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HOW GM SET WARTIME STANDARDS

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CLASSIC CAR

THE DEFINITIVE ALL-AMERICAN COLLECTOR-CAR MAGAZINE

MARCH 2014 #114

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HEMMINGS CLASSIC CAR
is published monthly by Hemmings Motor News
ISSN# 1550-8730
www.hemmings.com • 222 Main St., Bennington, Vermont 05201

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  Mail: P.O. Box 196, Bennington, Vermont 05201
  E-mail: hmnsubs@hemmings.com
  Online: www.hemmings.com
  Subscription rates in U.S. and Possessions 12 issues for $18.95, Canada $30.95 (price includes surface mail and GST tax). All other countries $32.95 in U.S. funds.
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Periodicals postage paid at Bennington, Vermont and additional mailing offices.
POSTMASTER: send address changes to Hemmings Classic Car, P.O. Box 196, Bennington, Vermont 05201
American City Business Journals, Inc.,
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richardlentinello

> "The thing I like best about reading maps is that it allows me to learn more about this great country of ours."

Reading Maps

Fifteen years ago when I began building my garage solo, a few knuckleheads in the neighborhood were amazed that I didn't own a pneumatic nail gun. Several of them said, "How are you going to build a garage without a nail gun; it's impossible." My standard reply, which always rendered them motionless for several seconds because they just could not comprehend what I was saying, was always: "Did the Romans have power tools when they constructed St. Peter's Basilica?" So, leaving me with my trusty Estwing hammer in my hand, the naysayers usually walked away shaking their heads, with nary a clue as to just how ridiculous they sounded.

Thanks to today's fascinating world of computer technology, this same mindset has permeated our society with GPS. Although I too have an iPhone, computer, laptop, scanner/copier and a digital camera, and I know how to record Formula 1 races on TV so I don't have to get up at the crack of dawn to watch them live, when it comes to owning a GPS I'm simply not interested. It's not just weird, it's an insult to my intelligence to rely on a little black box atop the dashboard to get me where I want to go. Like my neighbors who couldn't understand how I built a two-story, four-car garage without a pneumatic hammer, I've heard from similar people asking me, "How did you find our house without a GPS?" I politely reply by saying, "Oh, I know how to read a map."

Ever since I was a kid, I've been fascinated by maps. Then, as now, I read maps for enjoyment. It's not only informative, but I find it very relaxing, and I can do it for hours without getting bored. That is why every few years I buy the latest *Rand McNally Road Atlas,* my favorite.

Besides discovering how best to get from one place to another, there is also something optimistic about reading maps. Because you can see the entire city, state or country before you, it allows your mind to drift away from the day's problems and dream about going places you've never been to before, and all the national parks and historical sites that you've always wanted to visit.

The main problem I have with GPS units is that they plot the route for you, which in many cases is not the best or most direct means of getting to where you need to go. We have GPS in the Hemmings vans, and nearly every time I've used them, the routes that they described would have taken me many miles out of the way, and through some of the worst traffic-snarled roads in the Northeast. That little black box only knows what has been programed into it.

Once, when we were driving to the Charlotte AutoFair, one of my co-workers turned on the GPS to see which way the satellite would have taken us, and sure enough, it would have sent us over to Scranton, down Interstate 81, through western Virginia and over to I-77 into Charlotte; this route easily adds close to two hours to the trip. So instead we took the direct route of I-95 all the way down into Richmond, then cut off onto I-85 directly into Charlotte.

This is why I always turn it off and take out the map instead to get me to where I need to go. More importantly, reading a map will give me options that the GPS can't. Instead of relying on a tiny computer chip for directions, I rely on my eyes to decide which highways or back roads I need to take. A road atlas will also show you the roads less traveled, so if you have the time, you can make your journey much more enjoyable and perhaps see certain areas and towns that you have never seen before.

The thing I like best about reading maps is that it allows me to learn more about this great country of ours. Which towns are located where, unknown small mountain ranges that I never knew existed, scenic roads that wind along rivers, and all the interesting significant sites along the way that would be wonderful to visit.

When I took my daughters on a road trip to the Black Hills, on the return trip while heading down into Chicago from Wisconsin, I noticed a marker on the map calling out the home and studio of Frank Lloyd Wright. Our visit to his house was one of the most memorable places my daughters said they saw on our 10-day journey. Had I relied on GPS, I never would have realized that Wright's house was just off the interstate we were traveling on, and would have missed that must-see museum. Mr. William Rand and Mr. Andrew McNally, I thank you.

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

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BY TOM COMERRO

Pontiac Flatheads

THE QUAINT TOWN OF CANANDAIGUA, in the beautiful Finger Lakes region of upstate New York, will be the site of this year's Flathead Reunion. All flathead-powered Pontiacs are welcome to join the fun that this happy-go-lucky gang of flathead enthusiasts puts on. The meet takes place September 4-6 at the Miami Motel, and is hosted by the Early Times Chapter of the POCI, who are dedicated to the preservation and restoration of all 1926-1954 Pontiacs. For more details, visit the club's website: www.earlytimeschapter.org.

MARCH Calendar

2 • AACA Ontelaunee Region Swap Meet/ Car Corral • Hamburg, Pennsylvania
610-944-8619 • lhedgehog1@aol.com
7-9 • Amelia Island Concours d'Elegance
Amelia Island, Florida • 904-636-0027
www.ameliaconcours.org
7-9 • Carolina Collector Car Auto Fest
Raleigh, North Carolina • 336-972-4362
randy@carolinacollectorautofest.com
8 • AACA Chesapeake Region's Flea Market/ Car Corral • West Friendship, Maryland
443-744-6338 • www.chesapeakeaaca.org
13-15 • Norman Swap Meet
Norman, Oklahoma • 405-651-7927
www.normanswapmeet.com
20-21 • Pre-War Swap Meet
Chickasha, Oklahoma • 405-224-9090
www.pwsm.com
22 • AACA Antique Auto Show
Vero Beach, California • www.aaca.org
23 • Eastside A's Swap Meet
Macomb, Michigan • 586-949-3727
judyallen1@yahoo.com
23 • Super Sunday Swap Meet
Indianapolis, Indiana • 708-563-4300
www.supersundayindy.com

10,000 Lakes Concours

EXCELSIOR COMMONS ON THE SHORE of Lake Minnetonka will be the venue for the 10,000 Lakes Concours d'Elegance. The event takes place Sunday, June 1, 2014, in Excelsior, Minnesota, and will feature historic and prestigious automobiles of many classes and eras. This year's featured car classes include: American sports cars, popular collectibles, mini and micro cars, as well as motorcycles. The weekend events will also include a car cruise along the shores of Lake Minnetonka. Entries are still being accepted; so don't hesitate to submit an application. For more information, visit www.10000lakesconcours.com.

Kansas City Auto Museum

THE KANSAS CITY AUTO MUSEUM has leased a temporary home and is setting its sights on a March 2014 grand opening in Olathe, Kansas. The interim museum is a huge step in finding a permanent and larger facility that will showcase the Kansas City area's involvement in the collector car industry. Though it's never had a physical home, the museum is a member of the National Association of Automobile Museums and has run many exhibits and events in the area. The museum plans on featuring rotating displays of up to 50 vehicles within its new building. It will rely primarily on loaned vehicles and has built up a large database of willing donors over the past three years, ensuring a large variety of cars from all eras. If you'd like to donate to the museum, please visit www.kansascityautomuseum.com.

Studebaker Swap Meet

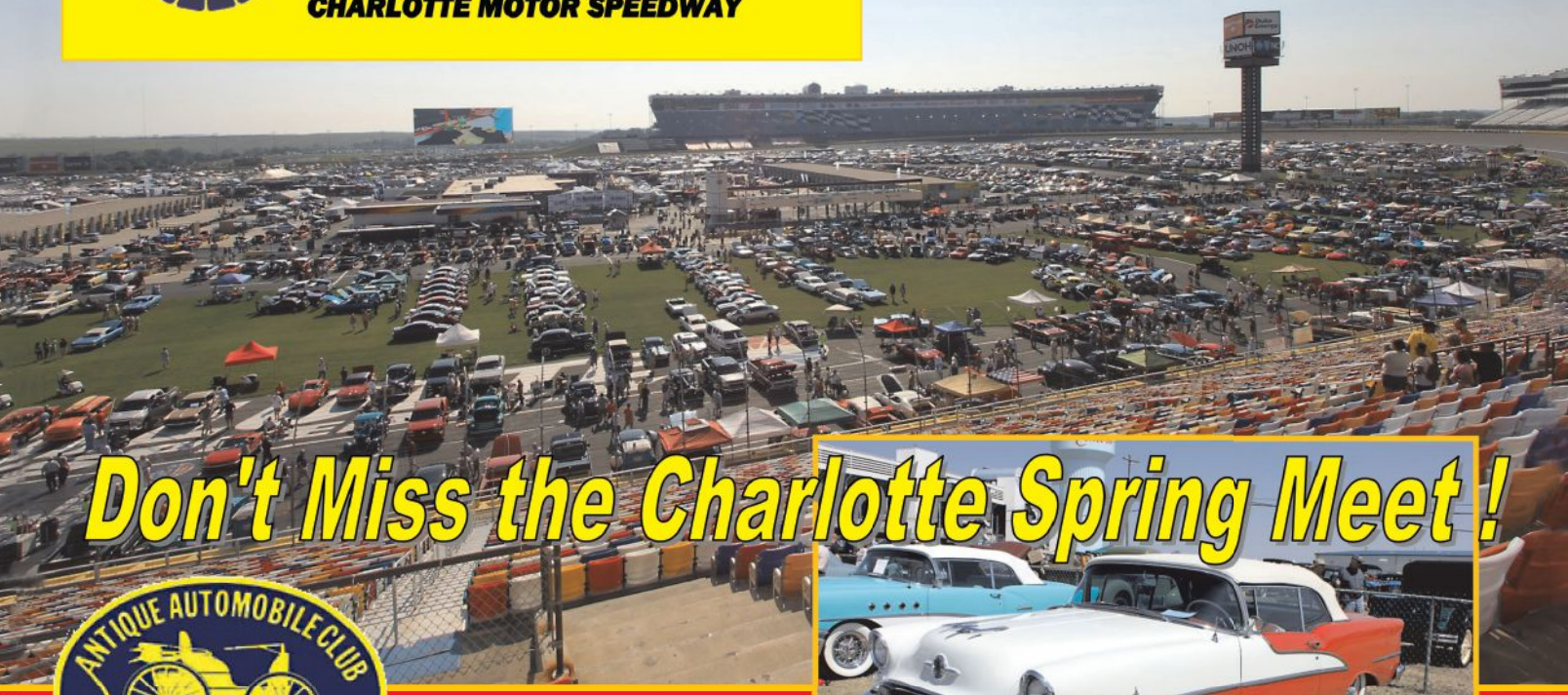
STUDEBAKER OWNERS IN THE EAST, mark your calendars for March 6-8 for the Keystone Region Studebaker Drivers Club Swap Meet. Spaces are available for indoor and outdoor vendors, as well as an indoor and outdoor car corral. The event will take place at the York fairgrounds in southeastern Pennsylvania, and there will be a raffle for a 1963 Avanti. For more details, call 717-574-1529, or go to www.sdckeystoneregion.com.

HORNETS NEST REGION • AACA

CHARLOTTE SPRING MEET AUTOFAIR

CHARLOTTE MOTOR SPEEDWAY

April 3-6, 2014



Don't Miss the Charlotte Spring Meet !

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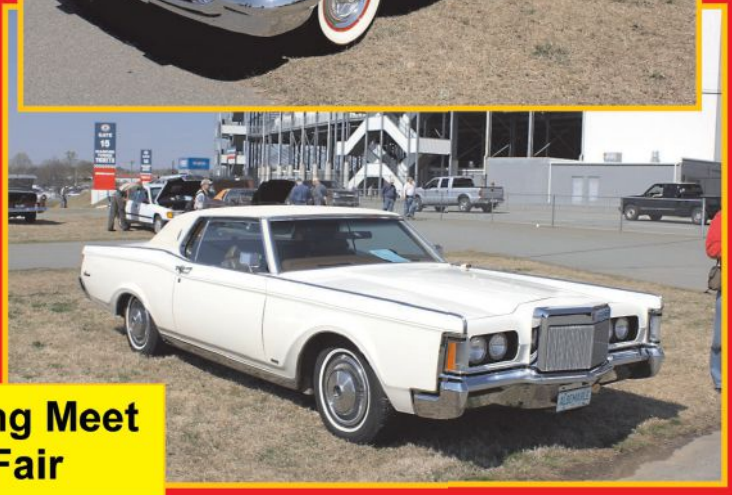

AACA Southeastern National Spring Meet
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BY DANIEL STROHL

Clipped Brougham

THOSE FIFTIES ELDORADO TAILFINS proved so popular, we've seen them adapted to at least a couple of non-Eldorado Cadillacs recently (see "Lost City of Black Gold," *HCC #110* and *#112*). But not everybody appreciated them, as we see from this finless 1958 Cadillac Eldorado Brougham that Jesse Osborne of Ham Lake, Minnesota, recently bought.

Jesse, a Cadillac collector, said he spotted the Brougham not 10 miles from his house last fall and has been trying to determine who clipped the fins on it. "I felt up inside the quarter panel and didn't feel any seams, and there's just a little bit of lead under the paint on top of the fender," he said. "Whoever did it did an astonishing job."

No less, the Brougham carries a serial number of 704, apparently indicating that it's the last of the 1957-1958 Eldorado Broughams. So did GM build that last Brougham to a special order? Or did somebody just get fed up with their fins years later?

Jeeporhome

VIA THE TRUQUE BLOG, where we've spotted several other truck-based oddities, comes a few photos of a flat-fender Jeep turned into a motorhome and not much context to go with it.

Without a windshield to tell the difference, it's tough to say whether whoever built this rig used a CJ-2A or CJ-3A front end. Whatever else went into its construction remains pure conjecture, but some strongly suspect that the two rear axles are simply dead axles—perhaps the same ones that originally underpinned the travel trailer—and that the builder used the Jeep because its transfer case allowed it to run off the front wheels alone.

Inside, we see what appears to be a mid-1950s Ford instrument cluster set into a homemade dashboard, and cars in the background date the series of photos to that era or later. We'd sure like to know who built this beast and how well it fared as a motorhome.

Flip-Top Goddess

FINALLY, FROM READER BOB NASH OF PRESCOTT, Arizona, come a few photos of a hood ornament that he said he purchased "many years ago from an old man that was selling junk."

"I traced the pattern numbers and found that the company was attached to General Motors," he wrote. "I never have been able to find anyone that knows what car it came off of, so I thought some of your readers would recognize it."

Our first inclination would be to answer Stutz, considering the company's Egypt-motif hood ornaments, but other car companies' hood ornaments also latched on to Art Deco's predilection for Egyptian themes, including Chevrolet. Indeed, we see that the Bowtie brand used hood ornaments like Bob's in the late 1920s and early 1930s. We have yet to nail down, however, exactly when Chevrolet used the ornaments and whether they were standard, option or accessory.

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

MECUM AUCTIONS

Kansas City Blowout

MECUM WRAPPED UP ITS 2013 AUCTION SEASON with a 795-vehicle bonanza in Kansas City, Missouri, December 5-7. A total of 490 cars, trucks and even motorhomes were sold for a 62-percent sell-through rate, which tipped the auction sales total to a year-ending $11.5 million.

This full classic Fleetwood-bodied 1931 Cadillac V-12 Convertible Coupe, which sold for the princely sum of $175,000, took the top single sale spot of the event. Contact: www.mecum.com.

MIKE MAEZ, COURTESY GOODING & COMPANY

Good News for Gooding & Company

Gooding & Company has plenty to celebrate, with 2014 marking a decade of ongoing success for the Santa Monica, California-based purveyor of fine automobiles. Its 2013 Scottsdale two-day auction concluded with a great deal to look forward to in the New Year, with a 97% sell through and 16 world records set.

One American representative of its 2014 Scottsdale auction is this 1929 Duesenberg Model J Dual Cowl Phaeton in two-tone "sweep-panel" LeBaron coachwork glory. The car was restored to perfection by Duesenberg specialist Fran Roxas of Chicago. Gooding & Company estimates the Duesenberg will sell for somewhere between $2,000,000-$2,300,000. Contact: www.goodingco.com.

AUCTION **PROFILE**

CONVEYING 1958 IN EVERY POSSIBLE WAY with its lavishly decorated exterior was this exemplary example of an Oldsmobile Ninety Eight convertible. Restored to perfection and featuring every available option including the 312hp J-2 engine with its three two barrels, removable Trans-Portable radio and New-Matic suspension.

This Oldsmobile was but one of a vetted selection of iconic representatives of artistic automobiles at the RM Auctions Art of the Automobile auction held in Manhattan in conjunction with Sotheby's. General Motors styling department, headed by Harley Earl, put everything it had into this Oldsmobile. From the almost liquid chrome to fiery jet-nacelle tail lamps, this Oldsmobile stands as an outstanding representative of jet-age American automotive art.

CAR	1958 Oldsmobile Ninety-Eight Convertible
AUCTIONEER	RM Auctions
LOCATION	New York, New York
DATE	November 21st, 2013
LOT NUMBER	128
CONDITION	#1/Restored
RESERVE	Yes
AVERAGE SELLING PRICE	$115,000
SELLING PRICE	$258,500

MARCH Calendar

Feb 28-2 • Atlantic City, New Jersey
GPK Auctions • 800-227-3868 • www.acclassiccars.com

6-8 • Greensboro, North Carolina
GAA Classic Cars • 855-862-2257 • www.gaaclassiccars.com

7 • Amelia Island, Florida
Gooding & Company • 310-899-1960 • www.goodingco.com

7-9 • Amelia Island, Florida
Hollywood Car Auctions • 800-237-8954 • www.hollywoodcarauctions.com

8 • Amelia Island, Florida
RM Auctions • 519-352-4575 • www.rmauctions.com

8 • Loveland, Colorado
Specialty Auto Auctions • 970-266-9561 • www.saaasinc.com

14-15 • Fort McDowell, Arizona
Silver Auctions • 800-255-4485 • www.silverauctions.com

14-16 • Fort Lauderdale, Florida
Auctions America • 260-927-9797 • www.auctionsamerica.com

15-16 • Palmetto, Florida
D.E. Foeller Sales • 239-571-5274 • www.defoellersales.net

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Classic Motorcar Auctions • 866-653-8900 • www.classicmotorcarauctions.com

29 • San Antonio, Texas
DanKruse Classics • 866-495-8111 • www.kruseclassics.com

Time for Memorabilia

THE AUCTIONS AMERICA Auburn Memorabilia auction on January 24-25 serves as a reminder that not everything sold at auction is a car. Winter might not be the best time to take your classic out for a drive, but it is a good time to put on the insulated coveralls and take inventory of garage supplies and projects. Even if the garage is already full, there's always room for an old sign, clock, or, if you really want to know, a thermometer.

Signage and timepieces are just the beginning of the Wally Arnold Collection, which includes everything from scale model trucks to buzzing spin dizzys. There are plenty of vintage scale model trains and sets available as well. Contact: www.auctionsamerica.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

Cadillac Service

AN INTERPRETATION of the impressive coat of arms of French explorer Antoine Laumet de La Mothe, sieur de Cadillac—who established a settlement that became what we now call Detroit—has, for decades, graced the Cadillac automobiles that bear his name. This regal crest has suited the premium American automobiles that have worn it, and it makes impressive wall art as well. Neon lighting specialist firm Neonetics (www.neonetics.com) offers a recreation of a colorful neon-lit General Motors-Authorized Cadillac Service sign, which sports hand-blown glass neon tubes supported by a black-finished metal frame. This circular sign measures 25-inches in diameter by four-inches deep, and it is powered by industrial-strength transformers that operate silently and efficiently. No assembly required. Cost: $339.95, with free shipping within the continental U.S.

www.neon4less.com

1955 Chrysler Windsor

VIRGIL EXNER'S MID-FIFTIES MOPARS were some of the most understatedly handsome cars on the road in their time, and they're comparably rare today. Brooklin Models is celebrating the most utilitarian-yet-upscale version of the bunch, the 1955 Chrysler Windsor Deluxe Town & Country station wagon. This hefty 1:43-scale white metal model is beautifully finished in period-perfect two-tone Jade Green Poly over Porcelain Green, and in typical Brooklin fashion, it's adorned with delicate bright metal accents that include a fender-mounted radio antenna and realistic exposed metal lower tailgate hinges. These Chryslers are rarely modeled, making this station wagon a genuine treat. Cost: $133.50

www.diecastdirect.com
800-718-1866

Bowtie Bag

CLASSIC CAR OWNERS KNOW that it's smart to keep jumper cables and other emergency supplies on hand whenever they travel, and Chevrolet owners and fans can now do so in proper style with California Car Cover Company's classic blue-and-yellow Chevrolet version of the GoBoxes Zippered Canvas Tote Bag. This durable, three-dimensional Bowtie-shaped canvas bag measures 27.5-inches long, is embellished with the classic Chevrolet logotype and is finished with a doubled zipper-top closure and sturdy black carrying handles. It's almost too cool to keep in the trunk! Cost: $29.99

800-423-5525
www.calcarcover.com

Duesenberg Aircraft Engines: A Technical Description

MANY OF US WHO LIKE PREWAR AUTOMOBILES often also appreciate the other machinery of the period, and so in reviewing this book we turn our eyes to the skies… Well, almost.

"Almost" because, contrary to Duesenberg's WWI-era marketing campaign, the legendary company never quite got its considerable power-plant know-how into service on production aircraft. This, despite multiple attempts to build engines for the air—including straight-fours, a V-12 and a goliath 3,393-cu.in., 800-hp V-16—all employing the brothers' unique engineering hallmarks, like the walking-beam valve gear originally developed for automobiles in 1910 and much touted for its efficiency and reliability.

