inch-diameter Firestone tires, made from resin using genuine licensed Firestone tire molds. These clocks are personalized with a name, and they're lit with red neon. The black- or white-sidewall Firestone tires, cut in half to sit flat against the den or garage wall, are mounted with the look of a polished wheel hub. Whether you're a fan of cars from the 1930s, the 1960s or decades in-between, you'll love this practical and fun décor. Cost: $499.95

800-708-5051
www.garageart.com

1954 Henney-Packard Limousine

THE ILLINOIS FIRM HENNEY MOTOR CO. had roots dating back to the 1850s, when it was founded as a carriage builder by Jacob Henney. This famed builder of cars for the funeral and limousine trades began its affiliation with Packard in the mid-1930s. Henney and Packard teamed up again in 1953-'54 to offer the Eight-Passenger Sedan and Limousine on the 149-inch-wheelbase commercial chassis. Brooklin Models now produces a hefty 1:43-scale white metal rendition of the coachbuilt 1954 Eight-Passenger Limousine in sober Meridan Blue metallic, and it's enhanced with handsome brightwork. Applause to Brooklin for thinking outside of the box. Cost: $149.50

800-718-1866
www.diecastdirect.com



Diesel Smoke Over Asphalt Ribbons

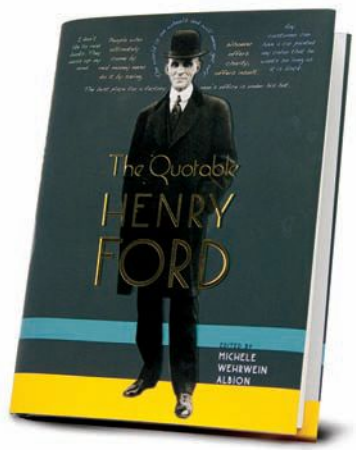
THE HEMMINGS NATION HAS MADE IT CLEAR that our big-truck coverage in *HCC* is a hit. We therefore present a review of a highly personal book about one man's life in the cab, going back to way before most heavy hauling took place along the Interstates. The author, Jerry Aaron, has written a 224-page softbound history of trucking in the West and the Mountain States, laden with harrowing anecdotes about battling grades, ice, rockslides, any of which could reach out and snare an unwary driver, with fatal consequences. The prose is appealing, and the photos alone, most of them from Jerry and his cohorts, are worth the price of this must-have book. Cost: $21.95 —*By Jim Donnelly*

Diesel Smoke
5296 Santa Rosa Avenue
Sparks, Nevada 89436

1936 Pontiac De Luxe Six Coupe

PONTIAC STYLIST FRANK HERSHEY'S UP-TO-DATE Streamline Moderne "Silver Streak" design theme was in its sophomore year in 1936, the year represented by Brooklin Models' rendition of the beautiful, upscale De Luxe Six Coupe. Part of Brooklin's *The Pontiac Collection 1935-1939*, this streamlined three-window Coupe features a separate hood ornament and rear license plate that accent the rich maroon exterior paint and the interior's burled poplar-look dashboard. In typical fashion, this model – hand-built in England—will be treasured by the Pontiac faithful. Cost: $129.50

800-718-1866
www.diecastdirect.com



The Quotable Henry Ford

HENRY FORD WAS A FORCE OF NATURE, and like the wind or the sun, could at turns seem beneficent or malevolent, wise or indiscriminate. Perhaps in no other book are these contradictions laid as bare as they are in this 260-page collection of his quotations, edited by Michele Wehrwein Albion, former curator of the Edison and Ford Winter Estates in Fort Myers, Florida. By citing the original source of each of the included quotations after organizing them into logical categories like "On Automobiles, Tractors, and Other Transportation Technology," "On Work and Leisure" and "On Education and the Arts," Albion has created a reference that is as addictive to read, as it is informative and useful. Cost: $24.95 *—By J. Daniel Beaudry*

800-226-3822
www.upf.com

Proud Allegiance

WHO DOESN'T ENJOY MAKING A STATEMENT about their automotive allegiances without having to say a word? Pep Boys has a new apparel line—available online and at stores nationwide—that includes officially licensed products from beloved automakers like Ford, Mopar, Chevrolet, Ram and Shelby, as well as nameplates like Mustang, Camaro, Firebird, Charger, Challenger and Corvette. Those branded designs can be found on adult and kid T-shirts, sweatshirts, mechanic's shirts, jackets and other clothing, and all are printed in the USA. T-shirt cost: $12.99 kids; $14.99 adults

800-737-2697
www.pepboys.com

The Mechanical, Interpreted

WHILE WE SEE AUTOMOTIVE ARTWORK on a regular basis, it's not often that we're stopped in our tracks. That was our reaction when we saw the artwork of collector car enthusiast and Checker collector Will Brandum, whose *Industrial Landscapes* series takes a detailed look at aspects of the car that aren't typically the subject of a painting, and does so in a disarming and charming manner.

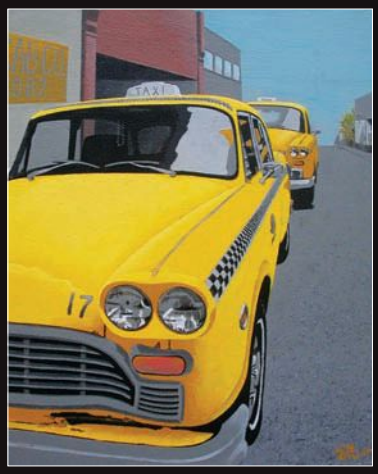
"Cars and other machines have always been my favorite subjects for my artwork," Will explains. "In addition to the beauty of a vehicle's outer form, there is also beauty in the fitment of mechanical parts, though they too-often remain hidden; this is why I try to capture a view that is not ordinarily seen. I then change colors and details as I translate it onto canvas."

Will continues; "Many of my backgrounds are influenced by surrealism, and I choose colors that help to separate the subjects from their recognized functions. In some works, I create a scene from an unknown world, inviting the viewer to provide a story. In others, I celebrate the shapes and interactions of the components—and I'll also occasionally do a realistic piece."

The original versions of these acrylic-on-canvas paintings are sized between 16 x 20 and 24 x 30 inches, and prints are available to order in several sizes. 8 x 10-inch originals (not shown) start at $50.

Will Brandum
surgecab22@aol.com
http://brandumconcepts.weebly.com/brandum-concepts.html

Under The C



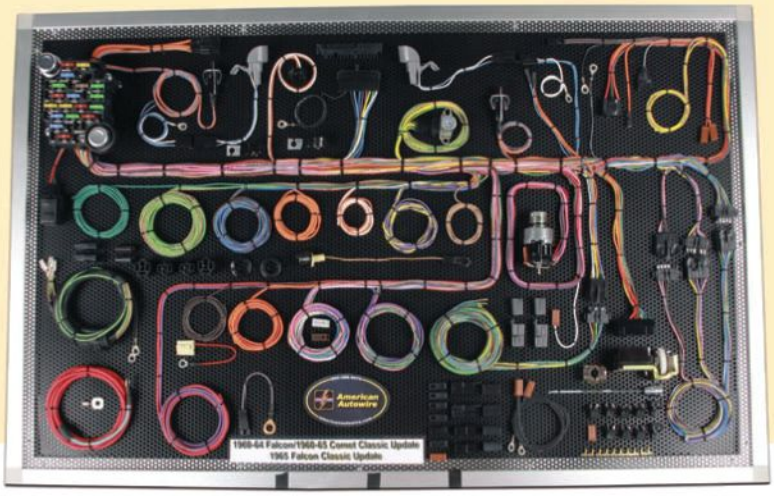
Taxi Stand

Orange Chrysler

Old Master

Timing

BY TOM COMERRO



Comet and Falcon Wiring Systems

Two new complete wiring harnesses for 1960-'65 Ford Falcons and Comets are now available from American Autowire. Headlamp, dimmer and ignition switches are all included, as is a new ATO-style fuse panel, which comes with extra circuits for power accessories. A gauge disconnect and steering column adapter are also provided to connect to most gauge packages and columns. The kit comes with all terminals and connectors. Cost: $699.

American Autowire
800-482-9473
www.americanautowire.com

Lockdown

Door lock pillar seals that fit 1968-'72 GM A-body two-door models (except Pontiac) have now been reproduced by Metro Molded Parts. The seals are made from premium rubber and are designed to protect against the harsh exterior elements. The cores of the locks are made in the USA of stainless steel and are engineered to fit two-door coupe, two-door hardtop and convertible models of Chevelle/Malibu, Buick Special Deluxe and Skylark/GS, Oldsmobile Cutlass/4-4-2. Cost: $37.95 (pair).

Metro Moulded Parts
800-878-2237
www.metrommp.com

Cordless Convenience

If you have repairs that need to be completed quickly, especially in tight spaces, Ingersoll Rand's series R3130 3/8-inch cordless ratchet provides the power and maneuverability you'll need. The R3130 delivers 54-ft.lb. of torque and is assembled with the same durable head as the other Ingersoll Rand air-powered ratchets. Powered by a 20-v lithium-ion battery, this cordless ratchet wrench is designed to last longer and offer optimal performance. Cost: $220.

Ingersoll Rand
800-483-4981
www.ingersollrandproducts.com

Corvette Wiper Switch

Keen Parts announces that it's now offering new replacement wiper switches for 1968-'76 Corvettes. The switches are engineered to General Motors's specifications to function like new. For more details, contact Keen and ask about part number 370030. Cost: $30.

Keen Parts
800-757-5336
www.keenparts.com

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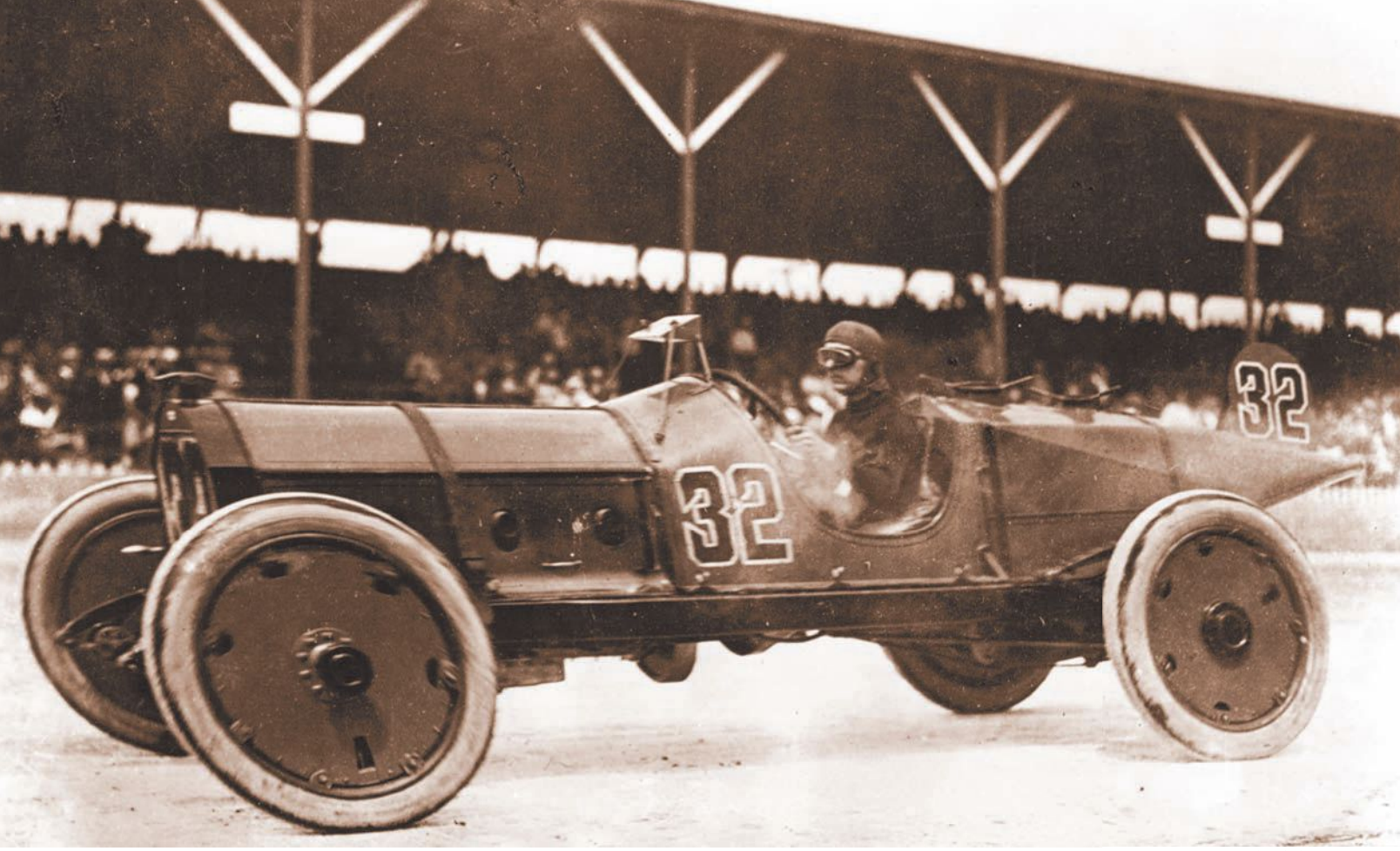


IMS PHOTO

Engineered to Be The Best

Marmon's journey from flour mills to 16-cylinder supercars

BY TERRY SHEA • PHOTOGRAPHS AS CREDITED

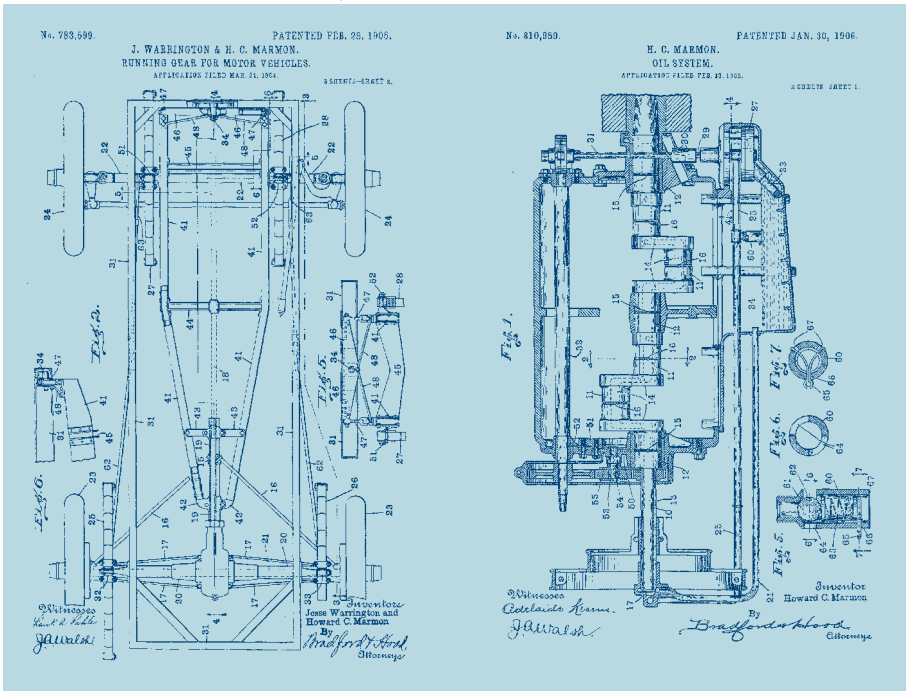
Before it ever adorned an automobile, the Marmon name had long earned a reputation for sound engineering. As one of the world's premier flour mill and grain elevator machinery manufacturers, Nordyke & Marmon occupied a large factory on Indianapolis's west side.

Nordyke & Marmon's team of more than 500 machinists produced milling equipment and related products that were shipped to every populated continent around the globe at the turn of the century. Sales easily reached into the millions, but the company's focus would change when the ambitious sons of one of its namesake owners came on board.

Ellis Nordyke and a partner formed Nordyke, Ham & Company in Richmond, Indiana, in 1851 to make millstones. When Daniel Marmon bought into the firm in 1866, the company took the new name of Nordyke & Marmon. Ellis Nordyke's son Addison took over as president

Fifty years before building their first car, Nordyke & Marmon began establishing their reputation for high-quality engineering by making world-renowned grain milling machines.

Longtime chief engineer Howard Marmon was the driving force behind Nordyke & Marmon's entry into the automobile industry.



U.S. PATENT OFFICE

Howard Marmon's name ended up on many automotive-related patents, including Marmon's unique double frame (left) and full-pressure oiling system with drilled passages (right).

when Ellis died in 1871, and kept the position until 1902. During the latter part of the 1870s, with the firm growing by leaps and bounds, Addison Nordyke and Daniel Marmon, in search of more capacity, moved the company to a much larger factory in Indianapolis.

At age 22, fresh out of the engineering program at Berkeley, Howard Marmon joined Nordyke & Marmon in 1898, two years after his older brother, Walter, an MIT-trained engineer, had signed on. While ostensibly in the family business to innovate and improve the milling machines, Howard Marmon had his sights set on something far more ambitious—building an automobile. After clamoring away for four years, designing, engineering and building it, Howard drove his water-cooled, V-twin-powered car out of the factory and onto a 100-mile round trip to Kokomo and back. He would be appointed chief engineer of the company that year, the same time frame that his brother, Walter, began moving up the ranks to president.

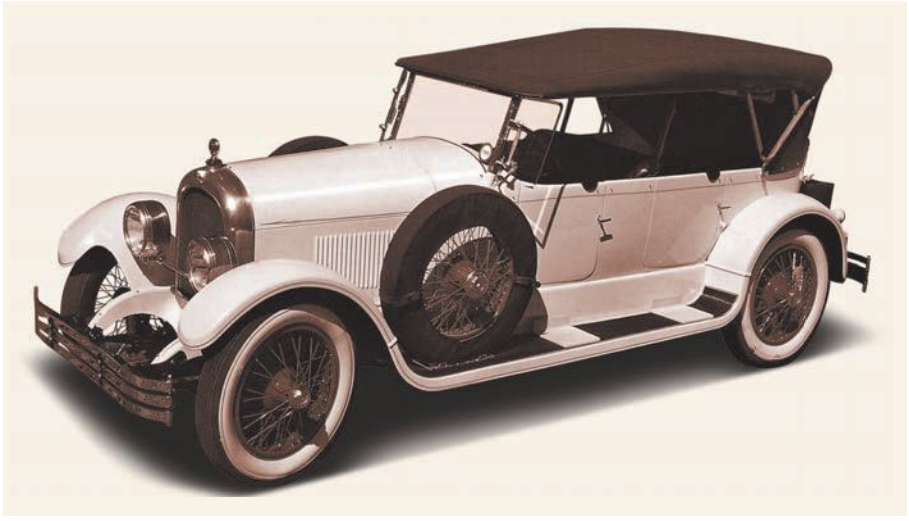
Along with the unusual front-engine, V-twin layout, Marmon's first automobile in 1902 included the then-unique full-pressure oil system that utilized a drilled crankshaft and a gear-driven pump to lubricate the bottom end of the engine. It would take decades before the entire industry adopted this patented innovation.

Marmon's arrival as a maker of finely made cars relied heavily on the built-in technical expertise and manufacturing capacity that Nordyke & Marmon had achieved in its first five decades, allowing them to boldly, but not without merit, proclaim the firm as "one of the world's great engineering houses." As Howard convinced the company to go into the automobile business, his intent was to truly build the finest car with the best materials and most innovative techniques. And Nordyke & Marmon were well equipped to cast, forge and machine the majority of essential components that would go into its cars.

In 1904, they began small scale production of an air-cooled V-4-powered car of Howard's design. Just six were sold, entirely to company and family friends, and mainly as a fleet of road going prototypes. But an improved version, this time with drilled oil passages in the connecting rods feeding the wrist pins, made it to the Model B, which sold 129 copies in 1906.

Marmon was on its way. Water cooling replaced the earlier air-cooled designs by 1908, and the vee configuration went out the next year in favor of more conventional inline designs, though not before Howard Marmon designed and built a prototype air-cooled V-8 that never made it into production.

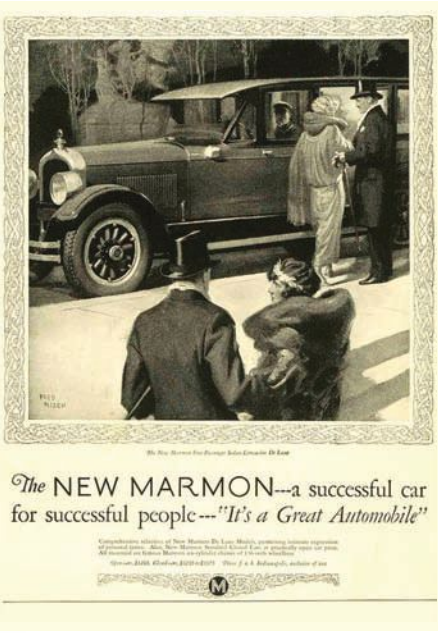
The next phase in the advancement of the Marmon automobile led directly to the company claiming an historic first that the world will always associate with the Marmon name. Powered by a water-cooled, T-head, 286-cu.in. four-cylinder engine, the Model 32 was a decent performer in 1909 with its 32-hp engine. But it was a six-cylinder racing version of the car that immortalized the Marmon name.



Made from 1916 through 1924, the six-cylinder, 74-hp Model 34 was one of the fastest cars of its day, thanks to extensive use of aluminum both in the drivetrain and the body.

DAVID LaCHANCE

This 1924 Model 34 was one of the last of the series, as consumers began perceiving straight-eight engines as more luxurious than the Model 34's straight-six, despite the Marmon's power and speed.



Marmon had no qualms about declaring its greatness and luxury in its advertising.

Indiana's placement as a hotbed of the early American automobile industry led a group of local investors to fund the building of the Indianapolis Motor Speedway in 1909, for both testing and as a grand venue to stage races. After experimenting with everything from balloon races to motorcycle contests, the track owners went for broke and decided on a 500-mile race with a spectacular $25,000 purse.

Retired from a relatively accomplished part-time racing career, Ray Harroun was working as an engineer at Marmon in 1911 when the promise of such a big prize lured him back onto the track. Appropriately named for its yellow-and-black paint scheme and tapered-to-a-point tail, the Marmon Wasp carried Harroun to victory at that first Indy 500. Though every other driver in the event teamed with a ride-along mechanic who assisted with reading the gauges and looking out for other competitors, Harroun drove solo, relying on the innovative rear-view mirror he mounted above the cowl in order to see any approaching traffic.

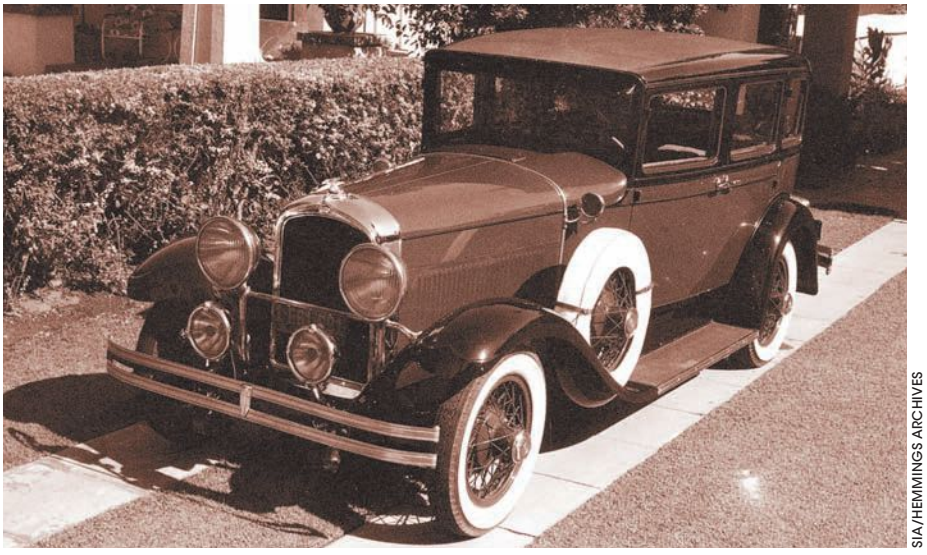
Harroun played a big role in designing the Wasp, which was based on the then-current Model 32. The Wasp's 447-cu.in. straight-six engine made an estimated 110 horsepower, propelling Harroun to the overall win in six hours, 42 minutes and eight seconds—an average speed of 74.6 MPH. Though largely credited with winning the race entirely on his own, Harroun shared the driving duties with Cyrus Patschke, who piloted the Wasp for approximately 35 of the 200 laps.

Although Marmon had tasted plenty of victories before, the company's win in front of 80,000 people at the Indianapolis 500 put the Marmon name before the public eye in a big way. Marmon attempted to capitalize on this success in 1913 by introducing the Model 48, somewhat based on the Wasp, but riding on a massive 145-inch wheelbase. Priced as high as $6,250, the Model 48 found few takers and was no longer offered after 1915.

The 1916 debut of the lightweight, aluminum-intensive Model 34 finally gave Marmon the product it needed to begin selling cars in significant numbers for the first time. The engine block and most of its internal components, including the pushrods on the OHV design, were made of aluminum. The lightweight metal was used for the hood, the fenders, the radiator shell, the body, the differential housing and transmission case. Carrying around several hundred pounds less than the competition, the Model 34 made the most of the 74 hp produced from its

JEFF KOCH

The 1927 E-75 was a revised Model 34 that was sold alongside the eight-cylinder models.



SIA/HEMMINGS ARCHIVES

Marmon's most successful years, 1928 and 1929, saw the Model 78 as its lead offering, featuring contemporary styling and the usual sound engineering and robust manufacturing.

RM AUCTIONS

Marmon saved the best for last. Though Marmon made less than 400 from 1931 through 1933, the Sixteen marked the pinnacle of its engineering expertise with the introduction of its aluminum, 200-hp, OHV V-16. Unfortunately, it was not enough to save the company.

339-cu.in., OHV straight-six, and was capable of 70 MPH.

Marmon sales more than tripled in 1916 to 1,753 cars, on the strength of the Model 34. From 1917 through 1924, it was the only line available from Marmon, though in quite a few different body styles. All of that aluminum proved expensive and tricky to work with, particularly in machining the block, which was cast in iron from 1920 on.

Though Marmon sales continued at a relatively healthy rate during World War I, particularly for a high-end car, Howard Marmon, then vice president of Engineering, joined the Army's Signal Corps. Howard headed the Army's experimental engine testing facility. Nordyke & Marmon became one of five auto companies contracted to build the Liberty aero engines. Howard Marmon was discharged as a lieutenant colonel and afterwards often affectionately addressed as "Colonel".

While the Model 34 firmly established Marmon automobile as a top-rung manufacturer, by the early Twenties, it had grown a bit long in the tooth, and inventories began piling up, despite its overall excellence and robust performance. The milling machine business was successful, to be sure, and company revenues overall were strong. But the automobile business needed help.

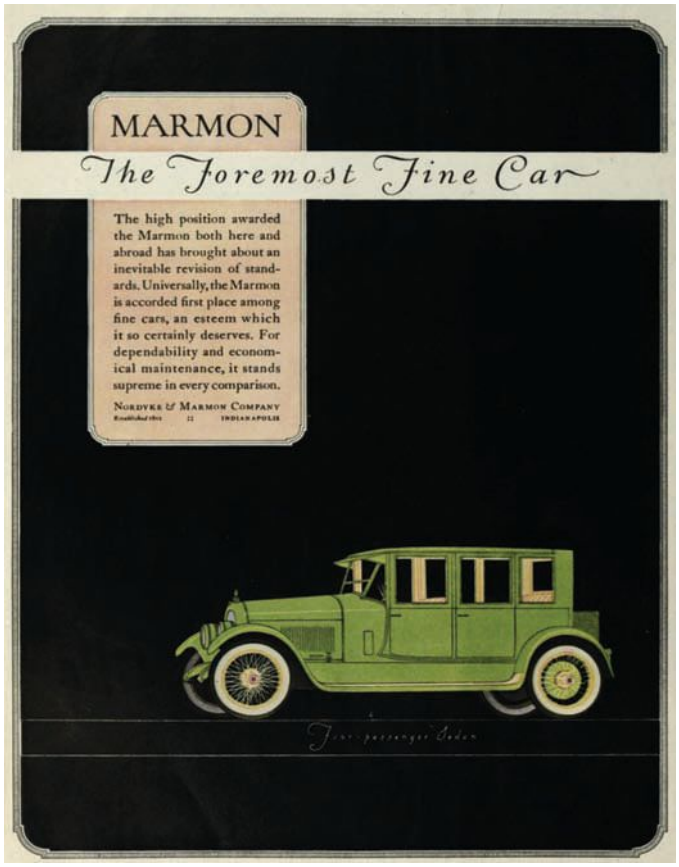
A warmed-over Model 34, dubbed Model 74, was already in the works when, under pressure from creditors, turnaround specialist and GM veteran George Williams was named president of the company, replacing Walter Marmon, who remained chairman. Williams guided the split of Marmon. The Nordyke name disappeared from the company as it sold off the milling equipment business to Allis-Chalmers in 1926. The new firm was then renamed the Marmon Motor Car Company, which shortly after, became a publicly traded concern.