Readers of William Pearce's well researched, 112-page book will be rewarded with informative, easy-to-read and enjoyable text—sadly, often a rarity in technical writing—as well as helpful specification charts and over 100 black-and-white reproductions of engineering drawings; photographs of engines, aircraft and facilities; period advertisements; and patent documents.

To purchase the book, or to read more about the fascinating machinery rusting in the footnotes of history, visit the author's web page. Cost: $12.99

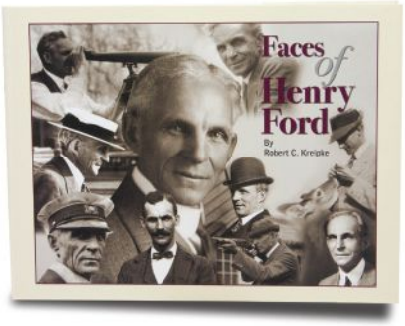
oldmachinepress.com

By J. Daniel Beaudry

Faces of Henry Ford

HENRY FORD WAS, WITHOUT QUESTION, one of the most prominent and influential figures of the 20th century, and his complex personality has made him the focus of endless study. The 150th anniversary of his July 30, 1863 birth in Dearborn, Michigan, was the impetus behind the new title, *Faces of Henry Ford: A Pictorial History of Henry Ford*. Created by Ford Motor Company corporate historian Robert Kreipke, this 156-page hardcover is a pictorial chronology of this industrial giant's life and accomplishments. Enlivened with simple text, it contains hundreds of rarely seen black-and-white and color historical photographs and images that detail Ford's rural upbringing, his early work as a watch repairer and at Thomas Edison's Edison Illuminating Company, and his passion for building and experimenting with machines. Of particular interest are images of the construction of the *Fair Lane* estate, the River Rouge assembly complex and of Henry's private time with family and friends. Fordophiles will note a few images out of context, but this does not diminish the book's broad appeal.
Cost: $39.95

888-263-4702
www.mtpublishing.com



Motorama La Salle II Roadster

GENERAL MOTORS DAZZLED ATTENDEES of its annual Motorama shows in the 1950s and 1960s with dream cars that made a statement about the company's technical and design prowess. The La Salle II concept from 1955 wore the name of Cadillac's former junior brand, and echoed the Corvette in its fiberglass-bodied, two-seat sports car architecture. The actual 1955 concept was rescued from the Warhoops junkyard in 1988 by noted collector Joe Bortz and has been restored to its former glory. Minichamps has made a beautiful 1:43-scale recreation of the La Salle II for its "The Real Dream Cars—Bortz Auto Collection" that includes crisp detailing like the side exhaust outlets, two-tone interior and an impossibly delicate three-spoke steering wheel. Just 999 are available; it's a gem. Cost: $94.99

800-639-1744
www.replicarz.com

Hubcap Flowers

FOR AUTOMOTIVE ENTHUSIASTS who have a passion for sustainable living, few things are more delightful than finding an artist who breathes new life into cast-off car parts. One such artist is Salt Lake City, Utah, native and devoted metalworker, Tory Johnson. Tory is a silver- and coppersmith/jewelry maker by trade, and a hobbyist welder as well. Her creative vision and love of found objects have resulted in the sculptures that she markets under the shop name My Rusted Roots, and are perfect for the garage or den wall: She calls them "hubcap flowers."

"I discovered plasma cutting and welding a few years ago, and have made more yard art than I could put in my own yard. It all started with the desire to make an eight-foot-tall sunflower for my yard," she explains. Using a plasma cutter, she cuts patterns and petal pieces out of raw steel, hammers them to shape and MIG-welds them to form flower- and sun-like circular patterns. These pieces are allowed to naturally rust and weather for great contrast against the old, chrome-plated hubcaps that make perfect center discs for these sculptures. Tory buys hubcaps as she can find them: "I find a group of three or four that are similar, and sometimes it's just one. Most of the time, I make the petals and then go through my hubcap collection to see which hubcap fits the flower."

The hubcap flowers measure approximately 20- to 22-inches across, and are hung from behind. Each one is unique and hand-crafted, and no two are alike. The My Rusted Roots inventory is always changing; visit her Etsy online store to see what is currently available.
Cost: $65.00 - $99.00

www.etsy.com/shop/MyRustedRoots
www.facebook.com/MyRustedRoots

BY TOM COMERRO

Horning In

New horn rings for 1949-'50 Chevrolet Deluxe passenger cars have just been reproduced. Made to exacting original specifications, these reproductions are a great alternative to original horn rings, which are often bent, broken or in need of chrome plating. This ring is an authentic copy of the original "Half Ring" that was used on all Deluxe steering wheels in those years. Each ring is finished in high-quality chrome and wears "CHEVROLET" block letters, just like the originals. Cost: $119.50 each.

The Filling Station
800-841-6622
www.fillingstation.com

One-Key Lock

If you are towing a car hauler to the track or a car show, securing your expensive cargo is paramount and can be daunting. The Bolt series of locks from Strattec Security is designed to deliver convenience and security by preventing trailer theft and eliminating the need for multiple keys. The locks feature One-Key Lock Technology, which allows you to permanently program the locks to your vehicle's ignition key. Just insert your key into the lock cylinder and spring-loaded plate tumblers move up and down until they are matched exactly to that key. The first time you turn it, the cylinder will be coded to that key alone. When the key is removed, the cylinder moves back to the lock position. The locks are plated with a cast-zinc cylinder and case for superior corrosion resistance. The six-plate tumbler sidebar prevents picking. Padlocks, cable locks, receiver locks, toolbox locks and spare locks are all available. Cost: $30-50.

Strattec Security Corporation
414-247-3333
www.boltlock.com

Killer Cross Members

Anyone who owns a Dodge or Plymouth pickup truck made during the WWII era knows that their truck had hardwood cross members under the pickup bed floor. Bruce Horkey's Wood and Parts offers custom steel replacement cross members for 1939-'47 Dodge and Plymouth pickups. These 12-gauge steel parts increase the strength and durability of the truck's bed, and are a direct-replacement fit. You'll immediately notice the increased rigidity and support. Custom replacement skid strips and bolt sets are also available to work with the steel cross members. Cost: $38/each (mid cross members); $125 (rear main cross member).

Bruce Horkey's Wood and Parts
507-831-5625
www.horkeyswoodandparts.com

Polished Product

If you're looking to buy some detailing products for your car but aren't sure what type of brushes or cloths you'll need, you may want to consider the Buffer Bit, which attaches to any drill that you own. The natural wool pads are thought to be better than their foam counterparts, as wool is more resistant to heat, allowing you to polish your car with less risk of damage. The design lets you get into many places that orbital buffers will often miss. The Buffer Bit is ideal for polishing paint, wheels, chrome, grilles and even some interiors. The high-quality pads don't dry out, and the machine-washable, interchangeable pad makes for easy cleanup and removal of harmful chemicals. Visit Buffer Bit's website for video demonstrations. Cost: $19.99.

Buffer Bit
708-567-6003
www.bufferbit.com

Olds Disc Conversion

To improve your 1940-'52 Oldsmobile's stopping power, consider Wilwood's newly announced Classic Series front disc brake conversion kit. These disc brakes will not alter the outward appearance of your Olds when using OE or classic-styled wheels. Truly bolt-on, no modifications are needed to your spindles or suspension. The best part is, you can easily remove the parts and put the original components back on when factory authenticity is preferred. For all of the technical details, be sure to visit Wilwood's website and search for kit number 140-12617. Cost: $910-$1,150.

Wilwood Disc Brakes
805-388-1188
www.wilwood.com

Those Fantastic 1969 Firebirds

Is Pontiac's alternative to the Chevrolet Camaro a better buy?

BY THOMAS A. DEMAURO • PHOTOGRAPHY BY RICHARD A. LENTINELLO OR AS CREDITED

The Camaro was a homerun back in 1969 due to its styling and performance, and it has remained highly desirable to racers, enthusiasts and collectors ever since. Coveted by car magazine editors for cover material, it has become so mainstream that, like other pop culture icons, the Bowtie F-body has suffered backlash from some classic car aficionados who say they have seen too much press on them and too many at events.

MATTHEW LITWIN

The chrome inner grille surrounds are part of the Firebird 400 package (top), as is the Pontiac arrowhead on the front bumper. (Scott, the previous owner, preferred blacked-out grilles and a Camaro front spoiler.) Differing design philosophies are revealed in the front view of the Camaro and Firebird.

Immense popularity has resulted in immense prices for the most powerful of the division's pony cars—Super Sports, Indy Pace Cars, Z/28s, COPO 427s and ZL1s etc.

Since in 1969 Pontiac and Chevrolet again shared the 108-inch-wheelbase, unitized shell with a bolt-on front sub-frame and the many components that comprised the F-body platform, the Firebird is an excellent alternative if you appreciate those crisp lines and attractive shape but prefer a ride that has maintained a lower social profile. Geno Francavilla, owner of our feature Firebird 400 convertible, and a legion of Pontiac fans already know this.

Despite being overshadowed, the Firebirds—especially the 400 variants—offer much of what a potential Camaro buyer desires, and in some areas considerably more but at a lower price than many comparable 350- and 396-powered cars.

Since Chevrolet could beat Pontiac on price while remaining profitable, thanks to higher volume sales, Pontiac had to take another approach to attract customers. Its designers and engineers refined the basic design, tactile qualities and operational characteristics to infuse the Firebird with its own identity.

It all began at the front. Chevrolet's design featured single headlamps in an expansive V-shaped grille above a thin, chromed bumper. A resilient body-colored front bumper was optional, as were

concealed headlamps as part of the extra-cost Rally Sport package. The SS option added bright inserts on the hood, and a raised "Special Ducted" hood was also available with some engines.

To impart the Firebird with the Pontiac family resemblance, a trademark split-grille, "ironing board" on the hood (with scoops on the Firebird 400) and quad headlamps were employed. Since there was no protection outboard of the chromed split-loop bumper, the headlamp bezels' material had to be impact-resistant, so Pontiac used Lexan, a GE-developed hard plastic. Below them, unlike the Camaro's unadorned round parking lamps, the Firebird used rectangular lamps with chromed crosshair trim.

Whether or not the Pontiac or Chevrolet treatment was better is a matter of personal taste. Regardless, they were decidedly different—no one was going to mistake a Firebird for a Camaro in the front view.

Wind splits created the slightly flared and squared-off tops of the wheel wells on both F-bodies, contributing to a lower and wider appearance than the 1968 models. Pontiac's front one, however, originated at the nose, while the Camaro's began at the wheel well, like the rear wind-split.

Further divisional differentiation was evident on the flanks where the Firebird stylists added non-functional front fender vents with decorative chromed trim and eliminated the Camaro's simulated brake scoops on the rear quarters. While the forward side marker lamps were simple on both cars, the rear ones were much more ornate on the Firebird. Where the Camaro employed simple rectangular lamps, the Firebird incorporated the marker lamp into the Firebird emblem.

In the rear, the overall shapes of the taillamps were similar, but the Camaro used a more conventional, single, large opening on each side filled with the lens. Conversely, the Firebird taillamps peeked through narrow slits in the tail panel, providing a near-louvered look. Pontiac's attention to detail was also revealed in the trunk lock, which was integrated into the Firebird emblem.

Pontiac offered a base OHC-6 sport coupe, the Sprint-6, Firebird 350 and Firebird 350 H.O., Firebird 400 and at mid-season, the Trans Am. Chevrolet's lineup began with an L6 sport coupe, V-8 sport coupe, Super Sport 350 or 396, Rally Sport, RS/SS, Z/28, Indy Pace Car replica, the very rare COPO 427 and rarer still ZL1 aluminum 427.

Convertibles were produced by both divisions and could be ordered with any of their respective powertrains, except Chevrolet's Z/28, COPO 427 and ZL1 427.

Though Chevrolet offered more engines in the Camaro—230- and 250-cu.in. straight-sixes and 302-, 307-, 327-, 350-, 396- and even 427-cu.in. V-8s—the Pontiac engines were just as durable, and in many cases, except the 425hp and 430hp 427s, just as powerful if not slightly more so.

An example of Pontiac trying to position the Firebird as an upscale choice when compared to the Camaro is evident in the standard engines. Chevrolet offered a 140hp, 230-cu.in. six-cylinder standard, and the 155hp 250-inch six was optional, while Pontiac's standard 250-cu.in. overhead cam 6 (OHC-6) produced 175hp. Going a step further, the Firebird Sprint featured a 215hp (automatic) or 230hp (manual) version of the OHC-6 with a four-barrel carb, low-restriction air cleaner, a hotter cam, higher compression and improved exhaust, as well as stiffer suspension. Chevrolet didn't offer performance versions of its six-cylinder engine.

However, Pontiac had no counter to Chevrolet's 290hp, 302-cu.in. Z/28 engine (the 303-cu.in. Pontiac engine developed for SCCA racing wasn't released to the public), the two-barrel, 210hp 327, which was replaced with the 200hp 307 in January 1969, or the ZL1 and COPO 427s.

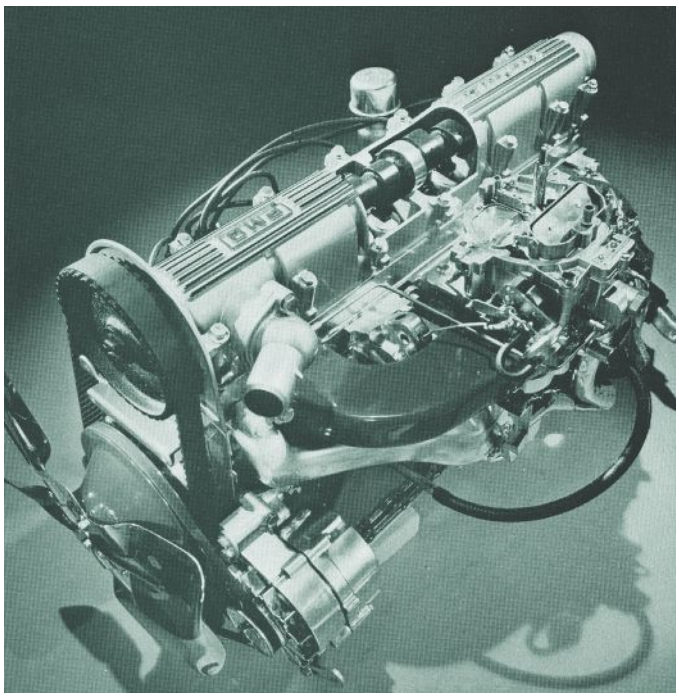
Regarding the V-8 engines, Pontiac's outward dimensions were the same for the 350- and 400-cu.in. versions, and at approx-

HEMMINGS ARCHIVES

Maintaining a somewhat stock appearance, our feature car's 400 engine has been modified for more power. Note the painted Edelbrock intake, open air cleaner and long-branch exhaust.

HEMMINGS ARCHIVES

Unlike the R/A-IV engine, the R/A-III engine could be ordered with air conditioning. This example also features optional cruise control. The 400-H.O. option, available in the Firebird 400, was a functionally identical engine sans the Ram Air system.



FACTORY PRESS PHOTO

Pontiac's Sprint package for the OHC-6 from 1967 through 1969 had a four-barrel and a hotter camshaft, as this pre-1969 press photo reveals.

Geno's standard Firebird interior has an optional console and steering wheel (gauges are aftermarket).

imately 675 lbs., were heavier than a Chevrolet small-block at roughly 550 lbs., but still lighter than a big-block Chevrolet at around 700 lbs. Pontiacs were designed more for torque output on the street than for high-RPM power on the drag strip, except for possibly the Ram Air IV. That same low-end torque made them competitive at the track nonetheless.

Pontiac's 350 engine could be had as a 265hp two-barrel or 325hp H.O. four-barrel, whereas the Chevrolet 350 four-barrel engines were rated at 255hp (replaced by a 250hp two-barrel 350 in January 1969) and 300hp, respectively.

The Firebird 400, 400 H.O./Ram Air III and 400 Ram Air IV engines were each underrated at 330, 335 and 345 hp, respectively, due to GM's policy of not rating engines at more than 1 hp per 10 lbs. of vehicle weight. While 1967-'68 Firebirds were fitted with carburetor linkages that restricted the full opening of the secondary throttle blades, the 1969 models weren't, so they had the same 350, 366 and 370 hp that the GTO had, placing their output on par with the Camaro's SS 396 ratings of 325, 350, and 375 hp. (The latter two 396 engines were not advertised in the Camaro brochure.)

Pontiac's 400 engine edged out the Chevrolet 396 in torque, while saving weight. The 330hp Pontiac 400 produced 430 lb.ft. of torque at 3,300 RPM, and the 325hp 396 produced 410 lb.ft. at 3,200 RPM, despite the fact that the 400 and 396 were very similar in bore and stroke dimensions, with the 400 featuring a 4.12-inch bore and 3.75-inch stroke and the 396 a 4.094-inch bore and 3.76-inch stroke. The torque increase can be attributed to differences in induction, cylinder head and exhaust designs, and cam specs.

Though torque increased to 415 lb.ft. for the 350hp 396 and the 375hp 396, the 400 R/A-III and R/A-IV with driver-controlled ram-air system were still 15 lb.ft. higher for the Firebird. (According to the published GTO ratings, which had the same 400 engine specs as the Firebird, 445-lb.ft. of torque was produced.)

Generally, a Saginaw three-speed was standard for the Firebird and Camaro six-cylinder engines and two-barrel V-8s, and a Saginaw four-speed was optional, except for the OHC-6. A Muncie HD three-speed was standard with four-barrel V-8s and the Sprint. Four-speed Muncie transmissions were optional (required for Z/28) for both the Pontiac and Chevrolet. The M20 wide-ratio and the M21 close-ratio four-speed were used in performance applications. A heavier-duty Muncie M22 could also be specified for the Z/28, 396/375hp and 427 Chevrolet engines.

1969 FIREBIRD PRODUCTION

	MANUAL TRANS	AUTOMATIC TRANS	TOTAL
FIREBIRD AND T/A TOTAL	20,840	66,868	87,708
OHC-6	N/A	N/A	N/A
OHC-6 conv.	N/A	N/A	N/A
OHC-6 Sprint	1,284	428	1,712
OHC-6 Sprint conv.	213	54	267
Firebird 350 (inc. conv.)	N/A	N/A	59,280
Firebird 350 H.O. (inc. conv.)	N/A	N/A	4,466
Firebird 400 (inc. conv.)	4,601	6,921	11,522
Firebird 400 H.O. and R/A-III	480	243	723
Firebird 400 H.O. and R/A-III conv.	87	57	144
Firebird 400 R/A-IV	58	27	85
Firebird 400 R/A-IV conv.	12	5	17
Firebird 400 Ram Air Total	637	332	969
TRANS AM PRODUCTION			
Trans Am R/A-III	516	118	634
Trans Am R/A-III conv.	4	4	8
Trans Am R/A-IV	46	9	55
Trans Am R/A-IV conv.	0	0	0
Trans Am Total	566	131	697

IMAGES: HEMMINGS ARCHIVES

After the Camaro's two-speed semi-automatic Torque-Drive transmission for the 230 and 250 straight-six, the next step up was the two-speed Powerglide automatic transmission for the six and small-block V-8s. The Super Turbine 300 two-speed automatic was available with the base OHC-6 and the 350 two-barrel in the Firebird.

The Turbo Hydra-Matic 350 (TH-350) three-speed was offered for the Camaro's low performance six and V-8s and Pontiac's OHC-6, Sprint and 350, and the TH-400 three-speed backed the high performance V-8 engines in the Firebird and Camaro.

Pontiac employed a B-O-P-type, 8.2-inch-diameter ring gear 10-bolt differential and offered gearing from 2.56 to 4.33, again depending upon engine and transmission choices and options. Safe-T-Track was optional and mandatory with some gear sets.

Chevrolet offered rear gear ratios from 2.56:1 to 4.88:1, depending upon powertrain choice. Its own 8.2-inch, 10-bolt rear was used on the lower-powered models up to the 307, 327 and 350 two-barrel (most instances) and 350 four-barrel (with the Powerglide). The famed 12-bolt with an 8.875-inch ring gear was employed with the 302, 350 four-barrel (most instances), 396 and 427-equipped models. Positraction was optional and mandatory in some instances.

Optional Custom interior for the Firebird employed molded-in armrests on padded door panels; breathable knit vinyl upholstery seat inserts; a wood-like vinyl dash applique; bright roof-rail side moldings; molded trunk mat; passenger-assist grip and additional trim pieces. Chevrolet's optional Custom interior offered many of the same main features, plus a hound's-tooth pattern seat insert was available.

The hood tach was a popular Pontiac option. Dash panel and gauge designs differed between the Camaro and Firebird. Simulated fender air extractors were not used on the Camaro.

Standard and optional interiors, though different in appearance between the Firebird and Camaro were comparable in equipment, but Pontiac went the extra step with regard to the automatic shifter. The Rally shifter, used with the TH-350 and TH-400 when ordered with the console, featured detents that allowed for safe manual 1-2 and 2-3 upshifting when starting with the shifter in low gear and pushing it forward and to the right for each upshift. The shifter cover even featured "1," "2" and "3" callouts on its right side. The Camaro's "basket handle" automatic could be upshifted manually (like any automatic shifter), but it did not have the manual upshift feature with the detents to avoid overshooting the next gear.

IMAGES: TOM DEMAURO

Custom interior added woodgrain dash, door panels with integrated armrests, and breathable vinyl seat inserts or (leather seats). Optional stacked gauges were a Firebird exclusive.