Intent on growing the company by taking a step downmarket to compete with the likes of Buick and Studebaker, Williams championed a smaller car, sales of which could be more easily scaled up. Even with the Model 74 and, later, continuation 75 in the lineup, Marmon added the Little Marmon series in 1927.

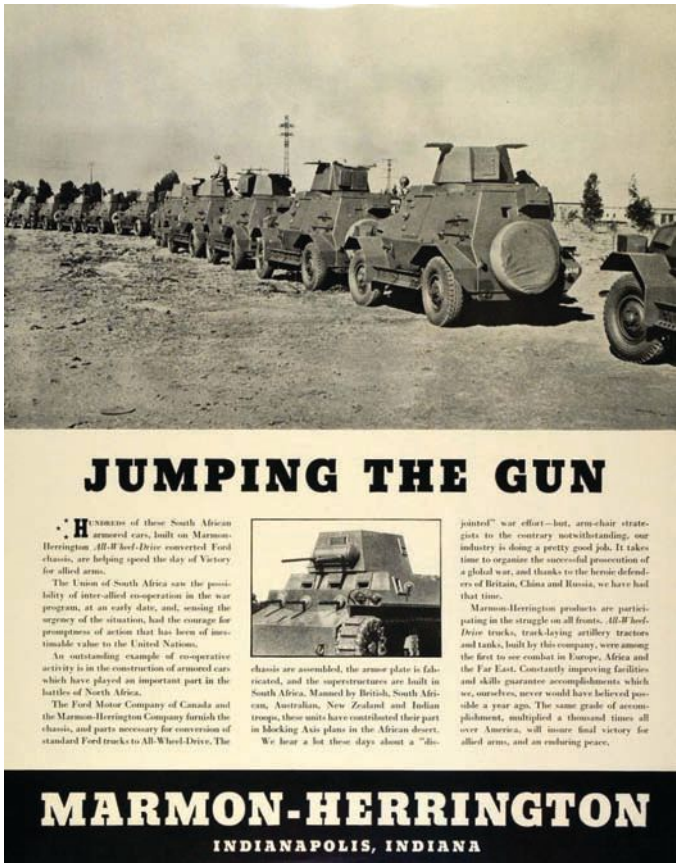
Powered by an eight-cylinder engine, this shorter wheelbase automobile was

RM AUCTIONS

The V-12-powered Marmon HCM was personally financed by Howard Marmon in a last-ditch comeback attempt. After the company's bankruptcy, he shopped the $160,000 project to other makers, but the worsening depression left no takers for the high-performance luxury car.



Never afraid to boast of its reputation, Marmon proudly proclaimed its greatness in this 1922 ad for the Model 34.



Marmon-Herrington, a separate truck company formed by Walter Marmon in 1931, survives today as part of Berkshire Hathaway.

priced as low as $1,895—more than $1,000 less than the least expensive Model 75. While sales increased, the Little Marmon did nothing for Marmon's otherwise stellar reputation, so the eight-cylinder models were rebooted for 1928, this time split into two ranges, the Model 68, with an L-head straight-eight riding on a 114-inch wheelbase and the Model 78, with an OHV straight-eight riding on a 120-inch wheelbase. The Model 68s started at just $1,200, while the Model 78 proved to offer a lot more car for its $1,895 price tag than did the Little Marmon the year before. The six-cylinder Model 75, retaining the last vestiges of the Model 34, was retired after 1928.

While sales dramatically increased through 1929, an even lower-priced, even shorter-wheelbase model, the Roosevelt—named after President Theodore Roosevelt—debuted that year. Sales had increased six-fold over 1926 to 22,323 units—Marmon's best showing ever. The Roosevelt's starting price of just $995 made it one of the least-expensive eight-cylinder cars on the market, but Marmon needed to sell far more cars to make a profit. Updates to the other straight-eight models continued, but none of Marmon's efforts were nearly enough to fend off the massive sales hit that the Great Depression would render across the entire industry. Still, Marmon doubled down and introduced perhaps the most over-the-top American car this side of a Duesenberg.

While working with the Army Signals Corps, Howard Marmon had studied an experimental Bugatti V-16 aero engine made from a pair of straight-eights with a common crankcase. The engine had fascinated him so thoroughly that, even removed from day-to-day management, Howard led a team that worked diligently to produce what the company would call "The World's Most Advanced Motor Car."

An automobile for the ages, the Marmon Sixteen featured leading-edge bodywork by LeBaron and an engine that demonstrated Marmon's remarkable engineering capacity one final, glorious time. Marmon cast the 491-cu.in, OHV V-16 in aluminum, the crankcase and cylinders in a single unit. With 6.0 compression and a two-barrel carburetor fed by a mechanical pump, the powerplant produced a legitimate 200 horsepower and torque somewhere in the range of 380 to 400-lb.ft.

Again incorporating a fairly extensive use of aluminum throughout, Marmon created a massive, 145-inch wheelbase automobile that was still capable of a guaranteed 100 MPH. As an engineering achievement, it was unparalleled. In terms of sales, it was an unmitigated disaster.

Cadillac had beaten Marmon to the punch by more than a full year, selling nearly 3,000 of its flagship V-16 models in 1930. Even as Marmon was ramping up Sixteen production in 1931, Cadillac, with momentum on its side, sold only 364 V-16s. Marmon fared poorly, the Great Depression's tightening grip in a worsening economy pounding the Indianapolis company. Marmon sold just 223 Sixteens in 1931, followed by 111 in 1932 and just 56 in 1933. Though by most accounts the Marmon was a superior car, more contemporarily styled, incorporating more advanced materials and production techniques and was undoubtedly faster, Cadillac's head start trumped the Sixteen.

The Marmon Motor Car Company entered receivership on May 1, 1933, marking the end of an era when engineering excellence meant everything. Though Marmon, the carmaker, was gone, the legacy had indeed been cemented—from Howard's first, full-pressure engine to the performance at Indy in the Wasp to the Model 34's power and performance, and culminating with the tour de force known as the Sixteen. Marmon cars frequently proved the best in competitions and trials. Though not robust enough to stand up to the pressures of the Great Depression, Marmon went out on the highest of notes, one last reminder of what "one of the world's great engineering houses" was capable of.

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55290834

SUPER COUPON!

FREE

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5 FT. 6" x 7 FT. 6" ALL PURPOSE WEATHER RESISTANT TARP

Item 953 shown

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SUPER COUPON!

PITTSBURGH AUTOMOTIVE

LOT NO. 68056/60706/62319

SAVE $90

RAPID PUMP® 4 TON HEAVY DUTY STEEL FLOOR JACK

$109.99 REG. PRICE $199.99

Item 68056 shown

- Weighs 105 lbs.

55310601

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SUPER COUPON!

★ WINNER ★ Truckin' Magazine

26", 4 DRAWER TOOL CART

US★GENERAL

LOT NO. 95659 61634/61952

SAVE $180

Item 95659 shown

- 580 lb. Capacity

$99.99 $159.99 REG. PRICE $279.99

55280982

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SUPER COUPON!

12 TON SHOP PRESS

CENTRAL MACHINERY

- Pair of Arbor Plates Included

SAVE $80

$119.99 REG. PRICE $199.99

Item 60604 shown

LOT NO. 33497 60604

55279999

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SUPER COUPON!

"Top of its Class in Quality at a Really Great Price" – Hot Bike Magazine

1/2" INDUSTRIAL QUALITY SUPER HIGH TORQUE IMPACT WRENCH

- 700 ft. lbs. Max. Torque

LOT NO. 68424

SAVE $55

CENTRAL PNEUMATIC EARTHQUAKE

$74.99 REG. PRICE $129.99

55292435

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SUPER COUPON!

POWDER-FREE NITRILE GLOVES PACK OF 100

WESTERN SAFETY

- 5 mil. thickness

YOUR CHOICE!

$6.49 REG. PRICE $10.99

Item 68498 shown

MEDIUM LOT NO. 68496/61363

LARGE LOT NO. 68497/61360

X-LARGE LOT NO. 68498/61359/37052

SAVE 40%

55275283

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SUPER COUPON!

PITTSBURGH MOTORCYCLE

1000 LB. CAPACITY MOTORCYCLE LIFT

LOT NO. 69904 68892

SAVE $380

Item 68892 shown

$319.99 REG. PRICE $699.99

55319213

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SUPER COUPON!

10 FT. x 17 FT. PORTABLE GARAGE

SAVE $120

HFT

$179.99 REG. PRICE $299.99

Item 69039 shown

LOT NO. 69039 68217/60727/62286

55319630

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SUPER COUPON!

CHICAGO ELECTRIC WELDING

MIG-FLUX WELDING CART

Welder and accessories sold separately.

SAVE 40%

LOT NO. 69340/60790 90305/61316

Item 69340 shown

$35.99 REG. PRICE $59.99

55315868

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SUPER COUPON!

SAVE $80

NEW

900 PEAK/ 800 RUNNING WATTS 2 HP (63 CC) GAS GENERATOR

Item 69381 shown

LOT NO. 66619 69381/60338

STORM CAT.

$99.99 $129.99 REG. PRICE $179.99

55295192

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SUPER COUPON!

CENTRALPNEUMATIC

3 GALLON, 100 PSI OILLESS PANCAKE AIR COMPRESSOR

Item 95275 shown

LOT NO. 95275 60637/69486/61615

SAVE 50%

$39.99 REG. PRICE $79.99

55329875

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SUPER COUPON!

"Impressive Accuracy, Amazing Value" – Car Craft Magazine

TORQUE WRENCHES

PITTSBURGH PRO

YOUR CHOICE!

$9.99 $21.99 REG. PRICE $29.99

- Accuracy within ±4%

SAVE 66%

1/4" DRIVE LOT NO. 2696/61277

3/8" DRIVE LOT NO. 807/61276

1/2" DRIVE LOT NO. 239

Item 239 shown

55316462

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SUPER COUPON!

PITTSBURGH AUTOMOTIVE

3 TON HEAVY DUTY STEEL JACK STANDS

LOT NO. 38846 69597/61196/62392

SAVE 55%

Item 38846 shown

$19.99 REG. PRICE $44.99

55329364

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Magisterial Marmon

Four generations of a single family have been enjoying this 1928 Marmon 78 for over 50 years

WORDS AND PHOTOGRAPHS BY TERRY SHEA

In the grand scheme of things, Marmon's manufacture of a little over 100,000 automobiles in 30 years is but a proverbial drop in the bucket of the hundreds upon hundreds of millions of motor vehicles made in the past 120 years or so in this country. But the rich tapestry of our automotive history would be far thinner were it not for the innovative company out of Indianapolis.

Caught out like so many other makers of high-end automobiles, Marmon never made it through the Great Depression, the super-luxury Sixteen model doing the company no favors. The cars were stupendous; the timing, just awful. But, looking back

to 1928 and 1929, Marmon's most successful years, you will find the Model 78, a machine of substance and presence in its own right that was good for as much as 85 MPH with its 217-cu.in. OHV straight-eight under the hood and a comfortable 120-inch wheelbase.

Coming under new management in 1924, even as company namesake, vice president and engineer extraordinaire Howard Marmon largely stepped into the background, Marmon began the task of focusing on a more accessible car than the $3,000-and-up Model 75, a slightly updated version of the aging Model 34. The first attempt, the $1,895 Little Marmon with the company's first straight-eight, debuted in 1927. While sales nearly tripled to just over 10,000, management wanted more, and the "Little" name proved more than a bit incongruous to the storied Marmon name.

Marmon immediately went back to the drawing board for 1928 and introduced the Model 78 as well as the companion Model 68, which featured a 114-inch wheelbase and a slightly smaller and less powerful, L-head straight-eight engine than the OHV-unit found in the Model 78. The company sold 14,770 cars in 1928 and 22,323 in 1929, a far cry from the mere 3,512 units they made in 1926. The Model 78 sedan featured on these pages shows why the cars had such appeal and why, had the stock market crash in late 1929 not undone all of the good work, Marmon might have ultimately thrived.

Though the body and frame were restored and refinished, they had been left in a well-preserved condition when the current owner's grandfather took the unorthodox—if incredibly effective—step of covering the entire car in oil using a paintbrush in the 1960s.

Beginning with its distinctive "widow's peak" radiator surround, the well proportioned Model 78 sedan's body belies its wheelbase by being just 181.4 inches overall in length, the wheels pushed out to the corners to accommodate the straight-eight engine and to give the rear-seat passengers extensive legroom. The driver and front-row passenger get a bit squeezed by the tapered body, though.

While the original Model 34's six-cylinder engine had carried the torch for technological innovation and still made excellent power, fairly or unfairly, it failed to stimulate the public's imagination the way that the onslaught of straight-eights from the likes of Packard, Stutz and Stearns-Knight did. Though smaller in displacement than many competitors' powerplants of both six- and eight-cylinder guise, the overhead-valve Marmon eight featured a healthy 5.5:1 compression ratio to produce 86 hp at a robust 3,400 RPM. Given the Marmon's lithe 3,104-pound shipping weight, the power-to-weight ratio gave the car considerably competitive performance for its $1,895 price tag. The Indianapolis Motor Speedway appreciated the Model 78's performance so much that they named a Model 78 rumble-seat roadster as the official pace car for 1928.

"My grandfather had painted it with a bucket of oil and a paintbrush so it wouldn't rust…"

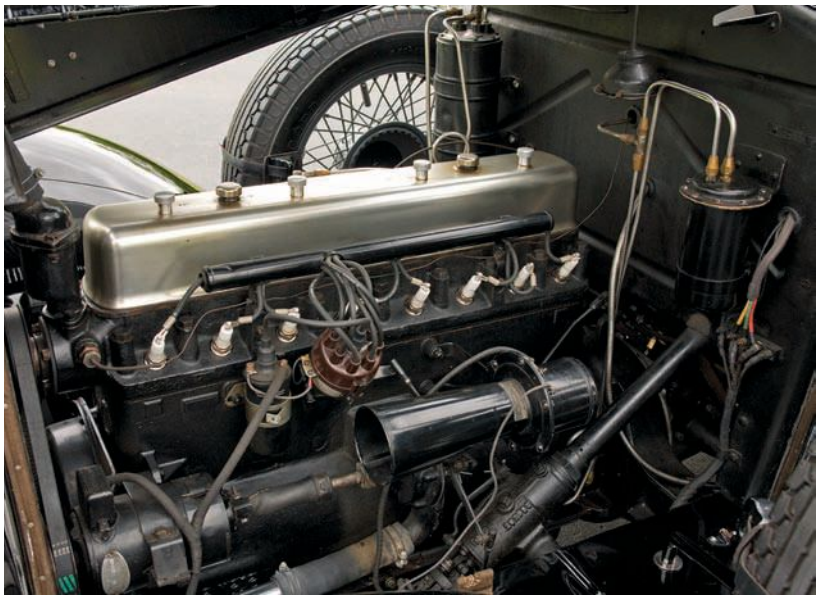
Inside, the Model 78 provided more than ample legroom for rear seat passengers, along with shades, full carpeting and a proper footrest. Wood trim and finely cast door handles completed the opulent touches for those just riding along. The driver enjoyed admiring the ornately stamped instrument panel punctuated with a small Marmon family coat of arms just above the Stewart Warner speedometer/odometer. The full set of standard instrumentation included a clock, water temperature, oil pressure, fuel level and amp gauge.

Our feature Marmon retains its original dashboard and fully functional instrument panel. Amazingly, it has been in the same family for some 55 years. Tim White, of Lockport, New York, who owns the car along with his wife, Michelle, recently shared the story of how this low-mileage beauty came into his family's hands and how he remains as its caretaker.

"Well, my father had bought the car in 1959," says Tim. "It

The controls and gauges are a relatively simple affair in the Model 78, but the closely spaced pedals require deft footwork.

Virtually untouched during the extensive restoration, the dashboard still shows its original Marmon family coat of arms.



Marmon's engineering superiority was on full display under the hood of every Model 78 in the form of its 86-hp, 217-cu.in., OHV straight-eight engine.

Original—and still intact—tool kit includes this massive lug wrench for the removal of the wire wheels.

was a low-mileage car. My dad got it from his boss, who was known to buy and sell old cars at the time. My dad was probably the fourth owner.

"My mother drove it around as a second car for about two years. She thought it was pretty neat, I guess." Of course, driving a 30-year-old car rarely serves as a financial win for anyone, particularly a young couple with a growing family. "They were not able to keep two cars on the road," Tim continues. "So, it went in the garage at a rental property they owned in about 1962 or '63. About 1985, my father said I could work on it. I was about 23 at the time. That's when I started a 15- to 20-year restoration."

Fortunately, Tim's father and grandfather made a sound, if somewhat unorthodox, decision, to keep the car from deteriorating. "My grandfather had painted it with a bucket of oil and a paintbrush so it wouldn't rust," says Tim. "His concern was that it would rust and that it wouldn't turn over if it sat too long. They were always running over there to start it at least once a year, I would say, if not more."

"It was very original when I pulled it out of the garage finally," recalls Tim. "One of the wheel wells had a rust spot that had gone through, about the size of a quarter." Though the restoration was straightforward on a solid, running car, Tim was building a family of his own, so it took time. "Trying to work and having the kids, a project like this gets put to the side and you start up again. So, I would send a piece out at a time, to be chromed or whatever."

Despite cramped quarters for the front row, the rear-seat passengers enjoyed relative opulence and excellent leg room.

As a non-professional restorer, Tim tackled the parts he could handle himself: "I did a lot of the dismantling, the research, figuring out who had parts, what needed to be done, who I could send what to. I had the chrome done by Paul's Chrome in Mars, Pennsylvania. They were familiar with a lot of the pot metal and what it would take to restore some of the items such as the door handles and the radiator cap."

When it came time to paint the car, the process represented a turning point in the long restoration process. "When we decided to paint it, I had a lot of the parts done that I needed, and I thought that we could do the paint and get it together. We actually had it painted in pieces and I reassembled it. The last panels painted were the hood and the windshield surround. I think I actually have a picture of us driving around without the hood and the windshield on. It was pretty funny. I had it painted by a local shop that was known to be a very good painter."

Though the seats were reupholstered, the dashboard and instrument panel were left alone as they were in such good condition. With the car back together, Tim has taken it to a variety of shows and concours events, trailering it in most instances, but also putting roughly 100 to 150 miles on it per year. In 2009, he earned his AACA First Junior at the Gettysburg meet with his father in attendance. When Tim gives us a chance to get behind the wheel of his award-winning car, who are we to object?

Climbing into a 1928 Marmon 78 sedan and settling behind the large-diameter steering wheel reveals the surprisingly small space provided for the driver and a single passenger. The tapered body makes for a literally shoulder-rubbing experience for two grown men.

Slightly more problematic is the space made available for the feet. Even with my extra-skinny, AA-narrow feet, I am left to removing my right shoe if I want to be able to easily move from the throttle to the brake. While the clutch and brake pedals are mounted in a conventional manner, the throttle itself is more of a button than a pedal and lies nearly directly underneath the brake pedal, making it a bit of a challenge to remove the foot from the gas to hit the brakes. Though driving without my right shoe might

owner's view

I guess it's the family jewel. My dad liked it and my mom drove it around. It's just a pretty neat car. The car handles well. It brakes well. It runs well—for what it is. For a car that is 86 years old, it's a well-engineered car.

I just always liked a gangster-looking sedan with running boards. It goes really fast for a 1928 car. The moonshiners used them because they were fast, and I always thought that was pretty neat.

be a bit unconventional, it works.

The key only serves to lock the shifter in place. Tim walks me through the starting procedure that includes pulling the original Delco Remy-badged ignition switch to the "on" position, flipping a toggle under the dash to enable the modern, electric fuel pump and then finally sliding my foot up the angled toe board to engage the starter button, which sticks out much higher than the throttle. The Marmon's OHV straight-eight engine, already warm, fires to life and immediately settles into a comfortable idle.

The three-speed transmission lacks synchros of any kind, making double-clutching all but mandatory. Even then, a little bit of gas and absolute deliberateness are both required for smooth shifts. There are a couple of cringe-inducing crunches, but I get smoother the longer I am behind the wheel. Third gear is appropriate for 20 MPH on up. And we definitely do go up from there, particularly on a long stretch of farm road where Tim asks, "Why don't you put your foot into it and feel what it's like to drive an 86-year-old car 65 MPH?" I happily oblige. Watching the little barrel speedometer in the ornate instrument panel rotate with the change in speed, offers its own little jewel-like joy.

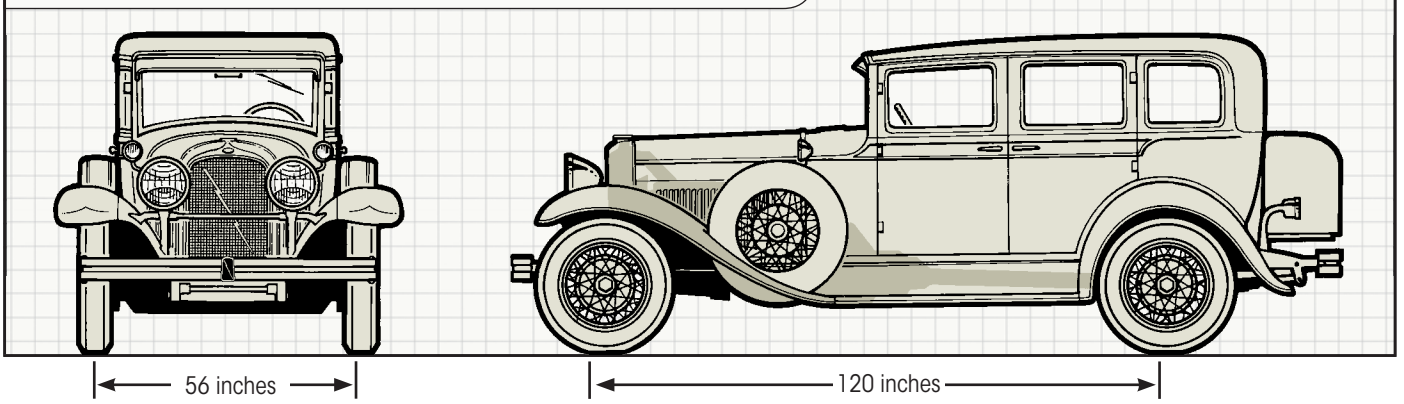
The big steering wheel is an absolute necessity, despite the Marmon's relatively low weight. Parking lot speeds require extra effort, but it's not back-breaking. Though the effort decreases as speeds increase, there is never any doubt about that turning the Model 78 requires plenty of strong input on the part of the driver. Fortunately, though more than somewhat vague on center, the steering is surprisingly accurate when turning or changing lanes. Feedback comes in the form or road imperfections being amplified through the steering wheel.

The mechanical four-wheel brakes require you to think ahead, but are surprisingly usable. Though the pedal effort required is more than hydraulic brakes would require, the sensation is very linear, very honest—push harder, brake harder. I would imagine that fade would be a real issue in true stop-and-go driving, particularly after a panic stop or two.

Guided by the radiator cap, running well above the posted speed limit and staring down the long, tapered hood of the Marmon, there is little doubt in my mind that driving a prewar car at speed can turn even the worst day into a very good time and the grumpiest heart into the warmest. Tim's Marmon delivers on that promise in spades.

Today, Tim attends shows with Michelle ("She loves it. I don't think she has missed one.") and even gets the family involved, ensuring that a fourth generation will enjoy the Marmon. Although their teenage daughters, Anna and Macy, haven't quite caught the bug, Tim has already given their son, Tyler, just 15, some parking-lot driving lessons in the Marmon. Here's hoping that Tim doesn't need to bathe the car in oil to keep it ready when the time comes to pass it down.

1928 MARMON MODEL 78 SEDAN



SPECIFICATIONS

PRICE

Base price	$1,895

ENGINE

Type	Overhead-valve straight-eight, cast en bloc
Displacement	217 cubic inches
Bore x stroke	2.94 x 4 inches
Compression ratio	5.5:1
Horsepower	86 @ 3,400 RPM
Torque	N/A
Valvetrain	Solid valve lifters
Main bearings	Five
Fuel system	Stromberg 1 ¼-inch updraft carburetor; Stewart vacuum tank
Lubrication system	Full pressure
Electrical system	Delco-Remy 6-volt
Cooling system	Centrifugal water pump
Exhaust system	Cast-iron manifold, single exhaust

TRANSMISSION

Type	Three-speed manual	
Ratios	1st	3.00:1
	2nd	1.75:1
	3rd	1.00:1
	Reverse	3.87:1

DIFFERENTIAL

Type	Hypoid, spiral bevel gears; Hotchkiss drive
Ratio	4.90:1
Drive axles	Semi-floating

STEERING

Type	Ross cam and lever
Turns lock to lock	3.45
Ratio	15.15:1
Turning circle	40 feet

BRAKES

Type	Bendix four-wheel mechanical, self-energizing
Front	12-inch x 1.75-inch drums
Rear	12-inch x 1.75-inch drums

CHASSIS & BODY

Construction	Steel body over hardwood framing, ladder frame with six crossmembers
Body style	Four-door, five-passenger sedan
Layout	Front-engine, rear-wheel drive

SUSPENSION

Front	38.19 x 2-inch semi-elliptical leaf springs with ends mounted in rubber shock insulators
Rear	59.56 x 2-inch semi-elliptical leaf springs with ends mounted in rubber shock insulators

WHEELS & TIRES

Wheels	Hayes wire
Front/rear	19 x 4-inches
Front/rear tires	29 x 5.50

WEIGHTS & MEASURES

Wheelbase	120 inches
Overall length	181.4 inches
Overall width	69 inches
Overall height	70.6 inches
Front track	56.0 inches
Rear track	56.0 inches
Shipping weight	3,104 pounds

CAPACITIES

Crankcase	6 quarts
Cooling system	5 gallons
Fuel tank	14 gallons

CALCULATED DATA

Bhp per cu.in.	0.40
Weight per bhp	36.09 pounds
Weight per cu.in.	14.30 pounds

PERFORMANCE

Top Speed	75-80 MPH

PRODUCTION

1928	14,770, inclusive of Model 68, 75 and 78.

PROS & CONS

+ Powerful straight-eight engine

+ Single family ownership for 50+ years

+ Excellent example of Marmon engineering

- Difficult to operate pedals

- Brakes require thinking ahead

- Most parts are very hard to find

WHAT TO PAY

Low
$15,000–$20,000

Average
$30,000–$35,000

High
$45,000–$50,000

CLUB CORNER

Marmon Club
P.O. Box 530759
Miami Shores, Florida
33153-0759
786-457-3400
www.marmonclub.com
Dues: $30/year.
Members: 250

EMAIL YOUR THOUGHTS AND COMMENTS TO: **rlentinello@hemmings.com**

WE HERE AT THE AACA always love to read *HCC*, but the article by Jeff Koch on the 1934 Buick in issue #116 really caught our eye as the club was mentioned in the first sentence. Any publicity is great, and we certainly appreciate it, but unfortunately, the statement that AACA defines a 25-year old car as a Classic is incorrect. AACA does allow any car that is at least 25 years old to be entered in one of our national meets but certainly not as a Classic car. We have classes for Classic cars that pretty much mirror the CCCA's definition of a Classic car. We also have other classes such as "Antique" and "Production."

We still get calls on a fairly regular basis to define what is an antique car, classic car, vintage car, etc., and we all know that these terms are used loosely by a lot of people. To avoid the confusion and the debate we have simply labeled cars as "collectible."

Steve Moskowitz
Executive Director
Antique Automobile Club of America
Hershey, Pennsylvania

AS I OFTEN DO, I began reading *HCC* #117 by reading Jim Richardson's column first. It usually gets me thinking, but did so more than usual this time, as I happen to be one of those "young fellas" Mr. Richardson was addressing. More specifically, I am 21 years of age, and my friends perhaps see me as the "weird kid," as Jim's friends did him.

I drive a mid-1990s Ford Fiesta, which in England at least, is not so unusual for someone of my age. However, I've had an interest in older cars for quite some time, and since buying a copy of *HCC* whilst on holiday a few years back, have had a fascination with American cars, particularly those from the prewar era. Both their styling and the soundtrack of their smooth six- and eight-cylinder engines, give those cars real presence. I too am a fan of the 1939 La Salle and, having recently bought a factory photograph of such a car to display on my wall, will be dreaming of owning and driving one for years to come.

I like modern cars too—they can certainly be impressive—and I am studying to become an automotive engineer. I can't help feeling, though, that modern cars are too complex, especially when it comes to electronic gadgets, and one day a point will be reached where these distractions will cause us to forget to enjoy driving our cars.

I don't know who I'd have sitting next to me in my 1939 La Salle, but I can safely say I'd have the latest copy of *HCC* tucked in the glovebox for some enjoyable reading after a day of driving. Thank you for producing such a well-written and informative magazine. I look forward to receiving the next copy and finding yet another car I dream of owning.

Josh Brailsford
Sheffield, England

ANOTHER GOOD PACKARD column by Pat Foster in *HCC* #119 on what could have been. I think we all agree that, if there was one car company we couldn't afford to lose, it was Packard. A couple of interesting points, in regard to Packard's move to the Conner Avenue plant, and the new Utica engine plant. One little-known fact is that Packard at full production at Conner could not assemble enough cars to take enough engines (the new V-8) from Utica to make Utica profitable. So along Pat's thought lines, perhaps keeping the senior Packards at the Grand Boulevard plant and using Conner Avenue for the Clipper (with the old body) would have allowed Packard to at least turn a profit at Utica.

After the 1956 model year, Packard should have used both Grand Boulevard and Conner for the senor line, and moved the Clipper line to South Bend. The 1957 Packardbaker was actually a pretty nice mid-priced car as it was, but didn't make it as a Packard. That would have given Packard the capacity to fully utilize the Utica facility, maybe even shipping Utica V-8s to South Bend for the Clipper the way they shipped them to Kenosha for the Nash and Hudson lines.

For general information, while the Grand Boulevard plant still stands empty since 1956, the Conner plant was demolished, and Utica became a Ford soft-trim plant and was recently demolished.

Michael Cenit
West Bloomfield, Michigan

USUALLY IT'S "the 120 that killed Packard," which is nonsense. As a fellow mourner and longtime enthusiast of the brand, I have my own theory of how things came apart—which is that 40 years of bad eyesight slowly killed the company.

To be more specific—consolidation in the auto trade began around 1910. Billy Durant was gobbling up small companies to form General Motors. Ford, Maxwell, and the Dodge Brothers, among others, were taking off, building cars that average people could afford. The market for carriage trade cars began a gradual decline and came to a screeching halt about 1939. It changed course about 20 years later when Mercedes et al set new standards (or revived old ones) in this market.

Packard (and others) were nearsighted. They totally failed to see what was happening or notice that cars used as sporting devices were being replaced by cars used for transportation. In 1922, the company built more trucks than cars—myopia struck again. They stopped building trucks and turned the truck facility to the construction of more luxury cars—in this case, a single six-cylinder model. They failed to notice that whenever they built a six-cylinder model, it outsold the eight- and 12-cylinder models—a message they ignored, forging ahead building big cars to compete in a shrinking market segment.

Later in the decade, after they stopped building trucks, they also abandoned the aircraft engine business, and the marine engine business; lousy eyesight again. A different management, with broader vision of the transportation industry, would have turned Packard into the Daimler-Benz of the U.S.—they had the people and the engineering skill needed.

Arthur Einstein
Stuart, Florida

AFTER WWII, there were five independent auto manufacturers, with Kaiser-Frazer being the upstart after the war. This discussion has appeared in other stories that I have been following over the past 30 years. One such "what if" that appeared joined Nash, Hudson, Packard and Studebaker together.

My plan would be to retain all four nameplates, but each in a distinct class. Packard would be the luxury line, Hudson the solid middle-class line, Nash the economical low-price line, and Studebaker the truck line. Each of these marques was firmly established in its distinctive class of automobiles and trucks.

It's unfortunate that egos, lack of vision, and lack of willingness to compromise got in the way of a solution that could have benefited the whole.

Patrick Costello
Green Bay, Wisconsin

Rooting for the Home Team

I like to think I'm a pretty patriotic guy. Whenever I shop for anything, I make a point of trying to buy American-made goods. With tools and large appliances it's pretty easy, while clothing and small appliances present more of a problem. In many stores, it seems impossible to buy American. That ticks me off.

But when it comes to buying new cars, I've had a mixed record. Of the last four cars we bought, one was a Chevrolet—made in Canada; one was a Plymouth—made in Mexico; one was a Honda—made in Ohio; and one was a Subaru—made in Indiana. In each case, I've felt conflicted, because it has always come down to a choice of a foreign-built American brand or an American-built foreign brand. Oy!

Have you ever wondered why there are so many foreign cars in America? It wasn't always this way. When I was growing up, foreign cars were rare, and people who bought one were laughed at by the neighbors because everyone knew imports were lousy vehicles. Then suddenly, they weren't, and import sales grew to the point where they now control over half the American market. So, how were these foreigners able to build a beachhead in the United States? Because we'd lost our independent automakers, that's why.

Think about it. Back in the 1920s and 1930s, any really rich person who was looking for the very best car in the world bought a Duesenberg, or maybe a Marmon V-16, Pierce-Arrow or a big Packard Twelve with custom bodywork. Nowadays, they have to settle for a Rolls-Royce, Bentley or a Mercedes-Benz/AMG sedan, because there are no American-made cars to compete with the ultra-luxury brands. In the near-luxury field, there are the smaller Infiniti and Lexus models; it used to be those buyers went for a Packard Clipper, Reo or maybe a Hudson Commodore.

BMW will probably sell over 200,000 vehicles in the U.S. this year. Why? Maybe it's because buyers don't have the option of purchasing a supercharged eight-cylinder Graham sedan, or a Stutz Monte Carlo with a 32-valve cylinder head and dual overhead camshafts tucked in a body of exquisite sportiness. If Graham and Stutz were still in production today, they would certainly give BMW a run for its money.

I have a friend who loves Audis, and has owned several. Do you think he would buy an Audi if he could have a new Cord instead? Cord was an incredibly good-looking front-wheel-drive sports sedan decades before Audi hit these shores. It's too bad my friend doesn't have the choice of buying a new Cord, or even a Ruxton, for that matter. If it could be otherwise, Audi wouldn't stand a chance.

Don't believe me? Then consider this set of facts: Sales of imported cars in America didn't really start to climb until around 1959—a few short years after the demise of Nash, Hudson, Willys, Kaiser, Frazer and Crosley cars. Fact is, if you wanted to buy a small car in the 1950s, you went for a Crosley, Henry J, or perhaps a Willys, Rambler, or Hudson Jet. If you wanted a performance sedan, you bought a Hudson Hornet, or a Rambler Rebel. And if you just wanted something different from the neighbors, you bought a Nash.

To me, it's ironic that Studebaker took over distribution of Mercedes-Benz cars in 1957, because the following year the company ended production of Packard-branded cars—the so-called Packardbakers. In other words, Mercedes-Benz cars literally replaced Packard in dealer's showrooms. And this year Mercedes will also probably sell over 200,000 vehicles in the U.S. That's a bitter pill to swallow. Just think, if that could've been 200,000 Packards.

Some of the American competitors that Jaguar used to face were the Studebaker Hawk and Avanti, Kaiser-Darrin and the Excalibur. Those cars are all gone now, and only Chevrolet's Corvette remains to carry the torch for American sports cars. Imagine if Mercer were still around, or Cunningham.

And it really irks me that the official taxicab of New York City is a Nissan. That designation should have gone to Checker and no one else. If Checker were still around, do you really think New York would vote to have a Nissan as its official cab?

So, if anyone ever asks you why there are so many imported cars in America, tell them it's because we lost a precious resource: our independents.

"Have you ever wondered why there are so many foreign cars in America? It wasn't always this way."

jimdonnelly

Whither the Wagons

People like us love a good argument. Get some car people together, maybe pop a couple cold ones, and off it goes. The topics can be about anything. Which was the better engine, the late Hemi or the big 440 Wedge? Who made sexier performance cars, Buick or Mercury? Which car had better build quality during the 1930s, Hudson or Studebaker? I won't even mention the debates over what any given car is worth today.

One debate that rarely occurs, perhaps because it's a generational thing, is about what killed off the American station wagon. In its traditional role as a full-size family hauler, the wagon no longer exists. Today, if you want a decent-sized wagon with an orthodox layout, and you're prepared to pay for it, you head for an Audi, BMW or Volvo dealership. It wasn't as if some nefarious plot spelled this type's demise in America, either. The station wagon was on borrowed time ever since the U.S. auto industry shifted en masse to transverse front-drive powertrain layouts. It upended the traditional weight and traction balances of wagons, and the added interior space potential that front drive provided set design teams thinking in new directions. Plus, let's face it, as the 1980s rolled on, people no longer had families. Instead, they had "lifestyles."

I became intrigued about all this after our Hemmings Daily Editor, Kurt Ernst, posted an entry on the digital *Hemmings Daily* (which you can sign up to receive, absolutely free, and should. Go to www.hemmings.com/newsletter/ to find out how) about an early alternative wagon that was considered for production by American Motors. In 1977, AMC created a truncated minivan called the Concept 80 AM Van, a short-wheelbase concept with three-across seating that was destined for (Jeep?) all-wheel drive and turbocharged horsepower. It's the vehicle depicted above. It was shown to handpicked focus groups as a design buck, with no drivetrain, but was never approved. You could call it a conceptual successor to the Pacer.

Reading about it in the *Hemmings Daily* made me look at some other concepts for family – oops, "activity" – vehicles that likewise didn't make it. Some were more plausible from a marketability standpoint than others, and Ford was one of the most active manufacturers experimenting with them. It did two takes during the 1970s on modifying the first-generation Fiesta with clip-on body panels that allowed it to be configured as a coupe, roadster, wagon or small pickup. Later, during the 1980s, came the Vignale TSX-6, a raised-roof design that applied the same switchable-body stratagem to the current Escort wagon platform. You could call it an early take on today's crossover concept.

General Motors and Chrysler were at it, too, when it came to people-mover concept cars. One of my personal favorites was the Pontiac Trans Am Type K of 1978. It was based on an actual production car, and a hugely popular one at that. Essentially, Pontiac extended the F-body Trans Am aft of the B-pillar with a huge Plexiglas enclosure, closed at the rear but with big liftgate windows on either side. A few years later, Chevrolet showed the Blazer XT-1, which looked mostly like a shortened version of the Lumina APV minivan, only with all-wheel drive and all-wheel steering, the latter controlled by an aircraft-like yoke. One of the Oldsmobile Aerotech studies was configured as a sport wagon, too.

Though concept vehicles are fun to contemplate decades later, the vehicles that did shunt the station wagon aside make for more compelling stories. The rescue of Chrysler from the scrap heap and its subsequent adoption of front-wheel drive, makes Mopar's monstrously successful 1983 minivan line one of the most important postwar American vehicle series, ever. So, too, is the original Ford Explorer of 1990. Both these vehicles utterly changed how families got around. Their survival to this day only underscores their importance. Disagree if you want, long for the station wagon of yesteryear, but the success of these two vehicles is a fact, one that changed how Americans viewed driving in very fundamental ways.

"Though concept vehicles are fun to contemplate decades later, the vehicles that did shunt the station wagon aside make for more compelling stories."

Non-Classic Customs

In decades past, mounting custom coachwork to a luxury car chassis has often resulted in something that we'd refer to as a "Classic." While Mr. & Mrs. Upper Crusty were being chauffeured around town in their elegant, huge motorcars, the other motorists in the era would look at them and wish that they, too, could have a custom-built car.

Well, some of these middle-income motorists did have custom-built bodies on their not-so-expensive, non-luxury motorcar chassis. In the era around World War I, one custom-body builder reached out to that middle-income earning group and offered them something a little different.

FIVE-PASSENGER SEDAN WILLOUGHBY COMPANY, UTICA, N.Y.

The Willoughby Company of Utica, New York, was well known and admired for its enclosed body styles. Sedans, limousines, broughams and town cars with fairly conservative but elegant styling were the firm's specialty. Willoughby could trace its origins back to the design and manufacture of horse-drawn carriages produced by the Utica Carriage Company. As late as 1914, Willoughby's stationary described the company as coachbuilders of "carriages, sleighs and automobile bodies," and even at that time it was already promoting closed coachwork.

From the Teens into the mid-Twenties, Willoughby would build its custom closed-bodied cars on Studebaker, Ford, Nash, Hudson, Chandler and other well-made chassis that were not in the luxury car price range. These Willoughby-bodied cars were more expensive than the factory "catalog" coachwork, but not so much that they were totally out of reach.

In Boston in 1919, the Studebaker dealer was the Donovan Motor Car Co. at 626 Commonwealth Avenue. In addition to announcing that the showroom doors were open all day on Washington's Birthday, Donovan informed readers that it was exhibiting special custom-built models. These consisted of a four-passenger club sedan, a four-passenger coupe, and a seven-passenger sedan.

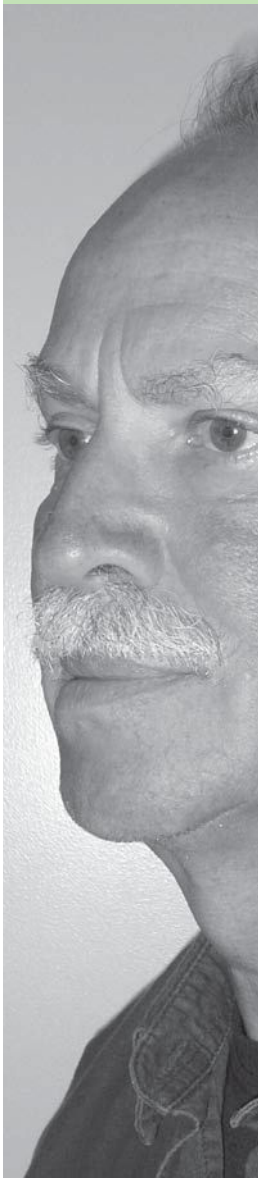
The Donovan Company boasted that "The bodies were built to order by the Willoughby Company, considered among the best custom body builders of the country," and that "cost was not taken into consideration" when it chose to have them built. Although the claim was made that the bodies were built to order, it wasn't mentioned that they were built in groups of five to 10 or more at a time. They were not built in an individual, one-at-a-time manner. The bodies were of aluminum and the interiors furnished in velvet velour. The exterior colors were painted in soft colors to blend with the interiors. The dealer also mentioned that there was an "unprecedented demand for these cars," and that they "would appeal to the motorist of most fastidious taste."

During this time period, Willoughby employed about 250 people, according to the company president, Francis "Fritz" Willoughby. A Utica business directory notes "the average wage rate (paid by Willoughby to workers) is high." It also records that Willoughby had contracts for deliveries six months ahead and had been compelled to rent two additional plants in the past three years.

Willoughby publicized its coachwork on these non-classic and classic chassis via a series of single-sheet flyers that were 7 x 11 inches. The name of the chassis was not mentioned by Willoughby in this particular type of hand-out, and I am guessing that quantities of these sheets were sent to specific dealers such as Nash, Studebaker, etc. for them to distribute. It was an inexpensive way to give a potential customer something to take home to remind them of the custom body they could buy. The cars with Willoughby bodies were unique and a little more expensive, but they had the quality and panache for those customers who could afford them.

I would be delighted to hear if anyone knows if any of these quality, non-classic customs by Willoughby exist. Please let me know at coachworklines@aol.com.

"The dealer also mentioned that there was an 'unprecedented demand for these cars' and that they 'would appeal to the motorist of most fastidious taste.'"



Belvedere Beauties

Appreciated for their design and what they symbolize, four perfectly restored Belvederes represent Plymouth's best for 1954

WORDS AND PHOTOGRAPHS BY DAVID LaCHANCE

It's a bouquet of sun-kissed colors that could only have come from the Fifties, with names that murmur of romance and adventure under golden California skies: Santa Rosa Coral. San Gabriel Green. San Diego Gold. San Pedro Blue.

As the colors draw you in, you come to realize that there's something else remarkable about this perfectly matched quartet of 1954 Plymouth Belvederes: Each one is a flawless example of its kind, looking as if it might have just arrived from the factory, washed by hand and rolled onto the showroom floor. Taken together, they're a three-dimensional dealer brochure, illustrating

all four Belvedere body styles for 1954, and all four primary colors offered.

If the world were only about dollars and cents, this Whitman's Sampler of Belvederes probably wouldn't exist, as its owner, Jim Benson, cheerfully admits. "These cars don't have any value," he notes. "If I was going to restore a Plymouth, it would be a '59, or a '57 model." Add up the book values of these four cars—the sport coupe, the convertible coupe, the four-door sedan and the suburban, or wagon—and, even using the high end of the scale, you won't come close to the cost of their uncompromising, AACA Senior-winning restorations.

The Belvederes were on display in the showroom of Jim's Chrysler dealership in Greer, South Carolina, when we saw them while in town for the Euro Auto Festival last fall; they've since been moved to the private museum behind the dealership, given their own space among the glitzy American convertibles from the late 1950s that made a big impression on Jim in his teenage years.

It's only natural that Jim would have a fondness for Mopar products. It was a Chrysler franchise in 1964 that got him started in the business, and, as he points out, the cars "have put bread on the table for 50 years." But he's quick to note that he's not the one who assembled the Belvedere collection. The credit goes to the man he bought the cars from 18 months ago, a Florida car collector and former Chrysler executive named Darrell Davis.

Plymouth's "Color-Tuned" Belvederes featured interior colors matched to exterior paint schemes. All four cars feature an array of factory and dealer options, including rear fender skirts and wire wheels. The convertible, above, and the sedan have the new-for-1954 Powerflite transmission; the wagon and hardtop coupe have column-shifted three-speed manuals.

Darrell has been consolidating his collection, which at one time numbered more than 30 cars, but he still has some significant examples—a couple of 1963 Max Wedge Plymouths, a pair of fuel-injected 1957 Corvettes. But the cars' appeal to Darrell is not rooted in their book values, or appreciation potential; "I'm not a guy who flips cars," he says. "I generally buy the kind of cars that I coveted when I was a kid. I've been car crazy my whole life." Just ask him about his Chrysler LeBaron convertible, with its Mark Cross package. "It's all original, even the tires. And everything works, even the digital dashboard," he points out.

There's a simple reason for Darrell's interest in the 1954 Belvedere line: a strong family connection. A 1954 Belvedere sedan was his parents' first new car (and the car that he learned to drive in), and Darrell drove two 1954 Belvedere convertibles while he was in college. Those ties, combined with his lifelong career with Chrysler, were more than enough to draw him in.

Belvedere was Plymouth's top line in 1954, perched above the Plaza and the Savoy in the company's hierarchy. The "Hy-Style" '54s were essentially warmed-over '53s, with extra lashings of chrome trim and "Color Tuned" interior and exterior color combinations that featured bolder, warmer hues. Although the cars were well regarded by the critics, the outdated straight-six engine and unfashionably boxy styling finally caught up with Plymouth, with sales falling by a disastrous 40 percent from the previous year.

Darrell tells us that he didn't actually set out to build the world's finest 1954 Belvedere collection. What he wanted, at first, was a convertible, just like the ones he had driven in college. "Nobody really collected 1954 Plymouths, as you well know," he notes. "There's a scattering of them around, but there's not that many." About 20 years ago, while searching for a good restoration candidate, Darrell's father hit on a terrific prospect: a low-mileage, highly-optioned, matching-numbers car in San Diego Gold that originally had been sold to a woman in Arkansas, and that still had all of its paperwork, including its build sheet. The only thing was that it wasn't a convertible—it was a hardtop, one of 25,592 built that year.

No matter; it was too good to pass up. Darrell bought the car and sent it to Don Harrison at Pioneer Auto Restoration in Wauchula, Florida, for a complete restoration. Built in Evansville, Indiana, the hardtop was bought from its fourth owner in

Florida in December 1991. "It was in good condition, despite having been the subject of an amateur restoration," he notes.

It was then that the convertible showed its face. Darrell found it advertised for sale in Indianapolis, Indiana, an 88,000-mile example that had been repainted once in its original San Gabriel Green and was in good condition. He learned that it had been sold new by Wegge Dodge in Pasadena, California, a dealership that was still in business. A call to Wegge put him in touch with the son of the founder, who, after hearing Darrell's description of the heavily-optioned convertible, identified it as his mother's former car. "He said, 'I remember riding in it to my grandparents' on the weekends when I was just a little boy,'" Darrell recalls. The convertible, too, was sent off to Pioneer to be restored.

The convertible was the rarest of the 1954 Plymouths, with just 6,900 built, but the station wagon wasn't far behind, with a run of 9,241—and it's probably safe to assume that those workhorses had a higher attrition rate. Imagine Darrell's surprise, then, on seeing a San Pedro Blue example consigned for sale on an Orlando, Florida, dealer's lot. The car belonged to a Minnesota man who was also a member of the Plymouth club.

"It had the typical Midwest lower body rust that was mitigated by the heaviest undercoat job on record," Darrell says. Off it went to Pioneer, where Don Harrison was, no doubt, becoming the world's leading authority on the restoration of 1954 Plymouths. "It's an interesting chase to find those pieces," Darrell recalls. "The emblems and the plastic pieces were hard to find in new old stock. And now I wouldn't think you could find them." The NOS plastic badges were selling for $500 apiece—and that was 25 years ago.

A footnote to the suburban story: The wagon appeared in a photograph that Chrysler Financial sent out to dealers, where it was spotted by the son of the original owner, thanks to Darrell's use of year-correct Kansas license plates. He contacted Darrell, and sent him all of the paperwork about the car that his father had saved.

It was at this point that Darrell realized that destiny had tapped him on the shoulder. "The sedan. I said, 'If I've got the three colors, I need to find the sedan.'" The missing color was Santa Rosa Coral, which happened to be the color of his parents' car. Darrell started looking around, and found a lead through one of his employees, whose father was president of the local Plymouth club in Detroit. He knew of just the car, one that had been bought new by a Chrysler employee who lived close enough to walk to work, and put few miles on the car.

The sedan went through a succession of Plymouth club members, none of whom ever drove it in bad weather. "When I took it to the restorer, being a Michigan car, I thought we'd have some problems, but it was the best one of the bunch, believe it or not," Darrell says. "There was less wrong with the body of that car than with any of the others." The sedan, one of a palindromic 106,601 built that year, had accumulated just 40,000 miles since new.

Darrell displayed the cars together, hauling them to AACA shows in a trailer. All four have achieved AACA Grand National Senior status; at one Plymouth Grand National meet, one won the Best in Show, while the other three won their classes.

About two years ago, Darrell decided that the time had come to reduce the size of his collection. The cars had become too much to take care of, and his wife, Jacque, was experiencing worsening symptoms of Parkinson's. He approached Jim, whom he had known for years through Chrysler circles, to see if Jim might be interested in adding the Belvederes to his collection.

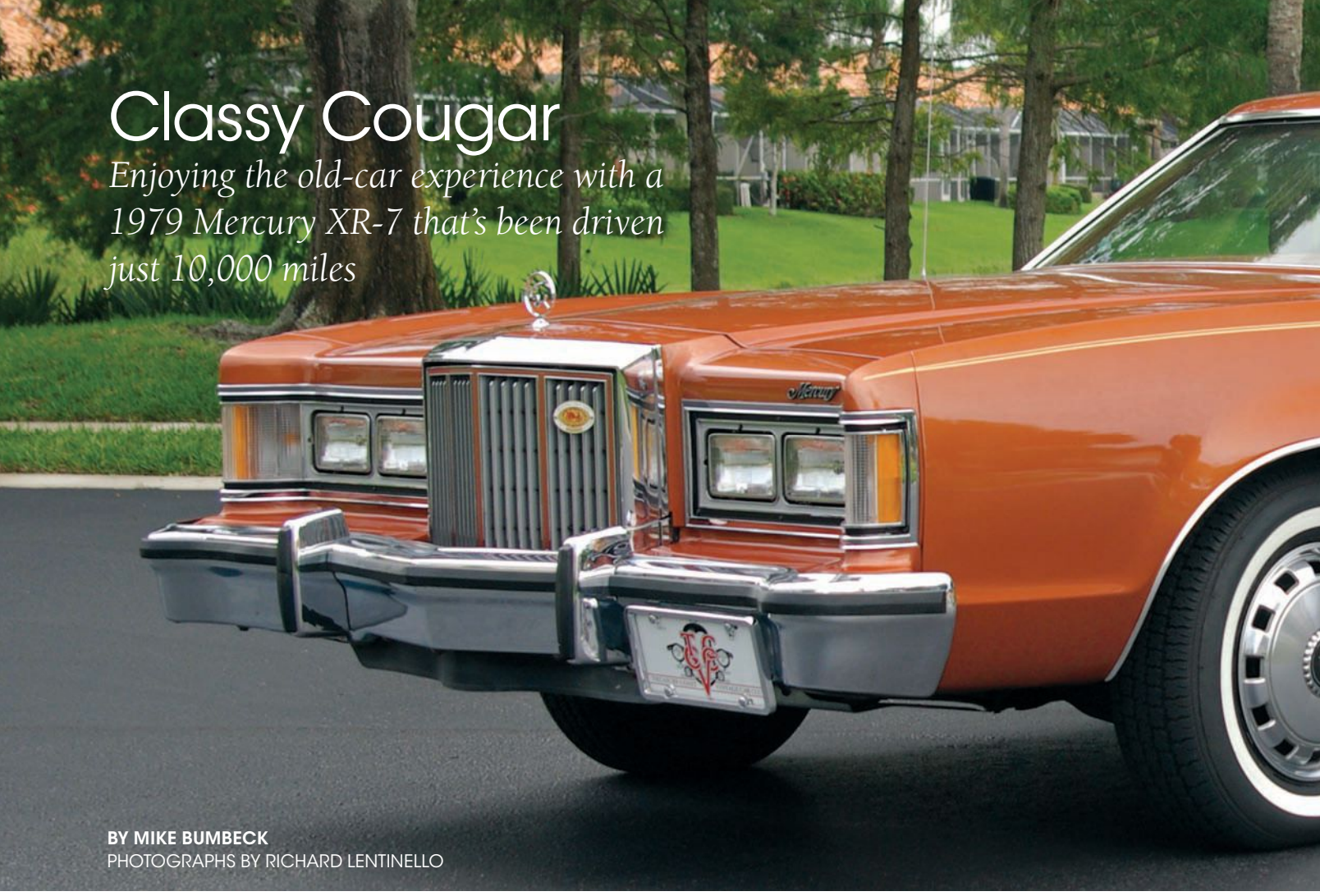
"I wanted them, and I had the perfect place to put them," Jim says. They now occupy a special corner of the museum, complete with the banners, brochures and other sales materials that Darrell had accumulated. Like Darrell, Jim doesn't drive the cars, though he does bring them out for the occasional show.

"I'll tell you what," Jim says. "Those cars draw a crowd everywhere they go."

Like the rest of the quartet, the suburban features the 110-hp, 230.2-cu.in. straight-six engine that was introduced midway through the 1954 model year run. The styling was an update from the redesign of 1953, with sunny color combinations and additional brightwork employed to make the cars more appealing.

Classy Cougar

Enjoying the old-car experience with a 1979 Mercury XR-7 that's been driven just 10,000 miles



BY MIKE BUMBECK
PHOTOGRAPHS BY RICHARD LENTINELLO

Big Three badge engineering was in overdrive in 1979. The lines between American marques continued to blur, and Mercury was no exception. In 1977, there was even a Cougar station wagon, which looked similar to the Ford LTD station wagon. However, all was not lost at the Mercury division when it came to intermediate performance-oriented coupes for the 1979 model year.

The Cougar stood fast in the personal luxury segment amid the mid-size Fox-bodied Zephyr and Maverick-based Monarch, as well as the king-size Marquis.

The Cougar had undergone a redesign for 1977, losing the sweeping fuselage style and gaining sharper lines, including a comparatively straight beltline when viewed in profile. Competitive cars above the Cougar in the corporate umbrella included the Ford Thunderbird, shrunken from its previous Continental size into the intermediate slot to compete directly against the Cougar. Competition from the other automakers included the Buick Regal, which introduced a turbocharger to its V-6 engine for V-8-level horsepower; the over-the-top Dodge Magnum XE; last of the rear-wheel-drive Oldsmobile Cutlass Supremes; and the Pontiac Grand Prix.

Even in its last year, with few changes made, the Cougar XR-7 made up for almost 25 percent of Mercury Division production, and well over 163,000 examples were purchased by those buyers looking to get performance and style in a single package. The XR-7 designation was reserved for the top-shelf Cougar, and only when it was in coupe guise. Standard features put the XR-7 into the "loaded" category. A flight bench front seat with fold-down center armrest, cut pile carpeting, electric clock, deluxe steering wheel

The optional 351-cu.in. Windsor V-8 engine was rated at 151 horsepower at 3,600 RPM and made its full measure of 270-lb.ft. of torque at a near imperceptible 2,200 RPM.

and courtesy lamps were punctuated with simulated baby burl walnut trim appliques inside. An XR-7-specific sound package belted out the hits.

The Cougar hood ornament was complemented by a landau vinyl roof with opera windows as part of the C pillar. Rounding out the XR-7's standard features were body side paint stripes, special XR-7 wheel covers and radial tires, power steering and front disc brakes, and a specially tuned "ride-engineered" suspension, which included front and rear anti-roll bars.

Our feature car is a 1979 Cougar XR-7 finished in Medium Dark Orange Metallic (code 5N) and powered by the optional 151-hp, 351-cu.in. Windsor V-8 engine. Other options on this example include the Select-Shift three-speed automatic transmission, tinted glass and rear-window defroster.

This particular Cougar was sold from Harold Nye Ford-Mercury-Lincoln in Oneida, New York, to its first owner, who lived in nearby Utica. Its second owner just happened to be John Cox, a longtime friend of the Cougar's current and careful caretaker, Jack Storandt Jr., who took ownership on his birthday in 2013. Jack and the Cougar currently reside in Palm City, Florida.