1969 CAMARO PRODUCTION

VEHICLES	TOTAL
All Camaros	243,085
Rally Sport	37,773
Super Sport	36,309
Z28	20,302
Indy Pace Car Convertible	3,675
Indy Pace Car hardtop	N/A
All Models V-8	206,837
All Models L6	36,248
All Convertible	17,573
All Coupe	225,512
ZL1	69

1969 CAMARO AND FIREBIRD COUPE PRICES COMPARED

CAR	LOW	AVERAGE	HIGH
Firebird 250 OHC-6/175hp	$9,000	$19,000	$35,000
Camaro 230-6/140hp	$9,000	$17,000	$33,000
Sprint 250 OHC-6/230hp	$10,000	$20,000	$39,000
Firebird 350/265hp	$10,000	$20,000	$39,000
Camaro 350/255hp	$10,000	$20,000	$38,000
Firebird 350 H.O./325hp	$11,000	$22,000	$42,000
Camaro SS 350/300hp	$13,000	$27,000	$48,000
Firebird 400/330hp	$11,000	$22,000	$42,000
Camaro SS 396/325hp	$15,000	$32,000	$58,000
Firebird R/A-III 400 335hp	$12,000	$23,000	$44,000
Camaro SS 396/350hp	$17,000	$35,000	$62,000
Firebird R/A-IV 400 345hp	$13,000	$25,000	$48,000
Camaro SS 396/375	$19,000	$39,000	$70,000
Trans Am R/A-III 400 335hp	$38,000	$68,000	$138,000
Camaro Z/28 302 290hp	$25,000	$47,000	$76,000

Both F-bodies employed unequal length A-arm front suspension with coil springs and a rigid rear axle with leaf springs, and shocks all around. They came standard with manual steering and the Z/28 had a faster gear, but variable-ratio power steering with a 16.0:1 to 12.4:1 ratio was optional for the Firebird (standard on the T/A) and Camaro.

Though the layout was the same, chassis tuning is another area where the Firebird and Camaro differed in an effort to instill unique ride and handling qualities. Springs were chosen via computer per vehicle weight with selected options. Front/rear ride rates at the wheel (not the spring rate) for the Firebird were: Base OHC-6—73/83 lb.in.; Sprint—73/90 lb.in.; and 350, 350 H.O. and 400—85/90 lb.in. The firm ride option increased the ride rate in coupes to 92/119 lb.in. and convertibles' rear rate to 123 lb.in.

Chevrolet's front-/rear-spring wheel rates for the six-cylinder were 99/115 lb.in., and for V-8s they were listed at 111/100 lb.in. (approximately 125 lb.in. rear on Z/28). Chevrolet also offered an F41 suspension package with revised spring rates and shock valving. Pontiac used multi-leaf springs on all Firebirds, but Chevrolet reserved them only for the 302 (four leaf), 350 and the big-blocks (usually five leaf). A .6875-inch front anti-roll bar was used for the Firebird (1.00-inch on T/A) and Camaro (.8125-inch for COPO 9737 Sports Car Conversion option).

The 9.5-inch standard drum brakes were shared, and both divisions offered optional power assist. Power disc brakes with single-piston calipers and 11-inch rotors were optional on both cars, standard on the T/A and SS, and a mandatory option on the Z/28. In this case, Chevrolet went the extra mile to offer a four-wheel disc brake option straight from the Corvette, which is extremely rare to find on a Camaro today with only slightly over 200 installed.

Standard for both the Camaro and Firebird were 14 x 6-inch wheels and E78 x 14 tires (Camaro) and E70 x 14 tires (Firebird) on the six-cylinder models and 14 x 7s with F70 x 14 tires on the Sprint and V-8s, except the Camaro's 307 and 350 two-barrel. Optional steel 14 x 7 Rally II wheels could be ordered on the Firebird, and steel 14 x 7 Rally wheels on the Camaro. The Z/28 featured 15 x 7 Rally wheels and E70 x 15 tires were standard.

Scott MacGillivray, who Geno Francavilla purchased our feature car from, is very familiar with the attributes of Firebirds and Camaros, having owned both. He found his 1969 Firebird 400 convertible in 2000 at a car show/cruise night at a local mall. Though it was ready for restoration, it did have a power top, steering and front disc brakes; an automatic transmission; hood tach; AM radio; and a console. It was also still in the custody of its original owner. "I thought it was rare and unique, and showed the potential to be stunning," Scott recalls. "I wanted to subtly modify it to look and perform well, but still look stock." Being the owner of Florida Classic Automotive in Stuart, Scott and his wife, Cindy, rebuilt and modified the convertible Firebird from 2002 to 2005, handling all the required tasks except for the paint.

GM MEDIA ARCHIVES

The Trans Am featured a new hood with larger scoops placed farther forward, a front spoiler, fender air extractors, a rear airfoil and painted blue stripes and tail panel. The 335hp 400 R/A-III engine was standard with a three-speed manual transmission, a 3.55 Safe-T-Track rear, variable ratio power steering, power front disc brakes and heavy-duty suspension.

Only the hood was replaced, as the body was rust-free. The shell was taken down to bare metal with chemical stripper and 80-grade sandpaper and then primed with three coats

of PPG epoxy and then super high-build. It was block sanded with 80-, 180-, 320- and 500-grade paper and sealed. After Scott and Greg Michaelian, of Michaelian Restoration, also in Stuart, Florida, tinted the Glasurit urethane a few shades lighter than the factory Matador Red, Greg then applied three coats of the single-stage paint. Scott wet sanded the finish with 1000-, 1500- and 2500-grade paper, and then polished it with 3M products. The rear bumper was rechromed and reinstalled.

HEMMINGS ARCHIVES

Convertible features larger-than-stock wheels and tires. Though Pontiac provided its rear deck Airfoil only on the Trans Am, Chevrolet offered its front spoiler/rear spoiler combo on a variety of Camaros.

The Firebird's date-code-correct YS-code 400 engine was rebuilt, employing the original crankshaft, cut 0.010 / 0.010 in., Eagle forged rods and 0.040-over Sealed Power forged pistons. A Crower cam with 228/235-degrees duration at 0.050 and 0.479/0.494-inch lift with 1.50:1 Scorpion roller rockers bump the 2.11/1.77-inch valves in casting number 48 cylinder heads that Scott sourced for the project.

On the induction side, he added an 800-cfm Quadra-jet built by Cliff Ruggles and an Edelbrock Performer RPM intake. R.A.R.E. ceramic-coated Ram Air manifolds and a Pypes X-type crossover 2.5-inch system with Walker Dynomax mufflers and 1970½ reproduction stainless exhaust tips were installed. A hidden MSD box works with a Pro-Billet distributor and black Taylor ignition wires.

A 1969 TH-400 transmission was rebuilt, a shift kit was added and it was installed with a 2,400-RPM-stall TCI converter. The original 10-bolt rear end was rebuilt and fitted with an Eaton Posi and 3.55 gears.

To improve handling, Scott upgraded to an Addco 1.25-inch front anti-roll bar, 2-inch drop spindles, Eaton Detroit springs with a 30-lb.in. higher rate, and a quick-ratio steering box. In the rear, he installed WS6 springs. Polyurethane bushings were used on the subframe and throughout the suspension, and KYB gas shocks are at the four corners.

The 11-inch front disc and 9.5-inch rear drum braking system was also rebuilt, and larger-than-stock Pontiac 15 x 7 Rally II wheels with 225/60R15 and 255/60R15 BFG Radial T/A tires round out the handling mods.

Factory black Morrokide remains inside; only the door panels and the carpet have been replaced.

Scott says, "With restoration and modifications complete, the Firebird 400 convertible is exciting to drive. It's very quick, corners flat and precisely, and looks great with the fresh paint, a Camaro front spoiler and a new convertible top."

Scott tells *HCC* that once the engine was tuned to run well on 93-octane fuel, he ran it on the drag strip where it posted a 12.20 E.T. at 110 MPH and that it has won more than 31 first place trophies. It would appear that this Firebird 400 has realized its "potential to be stunning."

Like Scott and Geno, you can enjoy some exclusivity when owning a 1969 Firebird. As you can see in the production numbers section, Pontiac made fewer Firebirds than Chevrolet built Camaros. While this may make certain Firebird models a little more difficult to find, it also makes them more unique and less likely for multiple examples to show up at a car show or cruise night.

Parts availability, though not as widespread as for the Camaro, has improved considerably in recent years. The restoration of any V-8 1969 Firebird can be accomplished using many high-quality reproduction parts. Development of some engine components for the OHC-6 still lags behind those made for the Pontiac V-8.

There's more good news if you want to buy a Firebird to drive and enjoy and not collect simply as an investment. Except for the base-model six-cylinder, 350 two-barrel model and the Trans Am, a Firebird will generally cost less than a comparable Camaro. It's something to consider when pondering a classic F-body purchase.

Hitched Hupmobile

Few people immediately recognize this 1931 Hupmobile Century Six; fewer recall the Mullins trailer behind it

BY DANIEL STROHL • PHOTOGRAPHY BY ROY D. QUERY

The first person Jack Dwyer had to convince of the reality of a Hupmobile nearly thwarted his plans to bring one home. The U-Haul salesperson on the other end of the line couldn't find such a car in U-Haul's database of approved cars to ride atop a U-Haul car trailer. Jack had found the 1931 Hupmobile over the Internet in South Bend, Indiana, about 250 miles from his Centerville, Ohio, home, and needed some way to get it home.

Styled by Amos Northup, the Depression-era Hupmobiles had Art Deco touches aplenty, and, as was the fashion of the day, could be had with a freewheeling transmission. Interior had been replaced several years before Jack bought it.

Though the Hupmobile's 113.5-inch wheelbase, maximum tread width of 58 inches and 2,905-pound weight, all measure less than a typical mid-1960s GM intermediate, U-Haul had never bothered to enter those stats in its database. "It took more than one call to convince them the car would fit on the trailer," Jack recalls.

And to add to the confusion, the Hupmobile came with a fiberglass reproduction Mullins trailer, which surely wouldn't fit on the U-Haul trailer while still hitched to the Hupmobile. Jack got around that by renting a box truck to haul the car trailer, sticking the Mullins trailer inside the truck and placing the Hupmobile atop the car trailer.

In the long run, the experience proved worthwhile as practice for convincing many more people of the benefits—and just plain existence—of the Hupmobile brand and its products.

For a first-time collector car buyer, as Jack was at the time, a Hupmobile seems an unusual choice. Though fairly long-lived, the company folded before World War II. Though one of the better-selling auto manufacturers of the 1920s (it broke into the top ten on more than one occasion, and sales peaked in 1928 at more than 65,000), only about 1,000 Hupmobiles are registered with the Hupmobile Club today.

"When I told my wife I was going to look at a Hupmobile, she said, 'A Hup-what?'" Jack remembers. "She called her mother to tell her what crazy thing I was about to do, and her mother, who was about 75 years old at the time, said, 'Hupmobile!

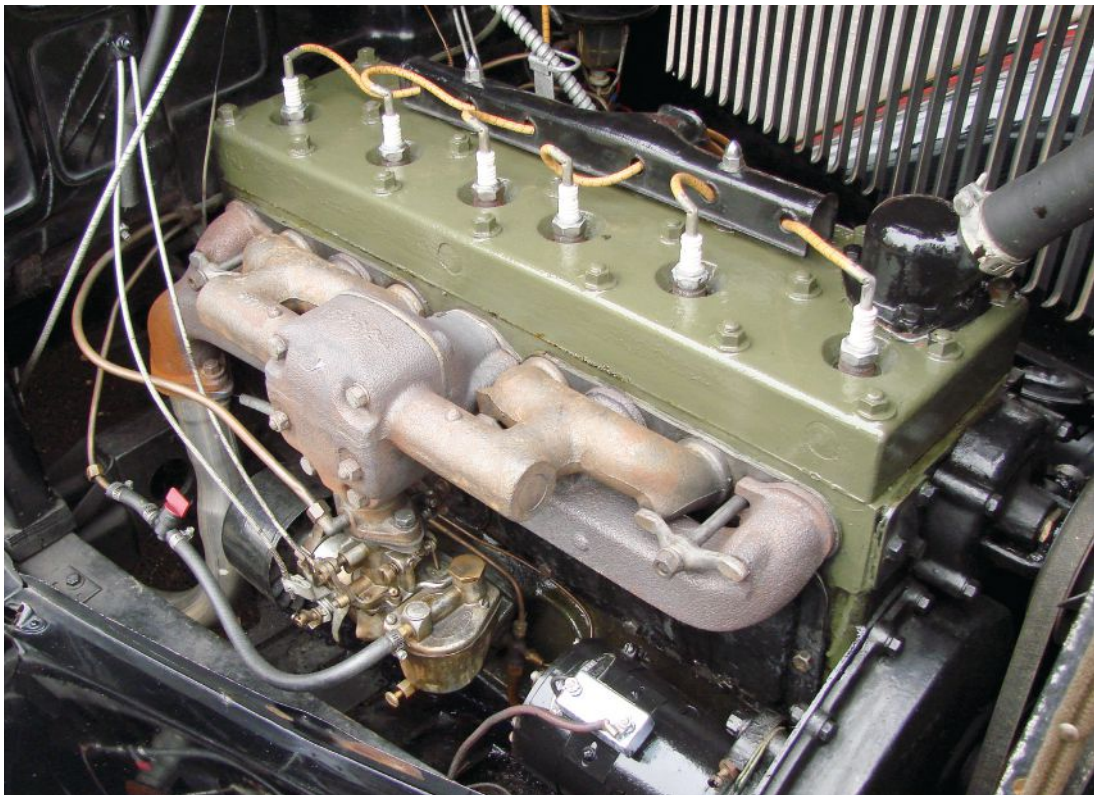
owner's view

All I wanted when I started looking was a car that looked like an Al Capone gangster car. And I wanted something that was in good condition, something that I wouldn't have to spend two years to get running. This one was in good shape, and at the time, there weren't many other cars from the 1920s or 1930s to my liking and for sale.

On the way home with it, I stopped at the Auburn car museum, and while I was in there, four museum employees came out and were checking out the car. They thought I had brought the Hupmobile there to donate it to the museum!

I don't know exactly why I like the Hupmobile, I just do. After more than eight years, I still enjoy it, and it still runs good and starts up in no more than 15 to 30 seconds, even when it's cold. I would probably like a higher gear in the rear axle to travel faster than 50 MPH on the highway, but there's nothing else I'd change or improve about it.

—Jack Dwyer



While the Hupp Motor Car Company used parts from other cars in its Hupmobiles, the Century Six engine was of the company's own design: L-head, displacing 211.6 cubic inches, and producing 70 horsepower.

That was the first car I ever remember as a child!'"

As the story of this particular car came to Jack, the original owner for some reason stuck it in a barn, where the second owner found it in 1990, purchased it and refurbished it with a new interior and new paint: yellow with tan fenders. That second owner also fabricated a trailer hitch for the Hupmobile and paired it with the reproduction Mullins trailer. "I think it was just a case of him having the trailer and looking for a 1930s car to tow it with," Jack says.

Mullins Metal Stamping Company, which stamped automotive body parts in the 1910s and 1920s, did appear to also stamp parts for Hupmobile—among several other automakers—in the 1920s, but its automotive contracts dried up in the late 1920s. Looking for additional products to stamp, the company designed and built about 3,000 utility trailers in 1936 and 1937, the year the company merged with Youngstown Pressed Steel.

Those actual steel trailers have now become prized collector's items. Multiple fiberglass reproductions have been marketed over the last few decades, and the trailers have inspired not only an enthusiast's club, but also a book on their history. Jack told us: "At the time they were de-

No, Hupmobile didn't build Mullins trailers, but with matching wooden wheels and black paint, the two make a good pair. Loaded with vintage suitcases and the Hupmobile's original tools, the 450-pound trailer doesn't slow the Hupmobile down much.

signed, very few cars had trunks, and fewer had built-in trunks, so Mullins decided that there had to be a market for an enclosed utility trailer that could also haul luggage."

It's likely for the utility that each successive owner, including Jack, kept the trailer with the car. Jack believes he's the fifth owner of the Hupmobile—technically a Century Six Model S four-door sedan with the 70-hp 211-cu.in. flathead six-cylinder—and believes that the odometer's reading of 23,000 miles when he bought the car is the Hupmobile's actual mileage.

"I figure it is correct because every Hupmobile needed new valves at right around 30,000 miles, and this one burned two of the exhaust valves at 28,000 miles," Jack says. (Of course, it also helps that the third owner, a priest, attested to the mileage.)

Through the Hupmobile Club, Jack learned that sourcing replacement valves wouldn't be hard: Exhaust valves from a Ford 352-cu.in. V-8 will work in the Hupmobile straight-six engine, as long as they're shortened by about half an inch and the valve guide is bored out by .005 inch.

Perhaps just as amazing as the mileage figure (Jack said it currently stands at 35,000 miles) is the fact that the Hupmobile has yet to come off its chassis for a thorough restoration. Sure, the previous owner repainted it after he discovered it left the factory wearing black paint. And sure, Jack's had to fix a couple things here and there: He replaced the original pot metal Stromberg U-2 carburetor with an aluminum version made in Australia, and he rebuilt the generator.

Jack puts plenty of miles on it every year, between tours and driving it to shows, so he'd know if it were ready for a full restoration. "I've run it as far as 200 miles in one day," Jack explains. "And though it's rough riding (the seats look great, but I can't sit on them after 150 miles or so), it runs great, and if I'd known then what I know now, I would have gotten in it and driven it home when I bought it."

The Mullins trailer, on the other hand, Jack felt the need to replace with… another Mullins trailer, albeit a genuine steel version. He bought it just north of Chicago, and took it immediately to his brother's auto body shop in Stewart, Iowa, where Ed stripped it down to the bare steel, repainted it and had it reassembled within a week.

Jack says he'll usually leave the trailer home when he heads out on a tour. "Pulling the 450-pound trailer presents no difficulty—it's like having two or three extra people in the car. But I do notice the extra weight when climbing a steep hill, and sometimes am required to shift into second gear."

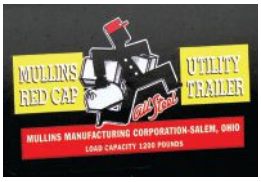
But when going to shows, Jack will hitch the trailer up and proudly display it alongside or behind the Hupmobile. "Anything that normally goes in the trunk or in your glove box or under your seats will go into the trailer," Jack says. "I even have the tools that originally came with the car, which I display in the trailer."

And it's at shows where he encounters the greatest number of people who've never heard of a Hupmobile. "It doesn't say Hupmobile anywhere on the car, just has some Hs on the hubcaps," Jack points out. "Everybody asks if it's a Hudson, and I tell them, 'No, it's a Hupmobile,' and they ask if GM built it, so then I have to explain that there were independent carmakers back then."

With all the tours and shows to which Jack drives the Hupmobile, he's made a point of religiously maintaining it, a process which he calls "a giant step backward: It uses non-detergent oil, has 26 grease points, and must be greased every 1,000 miles. Even the universal joints must be lubed with heavy-weight oil. The water pump has its own grease cup, and the fan blade bearing and the clutch throw-out bearing are oiled every 200 miles. Adjusting the SteelDraulic brakes requires the brake pedal be blocked four inches from the floor, all four wheels off the ground, and each brake adjusted individually up to the pedal."

But the maintenance has proven worth the effort: He's never again had to place the Hupmobile on a trailer.

> *"Anything that normally goes in the trunk or in your glove box or under your seats will go into the trailer. I even have the tools that originally came with the car, which I display in the trailer."*



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

I OWNED A 1978 and a 1983 Oldsmobile 98, and I was under the impression that the 98 used the GM C body, not the B body as stated in "Brougham Beauty" in *HCC #112*. The '78 car had the Olds 403-cu.in. V-8, and it was very peppy. I think the 1977-'79 98s were slightly heavier than the 1980-'84s. You are right about the hills. The '78 car would take them in high gear, while the '83 car had to shift down on the very same hills. They were roomy and great-riding cars.

Gordon Smith
Sterling Heights, Michigan

We inadvertently referred to the last of the full-size, rear-wheel drive Oldsmobiles as a B-body. The correct GM platform designation for the 1983 Ninety-Eight Regency Brougham was C-body. We apologize for any confusion this may have caused, and wish you many miles of pillow-top tufted-velour C-body comfort ahead.—Editor

I ENJOY THE ARTICLES on 1980s-built cars; please keep them coming. Accepting and recognizing these cars is the best way to attract younger people to our hobby. I suspect the front-wheel drive cars of that era will generate little collector interest, but I've noticed young people driving and working on '80s-era Monte Carlos, Regals, Cutlass Supremes, Mustangs, Camaros and Firebirds. I've also seen an interest in full-size, rear-wheel-drive sedans from older people for use as tour cars.

My daily driver is a 1986 Caprice. It doesn't have the character of my 1961 Chevrolets, but it's very comfortable. Earlier cars are better built than '80s cars, and the headliner never came down on any of my '60s or '70s cars. Also, I dislike the constricted timing and emission controls on the '80s cars, yet I have no problem accepting them at judged shows or cruise nights.

We should embrace '80s cars because they're the last "real" cars. They still had the shape and proportion of a car, not a jellybean. In the 1980s, you could still get a rear-wheel-drive car with a full frame. Nothing rides as well.

Russell Heim
Levittown, New York

THE DETROIT UNDERDOGS ARTICLE, "At Least It's a Pontiac," in *HCC #112* struck a chord with me. I'm also fond of certain "me too" cars, having owned over the years a Pontiac Firebird, a Buick Skyhawk (which was essentially a Chevrolet Monza with a nose job), as well as the subject of the article, a Pontiac Astre.