The Cougar had spent all of its previous existence in upstate New York, but was always carefully stored during winter before any salt hit the roads, not to be taken out until spring and only after the rains had cleansed the highways of steel-eating calcium chloride. After the first owner had died, John bought the all-original Mercury from his estate.

After his wife of over 40 years had passed away, Jack explains: "I wanted to do something that wasn't what my wife and I had been doing for 42 years. I wanted a different life. I can't replace her, and I can't do things that we did. I wanted something different." So his old friend John sold him the Cougar after vouching for its incredible original condition. Jack says, "I knew if John said the car was in good shape, then it

Acres of opulent light chamois vinyl cover the bench seat and interior. Carpet extends from floor to lower doors. A sports instrumentation group is surrounded by simulated baby burl walnut and a deluxe steering wheel. Climate control, electric windows, and remote mirrors are just a few personal luxuries. The "Ride-Engineered" plaque stood in part for the cross-country suspension package.

certainly was." Truth is, this has got to be one of the most authentic, lowest mileage 1979 Cougar XR-7 in existence. Its odometer only recently rolled past the 10,000-mile mark, and everything about it is 99 percent original, including every square inch of the factory-applied paint, upholstery, chrome, etc.

After the Cougar had been shipped to Florida in an enclosed trailer, Jack had his trusted mechanic get it in top-running condition. The carburetor was completely rebuilt, the spark plug wires replaced with an original equipment set, and the power steering pump, tires and battery were also replaced. The spark plugs, however, were perfect. In fact, the car was running so smoothly that these plugs were returned to their spots in the cylinder heads. The dual exhaust system was previously installed, and Jack reports the car performs well above average and sounds great.

Cutting-edge electronics from FoMoCo circa 1979 may have been high-tech then, but are suspect years later, especially when it comes to the ignition module. Finding an NOS replacement was a bit of a challenge. Even when new, these components were prone to malfunctioning, and the first ignition module lived up to that reputation, failing immediately. The second one has so far held up. Any other things that were fixed, such as leaking engine seals, were a result of the car not being driven regularly. The brakes were near perfectly broken in.

Jack gets the car professionally detailed inside and out and keeps the car stored in a garage in between regular cleanings. He uses Mother's California Gold car wash and Turtle Wax ICE detailing spray for a quick on and off adjustment, as well as another Turtle Wax ICE product for the vinyl top. The top is striking and as original as the rest of the car, so Jack takes extra care to preserve the material. Black Magic Bleche Wite and Armor All keep the tires cleaned and Rain-X works for the windshield. Mud flaps came off after the AACA judges determined that they were not original, which meant a little more cleanup here and there.

While someone may have once sat here, Jack says no one has ridden in the back seat of this Mercury Cougar XR-7 on his watch. Even the ashtrays have never been used.

Everything is back to original, and Jack has a plan to keep it that way. He runs the engine every week whether or not he's going anywhere, and drives it at least twice a month to local car shows, events, or just out for fun, all according to a carefully calculated mathematical formula. The Cougar has logged just over 10,000 miles since 1979, so Jack figures that if he drives it about 24 miles per month, he'll stay within the same range of what it had been driven in its time on earth before he became the proud owner. While Jack may not go far in his

travels, every mile delivers a lot of good times per gallon.

The orange hue of the Cougar was listed as a "glamour" color, and Jack reports that the ladies do indeed like the look of the car, but are more impressed by how it rides. Jack recently took his neighbor for a ride, and she said it was so comfortable she could ride in the car all the way to New York. The entire powertrain is as smooth as one would expect with so few miles and with such careful caretaking. Jack says jokingly that the car rides so smooth and runs so strong that he has a bit of a problem on the highway. "I don't have cruise control. I look down and I'm doing 95. 'Just because you're driving on Interstate 95,' the trooper said, 'doesn't mean you can drive 95 miles an hour.'"

Joking aside, Jack drives the car at legal speeds and gets accolades at every location he travels to, even if it's not a car show. He recently took the Cougar to the Hawaiian island tiki-themed Dolphin Bar & Shrimp House in nearby Jensen Beach, a fine-dining establishment once owned by the late American singer and entertainer Frances Langford. Jack emerged from the Dolphin with pals to see a man driving backward towards where they were standing. The man had been looking at the Cougar XR-7 while Jack was eating, and was returning to the restaurant to tell Jack that the Cougar was in fact the nicest car he had ever seen.

The same phenomenon occurs wherever Jack goes in the Cougar. As a member of the AACA and the Treasure Coast Vintage Car Club, Jack gets out to as many shows as he can. The Cougar took First Junior at the AACA National Winter Meet in Port Saint Lucie, Florida, earlier this year as well as a Best in Class at the Elliott Museum show in Stuart. Jack bought the car to show and have some fun and figures that a few wins and a lot of good times make for a pretty good first year of collector car ownership.

"This is exactly what it is; the XR-7 was the top cat. A lot of people will look at this one and think it's a Thunderbird or a Continental. This is the big boy. I found that out just by handling and driving it…"

People sometimes confuse the Cougar with a Thunderbird of the same era, which is an honest case of mistaken identity, considering the rampant badge engineering of the time and the somewhat similar lines between the two. Jack's other car is a 2013 Buick Regal, which he says is hard to compare to the Mercury. "It's got a turbo. I step on it and go to the back seat!" Yet the Mercury is way out ahead of other classics he has owned like a 1955 and '59 Ford. "I don't think I've ever had another Ford that can compete with this one. This is exactly what it is; the XR-7 was the top cat. A lot of people will look at this one and think it's a Thunderbird or a Continental. This is the big boy. I found that out just by handling and driving it," says Jack.

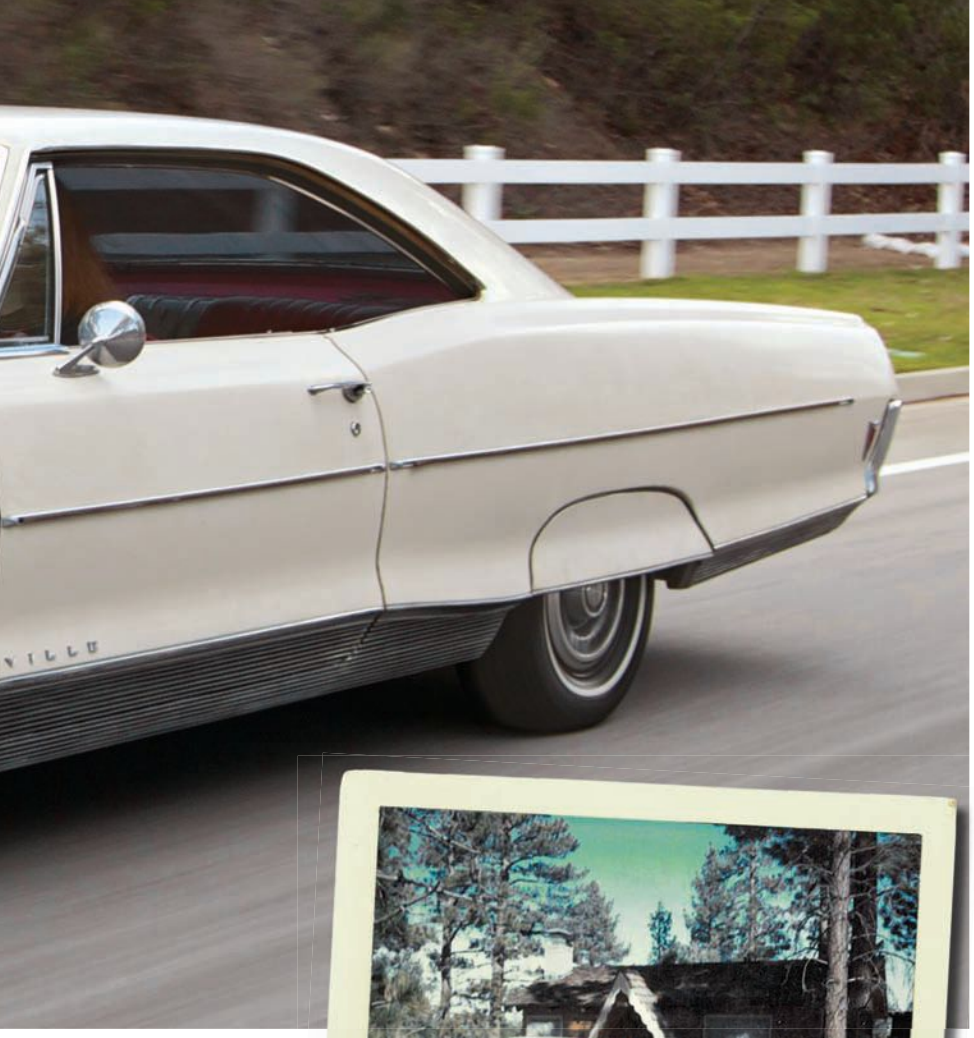
Longtime-friend John Cox is still involved with the car, and stays in touch with it through his relationship with Jack. Jack is satisfied with the Cougar as the sole and stylish automobile representative of his collector car hobby. "One car is plenty of car, especially when there is as much car as there is in the Mercury Cougar XR-7." Jack says he plans on keeping the car in original condition, but that there might come a time when he lets the lease run out on his Buick Regal and runs the Mercury Cougar XR-7 as his daily driver—even if that would throw his mathematical formula out a little bit.

Bonneville Heirloom

Single-family-owned 1966 Pontiac Bonneville has traveled 143,000 miles and still performs perfectly

BY MARK J. McCOURT • PHOTOGRAPHS BY JEFF KOCH

When you're six years old, little things can make big impressions: the crisp lines of a quarter panel, genuine walnut veneer surrounding sporty square gauges, the chill of conditioned air on pleated vinyl upholstery. The first new car that your family has owned in your short lifetime could forever cement your idea of what a car should be. And when you grow up with that same car, living with it for the better part of 50 years, your automotive world revolves around it. That's how Yorba Linda, California, resident Robert "Bob" Lane feels about his Pontiac Bonneville, the car that became an unintentional keepsake.



The Bonneville traveled to the Lane family's cabin in the summer of 1966; a young Bob posed by the trunk in this vintage photo.

"It was March 1966, and my parents' last new car was a 1958 Pontiac Star Chief," Bob remembers. "My dad had business cars that he'd switch every two years, but they kept the family car, which my mother primarily drove. Their 1958 Pontiac had manual steering, manual brakes, and in the summer, a swamp cooler placed on the floor in the front for long trips. While working in the area, Dad stopped by McConica Motors in Ventura. The result was a specially-ordered Bonneville hardtop coupe. He wanted a red Morrokide interior with the Mission Beige exterior, which was not a standard combination. Dad did not like electric windows or similar options, as they were prone to malfunction in those days, but he made sure 'Bonne' had air conditioning."

Pontiac's 1966 literature had recommended matching Mission Beige acrylic lacquer paint with a bronze, black or parchment interior, but Mr. Lane's selection was genuinely attractive. His new Bonneville was also specified with the aforementioned Custom Air conditioning, a Turbo Hydra-Matic transmission, pushbutton radio, Wonder Touch power steering and brakes, the heavy-duty Ride & Handling package and California emissions, among other options that raised its $3,354 MSRP to $4,612.99.

Selecting the automatic transmission meant that the car was built with a premium-fueled, 10.5-compression version of Pontiac's sturdy 389-cu.in. V-8. With a four-barrel Carter AFB carburetor, it made 325 hp at 4,800 RPM and 429-lb.ft. of torque at 2,800 RPM; this was enough to move the roughly 4,300-pound Bonneville—and whatever could be packed into its vast trunk—with authority.

"After being assembled in South Gate, California, the car was delivered on April 13, 1966. I still remember riding home with my dad that day, admiring the beautiful, rich-looking red interior," Bob says. "When we arrived home, I asked about the carpet on the doors. Being six and believing carpet was carpet, I gently placed my foot on the carpeted part of the door, to which I received a not-so-favorable response from my sister, warning that she was going to tell Mom and Dad!"

"Bonne" was the Lanes' new family car, primarily driven by Bob's mother save for when his dad took the wheel during their vacations throughout the Western states. It would make countless trips to the family's cabin at Big Bear, in the San Bernardino Mountains, and witnessed some startling experiences, as he remembers; "Shortly after we purchased her, we were in Vista, California, at a Union 76 gas station. My sisters were in the back seat, and my mother and I were in front. Dad had checked the front passenger tire for air when we heard a motorcycle rev up, and then the whole car was rocked.

"An attendant had driven his motorcycle between Bonne and the gas pumps, right over the gas line still filling the car, leaving scratches all along the passenger

The red Morrokide interior was a special order with Mission Beige paint; the dash's still-functioning pushbutton AM radio and ancillary Custom Gauge Cluster were factory-installed options.

side. It was incredibly stupid, but she was repaired. Another time, coming back from Arizona, we hit a sand storm and the paint got pelted pretty good. But aside from the gas station incident repair, she still wears her original finish," Bob explains.

The Lanes always loved this Bonneville, even after it was displaced from the garage and parked outdoors in the harsh Southern California sun. It would be the car that Bob drove to his high school prom, the one he filled with musical equipment and drove to gigs with his band. It survived carloads of teenagers and a cracked oil pan on a winter trip to the cabin. It was the car that got the job done, even when, well into its second decade, it was used as a de facto pickup truck, hauling a load of garden-fertilizing horse manure in its trunk.

Bob's parents passed away in 1991, and at that time, Bonne was one of three cars in the household. "One sister picked their Taurus, one wanted their Thunderbird, and that left me with the Bonneville. It was sitting there, then, with virtually no brakes, and it needed a valve job to pass smog regulations testing. But I was still thrilled," he recalls.

So this special automobile now belonged to the man who saw it, shining at the dealership, through a boy's wide eyes. Bob had the required maintenance performed by various specialists, then began driving it again. The Bonneville charmed Bob's wife, Martha, and it's been there as a fun car as their five children—Bobby, Johnny, Teresa, Patsy and Jimmy—have been growing up. It's taken the Lanes to places like Colorado, Kansas and Texas, has survived close encounters with three tornados and has carried people and cargo without complaint.

You might think that a car as treasured as this Pontiac would be pampered, but that's not the case. "It's often parked out in front of our house. One day, our neighbor came over and said, 'Bob, my son was pulling out of the driveway and he hit the Bonneville.' I could see in his garage, the whole rear end of his Ford Explorer was caved in, a taillight broken. I envisioned the worst.

> *"I still remember riding home with my dad that day, admiring the beautiful, rich-looking red interior."*

"I was expecting to see the side caved in, but I wasn't seeing anything. At the edge of the fender, by the rear bumper, I saw a little paint and a little scrape; looking closely, I saw that the fender was pushed in, maybe an eighth of an inch. You wouldn't notice that unless you went back and forth between the two sides. He said, 'I'm so sorry,' and I said, 'It's fine, there's no damage.' I haven't done anything to repair it."

Bob continues; "This car has patina because it's got 50-year-old paint, and surface rust is starting to form. Years ago, I used Palmolive dishwashing soap, but I started using Meguiar's products back in the 1970s, and have continued to use them. I buff it by hand. By no means is it babied—it sits outside. I keep sun shades in the front and rear windows, and blankets on the seats. The dash pad was cracked, and so I took it to Just Dashes for restoration; Martha and I re-installed it the morning that the 2006 Pontiac-Oakland Club International convention started in Ontario. There was some sun damage to an area of the front seat, which was repaired with original material.

"And for years, there was a leak in the trunk. I'd changed the seal, but that did no good," he recalls. "It turned out that the rear window was being held in just at one corner, and had that given way, the whole window would have fallen out! There was no rust in the chan-

The Turbo Hydra-Matic has needed two transmission modulators, and it received new seals last year. The 4 barrel carburetor requires periodic cleaning, but the 325-hp, 389-cu.in. V-8 has never been apart.

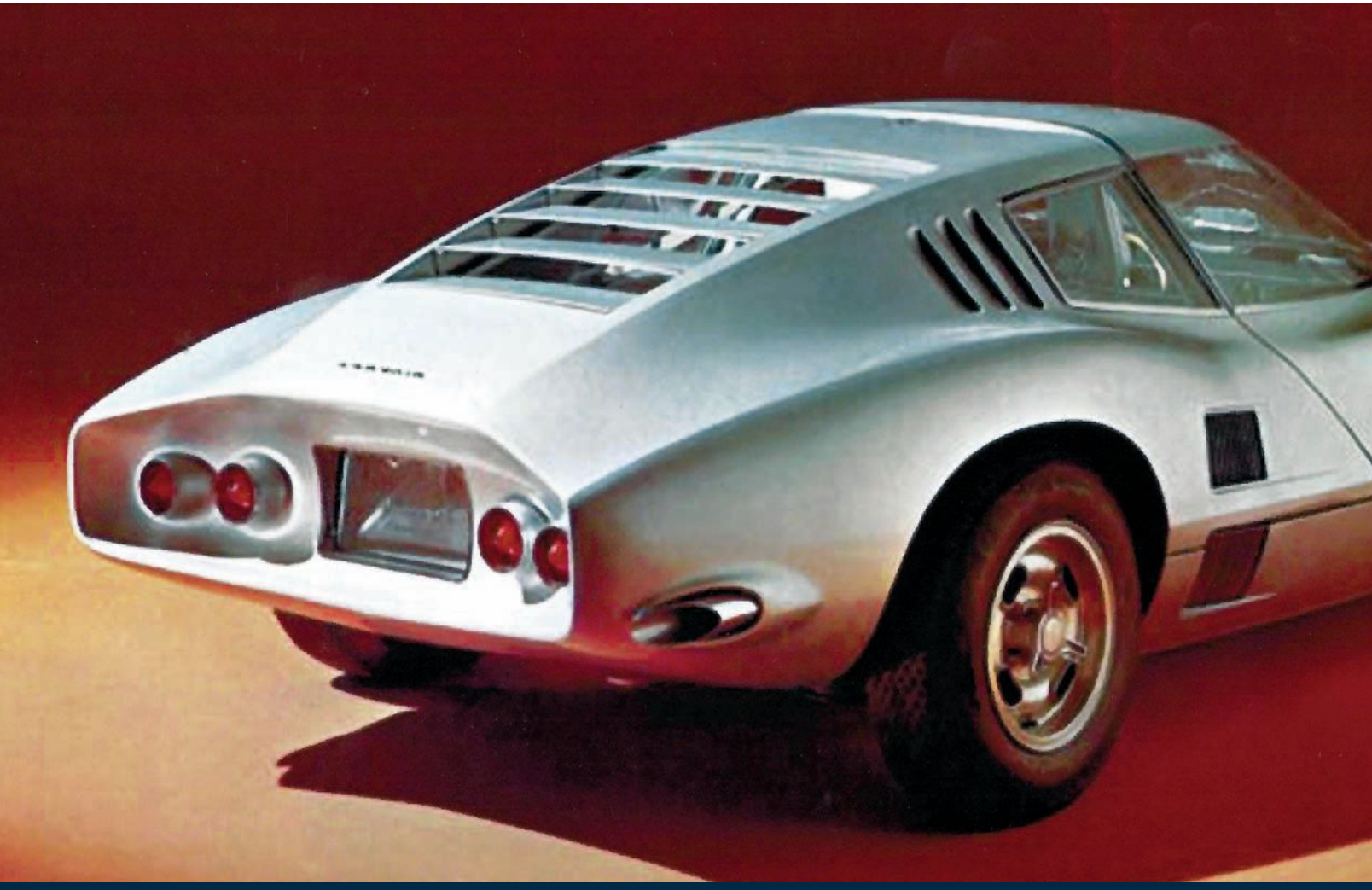
Nearly 50 years of exposure have aged the car's 1966 front plate; the factory-applied body paint is marked by surface rust.

nel, so they sealed it up. Since then, when it's rained, no water has gotten into the trunk."

This honest car has patiently waited its turn to shine again, its owner admits. "I promised her new paint when she turned 40, and I'll renew that promise when she turns 50. I've been collecting NOS trim and components for years—much is particular to the 1966 Bonneville—and what I can't replace with NOS, I'll have reconditioned."

So this original Driveable Dream Pontiac may soon become a restoration queen, but that's something it's earned over 143,000 largely trouble-free miles. And after that, it's not going anywhere; "It's fun and comfortable, and it has all the amenities you need to feel like you're in a modern car, although it isn't one. It's very reliable, and you can carry so much in the trunk that there's no reason to get rid of it.

"The kids have already told me they're going to fight over it," Bob says with a laugh. "My younger daughter and my sons love washing the car and helping to maintain it. Bonne is an heirloom, part of the family, and the problem will be figuring out who gets it. Having them share is not a bad idea… it's so big, if they live close enough, it could probably fit in front of two houses."



Chevrolet Concept Cars of the 1960s

BY PATRICK FOSTER • PHOTOGRAPHS COURTESY OF THE ARCHIVES OF PATRICK R. FOSTER

Although the 1950s is sometimes considered the "Golden Age" of concept cars, the 1960s probably produced more outstanding automotive designs in total. And among the Big Three automakers, General Motors appears to have produced more concept cars than anyone else. That's really not surprising; during that period, GM was the world's undisputed styling leader. Chevrolet, its largest division, in particular showed itself to be a very fertile environment for developing concept cars. During the 1960s, Chevrolet produced an almost dizzying array of dream cars, show cars and concepts.

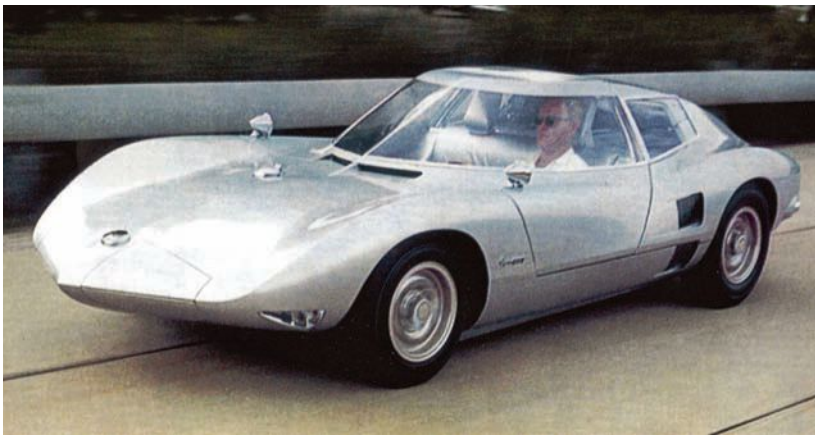
Perhaps not surprisingly, the majority of the concepts were sports car designs, because they were—and still remain—huge crowd-pleasers. And because back then, Chevrolet had three production-model sporty-car platforms to work with—Corvette, Corvair and Camaro, along with the compact Nova—the range of one-off production-based show cars the automaker could produce was remarkable.

The Chevrolet Division was understandably proud of its compact Corvair, which debuted for 1960. Bristling with innovations, the European-inspired rear-engine sporty compact car made an ideal base for a low-slung sports car concept, which is why Chevrolet built several.

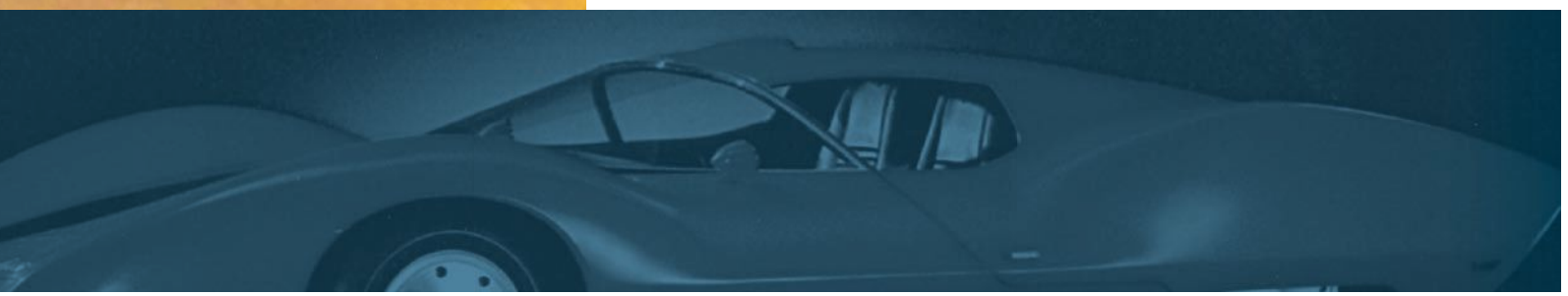
One especially gorgeous example is the 1962 Monza GT, easily one of the best-looking Chevrolet concepts ever built. Styled on a shortened and modified Corvair chassis by the legendary designers Larry Shinoda and Tony Lapine, the Monza GT utilized a front-hinged canopy rather than conventional

The 1962 Corvair-based Monza GT concept car had bold, exciting GT styling that looked sensational when viewed from the back. Note the side-mounted exhaust tips.

Although its swoopy Corvette-concept-inspired front end is quite striking, the Monza GT's lift-up cockpit canopy makes entry into the cabin somewhat challenging.



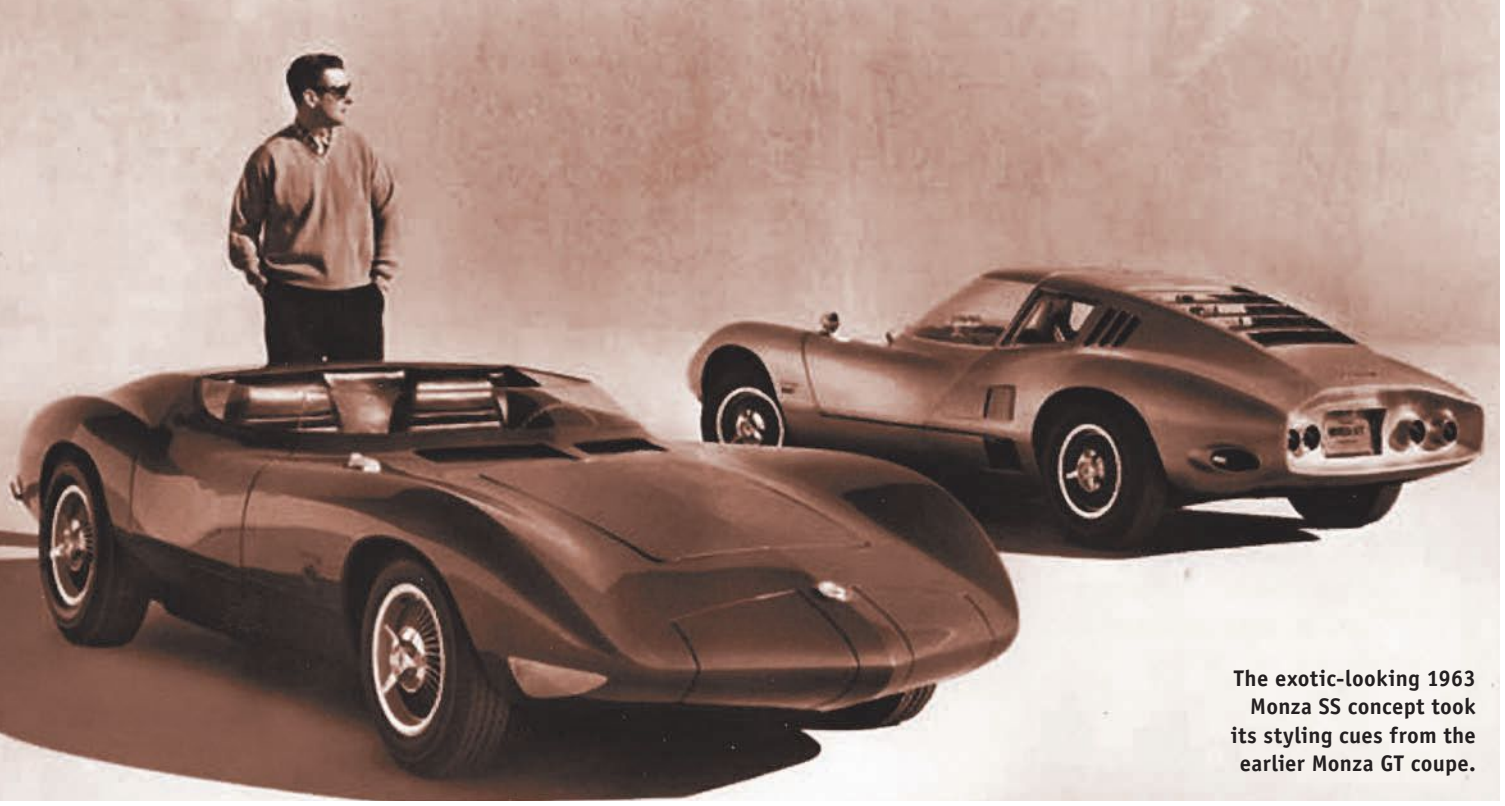
The Monza GT during its assessment at GM's test track. Note the wraparound windshield, and its distinctive side scoops to cool the rear-mounted engine.



doors. The engine chosen for this dynamic sports car was a standard Corvair 145-cu.in. flat-six with twin carbs that made 102 horsepower. To optimize handling, the GT's engine was mounted ahead of the transaxle and turned around 180 degrees, providing a classic mid-engine layout. Important features were its magnesium-alloy wheels, four-wheel disc brakes and fixed bucket seats with adjustable pedals. Perched on a short 92-inch wheelbase, the GT's overall length was a tight 165 inches, with a height of just 42 inches. Unveiled at an SCCA race event at Elkhart Lake, the Monza GT was an immediate hit, looking like a Ferrari for the common man. It's a shame Chevrolet didn't put it into production.