A tan, four-cylinder notchback coupe with a three-speed manual transmission, my 1976 Astre was as basic as it got. Aside from the AM radio, the only amenities were dual sun visors and dual armrests. I bought it in the early '80s for very little money, and it served several purposes. It allowed me to garage my 1979 Trans Am in bad weather, and got much better gas mileage. Say what you want about the Vega and its clone, my Astre was a reliable, good-running car that served me well for several years. It was also rust-free, in spite of the West Virginia winters it endured. I should also mention that my sister's first car was a 1974 Vega hatchback, which, after my dad rebuilt the engine, was also a good-running car.

I enjoy *HCC* because the magazine devotes pages to cars that do not get the attention they deserve elsewhere. Don't get me wrong, I like classic Camaros and Corvettes as much as anyone, but I also enjoy reading about "everyday" cars like vintage Ford Falcons, Chrysler station wagons and, yes, Pontiac Astres.

Randy Stone
Thurmont, Maryland

THE CARS FROM THE 1980S aren't old enough to be considered classic antiques, even though the AACA may think so. Perhaps in another 20 years they'll be viewed that way. The '40s, '50s and '60s were periods of big automotive changes, especially in appearance. Nowadays a 25-year-old car doesn't really look a whole lot different than newer vehicles. You also have to remember that the average car on the road is about 10 years old already. I have a 1989 Mustang LX convertible, and I don't consider it an antique at all, and neither do other people I've encountered while out with it on the road.

Dave Harris
Northbrook, Illinois

THANK YOU, RICHARD, for shining the spotlight on '80s cars. There are many people who like '80s vehicles, and not just the sporty or fast models. As the author of *Those '80s Cars*, I had many readers reply with stories of their fondness of their first cars or a family member's car. Some of these cars are rather rare today, as few have survived or they were sold in limited numbers. Additionally, people who first drove in the 1980s are becoming collectors now and will have interest in the cars of their youth. So, the importance of '80s cars and growing the hobby's membership is dependent on opening our minds and welcoming the cars and their enthusiasts.

James Kaster
Concord, North Carolina

I WANT TO SAY how much I enjoy Richard's columns in *HCC*; I always relax and stretch out a little more on the couch when I turn to his page. However, I don't mean to pile on, but I really do not enjoy seeing articles about late 1970s and later cars. Articles on quirky cars like a Fiero or Aztek would be okay, but mainstream X-cars or Monarchs don't seem to fit with the rest of the magazine. To me, a classic is partially age but also pride of ownership. Guys that buy new Vipers still park them out front; guys that bought Cavaliers parked in the garage and then handed the keys to their wives.

Hugh Lefcort
Spokane, Washington

THE LATEST SERIES OF ARTICLES dealing with more modern collectable cars got me thinking about cars that I can relate to and how more people could get involved in our fun hobby. I was born in 1958, so the types of cars I should be excited about would be the late '60s and early '70s. These were the cars available to a high-school kid who was nuts about driving. The new cars in the mid to late '70s are considered some of the worst of the worst when talking about performance and reliability. According to a lot of old-car guys, the cars from this era should not be afforded any consideration with regard to being collectable.

This is why I really enjoy Milton Stern's column "Detroit Underdogs," mainly because his point is that we should not be so snobby; we should give folks with different interests a chance to participate in car shows and car collecting without being ridiculed by the owners of run-of-the-mill classics.

I will walk right by cars I cannot relate to or have seen clones of, such as COPO Camaros. Yawn. Maybe there should be a new class of collectibles called "Classic Survivor" or "Collect-

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America's Cottage-Industry Carmakers

Imagine for a minute that it's 2009. The facade of the financial world is crumbling, General Motors is going bankrupt and the Pontiac Motor Division has just been given a death sentence. Things look pretty bleak.

Then, suddenly, from out of America's heartland comes a brave ex-Pontiac dealer who rides in to the rescue, boldly declaring that "The Pontiac Solstice is too good a car to let die, so I'm going to build it myself." He buys the rights to the Solstice from GM, along with a big factory building and a huge supply of parts, and sets up a new company to build the Pontiac Solstice in limited volume. A great automobile is saved from extinction. Enthusiasts everywhere cheer.

Obviously, that second part didn't happen. At least not for the Solstice. But years earlier, it did happen to Studebaker's Avanti. And because former Studebaker dealer Nate Altman had the courage to save Avanti, automobile enthusiasts were able to buy new Avanti cars for several more decades.

I've heard complaints over the years that one thing America has always lacked was so-called "Cottage-Industry Carmakers," small firms that build cars in limited quantities for specialty markets, like in Great Britain. But that's not the case, as Altman's Avanti Motors clearly proves. He was far from alone.

Around the same time Altman established Avanti Motors from the leftovers of Studebaker, industrial designer Brooks Stevens took a retro-styled 1963 show car called the Studebaker SS, switched it to Chevrolet power and began building it as the Excalibur automobile. His 1965 Excalibur was the car that launched the "neo-classic" car industry that thrived for over 20 years.

And what about Carroll Shelby and his famous Shelby Cobras and Shelby Mustangs? His shop certainly qualified as a "cottage industry." In fact, it still does. Same is true of Briggs Cunningham and his beautiful Cunningham sports cars. Remember Bill Frick and his hot-rod Studillacs? Or for an even bigger stretch, how about Hayward and Channing Powell, whose Powell Manufacturing Company built the sturdy Powell "Sportwagon" station wagons and pickup trucks on remanufactured Plymouth chassis from 1954-'57? For some reason, people don't think of any of them as American cottage industries. But they were.

Big companies like Kaiser-Frazer wouldn't be included in this group. Neither would Tucker or Crosley, or even Bricklin, because, although their production was relatively modest, they all aspired to be big-volume producers. But Earl "Madman" Muntz and the hand-crafted luxury sport coupes he built over a four-year period in the 1950s? Oh, yes.

Remember in the 1950s and 1960s when teeny weenie "commuter vehicles" had a brief fling with fame? Industrial vehicle producer Cushman Motors produced a three-wheel postal delivery truck called the Mailster and sold thousands of them to the Post Office. Westcoast Machinery built its tiny Westcoaster, a three-wheeled battery-powered "shopper." There was a cute little three-wheeler called the "Autoette" produced from 1952-'57.

The electric Citicar, built in the mid-1970s, is a perfect example of the product of a cottage-industry carmaker. They had a small industrial building in Sebring, Florida, that housed their entire operation. From 1974 to 1977 the company built somewhere around 2,400 cars. They had an assembly line, but it wasn't automated, and most of the work was done by hand. And they never got cocky enough to think they could take on the Big Three. They knew their limits.

Okay, so you're thinking "But Pat, all those cars were made years ago. America doesn't have cottage-industry car companies nowadays. Too many legal hassles." But we do indeed have some neat little car companies. One name that comes to mind is Panoz and their line of sports cars. Also, specialty builders Roush and Saleen. Falcon Motorsports builds a sports car that is drop-dead gorgeous. Cushman Motors makes LSV's (Low-Speed Vehicles) for on-road use. And Elio Motors of Shreveport, Louisiana, says it will be in production of a three-wheel commuter car in 2014, with a price tag of $6,800.

So we did have—do have—an automotive "cottage industry" in America. You just have to look for it.

"Brooks Stevens took a retro-styled 1963 show car called the Studebaker SS, switched it to Chevrolet power and began building it as the Excalibur automobile."

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ible Underdog." Mr. Stern pointed out that the biggest crowds and interest at a recent car show came from one of these survivor cars: the Pontiac Astre. I saw a Chevette at a show and really checked it out. I was very nostalgic about the time that car was new and what I was doing then. Fun stuff.

What made me consider underdog collectibles was the prices people are asking for cars I was driving in high school. Camaros and Chevelles are completely out of line. Pedestrian cars from the '60s with small engines and nothing extra are priced so much higher than they are worth. Maybe looking at what was new in the mid '70s and early '80s might get a guy started in the collector car hobby. Lately, I've been seeing a Dodge Omni. Hmmmm.

Dave Abresch
Menomonee Falls, Wisconsin

COUNT MY VOTE for all those 1980s collectibles articles. Also for Model Ts and 1940s Packards, and most of whatever else you got. After roaming countless vintage meets for 40 years and perusing a million car and bike magazines, I like looking at and reading about something a little different; *HCC* is better for it.

I would think many of your readers already have many images of (the fabulous) '57 Chevys and '64 Mustangs, etc., etc. indelibly imprinted in their brains and would agree.

Ross Hansell
Quincy, Florida

I ENJOYED JIM DONNELLY'S Commercial Chronicles in *HCC #111* on the practice of adaptively reusing Full Classics as commercial vehicles during the Depression. By happenstance, I read the column on the same day as when I picked up some old car magazines to add to my collection. One of my finds, the September 1962 issue of *Motor Trend* includes a Classic Comments column by the late, great Griffith Borgeson on the restoration of Buster Keaton's Mercer Series 5 Raceabout by Keaton's son, Jim Talmadge. The article includes a photograph from about 1950, when the car was still in the sad shape of a stripped pickup truck. It notes that Talmadge bought the car, unaware of its family history, for $225 and spent 10 years restoring it. It appears that this car was on display in 2009 at the AACA Museum.

Frank Behlau
Lancaster, Pennsylvania

IN THE ARTICLE about Powell Crosley Jr. in *HCC #110*, a photo shows him sitting behind the wheel of one of his signature cars. It put me in mind of a similar photo of Frank Lloyd Wright, sitting behind the wheel of one of his Crosley roadsters. Taliesin, Wright's home and studio in Wisconsin, was not properly equipped to deal with the winter cold. His students working in the large studio space had only a fireplace at one end to keep them warm. So every autumn there was a convoy of Crosleys, each driven by one of his students, which traveled from Wisconsin to Taliesin West in Scottsdale, Arizona. Wright was in the lead, but I doubt that he was behind the wheel of a Crosley. Much as he admired the design of these cars, he would have to be driving his L-29 Cord or one of his early 1940s Lincoln Continentals—in the mid 1950s, definitely his Mercedes-Benz 300SL gullwing.

Similarly, Powell Crosley Jr. would usually not drive one of his little cars, but rather his SJ Duesenberg, which he claimed to have driven at 128 miles per hour on one occasion.

Tom Speer
San Antonio, Texas

I'M ENJOYING YOUR SERIES on Chrysler station wagons, but I was somewhat surprised as I read the descriptions of the totally redesigned 1965-'68 models to find no mention of the roof racks. Certainly, this was one of the most notable and interesting features of these wagons. No other manufacturer, except Dodge, offered such a long and beautiful roof rack. Its sleek design fit perfectly with the new bodies on these wagons. I was surprised, too, that Chrysler waited until 1968 to make wood paneling available on their wagons. Dodge had offered wood paneling for all four years of this body style. Chrysler's 1968 offering was worth waiting for, though, as it certainly was one of the most attractive.

Fred Dole
Colchester, Connecticut

THANK YOU for the Chrysler station wagon series—Fabulous!

Growing up in a well-off neighborhood and being a not-so-well-off station wagon fan, I did a lot of wagon watching. Neighbors, who both owned grocery store chains in the '60s and '70s, were on the two-year wagon cycle: a stately Country Squire, generally black, would appear with calendar regularity. Likewise, a half block down, so did a parade of gorgeous New Yorker Town & Country wagons. Two of my absolute favorites were this '66 model in silver green and a '68 in light blue with woodgrain paneling. The interiors, including the instrumentation and optional Tilt-A-Scope and telescoping steering wheel, set both vehicles off beautifully. The smoothly integrated cornering lamps shed a ray of light on the many brick streets on the north side of our town.

I'll always be a fan of Chrysler wagons, even those dating back to the television series *Sky King* with its 1955 New Yorker T&C stirring a lot of dust on the way to the ranch or landing strip.

Doug Johnson
Santa Barbara, California

THE MYSTERY CAR on the bottom of page 57 of *HCC #112* ("Buick Concept Cars of the 1950s") is a 1959 Electra 225 six-window Riviera hardtop. After sticking the really ugly center fin on the trunk lid, it was rebadged as a "Limited"—a name, like Riviera—that Buick reserved for its top-of-the-line models. Had this car made it into production, would it have been an "Electra Riviera Limited"?

Buick's designers were not the only ones to flirt with a dorsal fin. I've seen a photo of the proposed 1961 Thunderbird sporting a 1959-'60 roofline, nose and taillamps similar to the production version—and a low center fin from back window to rear bumper.

Mike Peck
Petaluma, California

I ENJOYED MIKE BUMBECK'S story about the beautiful 1977 Mercury Monarch in *HCC #111*. I just wanted to add that from 1975 to 1977, the 351-cu. in. Windsor V-8 was also available as an option. As so often happened during the '70s, ever-tightening gas mileage and emissions control requirements resulted in the deleting of larger engines from the option lists. None of these cars were economical compared to today's cars. Even the sixes couldn't break 20 MPG, and their performance bordered on being sluggish. However, I always saw the FoMoCo cars of this era built with much better quality than their GM contemporaries, especially in their inte-

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Clearing the Record

If you work in journalism, especially the print kind, the follow-up story is a regular part of your toolbox. At Hemmings, the follow-up frequently comes from our interplay with our highly informed and energetic readership. What follows is a prime case study.

Once, when going through the files before claiming my share of the *HMN* assignments, I found a file containing photos that had been published in *Special Interest Autos* back in early 1977. It was about a 1964 Studebaker Lark that had been fashioned into a four-door parade limousine for the president of Israel before it inexplicably vanished.

Here's some background: Back in 1960, the Knesset, the national legislative body of Israel, disclosed an announcement by industrialist Efraim Eilin that he had secured the rights to build and sell Studebaker cars in Israel. Until that point, the plant, which was located in the seaport city of Haifa in northern Israel, had been known as Kaiser-Eilin. Beginning in 1951, the plant had assembled Kaiser-Frazer products after Eilin had personally negotiated a deal with Joseph W. Frazer. The agreements, both with Kaiser-Frazer and Studebaker, were very timely, because they allowed would-be buyers to avoid punitive Israeli duties that were levied on the imports of new motor vehicles.

Presumably for the purposes of enlightened self-interest, Eilin and the rest of his upper echelon in Haifa reasoned that building a specialized Studebaker for VIP duty with the Israeli government would be a smart move. The plant was already building six-cylinder Studebaker Larks, so Eilin's chief engineer and designer, Dick Zalman, grabbed one of them, in Cruiser trim, off the assembly line as his starting point.

Zalman ended up stretching the Lark's 113-inch wheelbase by 25 inches, and added two boxed members to stiffen its frame. Among many other changes, the plant fabricated a Lincolnesque suicide door arrangement and fitted a folding convertible top. The firm presented it to President Zalman Shazar on Israel's independence day in 1964. Like many such parade cars, it was used for a while and then retired.

In 1975, Yaron Fidler, a New York City resident born in Haifa and a lifelong Studephile, typed up an article for the Studebaker Drivers Club's magazine, *Turning Wheels*. Therein, he reported that the Haifa-built parade car was on permanent exhibition in the Israel Defense Museum, located in Jaffa–which is now part of Tel Aviv–after first having been sold by the government in 1966 to a private buyer. Two years later, *SIA* revisited the story, which essentially ended there–until this year, when *HMN* pondered the car's since-undetermined fate.

We asked for reader input, and got it in the form of an email from Daniel Meyers III of Columbus, Ohio, another SDC member, who with his wife owns a restored 1964 Lark Daytona convertible. He'd also wondered about the parade car. Through marriage, Meyers has Israeli relatives. During visits to Israel, he's done some Studebaker hunting, and informed us that about 3,500 Larks with six-cylinder power were built in Haifa through 1965, with General Motors-built engines installed in the 1965 cars.

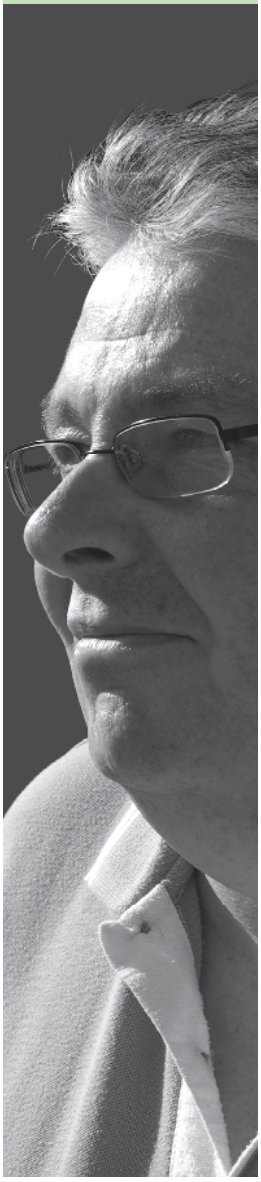
There was a strong effort to build buyer loyalty in Israel. Meyers showed us a copy of a magazine advertisement for the 1962 Larks, printed completely in Hebrew. About a half-dozen Studebakers, restored or otherwise, are still believed to be on Israeli roads.

We would love to close this out by breaking some happy news that the Lark limousine has been found intact. No such good fortune this time, alas. Meyers told us that just a couple of years ago, before a family visit to Israel, he managed to reach Fidler, asking how to track down the parade car. He quoted us a passage from Fidler's reply, "I just got back from Israel three days ago. The special 1964 convertible no longer exists. It took us until spring 1982 to locate its final resting place, a junkyard in Jaffa. It was towed there and cut to pieces in order to sell it as scrap."

Beyond this, we also found out something else. It's commonly held that Studebaker production in South Bend, Indiana, ended on December 20, 1963. That's almost true. What actually happened was that in January 1964, some of the remaining parts inventory at South Bend was boxed into kits, packed with knocked-down V-8 Studebakers going to South Africa for assembly and sixes shipped to Haifa. Some of the last Larks from "Indiana," then, were actually built in the Holy Land. Sometimes, getting the whole story takes more than one attempt.

Jim Donnelly is on a well-deserved extended vacation and was not able to write a column this month, so we selected this insightful column he wrote for the December 2007 issue.

"It's commonly held that Studebaker production in South Bend, Indiana, ended on December 20, 1963. That's almost true."



Continued from page 30

rior appointments and HVAC controls. In 1975, Ford also applied GM's A/C system, including its A-6 compressor, to many of the lower-priced full-size cars as it had in 1972 to the Thunderbirds and Lincolns.

What's especially nice about these cars and their GM counterparts is that in an era when the so-called full-size cars had ballooned to gigantic proportions, weighing nearly 1,000 lb. more than their '60s namesakes, the Monarch and Granada, considered compact cars at that time, harked back to about the size of a Ford of 20 years earlier.

Eddie Mitchell
Waco, Texas

THE COLUMNS by Jim Donnelly and Bob Palma were very interesting to me in issue *#108*. When I was young and my father got together with my uncles, they had what I called "The Woulda, Coulda, Shoulda" sessions. One was the "Edsel" fiasco, the car not the man. Someone said that if Edsel Ford were alive, he would never have had a car named after him. Then the discussion turned to the cost. I believe that I heard $700,000,000; Edsel would never have spent that money. My uncles said that it takes five to six years to develop a new model, much less an entire new car line. This puts Ford at 1952-'53, when they were thinking of a new car line poised between Mercury and Lincoln. If Edsel had been alive, he would have bought the Hudson car company; Edsel was instrumental in getting Lincoln. Hudsons were better cars than Mercurys and the start of unit-body construction—imagine a Hudson with an OHV V-8? Everyone said that it would have cost $40 million to $60 million, not $700 million. It's a moot point today, as there is no ladder structure in the auto industry anymore.

Joseph Roth, Jr.
Holmes, Pennsylvania

IN WALT GOSDEN'S J.B. Judkins Co. article in *HCC #107* on page 49 there's a picture of Judkins' personal 1938 Lincoln KB coupe. The car is outrageously beautiful with its pronounced diagonal cut on the rear side window. I don't believe I've seen that design before. Curiously, in the Mecum ad on page five in the same issue there's a 1938 Delage D8-120 Letourneur & Marchand Aerosport Coupe with the same window design. I believe the Lincoln to be much, much nicer, but the window design is exactly the same. Who copied whom?

I.N. Gelabert
Miami Lakes, Florida

AFTER READING Richard's column in *HCC #108*, I must say that I agree with his every word. I remember my high school drivers-ed class having both a 1967 Chevrolet Impala and a 1967 Plymouth Fury. The Chevy's dash was so plain and very "cheap" looking, with a large fuel gauge to stare at. The Fury's dash was much more interesting and featured more information for the driver to read. The Plymouth also drove, rode and handled way better. I worked part time at the local car auction after school and made the same observations that Richard did. The Corvair Monza Spyder had an especially beautiful one with the turbo package. Nice memories. Thank you!

John Somers
Sebastian Inlet, Florida

RICHARD IS ABSOLUTELY CORRECT about the 1960 Buick dashboard, as well as the '58 Bonneville's. I would also add the '59 Bonneville dashboard, with factory A/C. The 1960 Buick is my favorite GM car of the '58, '59 and '60 models. The '58 Pontiac was by far the best-looking marque in GM's lineup that year, and ditto for its '59 models. As for Chevrolet, I remember falling in love with the '65 Impala and Caprice. Their dashboards exuded the upscale style and class of mid-century modern automobile design.

Paul Baker
Scottsdale, Arizona

BEING THE AVIONICS CONTROL and display manager on the B-2 bomber, I have always been fascinated with machine-man interfaces, e.g., dashboards. Of course, in aircraft, where controls and displays are is critical to safety; my emphasis was always on ease of use, logical operations, and efficiency of information transfer. My love of car instrumentation is different: I like glitter and uniqueness. When I read Richard's column, I was greatly pleased that he wrote on something I've always loved, and I was surprised that we shared the same thoughts on great dashboards. I too, have felt the same way about the Chevy dashes, although I have grown to appreciate the simplicity of the 1964 models. I also appreciate Pontiac dashes in general. My favorite is a tie between the incredibly perfect 1960-'61 Buick dash and the 1960-'61 Chrysler. I also like the see-through speedometers in the 1954-'55 Fords and '60 Dodge.

David Parker
Fort Richardson, Alaska

I HAVE TO DEFEND at least two Chevrolet models: The 1955 Bel Air, with its bow-tie pattern, is a tribute to "detail," and I also enjoyed the F-14-style gauges on my C4 Corvette. I also think the '63 Pontiac Grand Prix, with all the chrome and the console manifold vacuum gauge, is a thing of beauty. Other instrument panels of note are the late '60s and early '70s versions of GM's personal luxury cars: Grand Prixs and Rivieras, with their driver's cockpit concept. And dad's 1965 Crown Coupe with the liquid speedometer made for an interesting dash as well. Early '60s Lincolns are very elegant, too.

Matt Walsh
Wesley Chapel, Florida

I CAN'T EXPRESS THE JOY I had after reading Richard's article on instrument panels. I'm into instrument panels myself, and have actually bought cars because of their instrument panel design. And, yes, most people call them dashboards, of which I am always correcting, and telling them that a dashboard was actually part of a horse driven wagon, which was used to keep your shoes clean from the horse's "exhaust." As true as that is, people don't want to hear it.

As far as my favorites go, it looks like you've hit them all. The 1960-'61 Chryslers and the Studebaker Golden Hawk are on the top of my list. And as you mentioned, Pontiacs are right up there also. I especially like the first edition Grand Am for 1973. They have that wraparound look that makes you feel you're in an airplane cockpit. And let's not forget those beautiful 1963-'65 Buick Rivieras. Another one of interest, although certainly not pretty, is the 1958 Edsel. The speedometer needle was stationary, while the speedometer itself revolved like a compass.

Bob Testa
Northfield, New Hampshire

Perennial Red-Headed Stepchild: The Ford Six

Comedian Rodney Dangerfield might have identified with any full-size 1941-1972 Ford powered by a straight-six engine, since neither of them gets much respect. Ford so firmly attached itself to V-8s after 1932 that sixes were almost an embarrassment. Three youthful validations come to mind.

The first is a conversation between Dad and his brother-in-law Andy at a family gathering in 1954. Straight-laced Uncle Andy drove good, sturdy, no-nonsense Plymouths. Andy and his family had arrived in his new, two-tone green 1954 Belvedere sedan with Hy-Drive. Being eight years old, I didn't participate in the ensuing new-car conversation, but I remember Dad and Andy concurring, "Plymouths are good cars, even though they're sixes, but there's something wrong with a Ford if it isn't a V-8."

The second is in 1958, at age 12. My friend Jim's father operated the local Dog & Suds root beer stand in Paris, Illinois. Needless to say, Jim was a valued friend. Jim's dad drove a bronze and white 1957 Ford Custom 300 Fordor; 312-cu. in. V-8, overdrive. It was pretty fast and driven accordingly. But during the 1958 recession, he traded it toward a new, two-tone blue 1958 Custom 300 Tudor, six-cylinder, overdrive. An apologetic explanation was tendered, "Yeah, it's only a six, but I need to save gas this year with business being down."

Later in 1958, Dad and I were shopping to replace the family's 1953 De Soto Firedome. We went to see a sharp, two-year-old 1956 Ford Customline Victoria, red and white. I thought it was pretty cool because it was a two-door hardtop and we had been looking at sedans. But when we got there, Dad raised the hood and saw that it was a six-cylinder model. He quickly closed the hood and we beat a hasty retreat. Dad opined, somewhat irritated, "Now I know why it was so cheap!"

Henry Ford had an aversion to six-cylinder engines. He was known to dislike the ponderous, expensive six-cylinder 1906-1908 Model K his early investors thought advisable. When defending his Model T against competitors having more than four cylinders, Ford reportedly said he had no use for an automobile with more cylinders than a cow had teats. Unfortunately, Sigmund Freud is not available for comment.

Ford thought he had a better idea for 1937: He would market a depression-era car with better gas mileage than the 221-cu.in. flathead V-8. So, did he authorize developing a six-cylinder? No. Instead, he made the diminutive 136-cu. in, 60-hp V-8. It offered distinct motor vehicle tax advantages in Europe, but had insufficient power to yield significantly better gas mileage than the 221 V-8.

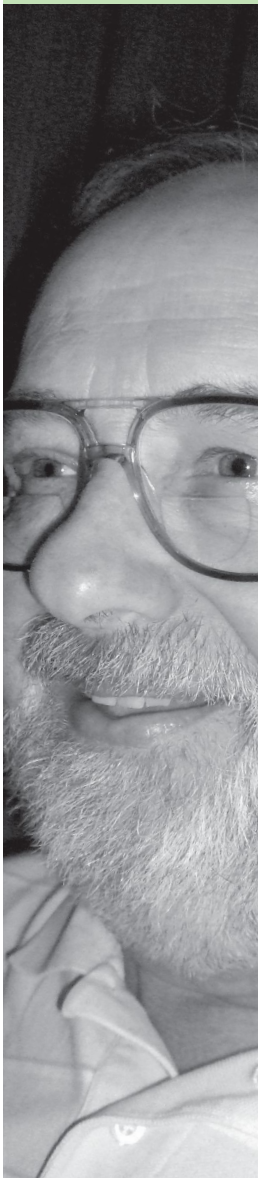
Thankfully, Henry's aversion to sixes yielded to his son, Edsel's, better judgment by 1941. The company subsequently introduced its first "modern" six-cylinder that year; the new in-line, L-head 226. Ironically, it was rated at the same 90 hp as the 221 V-8. Not only that, but its longer stroke produced 15 percent more torque than the V-8, it developed its maximum horsepower and torque at lower RPM, and it had more cubic inches!

If the 1941 Ford six-cylinder didn't embarrass the aging side-valve V-8, the all-new, thoroughly modern 215-cu.in. OHV straight-six did in 1952. Although the new 215 was rated at 101 hp against the (by then) 239-cu.in. V-8's 110 hp, it was no secret that the new OHV engine would often out-perform its L-head brethren. The trustworthy 215 was bored to 223 cubic inches for 1954 and remained there until being discontinued at the end of the 1964 model year…when it still had a manual choke!

The last all-new, straight-six engine for full-size Fords was introduced for 1965: the excellent, seven-main-bearing 240. It was available in full-size Fords through 1971. Taxi and fleet customers could still order one in 1972, but that was the last year full-size Fords were available with a straight-six.

Sometimes, red-headed stepchildren are good kids. Keep that in mind if you're at a car show and the owner of a pretty 1961 Starliner pops the hood and you see one long rocker arm cover between the radiator and the cowl: Isn't his pre-1963 fastback more interesting because it has that unexpected Ford six under the hood?

"Thankfully, Henry's aversion to sixes yielded to his son Edsel's better judgment by 1941."



Exclusive Motoring

With only 978 produced, the 1958 Edsel Villager is one of the rarest station wagons on the road today

WORDS AND PHOTOGRAPHY BY JEFF KOCH

Regardless of historical finger pointing and excuse making, Ford has to be credited for not just settling for the same-old same-old, inside or out, with the Edsel; the grille was controversial from the get-go, but inside, the stylists and engineers got together for a pair of interesting items that were beyond the standard-issue stuff for the era.

First was the barrel speedometer: Instead of a boring old needle swinging from left to right, the needle stayed steady while a revolving drum, its numbers clearly embossed into it, would match its number to the car's speed. None of this "I couldn't see the speedometer, officer!" nonsense; the number was in your face and right in front of you. As a bonus, it would glow if you exceeded a predetermined speed.

The second was the Teletouch push-button shift transmission. Now, pressing a button to shift wasn't new: Chrysler launched its "jukebox" TorqueFlite transmissions the year before

Natural-look carpet warms up an otherwise austere cabin. A brace of conventional instruments flank the floating-drum speedometer. Air-conditioning was dealer-installed. Teletouch shifting was a signature option in 1958, its buttons operating more smoothly than other pushbutton-selected transmissions of the day.

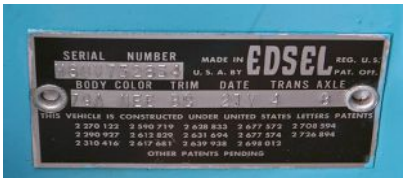
the Edsel debuted. Edsel's particular innovations, though, were twofold. First, the shift buttons were positioned in the center of the steering wheel where they could easily be located, saving you the trouble—and danger—of taking your eyes off the road to look somewhere on the instrument panel. Second, they were electric and required only a gentle press for the smooth-acting button to send the message to the transmission. When engaging, the sound is mechanical and positive, rather than the substantial clank you might hear under a comparable Mopar.

It was August 21, 1958, three days before Edsel's inaugural season was set to close, when our feature Villager station wagon rolled out of the Louisville, Kentucky, plant that it shared with sister Ford-badged products. It seemed like it was destined to be a Southwestern desert car from the get-go: The body was painted Driftwood, a pale beige that was just a few shades off of the complementary white that adorned the long roof and the side coves. "It also came with power steering and Teletouch, plus the padded visor and dash, which were options, and cloth seats, which were more of a choice than an option. It also had backup lamps, bumper guards, tinted glass, fancier wheel covers and dealer-installed air conditioning." So says Ted Downer of San Francisco, the car's owner and restorer, though it is no longer Driftwood. Aah, but we're getting ahead of ourselves.

"It was purchased new in Covina, California, and nearest we can tell it was taken to the high desert east of L.A., near Palmdale. Sometime in the '70s, a guy in Costa Mesa, California, bought

Perhaps one of the most distinctively designed automotive grilles of all time.

The middle and back row of seats can fold down flat for that 4 x 8 sheet of plywood. 'Shame the rear seat isn't rear-facing, but there's still plenty of legroom for adults.



Hard to believe that a 303hp V-8 was Edsel's base engine, but such was the case with the 1958 models; a marginally detuned version of the same engine became Edsel's high-performance option in 1959. White valve covers and air cleaner lid are surprising color choices for an engine that's bound to get dirty.

it and parked it. I found it in 2012. The owner was apparently a hoarder; he parked it in his garage in 1979, and then just buried it in the garage under all of the stuff that he was holding onto."

What he saw in that Costa Mesa garage was something of an eye-opener. Other eyes might have considered this Edsel a prime example of the junk that filled the space. But Ted, who has owned and restored more than two dozen Edsels of all body styles since 1975, saw something else: potential. "The engine and brakes were frozen; it had been repainted once—badly—in the original Driftwood, and it looked awful: just dirty and badly-used. The bumpers were covered in surface rust. The floors were all gross. I later pulled the seats out and found a Hershey Bar wrapper advertising the 1964 World's Fair in New York. The wheel covers were missing, along with a couple of little things like the turn signal arm—they're made of plastic; they're tough to find today, and they disintegrate easily. The cloth on the seats was shot, and someone started taking the dash apart. But most of the parts there were stored in the spare-tire well. Someone had converted it to floor shift from its original Teletouch. It was just a big mess.

"But that's good," explains Ted, who obviously has some new understanding of the term "good" that most English-language speakers have apparently overlooked. "It was beat-up and tired, but not destroyed. It was a complete car. The body was straight and had zero rust. The cargo area had its original linoleum, along with the original padded dash and dash paint. It even had the original yellow California license plate on it." Now, Costa Mesa is just inland from Huntington Beach and Newport Beach, California, about five miles from the sea. The roads are dry, but machinery there is not impervious to airborne sea spray. "This Edsel only survived," Ted tells us, "because it was buried in a tomb of junk. And if I didn't take it, someone would have ended up rodding it."

And so, it was taken apart in anticipation of a full restoration. "The odometer read just 79,000 original miles, and though the engine was rebuilt after sitting for as long as it did, I kept the stock 10.5 compression in it," Ted says. "I did replace the original carburetor for a more modern Edelbrock carb, but that was about it."

The mechanical parts are restored fairly easily: Parts are interchangeable with enough other Ford products that finding the right components wasn't an issue. And the body was solid. That just left everything else—easier said than done for a car with as few reproduced parts as an Edsel. "NOS parts—any NOS parts—are hard to come by for a 1958 Edsel these days," Ted explains. "But restoring one isn't impossible. Some of it is shared with Ford, like weatherstripping and glass. Some of it is reproduced—taillamp lenses, wheel cover appliques and spinners, a few little things. But interiors? Nothing is reproduced except for the seat cloth and vinyl materials. SMS makes material for the upholstery—vinyl and cloth—plus the carpet and headliner, but I had it sewed locally. No one makes an interior kit for an Edsel."

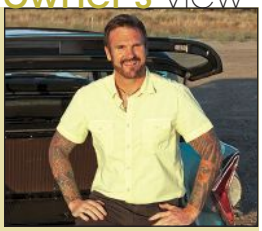
Significant money was saved by using the factory-original dash pad. "They tend to shrink around the edges," Ted points out, "but this one wasn't cracked at all. It must have spent much of its life in a garage, even before the hoarder got it. So, I softened it up and stretched it back out." The secret? "I used a silicone tire dressing, like Black Magic, and sprayed on a thick cover over a course of weeks. I restuffed it, heated it with a hairdryer, pulled it taut and then glued it back in place. It was hard to do, but it saved me about a grand from getting one made for it."

Ted wasn't so lucky with the acres of stainless trim. "Nothing is reproduced for it," he laments. "I removed all of the stainless trim and took most of the dents out myself."

While it was apart, Ted elected to make a significant aesthetic change: the color. "Driftwood isn't my favorite color on the Edsel palette," Ted admits. "Maybe on the scallop or the roof, as an accent color, but on the main body it looks kind of like milky coffee. Edsel advertised that you could order 90 different color combinations; the paint chart offered lots of blues and greens, and you could set it up using any colors you wanted on the roof, body and coves." And so, Ted made a unilateral decision to switch the body to Turquoise, with a black roof and white coves as the accent.

Today, Ted insists it feels "like a new car. All the rubber's

owner's view



I'd owned a 1959 station wagon as my first Edsel, and I'd always wanted a tri-tone nine-passenger wagon. Edsel Division made just 978 nine-passenger Villager wagons for 1958, which makes it one of the rarest Edsel models in its debut year, and finding one that had been parked for 35 years was a stroke of luck. It rides and drives like new. I just got it on the road when these photographs were taken. The only item left for me to restore is the roof rack.

—Ted Downer

been replaced, and I installed double-thick firewall insulation and sound deadener, so it's really quiet and feels solid. Wagons are usually very rattly, and this one isn't. I took my time, hunted the rattles down, and fixed 'em, one by one."

Regarding the Teletouch transmission, Ted calls it the Edsel's "Achilles' heel ... With regular use, they'd give warning signs and then expire, and there you'd sit. But I've rebuilt the motors in all of my Edsels, and I've never had another one go out on me," though he confesses that the rebuilt units in his cars don't see much rain or dirt. Whatever the issues Teletouch may have had when these cars were new, the interface in Ted's station wagon feels positively dreamy. "They were designed originally for the redesigned 1958 Lincolns," Ted tells us. "Look at the steering column in those cars—it's enormous. But Lincoln backed out at the last minute; they decided that Teletouch was too advanced a feature for their conservative buyers, so Edsel got it instead."

Getting in requires you to be a little bit limber: a high floor, low roof, short door, high seat and large-diameter steering wheel combine for a tight ingress. Once you're in, there's plenty of room in all directions—headroom and shoulder room are quite generous, particularly considering this is the smaller of the two Edsel bodies, and the seat demands that you sit upright as you drive. There's no slumping in an Edsel.

"After we photographed the car, I got it home and re-jetted the carburetor," Ted recalls. "I adjusted the timing; it's a little rocket now, very stable, and I get 14 MPG on the highway. Most of the station wagons like this Edsel came with a 3.23 rear gear, which was pretty punchy around town. Of course Fordomatic transmissions start out in second gear unless you really punch it from a stop, which downshifts it into first, or you push L1 to start off."

Twist the ignition key, and the engine settles into a 900-RPM idle. We know this because this particular car was ordered with the incredibly rare factory tachometer. Ted has seen only a handful of these units in person, and estimates that they were installed in about two percent of all Edsels, ever. Power on our drive—despite 300-plus horsepower and 400 lb.ft. of torque—feels only adequate to push its weight around. Curb weight is just the high side of two tons, plus another 400-plus pounds of driver and passenger during our drive, surely sapped as much from the accelerative power.

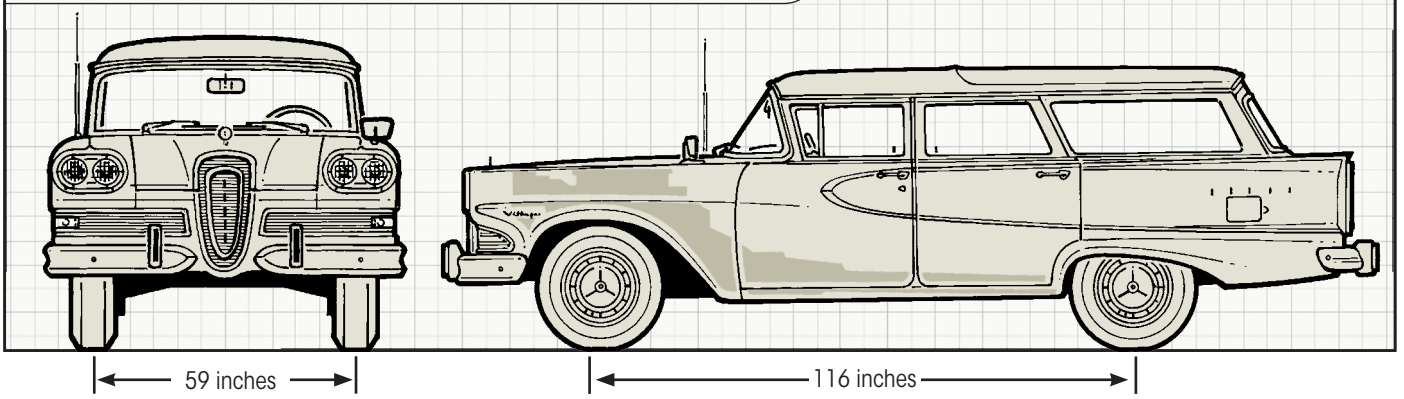
The extant power is easily-enough controlled: Aim the big E hood ornament, which reads the right way from both front and rear, and there isn't the usual wandering mess we've come to associate with bias-ply tires on the straight and narrow. In the corners it's another matter, the quick-enough power steering lets you react suddenly, but the suspension always feels half a beat behind. The Edsel leans dramatically, even at marginal speeds, and the typical bias-ply sidewall graunch is in evidence early into your turning circle. And despite our two-ton wagon being equipped with manual drum brakes front and rear, they're beefy 11-inch drums, and offer both a firm pedal and reasonable stopping distances from speed.

And Ted's right: Even freshly-rebuilt wagons frequently have the occasional squeak or rattle magnified by the big echo chamber behind the front seat, but as we got to drive it, this Edsel felt tight and all right. (If contemporary reports are to be believed, Ted's largely noiseless example is probably better than new.)

For decades, Edsels were punch lines, but time has put distance to the cruelty of contemporary comment. Despite the marque's sordid legacy, or perhaps because of it, today this Edsel Villager holds its head high in a car-crazy crowd.

1958 EDSEL VILLAGER

ILLUSTRATIONS BY RUSSELL VON SAUERS, THE GRAPHIC AUTOMOBILE STUDIO



SPECIFICATIONS

PRICE

Base price	$2,955

ENGINE

Type	90-degree Ford FE OHV V-8, iron block and cylinder heads
Displacement	361 cubic inches
Bore x stroke	4.05 x 3.50 inches
Compression ratio	10.5:1
Horsepower @ RPM	303 @ 4,600
Torque @ RPM	400 lb.ft. @ 2,900
Valvetrain	Hydraulic valve lifters
Main bearings	5
Fuel system	Holley four-barrel 1848A carburetor, mechanical pump
Lubrication system	Pressure, gear-type pump
Electrical system	12-volt
Exhaust system	Single exhaust

TRANSMISSION

Type	Fordomatic three-speed automatic, Teletouch pushbutton shift
Ratios	1st 2.40:1
	2nd 1.46:1
	3rd 1.00:1
	Reverse 2.00:1

DIFFERENTIAL

Type	Semi-floating hypoid
Ratio	3.23:1

STEERING

Type	Recirculating ball, power assist
Ratio	20:1 gear, 27:1 overall
Turns, lock-to-lock	5
Turning circle	44 feet

BRAKES

Type	Hydraulic, four-wheel manual drum
Front/rear	11-inch drums

CHASSIS & BODY

Construction	Body-on-frame
Frame	Ladder-type frame with full-length boxed side rails and five cross members
Body style	Four-door station wagon
Layout	Front engine, rear-wheel drive

SUSPENSION

Front	Independent; unequal length A-arms, coil springs, telescoping shock absorbers
Rear	Live axle; semi-elliptic rear springs, five leafs each side; telescoping shock absorbers

WHEELS & TIRES

Wheels	Stamped-steel disc, drop center
Front/rear	5.5 x 14 inch
Tires	Four-ply rayon bias-belted with white sidewalls
Front/rear	7.50-14

WEIGHTS & MEASURES

Wheelbase	116 inches
Overall length	205.4 inches
Overall width	77.1 inches
Overall height	58.8 inches
Front track	59 inches
Rear track	56.4 inches
Shipping weight	3,930 pounds

CAPACITIES

Crankcase	6 quarts
Cooling system	20 quarts
Fuel tank	20 gallons
Transmission	22.4 pints

CALCULATED DATA

Bhp per cu.in.	0.83
Weight per bhp	12.97 pounds
Weight per cu.in.	10.89 pounds

PRODUCTION

Total Edsel models	68,045
Villager wagons	978

PERFORMANCE*

0-60 mph	10.2 seconds

*Source ***Motor Trend***, December '57

PROS & CONS

+ Rarity

+ Sublime sensations at the controls

+ Edsels have attained retro-geek-chic status

– Finding one

– Need to limber up to get in

– Very few parts reproduced

WHAT TO PAY

Low
$7,400 – $9,000

Average
$15,000 – $18,000

High
$32,000 – $35,000

CLUB CORNER

International Edsel Club
P.O. Box 312
Muskego, WI 53150
www.internationaledsel.com
Dues: $25/year
Membership: 540

Edsel Owners Club
1740 N.W. Third Street
Gresham, Oregon 97030
503-492-0878
www.edselclub.org
Dues: $35/year
Membership: 445

Chevrolutionary!