Another great-looking GT concept from that same era was the 1963 Monza SS, which was an ultra-low two-seater on an 88-inch wheelbase, reportedly also designed by Larry Shinoda. Like the GT, the SS was produced on a shortened Corvair platform, though in the SS, the engine was left in its stock location behind the transaxle. The interior featured fixed bucket seats with adjustable pedals, and the driver peered through a very low, cut-down windshield and greenhouse of unframed glass. Two huge hidden headlamps effectively light up the road for safe, rapid nighttime driving.

Even Europe's most renowned styling houses caught Corvair fever. One apparent Corvair admirer was Italian coachbuilder Bertone, who in 1963 introduced an attractive concept car dubbed the Testudo, which was built on a Corvair chassis. It was a very low-slung coupe with a long nose, short deck and rounded lines with a definite Italian flavor. Like the Monza GT



The exotic-looking 1963 Monza SS concept took its styling cues from the earlier Monza GT coupe.

concept, the Testudo featured a one-piece, cockpit canopy rather than conventional doors. It, too, was front-hinged to tilt forward for passenger entry. Reportedly, the lead designer on the project was a young Giorgetto Giugiaro.

It seems that 1963 was a golden year for Chevrolet concepts because that same year the famed Italian coachbuilder/design company Pininfarina got into the act with the dark-colored Corvair hardtop coupe shown here (at the top of page 51). Designed by Tom Tjaarda, its lines are smoother and more "of-a-piece" than the production Corvair, although it really isn't any better looking. The silver Corvair Super Spyder concept by GM, which was built on a 1962 Corvair chassis, was much sportier looking than either of the Italian designs, with its lift-up rear panel that covered the engine and (former) rear seat area.

For real sports car performance, the Corvette was the car of choice to serve as a platform for styling expression. The dawn of the 1960s Corvette styling efforts really arrived in April 1959, when GM's celebrated design chief Bill Mitchell showed off his Corvette Sting Ray race car at Maryland's Marlboro Raceway. Chevrolet had built several other Corvette-based show cars in the 1950s, but they all wore '50s-type styling that didn't age well. By comparison, the Sting Ray race car gave a preview of

The Monza SS (left) and the Monza GT (right) had a menacing appearance, helped, in part, by their large rectangular headlamps.

For 1963, Italian styling house Bertone created the stylish Testudo on a Corvair chassis. Notice how soft these lines are; the rear styling seem to hint of Studebaker's Avanti.

the decade to come.

The experimental two-seater Sting Ray was actually raced that April day shortly after its unveiling, and reportedly took a fourth-place finish. It later went on to win an SCCA championship in 1960, thanks mostly to its lightweight body, de Dion rear suspension, and 315-hp V-8 engine. Reportedly, it was jointly designed by Larry Shinoda, Pete Brock and Bill Mitchell. It's a car that influenced nearly every production Corvette built over the following two decades, an automobile that truly was ahead of its time.

The sleek, futuristic look embodied in that Corvette race car carried over into the 1960s with the XP755 Shark concept car, later renamed the "Mako Shark." According to legend, design chief Bill Mitchell wanted something absolutely outrageous, and he got it. Larry Shinoda and a team of stylists worked up a sports car incorporating the rear fenders and roofline of the earlier 1959 XP700 Corvette concept (including its rearview periscope), and added a shark-like front end, complete with a menacing open-mouth grille, side pipes and a blue-fading-to-silver paint scheme that mimicked a real shark. It was a jaw-dropper.

Although it debuted in 1959, the Corvette Sting Ray Racer concept was a vision of the upcoming new Sting Ray for 1963.

The 1961 Corvette Shark (a.k.a. Mako Shark I), designed by Larry Shinoda, is one of the most menacing-looking concept cars of all time. Its blue-fading-into-silver paint scheme was meant to imitate a real shark, and it boasted sleek styling, big chrome side pipes, and a roof-mounted periscope. It was a preview of what the upcoming 1963 Corvette was going to look like.

Another Italian design effort on a Corvair chassis was this smart-looking coupe from Pininfarina. Although the overall design is pleasant, it doesn't represent any improvement over the production Corvair's basic styling.

"Exciting" is one way to describe the Corvair Super Spyder concept. Notice the cut-down, frameless windshield and side window glass.

Back in Italy, Pininfarina couldn't resist taking another try at restyling a Chevrolet, and this time it was more successful, introducing the lovely Rondine coupe for 1963. Built on a Corvette chassis, the Rondine was a European-styled Grand Tourer with silky-smooth lines and a semi-fastback roof. Pininfarina somehow managed to retain the sleekness of the new Sting Ray while adding sophisticated Continental details, and it all came together rather well. The semi-hidden headlamps and a split front bumper were two unique aspects of this pleasing design.

But the Rondine was no match for the newest Corvette concept introduced by GM around that same time, a wild-looking sports car called the Mako Shark II, which was nothing less than a preview of the upcoming Corvette Sting Ray for 1968.

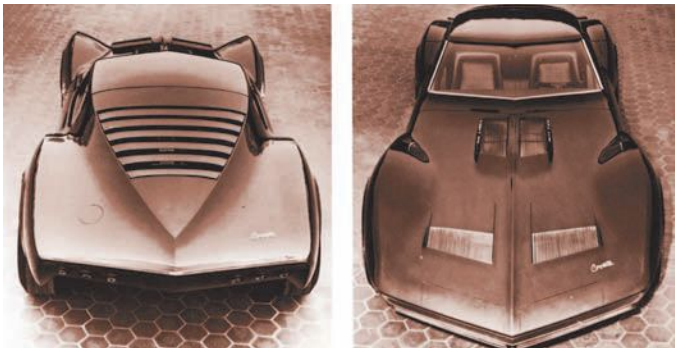
Pininfarina created this lovely Rondine coupe for 1963. It's a very sensuous design, with pleasing lines and great continental flavor; a perfect image of a Euro-style Grand Tourer.

It's a toss-up as to which Mako Shark was more outrageous, Mako Shark I or this design, the Mako Shark II. The turbine-style wheels and integrated side pipes are neat features, as is the hood blister.

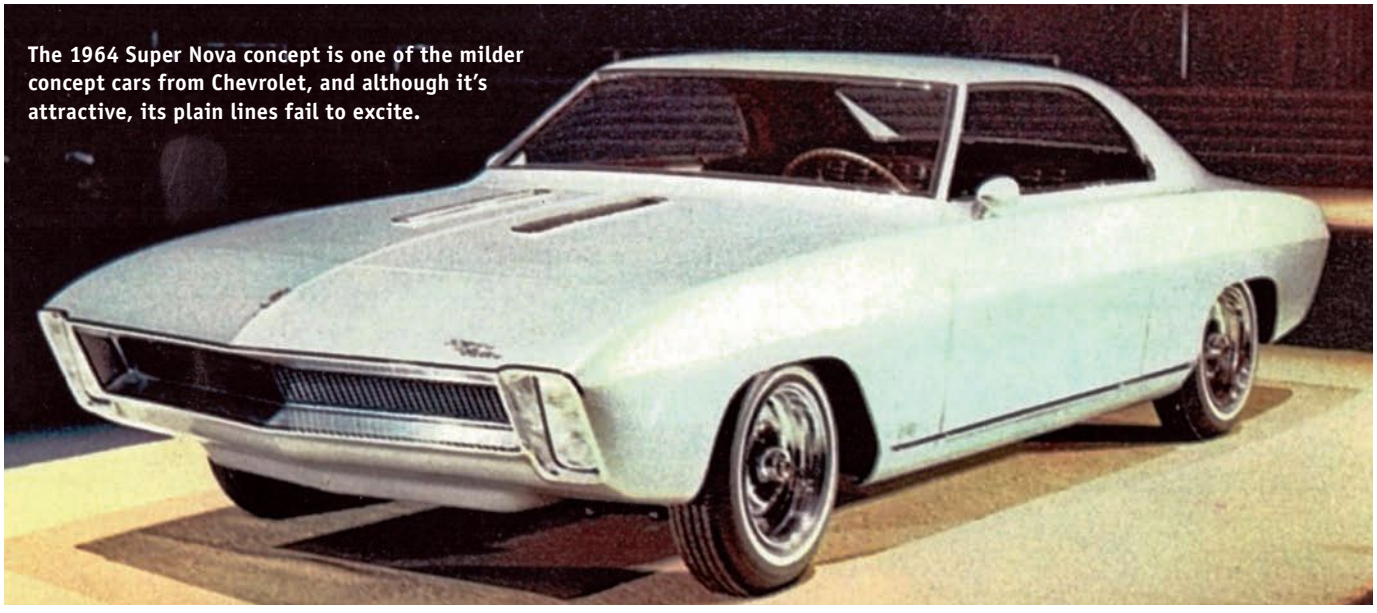
Although the bodylines and forms are not exactly the same, the entire styling theme of the production car is clearly evident.

Less so is the case with the 1964 Super Nova concept. Its squared-off lines and appearance of greater size are certainly themes that appeared on the production 1965 Nova, but the lines of the concept car are much softer than the production model, and the front end themes are completely different.

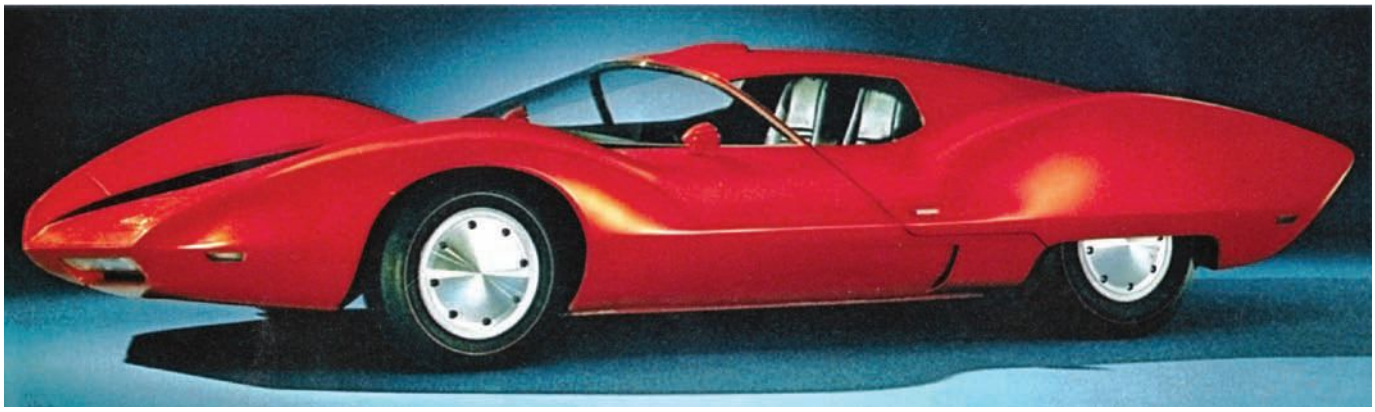
Perhaps the wildest Chevrolet concept of the 1960s was the Astro, which rolled out for the 1967-'68 auto show season. How to describe it? With ultra-low lines measuring just three feet tall, a fighter plane-type cockpit canopy, semi-enclosed rear wheels, and a severely wrapped-around windshield, it looked like something from outer space, or at least from a far distant future. In order to fit a drivetrain in that low space, a rear-mounted, air-cooled, horizontally-opposed six-cylinder engine was fitted.



The rear styling of the Mako Shark II is especially eye-catching, and makes one wish it had been seen on production cars.



The 1964 Super Nova concept is one of the milder concept cars from Chevrolet, and although it's attractive, its plain lines fail to excite.



A real jaw-dropper was the 1967 Astro, which was built on a Corvair chassis. The 1950s-style wraparound windshield contrasts with the futuristic sweeping lines of the rest of the body. An interesting concept, for sure.

The 1968 Caribe envisioned an El Camino-type pickup truck based on a Camaro body. The built-in roll bar is interesting, as are the unusual tires and wheels, but overall the Caribe doesn't quite hit the styling mark.

This Corvair-based engine was modified to produce a healthy 240 horsepower. The Astro had some interesting technical features, including four-wheel independent suspension, four-wheel disc brakes and magnesium wheels.

Very little is known about the 1968 Camaro Caribe Concept. Some sources refer to it as the Caribe Sportsman, but the official press photo identifies it as just Caribe. It was a two-seat conversion of a stock Camaro with a built-in roll-bar/targa bar and an awkward-looking open pickup bed in the rear. Not one of Chevrolet's best designs, it seems to have been largely forgotten about by most people.

As for the 1969 Camaro Concept Kammback station wagon, it wasn't shown to the public. Its front end styling came from the upcoming 1970½ Camaro coupe, with a Kamm-type tail shape and station wagon roofline. Several companies played around with the idea of a Sportwagon, but this attempt by Chevrolet was probably the most stylish of them all. The bodylines are well integrated, and it's a good-looking car. Apparently, the Camaro wagon nearly made it into production—it certainly looks production-ready in this photograph—but the idea was dropped for reasons unknown. Such is the life of concept cars.

Built in 1969 for introduction after 1970, the Camaro Sportwagon seems to be an entirely workable automobile; it's a shame it didn't reach production.

William Collins Jr.

Assistant Chief Engineer at Pontiac, VP of Engineering at DeLorean Motor Company, Founder of Vixen Motor Company—Part I: The Pontiac Years

BY THOMAS A. DeMAURO
PHOTOGRAPHS COURTESY OF GM MEDIA ARCHIVES, THE ROCKY ROTELLA COLLECTION, AND THE AUTHOR

Fresh out of Lehigh University in Bethlehem, Pennsylvania, and with a mechanical engineering degree in hand, 22-year-old William "Bill" Collins Jr. landed a road test project engineer position at Pontiac in 1954. "The V-8 debuted [for the 1955 model], and I felt very fortunate to be earning a living testing 0-60 acceleration and fuel mileage on new cars," he recalls.

He was also assigned to cold-room-starts and drive-aways, to check choke angles on carburetors in temperatures that could dip to 25-degrees below zero. Another two years were spent in the army at the Aberdeen Proving Ground in Maryland, evaluating and improving the T-60 amphibious cargo carrier prototype built by the Oliver Corporation.

After returning to GM in 1958, Bill was the Advanced Design transmission development engineer for the 1961 Tempest. His responsibilities included developing and testing transaxles, throttle and clutch linkage and the inventive flexible driveshaft layout.

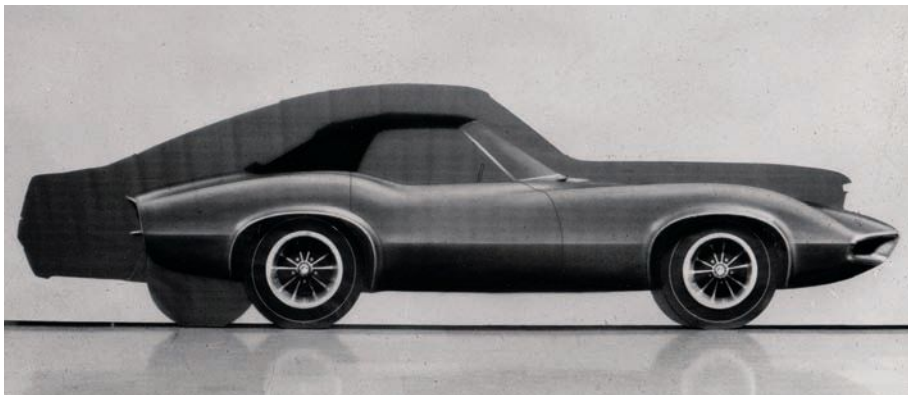
To lower the transmission bump in the floor and increase passenger leg room, the 1961 Tempest employed a rear-mounted transaxle. Connecting the engine to the transaxle was a torsion bar driveline housed in a torque tube (aka "rope" driveshaft in a steel backbone), for which then-Assistant Chief Engineer John Z. DeLorean held the patent.

Approximately 7 feet long, the .65 inch diameter (or .75 inch depending upon application) SAE 8660 triple-alloy steel rod was shot-peened to reduce surface stress and coated to thwart corrosion. Installing it with a downward curve provided two advantages: floor tunnel height could be further reduced, and the arc eliminated the inherent vibrations associated with spinning a long straight rod.

No U-joints were required, but two damper bearings were employed inside the torque tube. The shaft connected to the flexplate (or the clutch-driven plate) at the engine and to the splined shaft of the transaxle at the opposite end. The steel tube was bowed in the middle and bolted to the bellhousing at the front and to the transaxle at the rear to form a rigid structure, keeping the drivetrain properly aligned.

MERLE GREEN'S 1964 GTO WAS PROVIDED BY TIM DYE

"There were some of us who really loved the 1970 ½ Firebird and just wanted to put our personality into it."



The size relationship between the XP-833 convertible and the Mustang fastback.

For the 1963 Super Duty Tempest, Bill developed the Powershift transaxle. The stock two-speed TempesTorque, (similar to Corvair's Powerglide), would be short-lived behind the 405-hp 421 SD engine, and the Fords and Mopars were running *three*-speed automatics. Drastic measures were required to make the 14 1963 421 SD Y-bodies built (six LeMans, six Tempest wagons, two prototype Tempest coupes) competitive while retaining the factory transaxle.

The answer was to beef-up the existing transmission, mounted ahead of the differential case, and connect it via a shaft to a second set of planetary gears, housed in an aluminum case and bolted behind the modified 3.90:1-geared differential's case. The result was four forward speeds. A clutch, relocated to the back-end, employed a new coaxial hydraulic release bearing, and was used for launching. Once the car was moving, the gears were manually upshifted without it.

Director of Advanced Engineering by 1964, Bill and his group developed a two-seat sports car concept under the direction of DeLorean and Pontiac General Manager Elliott M. "Pete" Estes. Compared to the Corvette, it would be smaller—90-inch wheelbase vs. 98-inch, lighter—2,615 lb vs. 3,170 lb and cheaper—$2,500 (base projected) vs. about $4,200, yet would offer comparable performance.

"In Advanced Engineering, we did all the packaging on the 1964-65 XP-833 'Banshee,' Bill recalls, "which included engineering the basic chassis design and people layout, etc. Then it went to GM Advanced Design, and I worked with that studio chief directly."

Fiberglass body panels were fastened to a steel structure, and the floorpans were welded to the frame to form the unitized assembly. A modified front A-body-style frame and SLA coil-sprung suspension was used in conjunction with a solid rear axle, located by a four-link, coil-sprung, rear suspension. Bill added a rear anti-roll bar to improve handling. Two running prototypes, a silver coupe with a 230-cu.in OHC-6 engine and a four-speed, and a white convertible with a 326 and a four-speed, were completed for evaluation.

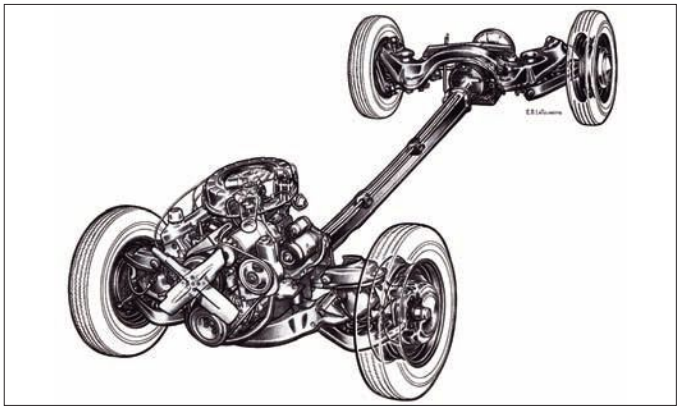
Ascending to Pontiac General Manager in 1965 when Estes was promoted to run Chevrolet, DeLorean pushed to get the XP-833 into production for 1967, and Bill crafted and presented a compelling proposal to GM President James Roche. Management was not swayed, however, and the head of GM Engineering Policy Group, Ed Cole, wouldn't have it. DeLorean explained in a 1998 interview with the *Chicago Tribune*, "Cole thought [the] Banshee would be devastating to [the] Corvette and used his not-inconsiderable influence to have the car killed." The four-seat XP-798 was then proposed, but it didn't fly either.

To save the two XP-833 prototypes from the GM crusher, Bill hid them at GM in storage containers. In 1973 or 1974, Pontiac Master Mechanic Bill Killen, who had also been involved with the project, proposed that he and Collins purchase them. Collins bought the white convertible from GM and Killen bought the silver coupe.

Though the Banshee was a ground-up design, the idea for the GTO didn't need to be, and was borne of a suggestion that Bill made. During a Saturday session at the Milford Proving Grounds, he, Russ Gee—the head of the Experimental Department—and DeLorean, among others, were examining the undercarriage of the new-for-1964 Tempest and its 326 engine.

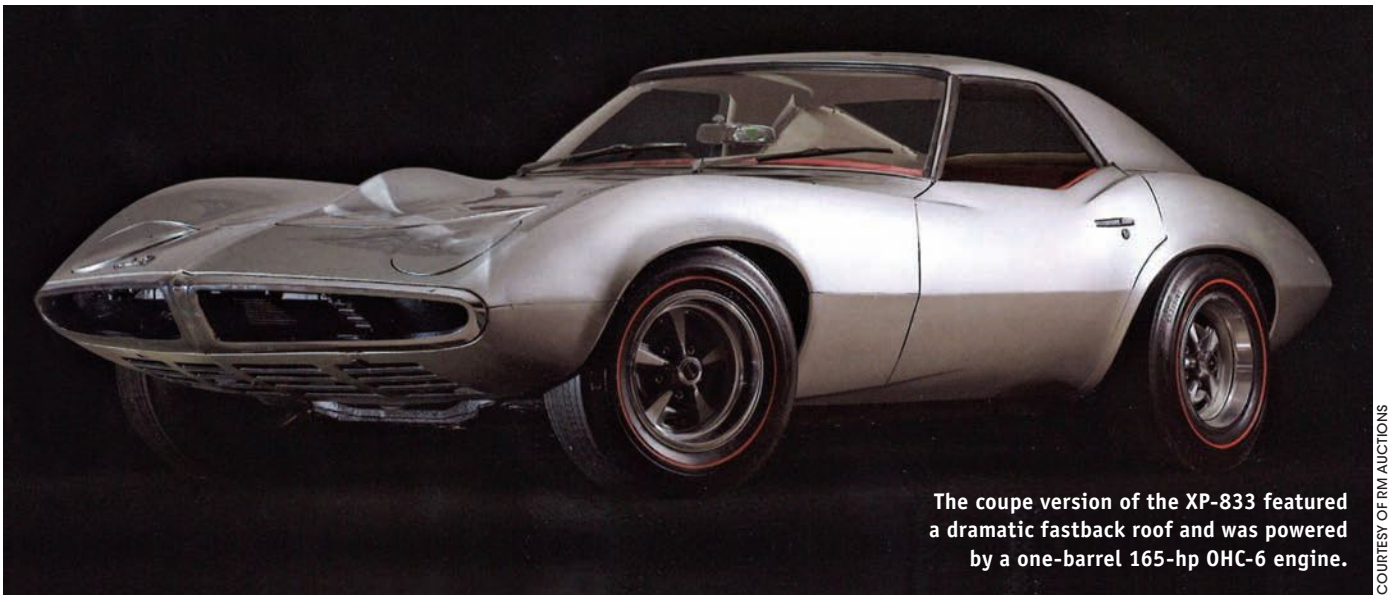
Bill commented that the 389 would fit in the new chassis, since its external dimensions were the same as the 326. Russ proposed they build one, DeLorean agreed and a week later, a running prototype was ready for evaluation.

"What is seldom stated, however, is since Pontiac was heavily into racing at the time, my rationale for the larger engine was for campaigning the Tempest in stock car racing," Bill adds. "For that reason, I had also proposed to stretch the wheelbase to make it legal for NASCAR. DeLorean decided that it would be a high-performance option on the Tempest line instead and named it GTO, and ad man Jim Wangers did a great job of marketing it."



Along with increasing interior floor space, another significant benefit of the rear transaxle design, from a driver's perspective, was near 50/50 weight distribution for improved handling.

This GM photo depicts the 1970½ Trans Am, which was designed and engineered to be the ultimate Firebird. "I remember having a very good relationship with Design Chief Bill Porter," Bill says. "I also recall a number of road trips out west during that program—it was fun driving the Firebird at illegal speeds.



The coupe version of the XP-833 featured a dramatic fastback roof and was powered by a one-barrel 165-hp OHC-6 engine.

COURTESY OF RM AUCTIONS

Bill remembers, "If anyone asked DeLorean about the GTO, he facetiously replied that Grand Turismo Omologato was an 'Italian Sandwich!'" As history has shown, the GTO was a runaway success that's credited with initiating the muscle car era.

Having been promoted to Assistant Chief Engineer in 1967, Bill also directed body, electrical, HVAC, engineering, product planning and cost analysis for all Pontiacs, including the 1970½ Firebird line. In meetings with Design Studio Chief Bill Porter and others, Collins introduced the concept of having the Firebird, Esprit, Formula and Trans Am as separate models, each with its own identity. The basic Firebird would be the practical sporty car, the Esprit the luxury car, the Formula 400 the affordable muscle car and the Trans Am the ultimate Firebird with suspension calibrations and working spoilers that rival those of race cars but are a bit more civilized.

"Pontiac was small enough that we could help with the whole car instead of just working on one item," Bill says. "There were some of us who really loved that car and just wanted to put our personality into it. Among other ideas I had, I wanted to add a leather scent inside." It would offer the impression of leather without the added expense of the actual upholstery. "The scented packets we tried under the seats, however, never did smell like anything better than old socks," he jokes.

Updating the Firebird emblem was more successful. "Executive Assistant Chief Engineer Herman S. Kaiser and I were in Phoenix at the GM Proving Grounds testing the Firebird," Bill remembers. "We later saw postcards at the airport featuring Native American jewelry that had a bird with the wings pointing up instead of down. We gave them to styling and they developed a new Firebird emblem."

Though Bill's official responsibilities on the 1973 Grand Am were the same as the Firebird, he was the driving force behind this Pontiac's birth. "I borrowed a BMW Bavaria from Opel in Europe to evaluate it, and that's how the Grand Am was born," he says. "It was America's BMW. I also appropriated the nose intended for the GTO and used the instrument panel from the GP."

Based on the new-for-1973 Colonnade A-body, the Grand Am was a high-content luxo-performer in the European tradition. It featured suspension tuning to ride and handle like a European car, and its reclining bucket seats, turn signal stalk-mounted headlight dimmer switch, and specific-sounding horn, were also popular across the pond. Like a European sports sedan, the four-door GA had bucket seats and a console.

"Had Pontiac stayed the course with the Grand Am, it would have captured its place in the market," Bill speculates. "Decontenting it to make it cheaper, however, just as it did with the GTO over the years, was not the answer."

By 1974, times and the GTO had changed drastically. People at Pontiac who championed the Ventura-based GTO believed that it was the right car for its era. Bill, however, felt that the Goat had been decontented too much to remain relevant. "The 1974 GTO was based off the cheap Chevrolet—it wasn't a GTO anymore," he argues. In a bold move during a staff meeting with Pontiac GM Martin Caserio, Bill did what he says is never done in a staff meeting, he proposed that the GTO be cancelled…and it was accepted. As a result, Bill says, "I guess you could say that I was both the "father" and "executioner" of the GTO!"

In Part 2 we'll discuss Bill's last GM assignment—the B- and C-body 1977 redesign, his years at DeLorean Motor Company and his most coveted achievement, the innovative and award-winning Vixen motorhome.

"I felt the Grand Am's concept was a normal outgrowth of the GTO, offering more than just straight-line performance," Bill explains. "That was the fun of Pontiac in that era, a single person could make major things happen. Even a station wagon prototype we called the 'super wagon' was built, but it was never produced."

Reborn Hawk

Previous repairs and a long list of needs shifts a rare R2-powered 1964 Studebaker Hawk from "driver" project to show-wining restoration—Part I

BY MATTHEW LITWIN • RESTORATION PHOTOGRAPHS COURTESY OF MATTHEW WENDT

As found, the 289-hp, 289-cu.in. Studebaker R2 engine was complete, though the Paxton supercharger had been removed and stowed in the trunk. The engine's internals would turn; however, it was incapable of running.

After a second, more thorough assessment of the Gran Turismo, it was determined that a show-quality restoration was the best course of action. Here, the front end has been disassembled, making the task of removing the engine significantly easier.

The Paxton supercharger and its related components were carefully inspected. Rather than attempt to rebuild the desirable system at home, it was sent to Paradise Wheels in San Marcos, California—the company that bought the service rights to Paxton.

The V-8 was then completely disassembled and brought to a local NAPA outlet that had its own machine shop. Closer inspection by the staff revealed no significant issues, and a .030-inch overbore was performed to ensure that the cylinder bores were perfectly round.

It's easy to say that you intend to seek out and revitalize a particular collector car. Actually accomplishing that feat is something else entirely. Background knowledge about the subject matter helps whittle down the list to a narrow range of model years, but does little to assist you in deciding just how far to go with the intended project. For example, should you strive for a complete nut-and-bolt restoration, or an as-needed refurbishment?

Now living in North Tonawanda, New York, Wisconsin native Matt Wendt subjected himself to precisely this kind of thought-provoking process. "I got into Studebakers because of my parents," Matt reminisces. "My first car was a 1962 Gran Turismo Hawk that my father, Peter, had originally bought for my mother, Jacquelynn, as a 10th anniversary gift. Before they married in 1977, she had fallen in love with a Flamingo Pink Studebaker, but instead of purchasing the car, they put the money towards paying for the wedding reception. The family has been into Studebakers since that initial purchase, and that 1962 Hawk was my every day car, except in winter. It was finished in black, had a four-barrel, 289-cu.in. V-8 engine, four-speed and Twin Traction differential. With my dad's help, it was the catalyst that got me into learning how to work on and maintain vintage cars."

In the ensuing years, Matt stuck with the Studebaker marque when it came to collector cars, as did Peter, even after his wife's passing. While Peter managed to amass a sizeable collection of cars and parts – most stored in his barn – Matt located and began restoring a 1967 Avanti II, a continuation of the original series, which still utilized a fiberglass body. It was a project he started while in high school, and before it was completed in 2008, he managed to locate and purchase a 1963 Studebaker Champ half-ton pickup truck, graduate college, get married and buy a house. The Champ, originating from California, was not only a bit of a workhorse vehicle but also played a significant roll in yet another Studebaker project in 2010, with support from Matt's wife, Christine.

A wide band of brightwork typically covers a Hawk's rocker panels, which then disintegrate while hidden from view—a common plight. The damage here is extensive but manageable when done correctly with reproduction panels.

Although the floors seemed solid upon first inspection, when the carpet was removed poorly executed repairs made by a previous owner quickly became apparent. The transmission hump had also been badly cut to permit installation of a three-speed manual.

Peter made several visits to assist with many aspects of the restoration project, including metalwork. Here, the passenger side floorpan has been cut from the body, and Peter is using an angle grinder to smooth the rough cuts.

Making repairs to the transmission hump was a difficult process because of the tight fit for the center console and automatic transmission shifter. A parts car in the family inventory of Studebakers donated the necessary metal to expedite the repair.

"Having bought the house and built an oversized detached garage, I was ready," Matt recalled. "The plan was to visit my father in Wisconsin in early October and bring back one of his cars, likely a 1962 or '64 Studebaker GT Hawk. I went to his place with a tow dolly behind my '63 Champ, which had done the 1,400-mile round trip before. I was initially thinking driver-quality, something I could work on. A car I could leave the body on and repair the brakes, do a tune-up, change the water and fuel pump and such—something not quite as stressful or intense as the body-off restoration I performed on my Avanti. It may be more rewarding to do a full restoration, but it's more fun to have a car that you're not worried about all the time."

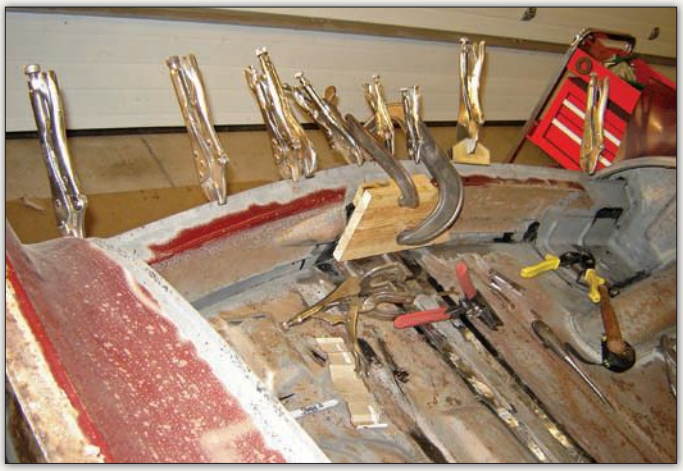
Those early intentions were quickly altered when he got to Wisconsin and learned through a family friend of a 1964 Gran Turismo Hawk powered by the optional R2 version of Studebaker's 289-cu. in. V-8 engine. According to Matt, "We headed about 60 miles south to Antioch, Illinois, and met the seller. Owning an R2 Studebaker Hawk has been a dream of mine. There were only 70 R2 Gran Turismo Hawks built for the 1964 model year, and a two-owner, unrestored example does not come up for sale often.

"When we arrived, we found it was in rougher condition than hoped, in spite of it being parked indoors since 1976. It needed paint, the brakes didn't work, the engine turned but was incapable of running, and the rocker panels had rotted, which is a common problem on Studebakers of this era. Having looked at a lot of these over the years, I've learned which areas are prone to damage, but for the most part it was a solid car, including the frame and the body panels, with exception of the roof. The vinyl top had disintegrated, so water had leaked into the headliner. From the perspective we had in the small garage, the floorpan looked solid as well. The Paxton supercharger was disconnected and in the trunk, but all of its specific parts were with the car. We made the deal and brought it to my dad's place."

When the time came to transport

An aftermarket section of floorpan was obtained and carefully "dry-fit" into place for accuracy before the panel was first tacked into place via MIG welder. Sections at opposite ends were then completely welded to avoid warping due to excessive heat.

Damage from rust on each fender's lower extremities was minimal; however, patches still had to be fabricated and butt-welded into position. Lines scribed on the paint are dimensional reference points, and the welds were eventually ground smooth.



A few metal repairs needed to be made to the rear fascia as well. Several clamps were used to temporarily secure small patch panels before each piece was tack-welded. Again, seams were welded shut one small section at a time to avoid warping the panels.

By the time the first round of metalwork was completed, the body had been stripped to its basic shell, which was then separated from the frame for a closer inspection of the mounting points before they were loosely reunited and sent for media blasting.

the car to Matt's house, days before loading the Hawk onto the tow dolly, Matt and Peter took the time to prepare the car for its journey, beginning with the installation of a set of road-worthy tires. They also inspected and rebuilt the rear differential as well as the rear wheel bearings to ensure it would survive the long trip east to New York. One final step was to disconnect the driveshaft. "When an automatic-equipped Studebaker is towed in neutral, the internal pump does not function, which means the main bearings inside will not get a proper amount of lubrication. The general rule of thumb is that you can go about 15 miles, but any more than that and there's a good chance of damaging the transmission," explains Matt.

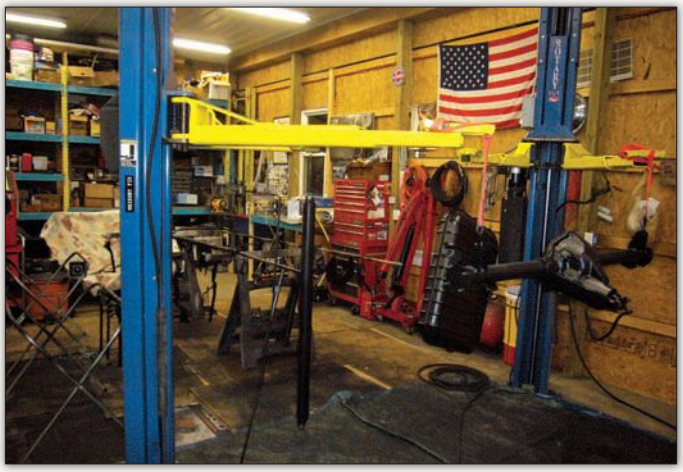
When Matt arrived at home with his new acquisition, he immediately immersed himself in the rare coupe by tearing off the remnants of the aftermarket vinyl roof. As part of the evaluation process, and still thinking the project could be approached as a refurbishment, he lifted the disintegrating floor carpet and was met with an unpleasant scene.

"My early thoughts about the floorpan were wrong," Matt says. "Work had been done prior, but the patch panels that had been welded in were done rather poorly. Somebody had also installed a three-speed manual transmission at some point in time, and to do so they cut a sizeable piece out of the floor tunnel, which could have easily let in a lot of moisture. Between the metal work – including the rockers – and new quality paint, I figured that I might as well pull the body off the frame and do the whole car. It needed so much I calculated that whether I had refurbished it as a driver or not, it would likely cost me the same amount of money as a show-quality restoration. And that's when this quickly turned into a father-son project."

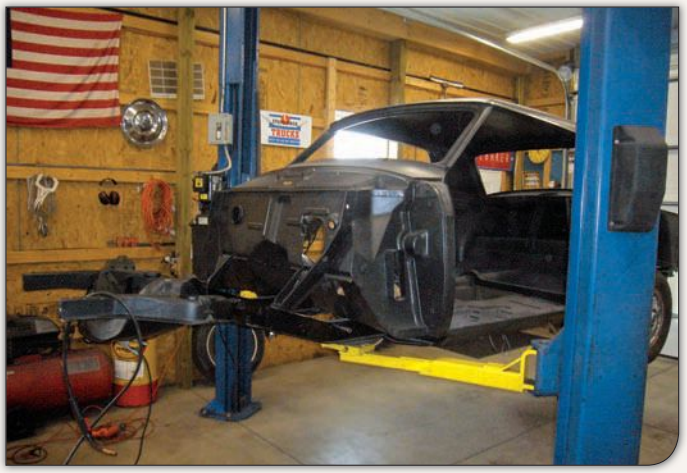
Having restored the aforementioned Avanti, Matt had the basic skills to do the same with his Hawk. However, working with fiberglass is vastly different than sheetmetal, which he had little experience with. Seizing the opportunity for more frequent visits, Peter began travel-

With only the underpinnings required to aid mobility left in place, the Hawk's frame was media blasted, leaving nothing but bare metal behind. In spite of some of the metalwork required to repair the body, the frame was devoid of corrosion damage.

The frame was not the only part subjected to media blasting. All of the removed body panels, and the body shell seen here, received the same careful cleansing, which revealed a few more minor areas of corrosion that would need to be repaired.



This is an example of how to make the most of the tools available to you during a restoration. Rather than create temporary space, the two-post lift in Matt's garage has been employed to hang and paint many of the chassis and suspension parts.



After media blasting, the body shell, panels and frame were given a coat of epoxy sealer to prevent the metal from flash-rusting before final prep, primer and paint could be applied. Note that the front suspension has been removed.

ling to North Tonawanda to teach Matt and lend a hand during the restoration.

After gutting the rest of the interior, the seating of which was deemed serviceable, they started metalwork on the passenger side by grinding and cutting out the spot welds on the remaining pieces of rocker panel. After removing the damaged pieces of metal, a MIG welder was used to secure a new panel. It sounds easy, but Matt reports that the panel consists of several pieces that all need to be fitted together carefully, lest moisture invade the metal once again. "You have to lap the different pieces together in the right order before butt-welding the ends together. It was a really big, hot job that required a lot of dry-fitting and adjusting before welds were done, and I would not have been able to do it without my dad's help," says Matt. After learning the correct process, he tackled the opposite side before work shifted to the floor.

Having already assessed the amount of work needed to correct the floorpan, Matt retrieved reproduction patch panels he had earlier ordered from Classic Enterprises in Barron, Wisconsin. The new pans excluded the transmission and driveshaft tunnel, enabling the duo to custom fit as needed, rather than replacing an entire section, which helped maintain the original factory geometry of the body shell.

"It was still a little daunting at first, removing as much of the floorpan as we did," Matt remembers. "As for the damaged tunnel, the original design is very intricate, and the center console has to fit just right, to say nothing of the transmission shifter. Rather than attempt to hand-fabricate what we needed, we turned to one of the parts cars my dad has."

They cut more than was necessary from the donor car to help facilitate the repair. In effect, the patch panel could then be custom fit via tracing smooth cuts, rather than attempting to match exact measurements. This also ensures a more snug fit and lessens the risk of having to start over.

While the metalwork was being tackled, between visits Matt carefully stripped the body of trim and ultimately

removed all of the body panels. He also removed the Borg-Warner three-speed "Powershift" automatic and lifeless 289 V-8, disassembling the engine down to the basic block. At first it was believed a simple rebuild with new piston rings would return the V-8 to service; however, water had leaked into a cylinder bore, causing its surface to rust. As a result, the block was delivered to the local NAPA store where its machine shop was tasked with performing a .030-inch overbore. In addition, the cylinder heads were reworked to accept hardened valve seats.

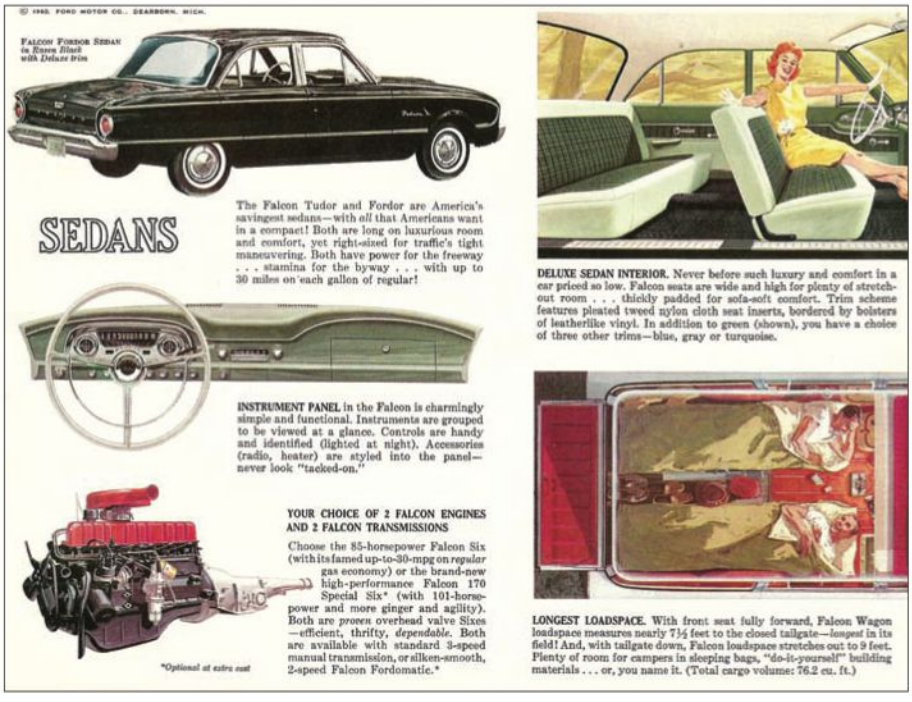
With metalwork complete and the body reduced to its shell, Matt separated it from the frame with the aid of his two-post lift. Aside from enabling him to examine the mounting points more thoroughly, it provided full access to the chassis and its potential needs. Any parts that were not required for the car's mobility were removed and inspected before the body was lowered back into position and loosely secured. This was done to help expedite the Gran Turismo's delivery to Blast Off in nearby Buffalo, for a thorough media blasting. The body shell was positioned on a rotisserie in order to gain access to every crevice before the frame received the same treatment. Removed body panels were also carefully blasted. Afterwards, all exposed metal surfaces were protected from flash rusting with a coat of OMNI epoxy sealer before the body and frame were reunited once again for the trip back to Matt's home shop.

"We were really happy with the result because the media blasting did not expose anything that was unexpected," Matt says. "There were a few pin holes that needed addressing here and there, several of which we could correct with small patch panels. Due to a lack of sealant along the folds, the rear edges of the front fenders are almost always rusted; however, one of the fenders had already been replaced just prior to when it was parked, so there was no damage to address. The other was just starting to corrode, so it was an easy fix.

"One other area that required work was in front of the rear wheels where these Hawks will rust out, even the pretty solid ones. It's because the trunk gasket is notorious for leaking," Matt told us. "Water gets in from the outside and sits against the panel on the floorpan, which is not helped by road salt and moisture getting kicked up from the underside by the tires. In all, the rust we found was fairly typical for Studebakers and, in my case, fortunately very manageable."

With all of the rust repairs completed, Matt was finally ready to send his coupe for its next phase: primer and paint, after final prep work to smooth out imperfections. Then, well into the restoration's second year, he and his dad needed to turn their attention to the chassis, as well as to learn the results of the engine and transmission rebuilds. Join us next month when we will continue to cover the extensive restoration of Matt's 1964 Studebaker Gran Turismo Hawk.

1961 Ford Falcon



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BY CHRIS RITTER
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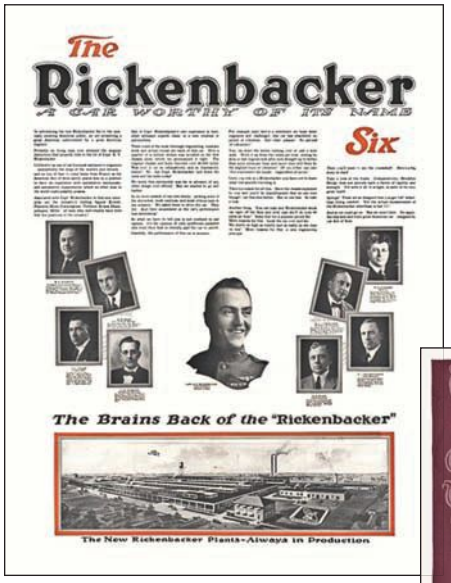
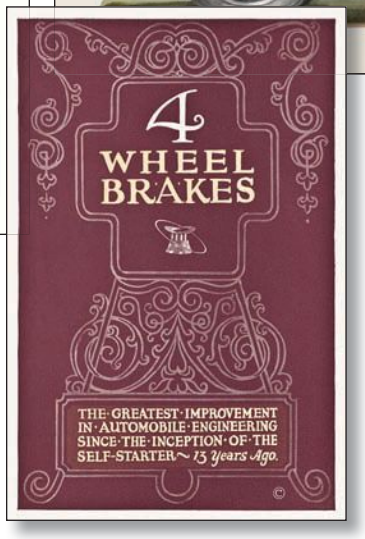
The Captain's Car





HOW COULD A NEW automobile manufacturer ensure car sales in the flooded 1920s marketplace? One company thought the answer was to name the company after an American hero. That American hero was race car driver and World War I ace Eddie Rickenbacker. The Rickenbacker Company had a large name to live up to. But how could the young company make sure its cars were worthy of that name? It would try by offering high quality, useful features and affordability. In the company's mind it would be a car "built up to a standard —not down to a price."

One of the first pieces of Rickenbacker sales literature was issued in 1922 and announced the new company to the public. This large unit folds open to a poster-sized 19 x 24½ inches. Inside, we learn that Captain Eddie Rickenbacker, "undoubtedly the dean of the world's race drivers," would be the company's director of sales and, of course, spokesman. The poster promised a car three years in development that could travel faster than 60 MPH and had "absolutely no period of vibration" thanks to tandem flywheels in the engine. The poster also pictures the company's other driving forces, namely Barney Everitt, William Metzger and Walter Flounders. Take the first letter of each man's last name and you get EMF. If you were wondering, those were the men behind the E-M-F Company that faded 10 years earlier.

In 1923, Rickenbacker would be the first medium-priced manufacturer to offer four-wheel brakes, and the company capitalized on this fact by issuing a sales catalog titled *4 Wheel Brakes*. This catalog doesn't include any colorful illustrations, but it is certainly well written. It claimed that with four-wheel mechanical brakes "you can stop 'in a car length' at any legal speed – or glide to a velvety pause, in half the distance you are used to." According to the catalog, four-wheel mechanical brakes also promised to eliminate traffic congestion in cities and reduce wear on tires, brake linings and other parts. The catalog couldn't reveal all of the benefits of the four-wheel brakes "For, if we told you here all the advantages of this greatest achievement, your credulity would be unequal to the test."

Rickenbacker sales literature and advertisements would be quite prolific in the mid 1920s. While they would produce more catalogs in subsequent years touting the four-wheel braking system, by 1925 Rickenbacker sales literature evolved into colorful brochures that provoked emotion and made a reader want to experience one of the firm's products in real life. By 1927, one such catalog describes the Rickenbacker "European type" 8-80 sedan as "a most bewitching 8 that just itches to go. A beautiful, captivating, colorful, large roomy car, possessing smart sweeping lines with grace and dignity." The advertised price for the 8-80 was $1,795.

After hitting its sales peak in 1925 with 8,049 units sold, sales began to plummet with 4,050 units in 1926 and 517 during the company's final year. Eddie Rickenbacker's name could only carry the company so far, and the Captain would bail out of the dying company in late 1926 just before it ceased operations in February of 1927. Rickenbacker sales literature, and the Captain himself, were colorful and did an excellent job promoting the cars. But, just like its spokesman, it too couldn't carry the company aloft.

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BY MILTON STERN

Concord: Old School Luxury

MOST OF THE CARS WE TRY TO push into your garage can be bought for less than $9,000. This month's Detroit Underdog can be had for less than $4,000, and a day doesn't go by when a decent one isn't for sale somewhere. Another advantage is that these were not the cars for the youth market, so they mostly ended up in the hands of careful drivers who were still loyal to the AMC brand and probably drove a few Ramblers, Nashes and Hudsons in their day. For many, the AMC Concord represented a return of sorts to the original compact concept of the 1950 Nash Rambler.

Rather than market the 1950 Nash Rambler as a cheap small car, they loaded it up with all the bells and whistles and introduced the roll-top convertible first. Soon came a very popular station wagon, which accounted for one-fifth of all wagons sold in the early 1950s, and then the Country Club hardtop coupe. Advertising always featured well-dressed people in country club attire or an upper middle-class family in front of a very nice home. It worked.

Toward the end of the 1950s, imports were gaining in popularity, and Nash did the unprecedented when it brought back the 1955 Nash Rambler two-door sedan as the 1958 Rambler American. The new popular version of the American compact was now an inexpensive, roomier and more powerful alternative to the European saloons. Many prior standard features were now part of the option list. American Motors was the only American auto company to sell more cars in 1958 than the prior year. The Big Three compacts of 1960 copied much of the Rambler formula, whether they admitted it or not.

After the first 1970s energy crisis, buyers flocked to small cars and wanted more luxury features. They were treated to cars like the Plymouth Valiant Brougham, Ford Granada and even the Cadillac Seville, for those with deeper pockets.

To perk things up, AMC returned to their own original compact car concept, and the 1978 AMC Concord was born. This would be AMC's last rear-wheel-drive, compact car. The following year's Spirit was still a sub-compact, and the Eagle that followed was classified as a truck. I have owned a Spirit and an Eagle and enjoyed driving both.

Was the Concord an all-new car? No, but don't tell the 150,000 people who bought one. Arriving as a two-door sedan with strange opera-like windows with thick B-pillars, it was also available as a two-door hatchback, four-door sedan and station wagon; the Concord was a Hornet at heart. There was even a Concord-based AMX the first year.

The suspension was upgraded for a more "civilized" and quieter ride. The interior was fitted with tufted velour or optional leather seating, cut pile carpeting and more lighting than Carnegie Hall. The base model came standard with remote control rear-view mirrors, air conditioning, whitewall steel belted radials, radio, bumper guards (only in the rear the first year), and sound insulation, just to name a few. Even the choice of colors was more luxurious.

Though Hornet-like, the shorter front fenders and grille (with a different insert) were borrowed from the 1977 Gremlin. A redesign of chrome accents, fender moldings and taillamps also helped to give this car the feel of being something new.

In a nationwide *Popular Mechanics* survey, owners who had more than one million combined miles of driving said they liked their Concords and indicated "few and rather minor gripes," the biggest of which was their neighbors asking them if it was a Hornet. Thirty percent reported no complaints.

In 1979, the Concord gained a new waterfall grille. The following year, the opera windows were redesigned and looked much better. Rear quarter windows were added to the four-door sedan. In addition, the taillamps were larger, wrap-around units.

Initially, Concords featured the AMC 232- and optional 258-cu.in. straight-six engines as their most popular choices. A two-liter four-cylinder design from Audi, used by Porsche, and built by AMC, was optional through 1979. Then the 2.5-liter Iron Duke four-cylinder from GM was made optional, then standard in 1981-'82. The 304-cu.in. V-8 was an option through 1979, the last year for the 232 six-cylinder as well. The 258 six-cylinder, an excellent engine, continued to be used in Jeeps through 2004, by then having a 4.0 liter displacement.

Front disc brakes and power steering were standard. By 1982, one could order a five-speed manual, giving the Concord an EPA highway rating of 34 MPG with the four-cylinder. Concord's last good year was 1982, when only the four-door sedan and wagon were left. By then, electric windows, tilt wheel, and other luxury items had been a part of the option list. Sadly, the Concord and Spirit were killed off mid-way through 1983.

With its Ziebart rust proofing and extensive use of galvanized steel, a 1980s Concord will provide you with years of pleasurable driving. Most mechanical parts are available at any corner auto parts store, and you will want to replace the plastic valve covers used during the last two years.

For enthusiasts on a tight budget, an AMC Concord makes an ideal compact collectible; one that's chockfull with luxury.

BY JIM DONNELLY

PHOTOGRAPHS COURTESY OF *JOURNAL OF COMMERCE*, NEWARK, NEW JERSEY; AND MAERSK LINES, COPENHAGEN, DENMARK

Malcom McLean

YOU KNOW THE OLD SAYING: "If you've got it, a truck brought it." But think further and ask yourself, where did the truck get it from? The answer to that question brings us to the subject of this biography. Even though it's probable that 99 percent of humanity doesn't recognize his name, he is one of the most important individuals in the history of transportation, every bit the equal of Henry Ford, and then some.

Malcom McLean (he was born as Malcolm, but dropped the second "l" to align the spelling with the traditional Scottish) was a trucker, and a trucking executive, but he was a lot more than that. Almost single-handedly, he came up with the idea of transferring freight among ships and trucks by closed container, essentially by lifting the cargo box of a trailer, minus its frame, aboard a ship and vice versa. He totally, irrevocably, changed the way freight was handled at the dock, upending practices that dated back to the New World's discovery.

McLean was born into a family of struggling Red Springs, North Carolina, farmers in 1914. The Depression only made things worse. To help out, McLean got himself a truck, worked hard, and began to expand. By 1940, he owned 30 rigs. The Allies' voracious need for war matériel caused trucking to boom, especially on the coasts. McLean began swallowing up smaller competitors through wartime mergers. As the 1950s commenced, McLean Trucking was operating more than 3,500 trucks out of terminals in 27 states from its headquarters in Winston-Salem, North Carolina. The business was founded on efficiency, despite the complexities of less-than-truckload cargo.

Despite his Piedmont roots, McLean spent a lot of time at seaports. His sense of order was jarred by the chaos of transferring cargo between ships and trucks, where stevedores hand-handled nets and crates swinging off the ship. The New York docks, in particular, were also notorious for cargo theft. McLean hit upon the idea of the freight container, although it wasn't called that yet. In 1955, he sold the trucking firm and used the funds to buy a pair of former oil tankers. He borrowed $42 million to

invest in port redesign for his new fleet of freight boxes. In 1956, his first ship, the *Ideal X,* sailed from Port Newark, New Jersey, for Houston with boxes aboard. Lore has it that as McLean beamed with pride, a longshoreman's union official standing nearby expressed his fervent wish that the ship would sink.

McLean did anything but founder. It was quickly demonstrated that his containers chopped the cost of freight handling by a factor of 100. He organized his new company under the name Sea-Land and expanded globally. The Port Authority of New York and New Jersey realized the potential of McLean's vision and approved a new container-only port at Elizabeth, New Jersey. The firm occupied huge new ports in Europe and Asia just as the global economy began a mushrooming expansion. Sea-Land was enormously successful in large part because cargoes could now be loaded and embarked much more quickly, with much less need for handling. Soon, the railroads saw what was going on and built yards alongside docks, so containers could be directly loaded from ships aboard flatcars. Intermodal shipping, as it's called today, was born. Virtually every single consumer item that crosses our shores today arrives in a container.

McLean sold Sea-Land in 1969 for a then-enormous $160 million. The company was later merged into Maersk Lines of Denmark, the global shipping titan. When he died in 2001, McLean had been honored by the International Maritime Hall of Fame as its Person of the Century.

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WORDS AND PHOTOGRAPHS BY RICHARD LENTINELLO

Ceramic Ashtrays

IF YOU ARE LOOKING TO COLLECT something old-car related that's somewhat different than the usual models, mascots and signs, think ceramic ashtrays. Unlike the much sought after tire ashtrays that were made of glass and surrounded by a thick band of rubber that simulated a particular tire manufacturer's automobile or truck tire, ceramic ashtrays are both much easier to find and they are far more colorful and interesting to look at, especially when placed in a display cabinet.

Although there truly isn't much information available on the history of ceramic ashtrays, we did manage to find out some basic background that may be of help. There were several different manufacturers, most of whom were located in the U.S., with Sabina being the most popular.

The company, Sabina Industries, was founded in 1946 in McKeesport, Pennsylvania, by its namesake, Samuel Sabin. It remained in business until 1979, although in 1966 it was under bought by Chase Enterprises. Sabin's concept was a simple one: to market decorated china and glass with a variety of subject matters, one of which was vintage automobiles.