The much-maligned Chevrolet Vega was ahead of its time, advancing new technology in an industry that desperately needed it in the 1970s

BY TERRY SHEA • PHOTOGRAPHY BY RICHARD LENTINELLO

By all accounts, the Chevrolet Vega seemed to be the right car at the right time when it debuted late in 1970 as a 1971 model for General Motors. Small, attractive, economical to buy and efficient to own, the sporty and thrifty little car—available in two-door notchback and hatchback variants, as well as in station wagon and panel delivery models—marked big changes at GM, upending nearly 60 years of the way Chevrolet did business.

From its revolutionary die-cast aluminum engine block, to its small dimensions, to its innovative manufacturing and distribution techniques, the Vega screamed "New," though its design was otherwise relatively conventional.

When the bottom fell out of the muscle-car craze in the early 1970s and then the first oil crisis and gas crunch hit in 1973, the Vega seemed poised for enduring greatness.

Though bigger, heavier and a bit more expensive than both the Volkswagen Beetle and Ford Pinto that the car primarily competed against, the Vega had the right mix of small-car chops and style to appeal to critics and the public alike. It won a variety of awards from the press and sold in big numbers, averaging over 414,000 units annually between 1972 and 1974. Were it not for a major strike that shuttered GM for a couple of months during the fall of 1970, the Vega might have sold as well in its debut model year in 1971.

The Vega's 2300 aluminum engine with its overhead-cam cylinder head marked a first for a production Chevrolet. GM had built aluminum engines before, but the Vega's mass production straight-four OHC was an all-new affair. At the time, GM boasted that its program to build the Vega's 140-cu.in. (2.3-liter) engine was its most extensive—and likely most expensive—to date.

Working in conjunction with GM, Reynolds Aluminum created a hypereutectic aluminum alloy with a high-silicon content that obviated the need for steel cylinder liners. "Hypereutectic" refers to the aluminum being over saturated with silicon. Aluminum will absorb silicon up to about 12%, after which the silicon precipitates in crystalline form. Following traditional machining, the cylinder walls are then treated to a chemical etching process that strips a very thin layer of aluminum (less than 1/10,000th of an inch) to reveal the hard silicon crystals that are far more durable and resistant to scoring than aluminum. Today, such hypereutectic materials are used by auto and motorcycle manufacturers throughout the world for linerless aluminum engines, but GM blazed the trail with the Vega more than 40 years ago.

Chevrolet offered the 2300 engine with either a single-barrel or twin-barrel carburetor, making either 90hp or 110hp, respectively; the two-barrel version featured a slightly hotter camshaft. Both engines used the same 8.0:1 compression ratio and cast-iron cylinder head. These numbers were later downgraded to 72hp and 85hp net when the SAE revised the horsepower ratings in 1972. The 2300 engine proved economical and sufficiently powerful enough to get the lightweight Vega up to highway speeds with little trouble.

Chevrolet wrapped that all-new powerplant with a handsome hatchback or coupe body design that seemed equal parts second-generation Camaro at the front and something more in the Fiat family at the rear. If you liked small cars, you probably found the Vega sensational, particularly for an American entry into the sub-compact market. Its good looks were undeniable, particularly so when compared to the somewhat frumpy Pinto and quirky love-it-or-hate-it Volkswagen. The round gauges, bucket seats and multi-spoke steering wheel all carried that same European feeling inside the car as well.

When it came to building the unit-body Vega, GM utilized robots for welding like never before. And when it came time to ship the completed cars to the dealers, GM teamed up with the Southern Pacific railroad to create the Vert-A-Pac system that allowed 30 Vegas—15 to a side, tipped nose

"The reaction to the Millionth Edition is just the highest. People just love that car. The color combination is the main thing, but they just love the condition of it."

"The Cosworth is a different ballgame. That car handles like it's on rails because the Cosworth has a little different stabilizer bar setup than even the GT."

down—to fit into a single rail car. Traditional car-carrying wagons could handle only 18 Vegas at a time. As with almost every other aspect of the inexpensive Vega, GM was looking to save money, and this innovative shipping method proved another frugal move.

The Vega was an immediate hit, enjoying a few great years in the showroom, but was ultimately undone by a host of quality issues that plagued the car in its early years and damaged its reputation almost beyond repair. Unlike virtually every other Chevrolet product to precede it, development of the Vega began under the aegis of the GM corporate engineering staff. Everything from the groundbreaking aluminum engine, to the vehicle's underpinnings, to its styling, to the way it was manufactured—all came down as edict from the 14th floor. This process did little to endear the car to Chevrolet management and rank-and-file engineers, who felt they had nothing to offer, save for correcting its inherent flaws.

Inadequate cooling capacity and differing rates of thermal expansion between the open-deck aluminum block and cast-iron cylinder head spelled disaster for some engines that overheated, and head gaskets paid the price. The worst overheating examples suffered irreparable damage to the unlined cylinders. Chevrolet responded by replacing failed engines and adding a coolant overflow tank. But Vegas suffered a host of other problems, each of which Chevrolet and GM would alleviate over the years, including too-short axle shafts that sometimes resulted in a wheel falling off, or extra-loose engine mounts meant to accommodate the vibrations from the large inline-four-cylinder engine that instead caused other problems.

SPECIFICATIONS

1973 Chevrolet Vega GT Millionth Edition

Engine Type	Inline four-cylinder; aluminum block, cast-iron cylinder head, overhead camshaft and two valves per cylinder
Displacement	140 cubic inches
Bore x stroke	3.50 x 3.63 inches
Compression ratio	8.0:1
Horsepower @ RPM	85 @ 4,800
Torque @ RPM	115 lb.ft. @ 2,400
Fuel system	Holley two-barrel carburetor
Exhaust system	Single exhaust
Wheelbase	97.0 inches
Overall length	169.7 inches
Curb weight	2,272 pounds
Price, base/as featured	$2,245.90/$2,883.70

Millionth Edition
Vega's striking color combination of Bright Orange paint with a wide white stripe down the middle is mimicked on the flashy interior, complete with orange carpet. Who says the Seventies had no style? As with his Cosworth Vega, the owner keeps this ultra-low mileage car in as-new condition.

Perhaps worst of all were the rust issues that plagued the early Vegas, which had no inner fender liners—almost certainly one of the corporate cost-cutting measures meant to keep the Vega's price low. In the end, GM paid plenty both in literal terms of fixes they needed to effect on customers' cars and in the damage to their corporate reputation that followed for years, if not decades, after.

Despite fixing these problems in the ensuing years—and turning the last Vegas into pretty reliable cars—it was too late, and the model was finished by 1977. Despite a strong warranty meant to alleviate customer concerns, Americans had moved on as Japan's cars improved and became more socially acceptable, VW re-invented their lineup for the first time with the front-drive Rabbit and even Chevrolet introduced the more conventional Monza on the Vega's platform.

But Chevrolet did save the best for last in the form of the sublime Cosworth Vega, a sports car with an exotic double-overhead-cam, 16-valve, four-cylinder engine; a suspension to match and sophistication decades ahead of most other cars. Like the Vega itself, the Cosworth Vega also seemed to be the right car at the right time. It featured a twin-cam aluminum cylinder head, developed with Cosworth, the English firm most renowned for producing the Ford Cosworth DFV V-8 engine that dominated Formula 1 racing in the 1970s. Destroked to 2.0-liters and breathing through a pair of intake and a pair of exhaust valves for each cylinder and fitted with Bendix electronic fuel injection (two more firsts for a GM production car), the Cosworth Vega revved like no other American car of the day, hitting its 110hp power peak at a lofty 5,600 RPM and exhaling through a stainless-steel header. The entire engine was built by GM, with Cosworth assisting development and licensing their name for use on the car.

In addition to revving much freer than either version of the standard engine, the Cosworth engine was also much smoother, given the smaller displacement and shorter stroke. Offered for sale in 1975, when black was the only color, and in 1976, when other exterior colors became available, the Cosworth Vega never sold in the numbers predicted by GM. Getting the engine to meet increasingly stringent

owner's view

The Millionth Edition has always been my absolute favorite. The first Vega I bought was a four-year-old Millionth Edition when I was 17. And then I bought another one out of *Hemmings* in the 1980s. I'm really happy the car won at the Hemmings Concours for the preservation class.

The Cosworth is a different ballgame. That car handles like it's on rails because the Cosworth has a little different stabilizer bar setup than even the GT. The car stands on its own, but I am a Vega guy first. I like the exclusivity of it.

—Robert Spinello

emissions standards pushed power from a target of 180hp all the way down to 110hp. Its $6,065 price tag in 1976—double the cost of a standard Vega, $2,000 more than a V-8 Camaro and just $1,500 less than a Corvette—did it no favors, either.

But those who never looked past that lofty sticker price missed out on a quick and zippy car that rivaled the performance of such vaunted foreign cars as the BMW 2002. Equipped correctly—with the optional five-speed and shorter rear-end gears—and driven correctly—with the revs kept high—the Cosworth Vega chopped two to three seconds off the 0-60 MPH sprint when compared to the Vega GT. Road test magazines fawned over the car and the technology, then quite exotic. Still, just 3,508 were sold before the model was discontinued.

Given the many jabs taken at the Vega in the ensuing decades since it went out of production, it takes a special kind of person to embrace the Vega. Fortunately, Robert Spinello is not your average collector. His garage includes not one, but two, ultra-low mileage, limited-edition Vegas, both unrestored originals, and so pristine that the Monroney stickers have never been removed from the windows.

Robert's orange 1973 Vega—one of 6,500 "Millionth Vega GTs" made to commemorate the May 17, 1973, production of the 1,000,000th Vega in less than three full model years—has just around 8,400 miles on its odometer. First titled in 1996 with just 80 miles on the clock, Robert purchased it in 2002 and has not been shy with this bright and brilliantly styled Vega, taking it to as many shows as possible, includ-

SPECIFICATIONS

1976 Chevrolet Cosworth Vega

Engine type	Inline four-cylinder; aluminum block and cylinder head, dual-overhead camshafts and four valves per cylinder
Displacement	122 cubic inches
Bore x stroke	3.50 x 3.16 inches
Compression ratio	8.5:1
Horsepower @ RPM	110 @ 5,600
Torque @ RPM	107 lb.ft. @ 4,800
Fuel system	Bendix electronic fuel injection
Exhaust system	Stainless steel tubular header with single exhaust
Wheelbase	97.0 inches
Overall length	176.4 inches
Curb weight	2,760 pounds
Price, base/as featured	$6,065.00/$6,508.00

Big, round gauges and simulated engine-turned dash perfectly fit the sporty Cosworth Vega, with its high-strung and powerful 16-valve four-cylinder engine. This example remains almost new, with less than 10,000 miles on the odometer and the original window sticker still on the window.

ing the Hemming Concours d'Elegance, where the car won the preservation class in 2010.

Millionth Vegas—all hatchbacks—included the GT package (suspension, tire, trim and interior upgrades), Bright Orange paint, wide accent stripes on the hood and trunk that came in either black or white, Light Neutral Custom vinyl interior, orange carpeting and Millionth Vega decal inserts on the exterior door handles. Along with its 1970 Camaro-like front end and the earlier, pre-1974 bumpers and GT wheels, the striking color combo of the Millionth Vega edition still stuns today. When we ask the Middle Island, New York, resident about the car's reception at shows, his response is immediate and enthusiastic. "Fuhgeddaboudit!" he says. "The reaction to the Millionth Edition is just the highest. People just love that car. They love everything about it. The color combination is the main thing, but they just love the condition of it."

Robert's 1976 Cosworth Vega, finished in Mahogany Metallic, came equipped the way every Cosworth Twin Cam should have been from the start, with the optional five-speed Borg-Warner manual gearbox and 4.10 final-drive ratio. With the extra fifth gear and the shorter axle, the Vega could better take advantage of the free-revving nature of its twin-cam engine. Unlike the unmistakably showy orange from the GT, the Cosworth's maroon on tan, with gold pinstripes and gold alloy wheels takes a more subdued route to showing the Vega's styling virtues.

Like his 1973 Vega GT, Robert's Cosworth Vega still has the original window sticker attached to the window and also has well under 10,000 miles. Both cars were originally delivered to the same Pennsylvania dealer who never titled them, keeping the cars in the showroom for years, though each took a different path to Robert's garage, the Cosworth arriving just in the past couple of years.

Today, within a few seconds of Googling Chevrolet Vega, you are likely to find no shortage of links suggesting it is "the worst car ever made" or even "the car that nearly killed GM." Unfortunately, it will be a bit harder to find the stories about what a fun car it was to drive and what a sharply styled body it had at a time when big cars with big engines were finally being seen as on the way out.

Two-Ten Transport

Former owner of a 1956 Chevrolet 210 station wagon finds his best-car-ever, again

BY MIKE BUMBECK • PHOTOGRAPHY BY JIM DONNELLY

For those who appreciate the distinctive lines and utilitarian nature of station wagons, the handsome 1956 Chevrolet 210 four-door wagon is one of those models that are near the top of the pantheon of wagon greatness. What's not to like? A competent and modern 265-cu.in. V-8 engine, a fully automatic and trouble-free Powerglide automatic transmission and the passenger capacity and storage of a small cargo ship. And then there's the legendary combination of Chevrolet value, style, durability and performance.

The 210-series was the mid-priced Chevrolet. While the entire lineup received updated styling for the 1955 model year, the big news was the new smooth-running and powerful OHV V-8 engine. Hydraulic lifters and an 8.0:1 compression ratio resulted in an affordable and quiet 170 horsepower in automatic-equipped cars. The wagons didn't sell in nearly the numbers as the sedans, but they did sell. Chevrolet sold over 200,000 four-door 210 station wagons during the 1955-'56 model years.

Carlton MacLeod from Belmont, New Hampshire, owned another one of those 1956 Chevrolet wagons back in 1965 as a family man, but wanted to make what was then a solid original car more presentable. Five weeks' worth of block sanding and four coats of hand-rubbed black lacquer later and the car was looking good enough to leave a lasting impression on Carlton, who remembers his old wagon as the best car he ever owned. He had been looking for another since he sold it.

"It would go anywhere in the wintertime, especially when I put a set of studded snow tires on it. I said when I sold that one I would have another someday—hopefully. But as the years went on and everything kept getting older and older, I didn't think I would ever get the chance."

Carlton's luck changed back in 2001 in what amounted to an expensive coffee break. He was working at his onetime job on a highway-line-painting crew for New Hampshire's Department of Transportation traffic division. Work had taken the crew north to Route 3 and the town of





The front bumper panel is the only piece of chrome that lost its fight with rust and is on the swap-meet short list. Drilling for a Schrader valve displaced the left bumperette when the wagon was set up to tow in California with air shocks and trailer lamp connections.

Plymouth for breakfast. Carlton told his boss to go in and order the usual, while he walked across the road to check out a Chevrolet wagon with a "For Sale" sign in the window.

Carlton could not believe the wagon's good, solid condition, or his good luck in finding it while out on the road. Two days later and Carlton was the proud caretaker of this 1956 Chevrolet 210 four-door station wagon. Not only did the wagon originally come from California, but it had hauled a loaded dual-axle U-Haul trailer with a family's- and business'-worth of stuff inside. The wagon still wears the Monroe air shocks and tow hitch from that very trip.

The engine is the car's original 265-cu.in. small-block V-8 and propels the wagon through all manner of town and country driving; it gets around just fine with its stock two-barrel carburetor. "You don't want for any power at all," says Carlton, who uses a little lead substitute with every fill-up, as the engine was built during the time when lead in gasoline cushioned the impact of valves on their seats.

For driving safety, the wagon received new front and rear wheel cylinders and four new sets of brake shoes to restore original braking performance. The drums were in such good shape they didn't even need to be turned. Best of all, the parts were bought at his local auto parts store.

The old wagon does show signs of use after hauling and carrying for so many years. The headliner has a few cuts, and the sun visors are a little loose, but some pipe tape keeps them from wobbling. The headliner and surrounding windlace is in need of replacement, but Carlton is in no hurry to do so.

To restore the paint back from its oxidized state, Carlton spent a considerable amount of time with Mother's rubbing compounds working the original two-tone paint back to a like-new luster. Five separate hand-buff passes over the entire body took about three weeks, a few days at a time. A coat of Mother's traditional carnauba wax finished off the job and keeps the paint looking its original best.

The wagon came fitted with Chevrolet rally wheels that Carlton shod with

The quiet and competent 265-cu.in. small-block Chevrolet V-8 still runs well with the original oil-bath air filter and two-barrel carburetor. The Harrison radiator is also original.

The two-tone exterior scheme flows inside the spacious station wagon. Comfortable bench seating front and rear is stylish and practical, with folding rear seat for extra storage. The spring-cushioned seats are worn in, not worn out.

new 215-70R15 radial tires for smooth drivability and better handling. As the car rides and drives well with the wheel-and-tire combination and gets plenty of compliments from folks at shows, Carlton decided to leave the rally wheels on for driving. One of the original wheels wears a spare tire and travels with the wagon. The other three original wheels are stored in the garage.

One significant, yet easy, improvement in driving the old Chevrolet was to replace the decades-old engine and transmission mounts. While steel may stand the test of time, rubber usually disintegrates. Now that there are new tires and body mounts—which help to isolate the body from engine vibrations and keep the powertrain firmly in place—the car drives quietly and smoothly. "It tightened everything right up," he says.

With ongoing maintenance and a few modernizations, Carlton says the 2,000 miles per year pass without trouble. "I can drive that old Chevy 55 MPH everywhere I go, if I want. I've caught myself a few times hitting 65, but there's no problem." Carlton figures the V-8 engine is turning about 3,800 to 4,000 RPM at highway speeds. One reason to keep the speed down is fuel economy, which drops off considerably the faster the brick-like wagon goes.

The original vacuum-operated windshield wiper system has been replaced with an electric conversion kit, and the old cartridge oil filter setup was replaced with a spin-on filter for quicker oil changes; Carlton kept all the original parts. Even the original radio vacuum tubes were stowed safely in an antique trunk in case he ever wants to bring the car back to all-original condition.

One future modification Carlton is saving up for is a requisite seven-foot surfboard for the roof-mounted luggage rack, and he's still combing swap meets for a left rear bumperette; a hole in the bumper for the air shock Schrader valve evidently prompted removal of that particular bit.

The oil and filter are replaced every April prior to Carlton firing up the engine for the season and annual State of New Hampshire Antique Automobile inspection; he uses Amalie Heavy-Duty 10W-30-weight oil. The cast-iron Powerglide transmission also gets its pan dropped for a fluid and filter change to ensure trouble-free motoring.

Though not currently a member of any car clubs, Carlton runs a circuit of area shows and has won a few trophies and ribbons along the way. Although he took his first 1956 wagon down the

The roof rack chrome finish is worn from use and the elements, but the aluminum and steel structure is still strong enough for luggage or surfboards: the perfect touch for a wagon.

Few service-station attendants are able to figure out where Chevrolet hid the filler cap.