Cast in molds, these ceramic ashtrays are five and half inches in diameter and finished in a warm white glaze. The gold rim is real 22K gold, and it proudly says so on the ashtray's bottom: "Warranted 22K." The other marking reads: "THE 'Sabina' LINE."

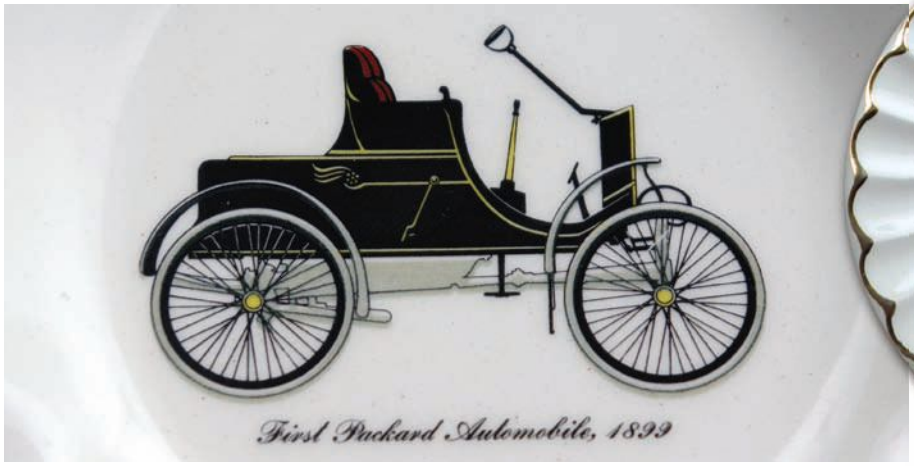
The car images printed in the bowl of the ashtrays are about two inches in length and are highly detailed. This particular one reads: "First Packard Automobile, 1899." In fact, so detailed is its image that you can clearly see each of the 36 thin spokes in the wire wheels. Practically all black, a small spot of deep red was used for the seat backs.

These novelty ashtrays were just that, novelty gifts, and were made from the late 1940s through to the early '60s. They were sold in gift shops and where dinnerware and other glass and ceramic items and collectibles were sold.

This Packard ashtray is the only Sabina ashtray I have, and I think I paid $5 for it about four years ago. Other similar non-Sabina ashtrays, none of which have markings on their underside, are more popular and cost less; rarely did I pay more than $3 each for any of them, although ashtrays in perfect condition without any scratches or rubbed-away finishes can still be bought for less than $10 each and at most, $15.

Today, you will have to rummage through the tables at antique flea markets to find them, although I have managed to buy a few at Hershey in years past. The Brimfield Antique Show in Brimfield, Massachusetts, this country's largest such show, is where I found most of the dozen or so automotive ceramic ashtrays in my collection. Other sources are antique shops, local tag and estate sales and Salvation Army and Goodwill stores.

Can you think of another 50-year-old automotive collectible that you can amass two dozen items of and still have change from a $100 bill?



Primary Ignition Resistance

Voltage control circuit for ignition coil

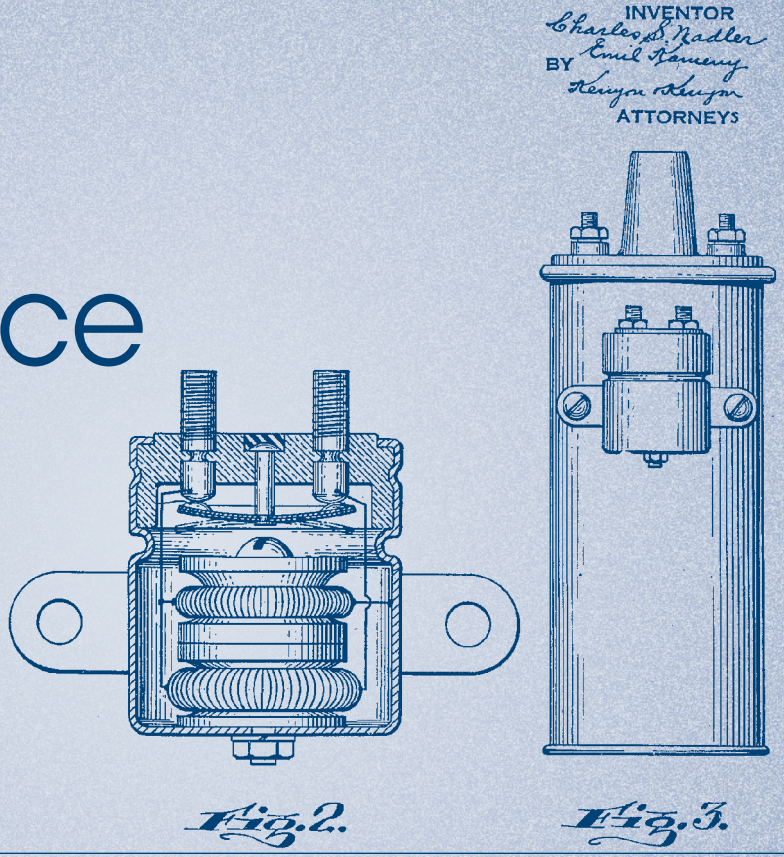


ILLUSTRATION COURTESY OF THE U.S. PATENT OFFICE

JOB: Reducing Ignition Voltage

BY RAY T. BOHACZ

THE IGNITION DISTRIBUTOR AND breaker points were the mainstay in the industry until the 1975 model year automobiles were introduced. Then, an electronic control unit for the charging of the ignition coil took the place of breaker points, which by then were a technology that was three-quarters-of-a-century-old. This all came about because the government demanded reductions in engine emissions, and consumers wanted to have a vehicle that required less maintenance.

As with any technological advancement, this change had both positive and negative effects. The benefit of breakers had been their simple mechanical design that allowed anyone with any mechanical skills and a book of matches for a feeler gauge to get their car running again, even if it had broken down on the side of the road. In contrast, the electronic replacement was of a modular design that could be easily swapped out as a unit but was less easily diagnosable. Hopefully, after a swap, the engine would have spark and run. If it didn't, other parts of the ignition system would have to be replaced until the engine fired. It's likely that these early electronic ignition systems led to mechanics being nicknamed "parts changers."

Even the most ardent fan of breaker points, however, will admit the component's one true weakness: It needs to work on a reduced voltage for it to have an acceptable service life. Breakers could not handle charging circuits putting out over 12 volts for very long. Instead of a service life of thousands of miles, the points would be burned and the engine dead on the side of the road in as little as a few hundred miles. Obviously, this was not acceptable even in the early days of motorcars when the public drove less.

UNDERSTANDING THE IGNITION COIL

The job of breaker points is to act as a switch that supplies primary (low voltage) to the coil windings. When the breaker points are closed, the electricity flows into the coil, which is being "filled" or "charged." The coil has both primary and secondary windings. The secondary windings work in conjunction with the primary windings to increase the voltage that is supplied by the engine's battery to in the thousands. This amount of energy is required to jump the gap of the sparkplug under cylinder pressure and ignite the air/fuel ratio.

When the points open via the distributor's cam, the charging of the coil stops and the energy field is no longer supported; this is called "collapse." At that time, the electricity moves into the more numerous secondary windings, and the spark plug fires.

A good way to understand the charging of an ignition coil is to liken it to a bank account that you constantly make deposits in and then withdrawals from. If you put more money in the bank account

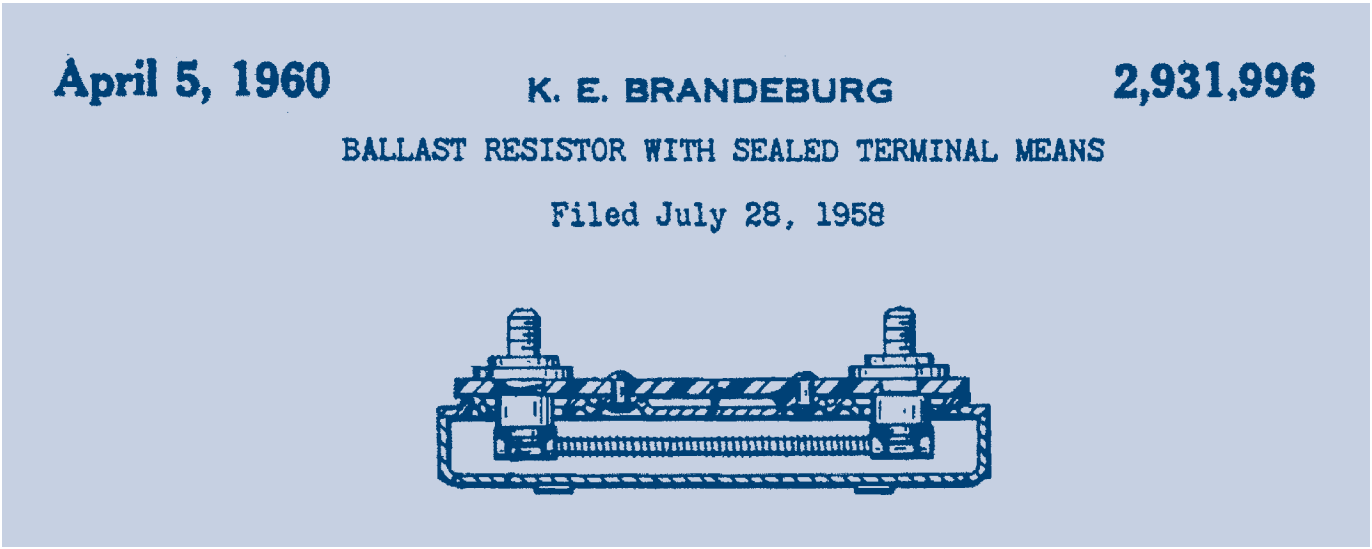


ILLUSTRATION COURTESY OF THE U.S. PATENT OFFICE

The encapsulated ballast resistor was made popular by Chrysler from the 1960s until EFI was installed. The 1970s brought a dual ballast that had 0.5 ohm resistance on one side and 5 ohms on the other. It was used with many early Mopar electronic ignition systems.

at a faster rate than you take it out, there are more potential funds available for you to withdraw from. Now think of the money as electricity.

If the voltage that is fed ("deposited") to the coil is higher than the charge in the windings, it fills faster and to a greater capacity. Simply put, the more you put in the more you can take out. Thus, if the breaker points could carry more electrical energy than the coil could, in theory, they could become more powerful.

But before this concept can be explored any further, we need to look at the needs of the sparkplug.

THE SPARKPLUG FIRING

The voltage demand on the ignition coil by the sparkplug varies with load on the engine. It may require only 1,000 volts for it to ignite when the engine is idling and cylinder pressure is low, but then need 20,000 volts to climb a hill under full throttle. This posed a dilemma for the ignition designer. If the coil (remember it's a bank account) has only enough energy in it to support the ignition load at idle and the engine is only being asked to idle, the engine runs fine. But if the driver demands more power, the coil will not have enough electricity (funds) and the engine will misfire (the check will bounce). The engine misfires because once the coil is depleted, falling short of the amount of energy that is needed by the sparkplug, the electrical arcing stops and the sparkplug extinguishes. Thus, a long-lasting system needed to be designed that could charge the coil sufficiently to provide the necessary voltage for the sparkplug to fire under every driving condition.

There was another problem to overcome. When the engine is being cranked by the starter motor, the available voltage in the battery is diminished. This, in turn, limits the energy that goes to charging the coil. A method to limit the voltage to the breaker points when the engine was running, but did not function when the engine was being cranked, was needed.

THE BALLAST CIRCUIT

Upon investigation, it was determined that the most logical place to control the voltage to the coil was in the ignition switch circuit. Located there, when power was going to the coil alone (engine running) or to the coil and starter motor (cranking), the control inherently directed the electron flow.

The theory of a breaker point ignition was the same regardless of the car make or engine type, only the means of execution varied. Hence, the basic tenet of the system controlling the voltage to the coil will be common.

When discussing automotive electrical circuits, the word "ballast" refers to a means to step-down the voltage to a prescribed value. It could be thought of in simple terms as a resistor in a circuit.

During engine cranking, when a full load is put on the battery, and the potential voltage is reduced, the ballast circuit is bypassed, allowing all available battery voltage to go to the starter motor and the positive side of the ignition coil; the breaker points are attached to the negative side of the ignition coil. The starter motor turns the crankshaft, and the breaker points in turn open and close as the rubbing block rides on the distributor cam. As soon as the engine starts, the operator releases the ignition switch, and the power to the starter motor is interrupted, while at the same time the voltage to the coil is redirected through the ballast circuit. In theory, there is a split second from when the ignition goes from crank to run when there is no voltage being fed to the coil primary, but because the crankshaft has inertia, the operator does not detect it.

When the ignition switch is in the run position, the voltage via the ballast circuit drops to approximately one-half the charging circuit output. It used to be said that the engine cranks on 12 volts but runs on 6 or 7, and that statement is loosely correct if it's not in reference to a 6-volt system.

A DIFFERENT PATH TO THE SAME RESULT

Two different approaches in the industry to ballasting the ignition feed to the coil emerged, one utilizing a physical resistor, popularized by the Chrysler Corporation and one using a ballast or resistance wire, employed by other brands.

The resistance-wire type functions as a step-down circuit. It is a designed part, just like anything else on a car or engine. To the naked eye, it resembles a common

low-voltage wire, no different than the one that feeds the power to the radio, dashboard lamps or any other electrical component found in a car. By contrast, a Chrysler-style ballast resistor is a physical resistor that is housed in a Bakelite-type of material. Inside, there is an uninsulated resistance wire that is typically a spiral light-grade metal winding.

The voltage supply for the ballast circuit can be found in different locations and is manufacturer-specific. In some applications, there is an "R" terminal for resistance on either the starter-mounted solenoid, or if the solenoid is remotely fixed, it may be located there. In other models, the "R" terminal may be a dedicated pin on the ignition switch. Regardless of where the power to the coil is sourced, the end result is the same: The ballast circuit is bypassed during engine crank and then reintroduced when the engine is running.

AN INHERENT OBSTACLE

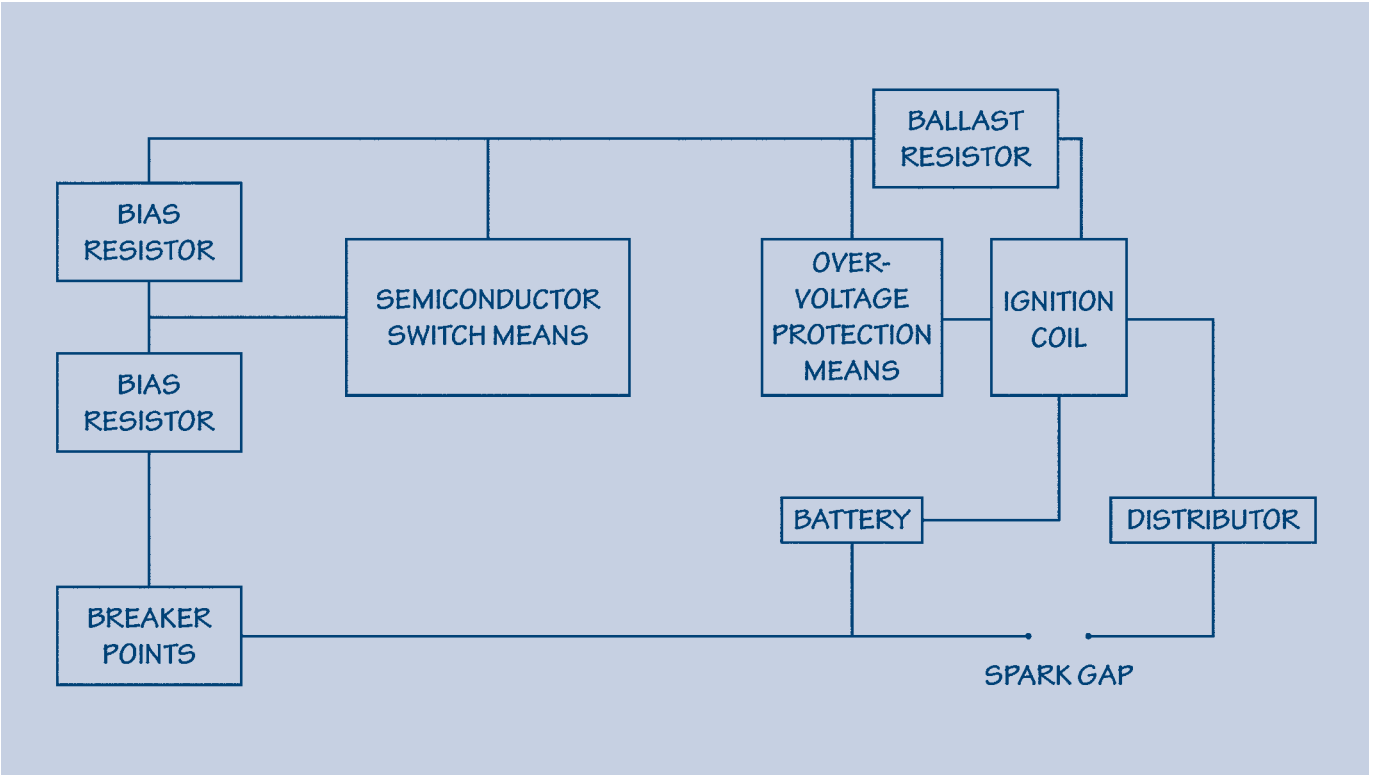
When these systems were in production, regardless of whether dedicated ballast was employed or a resistance wire, the engines ran flawlessly. The ignition system was designed around all of its components, and there were no issues at all. Occasionally, an external ballast would fail (break internally), and though the engine would start, as soon as the ignition key was released to run, it would shut off since there was no voltage being supplied to the coil.

The main issue was that, even though the windings of the coil could be manipulated to increase the output, only so much could be done if it was being fed around 7 volts. This limited the gap of the sparkplug to the then-common 0.035 inch. It is advantageous to have a wider gap so a larger ionization window is created, but the ignition system needs to have the power to arc that larger gap under all engine-operating states.

Once the breaker points were eliminated, the ignition coil could be fed full charging circuit output, and the gap of the sparkplug could be opened up quite a bit. The first manufacturer to do this was General Motors in 1975, with the corporation's excellent High Energy Ignition (HEI) system, which delivered full alternator output to the coil. Eventually, the other automakers followed GM's lead with a version of this type of ignition.

The problem that the automobile collector deals with today is out-of-specification ballast circuits that look correct but that have the wrong resistance or skew greatly under high heat load in the engine compartment. An ignition coil that has the wrong internal resistance often exacerbates this condition and leads to a poor-running engine for which you can find nothing wrong. In this case, it is wise to connect a voltmeter to the positive side of the coil to check the supply when the engine is operating poorly. I recently experienced this on a Dodge that would run fine until it got warm under the hood. The "new" ballast was dropping the power to the coil in a downward spiral until it reached less than 6 volts. As the voltage dropped, the engine would begin to run poorly and then at the 5.8-volt level, it would stall. It would start back up because during cranking, the ballast was bypassed.

The ballast circuit is another part of automotive history that, as time passes, fewer enthusiast are aware that it ever even existed. This technology served the industry well for almost 100 years, but as transistors replaced vacuum tubes in TVs, they also replaced the ballasts in automobiles. Who could have imagined when Bell Laboratories invented the transistor it would have such an impact on how an engine runs?



All of the Detroit four employed a ballast circuit with breaker point ignition, but only Chrysler used a ballast circuit with the early (1972 and up) electronic design. It replaced the breaker points with a switching transistor.

I WAS THERE

Richard Lichte

Painter

Excalibur Automobiles, 1969-1975

LIKE THE EXCALIBUR SWORD, the story, the man and the legend cannot be changed and will always endure, unambiguous, straight, and true.

I enjoyed reading your very impressive "Personality Profile" in *HCC* #112 on Alice Preston, "Keeping the Brooks Stevens's Excalibur Dream Alive." It brought me back to my time as Brooks Stevens' chauffeur and to my six years of running the Excalibur paint department.

Taking the Studebaker chassis, upgrading the engine, and mounting body panels resembling an early Mercedes SSK was a stroke of genius, and as Alice quipped of the Zimmer and the Clenet, Brooks used somebody else's frame and engine and slapped some fiberglass panels on it. It was the birth of a new concept that inspired a strong secondary kit car market of today.

I've been building and painting cars for over 40 years now, and I've painted thousands of cars, but it all began for me at Excalibur Automobiles. My connection goes back to 1966, when I was painting cars with a buddy, Bob Wolcyk, the original Excalibur painter who painted all the Series I cars, and quit in 1969. I was then hired by Excalibur and given a free hand to hire staff and run the paint department, which I did from 1969 through 1975.

When I first came on board, they were just changing over to the Series II cars, and I was hired to develop a production-line painting system that turned out show cars. I was responsible for their appearance and accountable for resolving all paint-related issues. There were scores of components and, over time, I developed those initial procedures and systems used in treatment, preparation, and final finish for every painted part that made up this automobile. The A-arms, rear trailing arms, and many frame parts were visible on the finished product. They had to be ground smooth, molded by hand with body filler, sanded, primed and painted with acrylic enamel, with a hardening activator. The fiberglass bodies were refinished in lacquer, which was "old school" and not recommended for fiberglass, and was essentially on the way out.

Once the car was assembled and

tested, I made repairs and did all blending and touch-ups as required due to scratched fenders, dropped wrenches and spilled brake fluid. Upon completion, every painted component on this car was examined and approved by me. I was a car guy, and like the rest of the crew, I took my job seriously, and I was dedicated to the car, the job, and the crew of the SS Excalibur.

But, I was not just the factory painter. I did lots of fun stuff. I delivered cars, I was given the task of putting 5,000 miles in 10 days on the EPA Test Car, and I was Brooks Stevens's chauffeur. We both loved cars, and spoke the same language on many issues on our many trips to Chicago.

Brooks trusted my judgment on many topics, including paint-related issues for the Excalibur and for his museum cars, and special projects. I've always had a great respect and admiration for his unique design perspective on the world of the past, and how it related to the world of today. When I earned my degree in mechanical design engineering 20 years later, I couldn't help but reflect on his insights.

The last project I worked on with Brooks was in mid 1974. He was heavily involved in the construction of Jackie Gleason's car. He came to me in the paint department and asked if there was some way we could mount woven cane onto the doors. I truly admired Brooks, and whenever he asked me to do something, I always found a way to make it happen. I used a two part epoxy and made a quarter-inch raised edge around the perimeter of each door, laid them face-up, and poured a decoupage clear-urethane over the woven cane, encasing it in a thick, clear, protective layer.

Due to issues with paint cracking, for years I tried convincing management to switch to the newer acrylic enamel system, and to get an oven. We were building three and a half cars per week at that time, gearing up for the Series III models, and they wanted to increase production up to five cars per week. I told Brooks there was no way to do that without force drying, so he bought an oven to cure the fiberglass and stop the paint cracking issue. There was also a timesaving advantage. The oven allowed us to check for air pockets, cure the primer and cure the paint prior to buffing. By the time I handed over the reins in 1975, I had painted some of the Series Is, nearly all of the Series IIs, and some of the Series III Excaliburs—around 350 cars, total.

Even after my departure, I convinced them to convert from spraying flammable solvents to using a cleaning system I had developed for their metal frames. It was a water-based, environmentally safe, chemical etching system. Just like their father, Steve Stevens spared no expense when it came to safety, and Dave Stevens—a master at engineering the car into what it is today—spared no expense when it came to doing the job right.

It all began with a handful of guys who wanted to build a car, and ended up a legend that's lived on for 50 years. The cars always looked spot on, and that says a lot for Brooks's dream team.

I preceded Alice at the Excalibur Factory by six years, and I too was close to Brooks Stevens. Along the way, I gained respect for the man, admiration for his talent, and allegiance to his dream. I was delighted to see that Alice Preston was keeping the dream alive for my mentor. I know he'd be happy to see his legend represented with authenticity, class and integrity, like the man himself. I'm pleased to have played a part in making his dream a reality, bringing authenticity, candor, and clarity to the fairy-tale.

I Was There relates your stories from working for the carmakers, whether it was at the drawing board, on the assembly line or anywhere in between. To submit your stories, email us at editorial@hemmings.com or write to us at I Was There, c/o *Hemmings Classic Car*, 222 Main Street, Bennington, Vermont 05201.

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TECH TALK

BY MIKE McNESSOR

BURNING QUESTION

Q: I have a 1937 Chevrolet that was restored about two years ago. The original engine was swapped for a 1966 GMC truck 292-cu.in. six-cylinder, assembled by an independent rebuilder, and installed by a restoration shop. I've had the car back to them several times to address oil leaks and consumption, because one to two tablespoons of oil drips into a drip pan every time it is parked. The oil seems to be coming from the back end of the engine above the starter and drips off the starter. The engine rebuilder is no longer in business, and the restoration shop says they "think" the rear main seal is the rope type and was replaced by the builder. I would love to stop the leak, but I am more concerned with oil consumption right now.

Since day one, the engine has used one quart of oil to drive 300 to 350 miles. Last summer, on a 15-day trip to Chicago, I used one quart a day, almost four gallons of oil in a 15-day trip. The restoration shop said it needed a PCV valve. We installed one, but no change. Then, they said the baffle was missing in the valve cover under the filler cap. So we installed one, but there was no change. I tried disconnecting the tubing from the PCV valve to the filler cap and using a vented filler cap, but there was no change. I found an independent mechanic to talk with, and he suggested it needed a tube from the carburetor air filter cover to the valve cover for air flow to the crankcase. He installed one, but no change.

I use 10W40 Valvoline oil as instructed by the restoration shop. I tried 10W40 synthetic oil, but there was no change. I tried 20W50 oil, but there was no change. When I took possession of the car from the restoration shop, over 10,000 miles ago, they said to be sure and use Lucas Engine Break-In Additive with TB Zinc-Plus with every oil change, because the engine needed zinc. My next test is to try Valvoline 10W40 Max Life, Synthetic Blend, High Mileage oil. It says it will help seal a main bearing seal leak, and I am hoping it might ease the high oil consumption. Any suggestions you have would be greatly appreciated.

Bob Everett
Fruita, Colorado

A: I'd start with the leaks, because it's making a mess and it's tough to know whether the oil is just streaming out of the engine while you're driving or if it's actually burning it. First, clean and degrease the engine and underside of the car thoroughly, and then let it idle while you determine where the oil is leaking from. Maybe one of the mechanics who has worked on the car could help by using his leak-detection dye kit to find the leak. In addition to the rear main seal, don't rule out a leaking oil sending unit, a leaking oil pan or valve cover gasket or all of the above. If you determine that it is the rear main seal, your best bet is to pull the engine and do the job out in the open. (Frankly, even if it's the oil pan gasket, I'd probably pull the engine.) There's a chance you will also be replacing the oil-soaked clutch disc at that time, as well.

It's hard to know if your oil consumption is because of the leaks or an internal engine problem. Certainly, a lack of crankcase ventilation will cause oil to find its way out, but a PCV valve correctly installed should've fixed that if it was the problem. You don't mention any of the usual oil-burning symptoms: blue smoke while driving that might indicate worn or broken piston rings, oil-fouled spark plugs, or blue smoke on startup that might indicate worn or incorrectly installed valve seals, for instance. Perform a compression test and a vacuum test looking for clues. Your spark plugs too are a good source of information.

Regarding the oil issue: Lucas Break-In Oil Additive has a lot of zinc in it and should be, in my opinion, used sparingly, if you're using it with every oil change. Lucas's website claims that adding a 16-ounce bottle to 4.5 quarts of oil will result in a zinc level of 3,500 ppm, which is far more than your engine requires. You should probably use no more than four to eight ounces to five quarts of oil. Also, please keep in mind that most oil manufacturers advise not using additives in their oils at all. Valvoline Max Life is probably a very good product, but if you're concerned with additive levels high enough for older flat-tappet engines, Valvoline's conventional VR1 should work well without the use of extra additives. There are other oils on the market too that offer additive levels suitable for flat-tappet engines: Brad Penn, Mobil 1 (15W50), Joe Gibbs Driven and my employer's brand, Hemmings Motor News Motor Oil, manufactured by Champion Brands LLC, to name a few.

If you're considering Max Life for its claimed seal-rejuvenating properties as a solution to your oil leak, I think you'll be much happier when you repair the problem with new, correctly installed gaskets and seals.

TO BORE OR NOT TO BORE

Q: I want to rebuild the engine in my 1964 Falcon, because it's smoking and burning oil. It's a 260-cu.in. V-8 two-barrel. Years ago, I remember people would just replace an engine's rings and bearings, sometimes without removing the engine from the car! Could I do this and save some money, or should I pull the engine and do a complete tear-down, bore the block, etc.?

Joseph Mahoney
Via email

A: This depends entirely on the condition of your engine and why it is burning oil. Engines that have been fastidiously maintained their entire lives will often work very well after the cylinders have been honed, the pistons and rods cleaned up and outfitted with new rings and bearings, along with a valve job, and polishing the crank. (A new timing chain and gears as well as an oil pump are also a good idea.) How far you want to go with this depends on your comfort level and your pocketbook. When you take the engine apart, you will need to measure the bore for taper and out-of-roundness. If the cylinders are excessively worn, you'll need to bore them. The condition of the crankshaft, too, will determine whether or not you need to pay for machine work.

Consider removing the engine, and with the aid of a good basic engine rebuilding manual, disassembling it (carefully marking the original positions of all the parts you remove) and then having a machinist or a knowledgeable fellow hobbyist measure the block and inspect the crank, rods and cam for you. While the engine is out, you'll want to consider replacing any worn rubber mounts, U-joints, and if it's a manual transmission car, the clutch and throw-out bearing. These projects can snowball and wind up costing you more than you anticipated. But cutting corners and saving a little money now could wind up costing you more aggravation (and more money) later.

Send questions to: Tech Talk, c/o *Hemmings Classic Car*, P.O. Box 196, Bennington, Vermont 05201; or email your question to: mmcnessor@hemmings.com.

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REARVIEW MIRROR 1930

BY TOM COMERRO

CHEVROLET'S UNIVERSAL MODEL AD is now available with a non-glare windshield and smaller tires, while standard equipment on the Special sedan includes six wire wheels, front and rear bumpers, a robe rail and silk assist cords. Total production exceeds 864,000 for this year, making the Universal one of the more popular cars on the market. Chevrolet also produces its seventh-millionth car this year, dating back to 1912.

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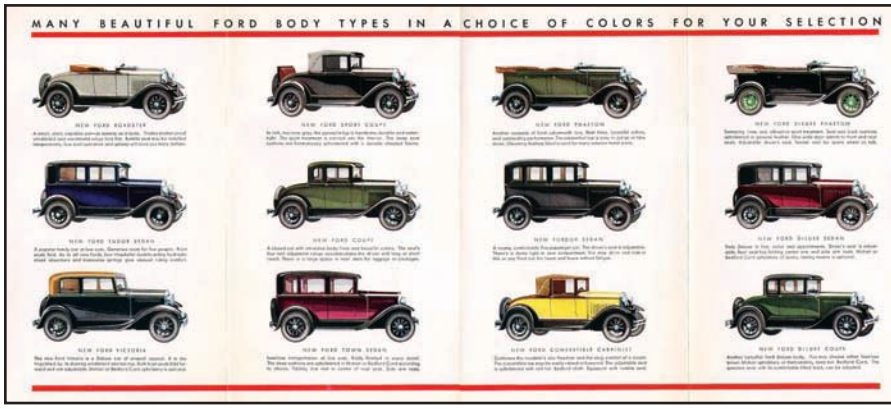

FORD'S MODEL A ERA is in full swing with a full spectrum of colors and body styles now available. Wider fenders and an overall height reduction bring a new look to the Model A. New body styles include the Victoria and a Deluxe Phaeton. With factory prices starting at $440, the Model A is an affordable car with a lot of exposure in the marketplace of 1930.

LA SALLE'S FLEETWOOD ROADSTER is a new addition to the La Salle line. Built on a 134-inch wheelbase, the roadster features louvers on the side of the cowl and is powered by a 340-cu.in. V-8 that features an increased bore, making it the same displacement as those used in the Cadillac Series 341-B. The two-door roadster is now available at $2,450.

THE CHICAGO AUTO SHOW features 300 new car models, as well as the first ever viewing of the Nash 400.

PRESIDENT HERBERT HOOVER ASKS Congress for $150 million for a public works program to stimulate the economy.

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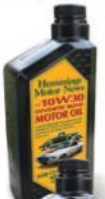

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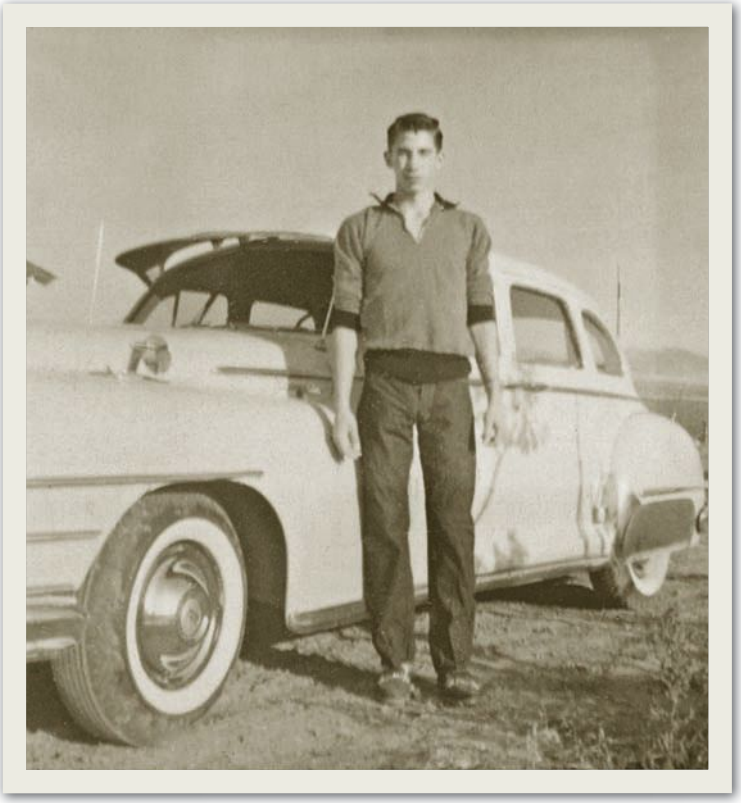
A Beauty in My Eyes

MY FATHER THOUGHT Fords, Mercurys and other V-8-powered cars were too fast and dangerous, so my older brother's first car, and later, my first car, was a 1948 Chrysler Windsor four-door sedan. It had the optional Highlander Plaid interior, and was powered by a flathead straight-six engine and a Fluid-Drive transmission.



The Chrysler came into our family in 1955 when my parents bought it from a dealer in Great Falls, Montana, for my brother when he was 15, and I was 13. Although a Chrysler was not the typical car that other teenage boys were driving in the 1950s, it was our car—in fact, a very nice car.

We lived on a cattle ranch about 50 miles from Great Falls and near the small town of Geyser. We had a Dodge Power Wagon on the ranch, which was great for going through deep snow drifts, but it was not too cool to drive to town and impress the girls.

My brother drove the Chrysler for two years, then it was parked behind our barn with a connecting rod through the side of its block; not unusual for cars at that time when they were hot-rodded too much and not serviced properly. My brother didn't want to replace the engine, so he wound up buying a 1953 Chevrolet. I remember dreaming what I could do with the Chrysler if my parents would ever give it to me and if I could get it running.

My dream came true and I inherited the Chrysler in 1957 when I was 15. I saved my paychecks from my summer job on the ranch and proceeded to buy a rebuilt short block from Montgomery Ward. On top of the cylinder head was the word SPITFIRE, so I was sure I had a much more powerful engine than ever before. Of course, that wasn't the case.

I attempted to install the new engine, but stopped my endeavor when I realized I didn't know how to disconnect the engine from the transmission. Plus, I had already ruined some of the brass fittings when removing them from the old engine.

In Raynesford, another nearby small town, was Michael's Garage. So, after the owner agreed to take on the job of exchanging engines, the car was pulled behind the Power Wagon down to his garage. After a couple of weeks, the job was completed, and I was finally driving my car.

I tried to customize the old Chrysler as much as my limited funds would allow. To brighten up the original tan paint, I installed red fender skirts and a blue sunvisor. I ordered full hubcaps, bolt-on spinners, dual mirrors and headlamp rims from JC Whitney catalog. I replaced the original grille with one from a 1948 Oldsmobile, and repositioned the taillamps. I made four-inch lowering blocks for the rear axle, just enough so the driveshaft would rub on the undercarriage and I would consistently bottom out. In the Montana snow and mud, a lowered car was not too practical, but having my '48 Chrysler customized was much more important, not that my father agreed.

In the summer of 1958, I again saved my pay and had my Chrysler painted Peacock blue, including the fender skirts and visor. I nosed and decked the hood and trunk, and also had dual pipes and glass-pack mufflers installed after having the manifold split. Under the hood, I replaced the oil bath air cleaner with a chrome bonnet, and placed chrome covers over the head bolts.

The very attractive Highlander Plaid interior was complemented with red carpets, and I always kept the dash shining with my moms' Old English polish.

The car was a beauty in my eyes. It wasn't too fast, maybe 80 MPH, but the Fluid-Drive transmission had a first gear that would give me a jump on just about any car in my little hometown. I remember so many fun trips that my faithful Chrysler provided to country dances, high school basketball games, and trips to Great Falls just to go cruising.

During the summer of 1959, I sold the Chrysler to a friend when I found a 1951 Oldsmobile 98 convertible for sale. Unfortunately, my friend had an accident and that Peacock blue custom wound up parked once again under the great Montana sky. My Olds 98 turned out to have many mechanical issues, but it did last me through my senior year of high school. When the transmission stopped working, I found a very fast and clean 1951 Oldsmobile 88 four-door that I drove until I joined the Army in 1960. The 88 then stayed on the ranch with my mom and dad while I served my duty in Germany.

Mighty Mack

The little big pickup that could—Mack's 1937 Jr.

WORDS AND PHOTOGRAPHS BY DENNIS DAVID
REPRINTED, IN PART, FROM *SIA* #189

When we think of big trucks, the name Mack immediately comes to mind. As one of the premier builders of heavy-duty vehicles, Mack has ties going back to the very beginning of the trucking industry.

While it may be easy to stereotype Mack as a builder of nothing but large trucks, there was a time when the company that built "the big ones" offered a small truck. While it certainly couldn't haul heavy loads like its big brothers, the Mack Jr. was well suited to the needs of any small business. Exemplifying all of the styling characteristics of the classic 1930s, the Mack Jr. was a cute pickup truck that was more than capable of earning its keep around the farm, and then taking the family down to the general store.

Success came rather easily to the Mack brothers, as they stood in command of their own market. A move from New York to Allentown, Pennsylvania, in 1905 saw the expansion of the company's manufacturing facilities, and output had increased to 51 units for the year. At this point, the name Mack Truck Incorporated was still some years away, and the company was simply called the Mack Brothers Motor Car Company. By maintaining the highest quality standards and manufacturing their own proprietary engines, the Mack brothers were clearly on their way to making a name for themselves in the heavy truck business.

As Mack approached the mid-1930s, it was no secret that several public works contracts were keeping the company alive

Two large, light gray-faced gauges with their chrome bezels contrast nicely against the green instrument panel.

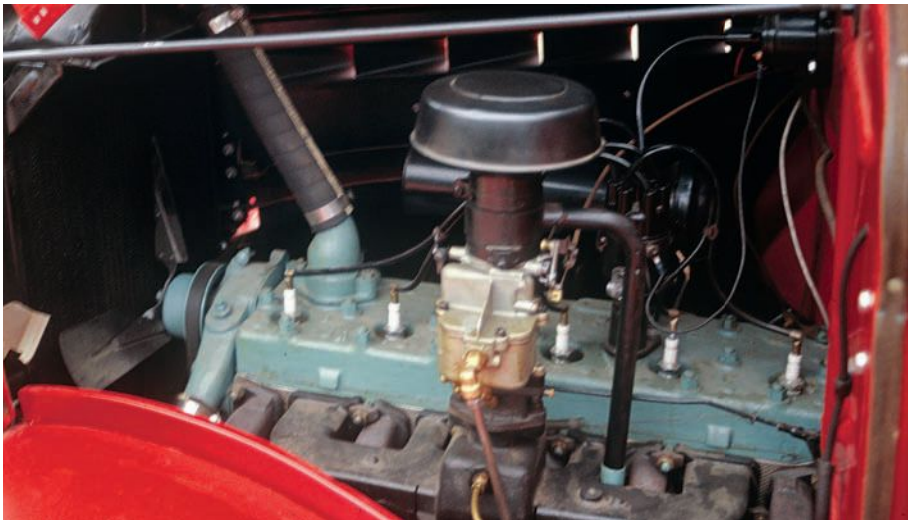
through the Depression years. As with most car companies of the era, these were hard times, and many found an alliance with a competitor to be a better fate than death. Sensing a market for a light-duty truck, Mack contracted with REO in October of 1934 to market a pickup truck built by REO. The new Mack Jr. would be identical to REO's light- and medium-duty offerings, save for a few badges and a double trim spear rounding the front radiator. Mack didn't try too hard to hide the Jr.'s lineage, as REO had built a solid reputation with its REO Speedwagon series of 1-ton and 1-½-ton trucks.

Mack's new Jr. Model appeared in 1936 and received a restyling just one year later. The first Mack Juniors designated by the letter M were offered in a ½-ton model known as the 1M, a 1-½ ton model known as a 10M, a two-ton model known as the 20M, and finally a three-ton known as the 30M. While the REO and Mack Jr. trucks looked practically identical to one another, that famous Mack bulldog still graced the hood of the Mack Jr.

Marketing of the Mack Jr. allowed the company to penetrate all levels of the public's need for a truck. The Mack Jr. benefited greatly from the company's reputation as a builder of reliable trucks at a time when Mack was still feeling the effects of the Great Depression. The alliance with REO proved to be a success, as Mack would post sales of over 4,000 units for 1936, a figure not seen since 1930.

Realizing the full potential of the light-truck market, Mack began development of its own pickup truck, which would come to be known as the ED series. While the Jr. was truly a light-duty pickup, it could be argued that the Mack ED series was nothing more than a commercial-grade Mack in a diaper. In keeping with Mack's tradition of building heavy-duty trucks, nothing about the ED series was actually light-duty. The ED's frame was constructed of 7-inch-deep, 3-1/6-inch-thick side channels and four crossmembers, three of which were boxed and ensured that the ED would not buckle under load. There were distinct styling differences between the Jr. and the ED series, with the latter benefiting from Mack's vast knowledge of heavy-duty trucks. The ED series was actually an exercise in overkill in terms of a light-duty pickup. The ED series also benefited from a state-of-the-art one-piece windshield, and its quality construction ensured that it would last for many years. With the introduction of the ED series, it became apparent that the writing was on the wall for the Mack Jr. The Jr. was discontinued, and Mack's claim to fame in the light-duty truck market would be solely based on the ED series.

Bill Hurlburt acquired his Mack Jr. in 1995; it had been sitting in a barn



With its single, one-barrel, tube-type carburetor, the Continental L-head straight-six engine develops 144-lb.ft. of torque below 2,000 RPM; it starts easily and runs silky smooth.

for many years. As far as Bill knows, he is only the second owner of this truly unique pickup. This cute little pickup was completely disassembled and treated to a body-off restoration. Some parts were difficult to locate, but in praise of REO's fine engineering, the Mack Jr. was mechanically sound. The most difficult piece to track down was the famous Mack bulldog ornament. While the little doggie himself wasn't too hard to find, the mounting structure that it is perched on is unique to the Mack Jr. Bill eventually gave up and had replacements beautifully crafted by a machinist. The results are outstanding, and everything now looks as it did back in 1937.

Opening the door to the finely restored cab, you quickly notice that you're not in for a luxurious ride. Its utilitarian nature is evident from the lack of turn signals and other amenities that are now standard on present-day pickups. Don't bother looking for the heater controls either; it doesn't have one. In 1937, for only $575, the owner of a Mack Jr. got a tough little pickup truck that could do more than earn its keep.

Upon climbing into the cab of the Mack Jr. it is apparent that one is entering a pickup from the 1930s. Its basic interior speaks of a time when the pickup truck was a machine of simplicity. The first thing you notice is that the seat is bolted into position. Despite the lack of an adjustment, it seems to be comfortable for anyone between five- and six-feet tall. Bill's 6-foot 3-inch frame fits comfortably into the cab with just a few inches of

headroom to spare. Posture in the Mack Jr.'s firm seat is just right. Unlike a modern automobile, the Mack allows the rider's legs to bend and lets the feet rest flat on the floor. It's more like sitting on the living room sofa than riding in a truck. Visibility through the split front windshield is excellent, and the reassuring posture of the bulldog up front gives the driver a sense of confidence and reliability.

Familiarization with the gauges and gearshift controls is easy, given the simple nature of the dash layout. The gauges are nicely designed and very easy to read. The smart-looking instrument pod on the left holds an oil pressure gauge in the 12 o'clock position. Fuel is at 3 o'clock, amps are at 6 o'clock, and temperature rounds out the circle at 9. The speedometer is conveniently located just to the right, and it takes only a quick glance to read it. The Jr. is equipped with only one door-mounted rear-view mirror, and there is nothing about the Mack's interior that suggests comfort.

Starting the Mack Jr. is as simple as turning the key and depressing the starter switch located in the center of the floorboard. Its Continental straight-six starts immediately and doesn't exactly roar to life, but begins its leisurely purr as if to say, "I'm ready, let's go." The engine is remarkably smooth and quiet, with no vibration evident in the body or steering wheel.

If the Mack Jr. lacks in anything, it is stopping ability. It is certainly good enough to halt the pickup when the need to stop is foreseen, but one wonders what it would do in a panic. It's not hard to get used to the brakes, given enough time, but there's one motion that you'll never get used to. Every time we make a turn, my hand reaches for a signal indicator that is not there. The Jr. was built without turn signals, and in the interest of authenticity, Bill decided to leave it as is.

We pull back into Bill's yard, and our drive is over all too quickly. Turning off the engine, you have to just sit for a little while and marvel at the wonderfully simplistic nature of the Mack Jr. It's a pure joy to drive, and its effortless mechanical systems only add to its charisma. What it lacks in creature comforts is more than made up for in its devotion to simplicity. It defines an era when an engine was not saddled with air-conditioning units and anti-pollution gizmos. No power accessories or carpet here, just good solid transportation. It's a charming pickup that could make a home for itself in anyone's garage.

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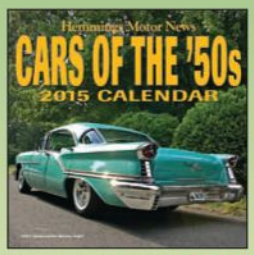

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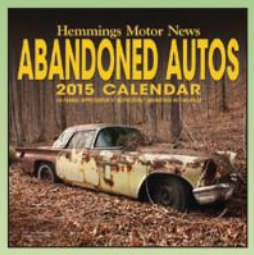

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Mutual Aid

A welter of partnerships in Canada produced Bickle fire trucks

BY JIM DONNELLY • PHOTOGRAPHS COURTESY OF THE ARCHIVES OF WALTER M.P. McCALL

Yes, this is about a single brand of Canadian fire apparatus that was very famous in its day and in the Dominion. The larger story, it's important to note, is about a cross-border pollination of firefighting technology that spanned more than 100 years. The lineup of nameplates that were involved, directly or indirectly, in the gestation of Bickle is a roll call of fire-apparatus royalty. In the most literal sense, Bickle is linked to its home plant in the city of Woodstock, Ontario. But there's a lot more to this story. In fact, it doesn't even begin in Canada.

Bickle Fire Engines, Ltd. took its name from founder Robert Sydney Bickle, one of three sons from Woodstock who cofounded the company. But Robert had an edge in the fire business. His wife was a descendant of the Obenchain-Boyer Company of Logansport, Indiana, which had been producing hand-drawn hose reels since 1879, and would later build the well known Boyer fire truck. The family acquaintance led Robert Bickle to try his own hand in the business. He set up R.S. Bickle in Winnipeg, Manitoba, in 1906. Within a few years, he'd sold a motorized pumper to Calgary, Alberta, the city's first self-propelled engine and one of the first such vehicles in Canada of any kind.

Our source for this story was Walt McCall, a longtime historian of fire apparatus and professional vehicles who lives in Windsor, Ontario. He's planning to write a definitive history of his homeland fire legend. He notes, though, that although the Canadian market for fire trucks is small compared to the sales environment in the United States, American manufacturers jumped in quickly. The best known was Seagrave of Columbus, Ohio, which operated Canadian plants on three separate occasions. American LaFrance set up a satellite manufacturing facility in Toronto that built rigs for many years. Seagrave, as Walt explains, takes credit for selling the bulk of first-generation motorized fire trucks in Canada.

While all this was going on, Bickle decided to relocate the company from Manitoba to Ontario—to his hometown,

to be precise. He moved the firm into an abandoned plant in which the very short-lived Woodstock automobile had been assembled. During World War I, Bickle produced a variety of hose carts for the Canadian military. By 1924, the firm had been reorganized and occupied a new, larger factory in Woodstock.

Postwar competition was fierce, and Bickle shortly entered into a technical and marketing partnership with one of the grandest names in American firefighting. Ahrens-Fox of Cincinnati, Ohio, was already famed for its line of massive pumpers, whose vertical piston pumps, with their distinctive round air chambers, were mounted ahead of the radiator. Bickle built four of the piston-pump beasts; the first is still owned by Kingston, Ontario. But in 1926, Bickle decided to introduce a new series of fire trucks with a stronger Canadian lineage. A Bickle nephew, Vernon King, designed them. A variety of chassis configurations were offered, with enormous six-cylinder Ahrens-Fox power and rotary pumps. The new Bickles borrowed their gabled hood and upright radiator shell from Ahrens-Fox. They came in four sizes, rated from 350 to 840 Imperial gallons per minute of pumping capacity.

The pumpers you see here represent the first major order of Bickle's "Strictly Canadian" rigs, by the city of Toronto, which in 1930 bought five 800 IGPM pumpers built on Canadian-made Gotfredson truck chassis, with Ahrens-Fox engines. They served Canada's biggest city for decades. The success prompted Montreal and Quebec City to both approach Bickle, seeking a short-wheelbase aerial ladder truck that could better negotiate those historic cities. Bickle contracted with the German ladder manufacturer Magirus, which supplied a very compact 100-foot aerial. It was adapted to the Bickle chassis. The first, which went to Montreal (one of which was still on the roster in 1970), is believed to be the first rear-mount aerial ladder truck ever used in North America.

Next, Bickle paired with Peter Pirsch & Sons of Kenosha, Wisconsin, to use its patented hoist and ladder system on a new line of tractor-drawn aerials. By 1935, Bickle reached a deal with Seagrave to take over the production of its trucks for Canadian buyers. The franchise was rechristened Bickle-Seagrave, and became Canada's largest manufacturer of fire equipment. It built scores of military fire trucks during World War II.

The Bickle brothers decided to retire after the war and sold out to a Toronto financier, which went to produce Seagrave's gorgeous 70th Anniversary models in Woodstock, but the firm went into receivership in 1956. But, lo, Vernon King was still around, and he stepped in as Bickle's rescuer. The family name expired, but the new firm, King-Seagrave Ltd., continued operations from a new plant in Woodstock. It lasted until 1985, when it once again went into receivership and emerged as Amertek, which was best known for building airport crash rigs.

We enjoy publishing period photos of authentic, old-time working trucks, especially from the people who drove them or owned them. If you have a story and photos to share, email the author at jdonnelly@hemmings.com.

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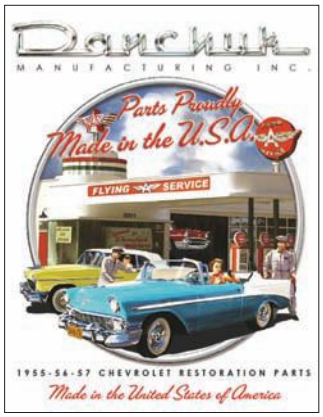

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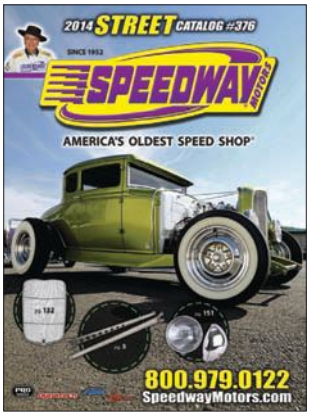

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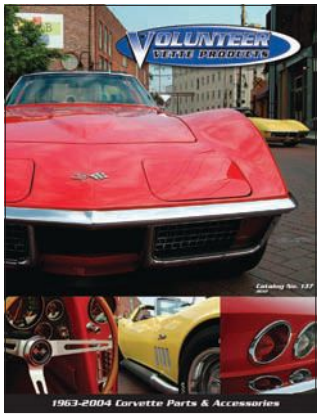

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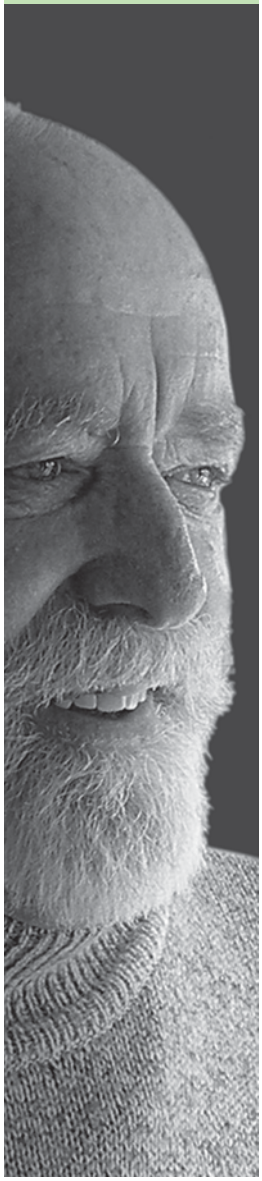
Advertisers in this issue

"The Duesenberg struck me with its aristocratic magnificence, but the Cord was what stopped me in my tracks."



jim**richardson**

America's Most Successful Failure

Have you ever been so stunned and startled by beauty that all you could do was stop and stare? It happened to me in the 1950s when I was 12 and my father had taken me to the Los Angeles Museum of Natural History. In the basement was a small collection of classic cars, which included a big black Duesenberg Model J roadster and a 1936 Cord Westchester 810. The Duesenberg struck me with its aristocratic magnificence, but the Cord was what stopped me in my tracks.

I thought it was a much newer car until I read the information on the plaques in front of the cars. It was then I discovered that the Cord and the Duesenberg were just five years apart in age, and both were designed by styling genius Gordon Buehrig. Both were built by Auburn-Cord-Duesenberg in Indiana, and both were the epitome of styling and engineering for their time; but they could not have been more different. The Model J was the ultimate statement of the classic period with its upright styling. But the Cord defined the future.

In 1936, when the Cord 810 sedan made its debut at the New York Auto Show, it was an immediate sensation. Nothing like it had been seen before. The crowd around it was so big that people stood on the bumpers of other offerings to get a look at it. It was low, understated and stunning. And the more you looked, the more amazing the car became. As an automotive first, its headlamps rotated into its fenders and were concealed when not in use.

It was also the first car to have its gas cap under a flap in the body so as not to ruin the flowing lines of the car. And it was the first to have its door, hood and deck hinges concealed, plus it was the first to have a horn ring instead of a button. And it had a clamshell hood, unlike other offerings of the day whose hoods opened from the sides.

But the car didn't just look innovative. Everything about it was ahead of its time by years. It had front-wheel drive and independent front suspension, was unit bodied, sported a semi-automatic transmission with a fourth gear overdrive, and it sat so low that it needed no running boards. Its 288.6-cubic-inch V-8 designed by Duesenberg, was built by Lycoming and had aluminum cylinder heads. It was a flathead, but in 1936 that was an advantage because it allowed for a short, sturdy valvetrain that needed little maintenance.

And then in 1937, a centrifugal supercharger was added to the engine, along with free-flowing side pipes that gave the engine 195 hp when most companies were happy with 80 to 100 hp.

So why was the car a failure? It started with money. E.L. Cord, who put together Auburn-Cord-Duesenberg in the late 1920s, had long since lost interest in the company and had divested himself of much of its stock. Cord owned most of Beverly Hills, and was busy making another fortune selling lots to movie moguls. He also owned Lycoming, and Stinson aircraft, among other things, so he mainly wanted one more spectacular car to drive the stock price up on his car company so he could sell out at a good price.

Then about the time the decision was made to go ahead with the 810, President Roosevelt had the date of the New York Auto Show moved back to November instead of January in order to stimulate sales. So not only was there little money, but there was no time to test and develop such a revolutionary automobile. Plenty of orders were placed, but buyers had to wait due to production problems, and many cancelled.

Due to the limited time available to get into production, early buyers became the test drivers, with the result that the car developed a reputation for being unreliable. And by the time they worked the bugs out, it was too late. Then there was price. A new Cord cost as much as a Cadillac, but was only the size of a mid-priced sedan. People equated size with value back then.

After having driven an 812 Beverly sedan owned by noted Duesenberg restorer Randy Ema, I can tell you that they are as fast, comfortable and enjoyable to drive as they look. It wasn't until the 1966 Oldsmobile Toronado that a car with the innovations of the Cord 810/812 came along, but the Toronado was not the styling tour de force, nor the magnificent failure that the Cord was. I am still stopped in my tracks by the beauty and genius of the Cord 810/812 at car shows. I can't afford to make one mine, but I can love them anyway.

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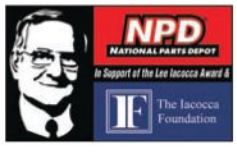

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