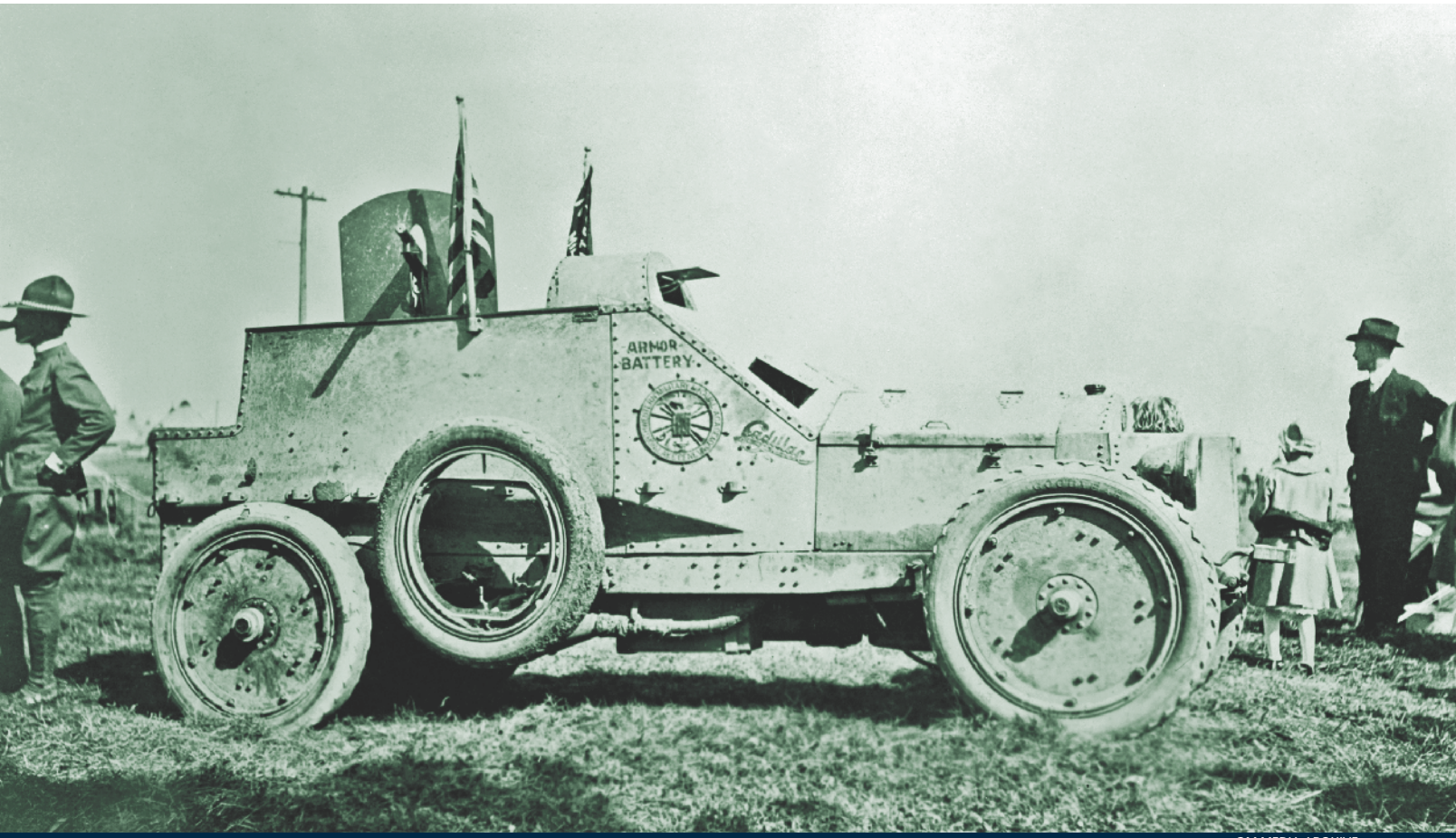
There's plenty of rugged deck space out back, which is useful going to cruise-ins. Carlton installed an AM/FM cassette stereo and speakers for Johnny Cash and Merle Haggard.

"I have met some of the nicest people in the world driving that wagon."

quarter mile at New Hampshire's New England Dragway in nearby Epping, he keeps this wagon on the club meet, cruise-in and get-together side of the old car hobby while out on the road. The trophies are nice but it's the people Carlton meets while driving the Chevrolet that count. "You would not believe how many people come up to me that had one just like it, or that their uncle had one, and he used to give them rides to school."

This 210 wagon's particular color combination of Twilight Turquoise and Indian Ivory seems to have made a lasting association with people in that it triggers memories of every Chevrolet so painted. The only thing Carlton doesn't like about this fun-to-drive Chevrolet wagon is the fact that he has to park it for winter every October. The winter months may be long, but at least there's something to look forward to come spring.

Carlton says if he ever found some buried treasure, the first thing he would do is send the old station wagon in for a full restoration. In the meantime, he's happy driving the wagon just the way it is, scratches and tarnished chrome and all. "I have met some of the nicest people in the world driving that wagon."



GM MEDIA ARCHIVE

Setting Wartime Standards

The Early Cadillac V-8 Models that were engaged in World War I

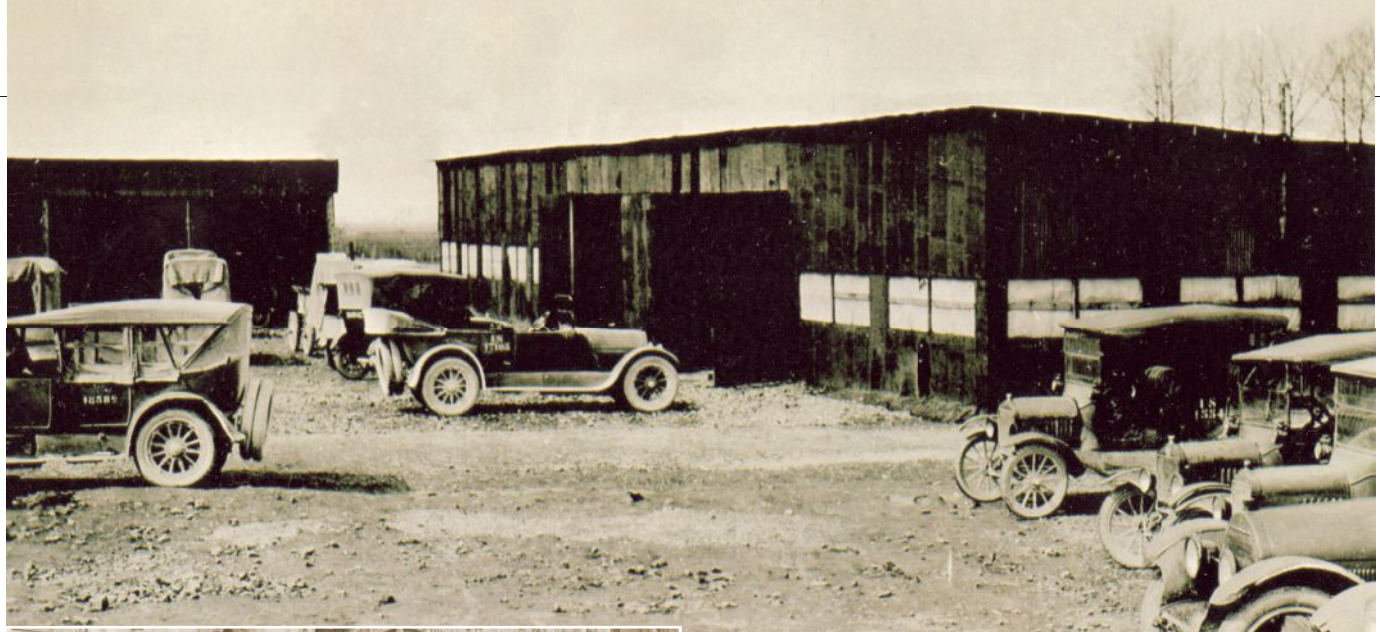
BY BROOKS T. BRIERLEY

Two Cadillac V-8 touring cars that were assigned to the Marines were among the first shipment of American motor vehicles sent to Europe after Congress declared war on Germany in April 1917. They were the only passenger cars in that convoy of five ships; the other vehicles included four Nash Quads and 127 Packard trucks.

By November 1, 1918, just before the war ended, Cadillac had readied a total of 1,734 touring cars and 222 limousines for overseas duty. Cadillac was but one of over 200 different makes of motor vehicles, which also included Fords and Bugattis, involved in the American military effort. The War Department's Motor Transport Corps minimized that logistical multi-marque nightmare by qualifying Cadillac to be the standard for heavy American military passenger-car purchases; Dodge and Ford were the light standards.

These cars were powered by the first quantity-production V-8 engine. History generally credits this remarkable engine to Cadillac's founder, Henry Leland, while his family history, *Master of Precision*, points out he shared credit with his son, Wilfred. The new car, designated the Type 51, with a 70-hp 314-cu.in. iron-block engine, had cylinders cast in fours with an aluminum crankcase, all set into a 122-inch wheelbase chassis. Its performance added nicely to Cadillac's established reputation for reliability and standardization famously recognized twice by the Dewar's Cup. Cadillac was an upper-middle price brand then, with a range of $1,975 to $3,600, compared to Packard's $3,750

This V-8 armored car—said to be capable of speeds up to 70 MPH—was one of eight Cadillac experimental military vehicles developed and built by Colonel R. P. Davidson of the Northwestern Military and Naval Academy in Chicago. In July 1915, their convoy drove to the Panama-Pacific International Exposition in San Francisco.



STILL PICTURE BRANCH, NATIONAL ARCHIVES

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Above: This automobile repair shop was part of an otherwise unidentified Motor Transport Reception Park set up by the War Department in France. The Cadillac touring car in the center appears to be the next in line. Left: New York City coachbuilder Brooks-Ostruk sometimes used its own radiator shell when bodying a car, such as this unique 1918 Sport Tourer. It may seem incongruous to us now to see a glamorous pleasure car among military vehicles, but at the time, civilian automobile production continued, as did all the major automobile shows.

to $6,100 and Studebaker's $985 to $1,450.

The Lelands foresaw Cadillac's military applications as early as 1909, and worked with Colonel R. P. Davidson and the Northwestern Military and Naval Academy to create experimental prototypes. The V-8 power plant multiplied those early possibilities. Several of them—including an armored car, a reconnaissance car, a hospital car and a wireless car—were completed in the summer of 1915 and traveled across the country to the Panama-Pacific International Exposition in San Francisco testing and displaying their concepts. Even so, it was civilian-style passenger cars that dominated Cadillac's military uses.

Before the United States became involved in World War I, the Villa Punitive Expedition intervened in the Mexican Civil War, becoming a dress

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Brooks-Ostruk also disguised this beautifully shaped cabriolet to resemble a Rolls-Royce. This photo, taken in Philadelphia, suggests this Cadillac was ready to lead a social conquest of the city.

STILL PICTURE BRANCH, NATIONAL ARCHIVES

The Chief of Staff of the 42nd (Rainbow) Division, Colonel William Hughes, Jr., with his chauffeur and Cadillac limousine, U.S. #15560, at Ahrweiler, Rhenish Prussia, Germany in February 1919. This car was used in a number of battles, including Chateau Thierry and Sedan.

rehearsal for the conflict in Europe. Cadillacs—both V-8 and earlier four-cylinder models—became famous for being used by all sides in Mexico (by the Americans and by both the Mexican forces of General Carranza and Pancho Villa). Cadillac's California distributor, Don Lee, kept track of what was going on south of the border and reported United States Rubber brand "Nobby Tread" tires were very helpful in Cadillac's wartime performance.

Cadillac V-8s were gradually introduced in Europe. A few were in Russia in 1915—the St. Petersburg dealer who specialized in American marques, Pluym & Ochs, was advertising them in the local car club magazine. The ten limousines used by the French General Staff, long before the United States entered the war, were another early sight overseas.

Yearly improvements to the initial Type 51 were identified as Type 53, then 55 and 57, indicating someone at Cadillac liked series of odd numbers. The last was introduced in the summer of 1917, as a 1918 model. The previous Type 55 included a major visual change, introducing a longer 125-inch wheelbase with a more pronounced radiator shell. Type 57 modifications were more significant under the hood, adding detachable cylinder heads, a redesigned three-speed transmission and a new tilting headlamp reflector, among others. The radiator and hood were made slightly more prominent, for a more powerful appearance.

These specifications were evaluated by a War Department 2,000-mile competitive endurance test near the Mexican border in July 1917. It qualified Cadillac to be the standard heavy car type for the American Expeditionary Force sent to Europe. Only little changes were made to make the military version from the civilian one, such as adding an emergency gas tank to the running board and equipping each with a set of tire chains and painting the car olive drab. The limousine model received leather upholstery to replace mohair velvet; canvas was substituted for silk to make the window shades. A desk was built into the rear compartment, with the floor covered by a cocoa mat.

Equally important changes were also then taking place in the Cadillac business. General Motors' head, W. C. Durant, disagreed with Henry and Wilfred Leland about Cadillac making war equipment. By 1917, Durant's opposition to plans to build mili-

STILL PICTURE BRANCH, NATIONAL ARCHIVES

The snow stopped falling in Rheims, France, in early 1919, as President Woodrow Wilson's motorcade reached the great cathedral.

STILL PICTURE BRANCH, NATIONAL ARCHIVES

On May 13, 1919, a Cadillac touring car headed a line of 400 Motor Transport Corps cars parked along a picturesque road in Nantes, France.

tary aircraft engines led the Lelands to resign and establish a new business, the Lincoln Motor Company.

IN EUROPE

The list of Cadillac wartime experiences is a long one. It includes English and Canadian forces using them as ambulances at the front. Not surprisingly, the enemy liked them, too. Captured Cadillacs were a special prize—the German crown prince was said to have one.

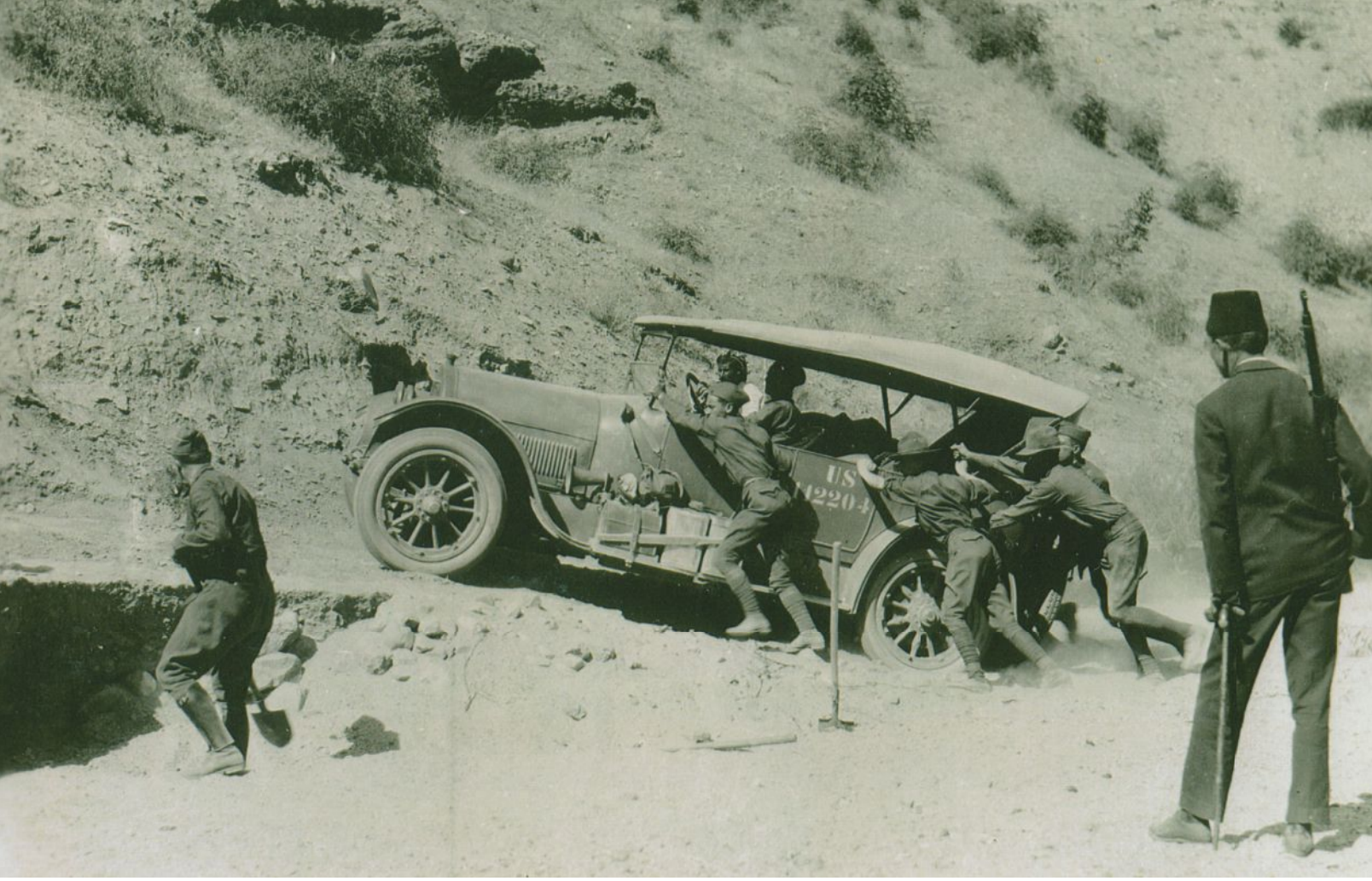
The War Department's Motor Transport Corps headquarters controlled Army automobiles through a chronological log simply labeled "Automobiles," typed on numbered legal-size paper called "sheets." For example, Sheet No. 66 listed June 1918 transactions and summarized that month's communications (mostly wires) of car issues, including original-document references. These lists could include the odd complaint of speeding or confirm return of a specific car. If a car was not returned, such as the two Cadillacs used by 4th Corps generals after relief of command in October 1918, someone would summarize the report in a manner like, "The generals took these machines with them," to begin a trace. These records repeatedly confirm Cadillacs were highly desirable, such as the June 25, 1918, letter from GHQ requesting a Cadillac be issued to replace a Winton limousine.

The American Air Service maintained a series of garages at air depots in France. Cadillac use appears to have been nearly universal there. The Paris garages held an average of 30 cars—with 15 to 20 being "road cars" ready for use immediately at any time of the day or night. One set of drivers was on duty as a second shift slept in the garage dormitory. Cadillac maintenance included regular oil and greasing, but three or four weeks could pass before a car was formally serviced in the shop. General Pershing ordered regular washes, too.

Operating rules were strict: Officers were not allowed to drive their own cars (assigning a second person to the car improved the chances it would return). Headlamps were dimmed in open country;

STILL PICTURE BRANCH, NATIONAL ARCHIVES

Major General Summerall (left), Brigadier General Butler and Major General Lejeune walk briskly past a row of Cadillacs on June 18, 1919, in Pontanezen (Brest), France.



STILL PICTURE BRANCH, NATIONAL ARCHIVES

In September 1919, American General Harbord was using this touring car for an inspection trip of Turkey and Armenia. Here, the Cadillac needs help at a crossing near the Euphrates River.

cowl lamps were painted dark blue for night driving in town; all were turned off near the front. Ideally, the V-8-powered Cadillacs traveled at 40 MPH on good roads. Erratic conditions made them shine; the chassis and its great power successfully navigated uneven road shoulders and surfaces torn up by convoys or bombs, or ruined by the weather. One officer reported that speeding over cobblestones actually smoothed out the ride versus driving over them slowly.

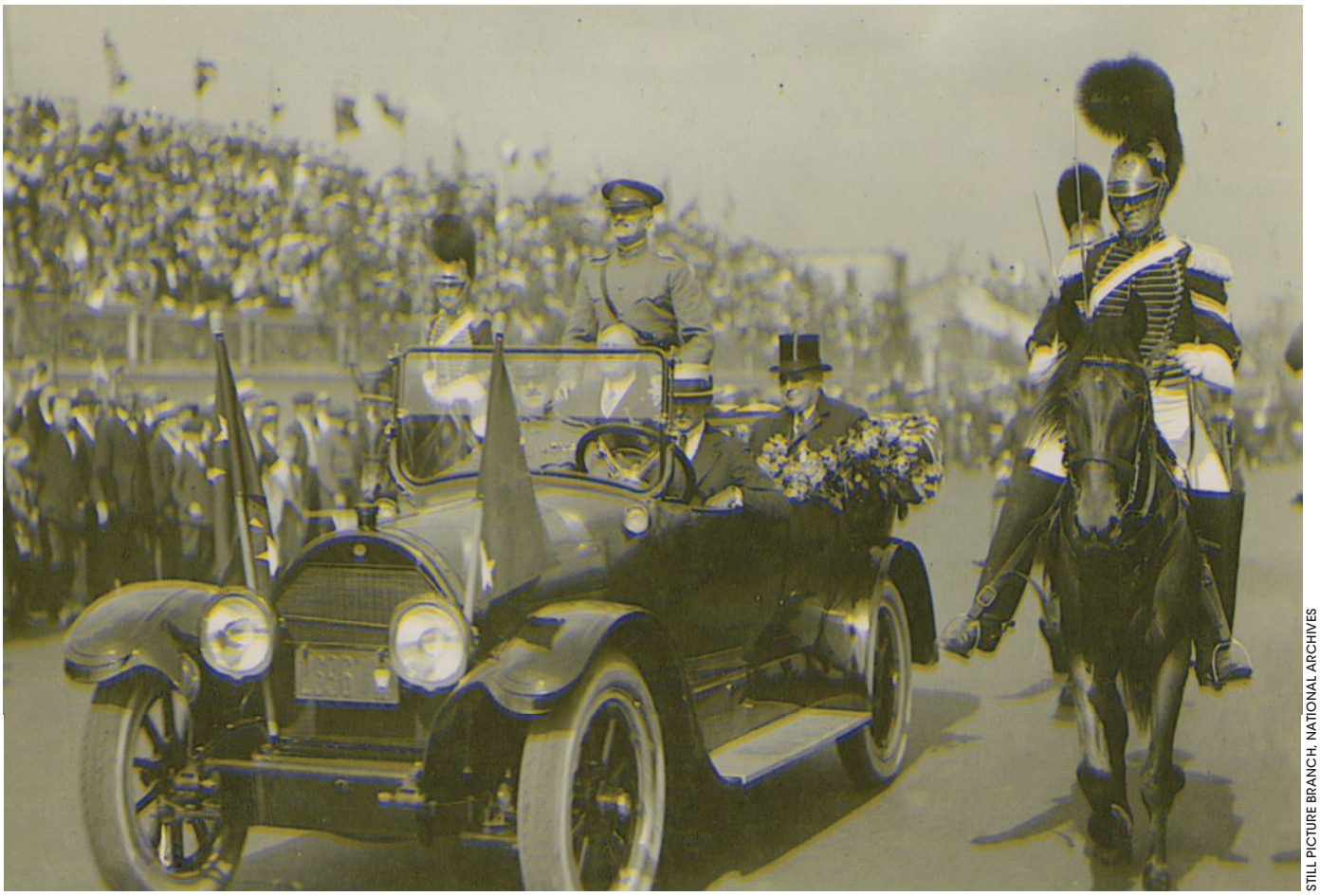
Cadillac history includes speed among the marque's wartime experiences. Driving faster than a train was a great accomplishment then, until Air Service cars regularly reduced Chaumont (GHQ or general headquarters)-to-Paris travel time from 5½ hours to 3½. Colonel Thornwell Mullally, the brigade commander of the California Grizzlies, experienced a more interesting Army speed test. He was beginning dinner in Bordeaux as two captains left the restaurant to catch the train to Paris. They arrived the next morning to see Mullally sitting in his Cadillac in front of the officer's registry—he had traveled faster than the express train for over 300 miles. Some of the roads and railways along that route paralleled or crossed, suggesting Mullally's experience may have included dramatic encounters with the Paris train.

AWAY FROM THE BATTLEFIELD

One of the automotive quirks of World War I was that the American government reduced, rather than stopped, pleasure car production. Most automobile shows continued, with some exhibits honoring employees who served in the military with service flags. At the annual January 1918 Chicago show, manufacturers displayed service flags with stars for each employee serving. Among them, Cadillac had 935 stars, Packard 1,462 and Marmon 415. Honoring military service proved to be a delicate commercial point—one manufacturer painted an entire car with a single star for the show. Visitor reaction was intense; the car had to be moved away from the sales area.

Cadillac introduced a second 132-inch passenger car chassis just prior to the United States' declaration of war, creating a luxury Imperial line. It included seven-passenger limousine and limousine-landaulet body styles, and was priced at $4,285. Hollywood director Cecil B. DeMille had one painted sage green. By comparison, a one-of-a-kind 1918 touring car built by New York City coachbuilder Brooks-Ostruk could be described as one of the most heavily camouflaged Cadillacs of the time—but not for military purposes. This one-off touring car had an elaborate cape top, to which Brooks-Ostruk added its own radiator shell design to further disguise the chassis manufacturer.

Cadillacs figured prominently as the Armistice took hold, accompanying the troops to occupy Germany. On November 18, a right-hand-drive Canadian Army touring car was the first Allied car to cross



STILL PICTURE BRANCH, NATIONAL ARCHIVES

That same month, General of the Armies John J. Pershing helped the United States celebrate the end of war, with some pomp, in this parade in Philadelphia.

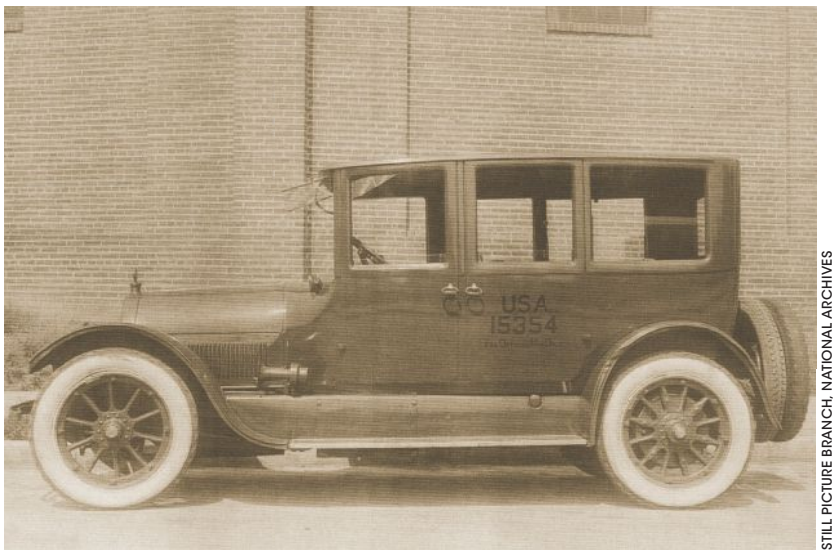
the Rhine River, at Alt Breisach. For the official photograph, Canadian Lt. Colonel George H. Johnson parked his Cadillac between some cows and villagers on the German side of the trestle, confirming the German retreat had passed that point.

Ironically, new Cadillacs continued to be issued for Army service into 1919. At the same time, the government established a Liquidation Commission to sell all cars released from military duty. Included were cars still arriving in France, shipped brand-new from the factory.

Other Cadillacs were reassigned to Allied postwar projects. One such effort included constructing new nations out of the former Ottoman Empire. American General Harbord led a 1919 inspection trip of Turkey and Armenia, putting touring cars to rigorous test after test, such as fording the Euphrates River with supplies strapped to the running boards.

In France, ten limousines were assigned to President Wilson's staff attending the Versailles peace conference in the winter of 1919. On one outing, they accompanied the President to the giant cathedral in Rheims. It became one of the great automotive scenes of the Armistice, with Cadillacs, lined up on the snow-covered road next to the massive structure, given the scale of toy cars.

The timing of the Cadillac scene in Rheims could be considered the dress finale for the war's military limousines. At home, Cadillac introduced a new, less-formal model, a four-door sedan, to take their place. Someone familiar with Cadillac's wartime popularity may have been the one to make sure "For official use only" was painted beneath the serial number on each rear door to thwart making detours during a drive.



STILL PICTURE BRANCH, NATIONAL ARCHIVES

One of the first government 1919 model-year five-passenger Cadillac sedans was fitted with whitewall tires, highlighting the new body shape.

FRED K. FOX

One of the hobby's most celebrated historians has authored, with editorial support from his wife, Linda, hundreds of definitive pieces on Studebaker history

BY MARK J. McCOURT • PHOTOGRAPHY COURTESY FRED AND LINDA FOX

Sometimes the stars align, and a person's particular situation, interests and family support come together to influence their course in life. That was certainly the case for Studebaker historian Fred K. Fox, a mechanical engineer who grew up in a car-loving family and whose life partner, Linda Fox, has participated alongside him in his favorite hobby for almost 50 years. While he has researched numerous automakers through the years, Fred's greatest contributions have been to Studebaker's written history, and he's created a legacy that benefits future historians and the old-car hobby as a whole.

Few kids get to grow up with a generations-old family car still in the family, but Fred grew up with two. Stored in outbuildings on his family's Delhi, California, farm was his grandfather Fred W. Fox's 1921 Reo T6 Touring, the third Reo that he bought after the 1913 and 1916 models that he loved. Also protected from the elements was the 1914 Ford Model T that his father, Walter Fox, purchased from his brother Charles in 1924 to replace his very first car, a 1909 Buick White Streak (see photo above).

Where does the passion for Studebaker come in? Fred's paternal grandparents used a horse-drawn Studebaker wagon on their farm, while his aunt purchased a new 1927 Dictator, and his uncle bought a 1941 Champion that was a faithful servant through the war years. On his mother Berenice's side of the family, Fred's great-grandfather bought a new 1910 E-M-F Model 30—a brand that was sold through Studebaker dealerships and then absorbed by Studebaker in 1913—and his aunt drove a 1923 Studebaker Model EK coupe.

While these were strong precedents, Fred's personal interest in Studebaker can primarily be attributed to his parents' purchases after World War II, starting with a new 1949 2R16 truck for their ranch. This was followed in 1950 with two additional new

"When my folks became multiple-Studebaker owners, I quickly became a Studebaker fan... For decades, I hit new-car showrooms each year and picked up sales brochures."

Posed by the 1950 Studebaker Land Cruiser at the Wawona Tree in Yosemite National Park in 1953, Fred stands between his father, mother and older brother Roger.

Studebakers, a 2R5 pickup and a Land Cruiser sedan. Ten years later, they purchased a new 1960 Hawk, and in 1965, they took delivery of a Canadian-assembled Cruiser sedan. In 1969, they bought a five-year-old Gran Turismo Hawk.

"When my folks became multiple-Studebaker owners, I quickly became a Studebaker fan," Fred explains. "I learned they once made horse-drawn vehicles, that they were the oldest vehicle company in the U.S., and that they had an assembly plant in California. In 1950, I started my collection of Studebaker sales literature. I was especially impressed by the 1951 Studebaker sales catalogs that included pictures of Yosemite and San Francisco, both places within about 100 miles of our home."

He credits his family's property, and his father's collecting habit, with fostering his passion. "To properly store numerous family vehicles and thousands of items of automobile-related literature, etc., takes lots of space. Living in the country, we had the room to build all the buildings that are needed for storing our stuff," he says. "My dad's penchant for keeping his vehicles inside buildings, and the fact that he was a packrat, provided me with the opportunity to have long-time family-owned vehicles stored right where I lived. Besides saving the 1914 Model T and '21 Reo, he kept every Studebaker that he purchased after WWII. After the war, trading in was not in his game plan."

Before he was old enough to buy cars for himself, Fred was collecting automobilia that would become future research material; "I started subscribing to *Motor Trend* in 1956 and to *Hemmings Motor News* in 1959. I was a charter subscriber of *Special Interest Autos* and many other collector-car magazines. For decades, I hit new-car showrooms each year and picked up sales brochures. I also built a large library of Studebaker-printed items for all years. Although it is not organized as well as I would like, I still have every piece of automobile literature and magazine I have obtained in the last 64 years."

Fred was deeply involved in the hobby—he'd joined the Studebaker Drivers Club in 1964—by the time he was attending the University of California, Davis, where he met a co-ed named Linda Collier. Linda also grew up in a four-wheeled family. "My dad was a contractor, and owned his own trucks and equipment. He didn't have sons, so his two daughters got to do an awful lot of work—driving the tractors, holding the carburetor, fetching that wrench," she recalls. "It felt natural to me. It was no problem when Fred had that interest!"

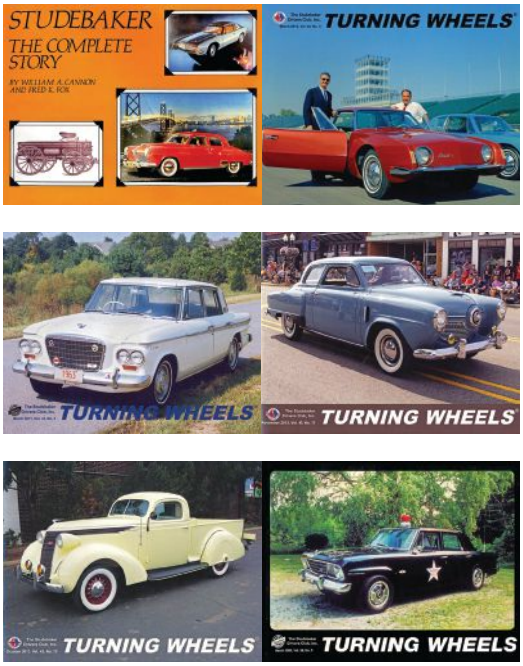
He and Linda were married in 1966, the day after Studebaker announced it was closing its Hamilton, Ontario, Canada assembly plant and discontinuing automobile production. Despite that sad turn of events, Fred continued his pursuit of Studebaker history, now with his bride at his side. The couple moved across the country in 1966 so he could earn a graduate degree at Penn State University. They drove the 1960 Hawk that Fred purchased from his parents that year, and stopped in South Bend, Indiana, to visit prominent Studebaker family and company locations and to interview former Studebaker employees.

Writing about the things that interested him came naturally to this analytical thinker, who authored his first automotive history piece on Henry Ford as a teen. For more than 40 years, Fred has been writing about Studebakers, and every one of his stories—including the highly regarded book he co-wrote in 1981 with William Cannon, *Studebaker: The Complete Story*—has been expertly edited, proofread and typed by his wife.

Now retired, Linda enjoyed a career as a secondary school English teacher with a specialty in reading education. The couple's working rapport developed when Linda prepared Fred's master's thesis. After returning to California and helping organize the Sequoia Chapter of the Studebaker Drivers Club in the late 1960s, she and Fred worked together to edit and publish that chapter's newsletter, *The Wheelbarrow Johnny*.

In addition to her mastery of the language, Linda became a proficient layout artist. For decades, her trademark has been providing the magazine she's contributing to with print-ready story and photo layouts. This began with physically-manipulated "paste up" pages, and has progressed with

Fred's book. He has been contributing to *Turning Wheels*, the publication of the Studebaker Drivers Club, for more than 40 years. Linda was its editor for eight years.



advances in computer technology; she now uses Adobe InDesign. In the four decades that they've been a writing team, the couple has co-edited these national publications: *The Milestone Car, The Avanti Magazine, The Antique Studebaker Review,* and *Turning Wheels*. Indeed, The Society of Automotive Historians awarded Linda the prestigious Richard and Grace Brigham Award for "The best treatment of historical topics published in 1998 in an automotive periodical," for her work during her tenure (October 1992-November 2000) as editor of *Turning Wheels*.

At current count, Fred has published roughly 150 feature articles and 100 secondary articles for the education and entertainment of Studebaker Drivers Club members. He is known for his in-depth-yet-approachable pieces that are annotated in proper academic style, with footnotes and source listings. "When I did my master's thesis, I had to be accurate about what I did, and to get into details. Linda will say I'm a nitpicker," he says. "He is!" she chimes in with a laugh. "When he writes an article, one of my jobs is to whittle it down. Less is more! But I love reading about history."

New *Turning Wheels* readers may not realize that Fred has, at this point, researched and written about every model of Studebaker automobile that the company built. His most recent series of feature articles (February and May 2013 issues) focuses on the topic of Studebaker's prewar cab-over-engine trucks, and these stories will serve as a model for his future features. "I wrote about COE trucks 30 years ago, and am revisiting the topic again. I'm updating them with more information, including literature in color versus black and white. It makes a big difference.

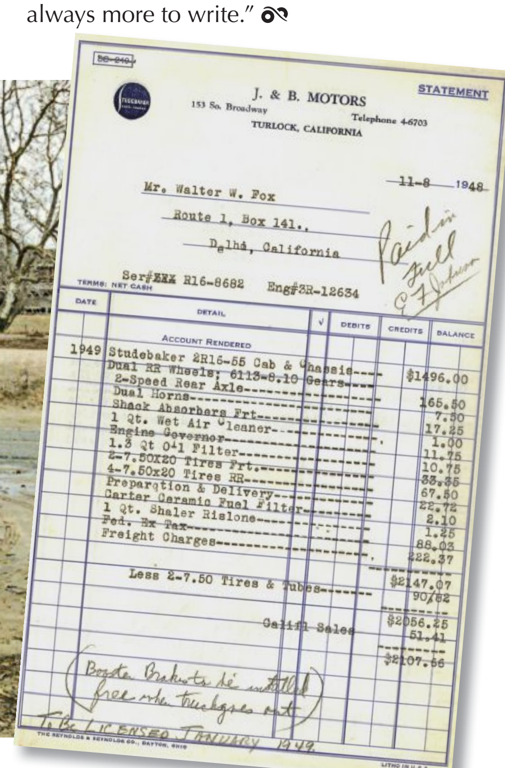
"People are learning new things all the time," he continues. "We're very fortunate with Studebaker, because they have tremendous archives. Although the company quit building cars, they kept their subsidiaries going, and that's why so much got saved. Most companies didn't keep things like production orders, which we have access to today. Andy Beckman, the archivist at the Studebaker National Museum, found the IBM punch card for our 1964 Hawk, which listed the original owner's name, profession, even his Social Security number… which of course was blacked out."

This unusual amount of validating historic information available, as well as the solid restoration parts supply and the inherent desirability of these stylishly designed, well-built cars and trucks, has made Studebakers popular collectibles—although this wasn't always the case. Fred muses, "The perspective on Studebaker has changed a lot through the years. If you go back to the 1920s, it was very well respected; they joined up with Pierce-Arrow. But then they went into receivership and had some tough times in the 1930s.

"After the war, the Big Three were the big deal, and Chrysler, Ford and Chevrolet people looked down their noses at Studebaker," he recalls, and Linda remembers it being called an "off-brand." "And then they quit making cars, and their resale value was terrible for a long time. Studebakers didn't get much respect from people who weren't owners. The owners, though, were loyal—super loyal. People used to laugh at the 'bullet nose;' I once spoke to a dealer who told me he hid the nose in a potted plant. Now, those cars are respected, and the 1950-'51 convertible is worth quite a bit of money."

Fred still owns his parents' bullet nose 1950 Land Cruiser, as well as his father's and grandfather's antique cars. Indeed, between the Foxes and their son Jason, they have 19 vintage vehicles, 12 of which are Studebakers, that range in age from 1901 to 1985. The old-car passion is alive and well in the younger generations, Linda says: "We've always told our three kids that the car they came home from the hospital in, would be theirs. That started a connection. And they've each used a Studebaker in their wedding." Fred's watching it trickle down: "They've inherited the love of old cars. We haven't run the Model T in a bit—it's 100 years old!—and now my 10-year-old grandson Eli wants to help me get it going again. That's the best way, to get them involved."

After a lifetime of analyzing the Studebaker arm of the old-car hobby, Fred believes its future is bright. "Studebaker enthusiasts are kind of like Harley-Davidson enthusiasts, in that we're getting grayer and grayer. Club membership has dropped a bit from its peak, but there are young people joining… the enthusiasm is still infectious. The 'Studebaker Story' is unending. There is always more to write."



J. & B. MOTORS
153 So. Broadway Telephone 4-6703
TURLOCK, CALIFORNIA
STATEMENT

11-8 1948

Mr. Walter W. Fox
Route 1, Box 141.,
Delhi, California

TERMS: NET CASH
Ser#XXX R16-8682 Eng#3R-12634

DATE | DETAIL | √ | DEBITS | CREDITS | BALANCE

ACCOUNT RENDERED
1949 Studebaker 2R16-55 Cab & Chassis
Dual RR Wheels; 6113-8.10 Gears
2-Speed Rear Axle
Dual Horns
Shock Absorbers Frt
1 Qt. Wet Air Cleaner
Engine Governor
1.3 Qt Oil Filter
2-7.50X20 Tires Frt.
4-7.50x20 Tires RR
Preparation & Delivery
Carter Ceramic Fuel Filter
1 Qt. Shaler Rislone
Fed. Ex Tax
Freight Charges

$1496.00
165.50
7.50
17.25
1.00
11.75
10.75
33.35
67.50
22.72
2.10
1.25
88.03
222.37

$2147.07
Less 2-7.50 Tires & Tubes 90.82
$2056.25
Calif. Sales 51.41
$2107.66

THE REYNOLDS & REYNOLDS CO., DAYTON, OHIO
LITHO IN U.S.A.

The 1949 Studebaker 2R16 1½-ton truck purchased new by Fred's parents, and the original receipt; since new, it has worn the bed from a surplus WWII Army truck.

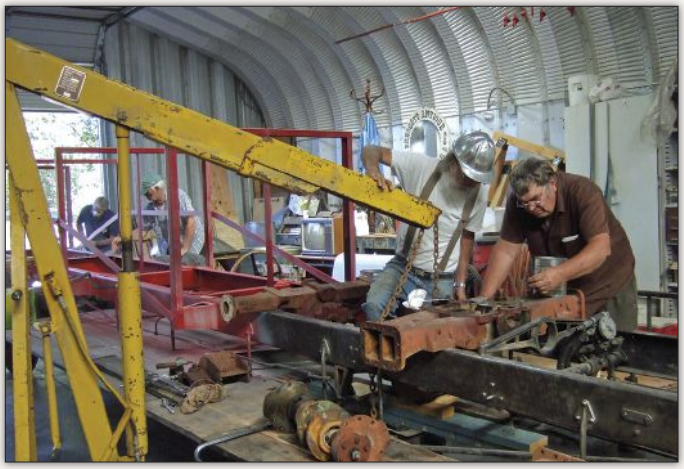
COURTESY OF SHARLOT HALL MUSEUM

Pride of Prescott

A dedicated club unites to restore their city's treasured 1931 Seagrave Ladder Truck

BY MATTHEW LITWIN • PHOTOGRAPHY BY JEFF KOCH
RESTORATION PHOTOGRAPHY COURTESY OF THE PRESCOTT ANTIQUE AUTO CLUB

With the truck outside of the clubhouse building, members have already begun the disassembly process by removing hoses, wooden ladders and miscellaneous parts. A thorough power wash removed grime to help expedite the next restoration phase.



With the front of the chassis stripped of factory paint, club members carefully positioned a new period-correct water pump's mounting points on the frame. This hefty fabrication work done now eliminates the threat of damaging the restoration later.

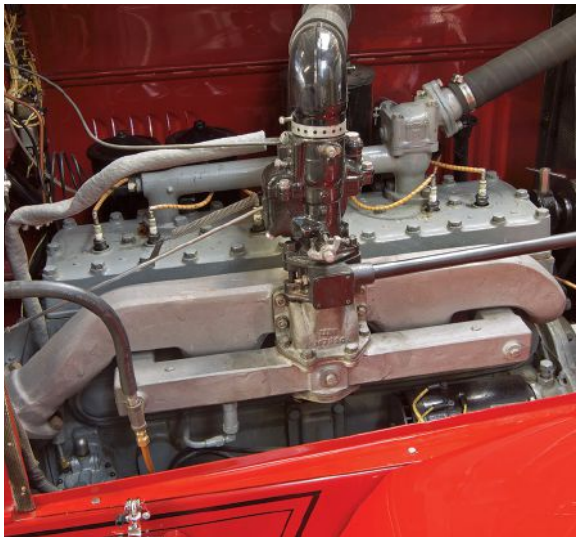
With exception of the suspension systems and the ladder bed framing welded into position at the Seagrave assembly plant, everything has been removed from the chassis, most of which has been painstakingly stripped to bare steel.

Without the aid of a media blaster, the team used drills with wire brush attachments, scrapers and sand paper to strip paint. Club members, seen here, did what it took to clean even the inner crevices of the frame and every cross member.

Professional vehicles, particularly fire apparatus, lead a charmed life. Or so we think. We typically see them being constantly washed, waxed and finely detailed on sunny days, and kept in tip-top mechanical order, but this kind of care is a necessity. When called upon, fire equipment is pushed hard, responding in haste to the needs of those in peril—their pumps, hoses and ladders as much first responders as the men and women they transport to a scene. The same maintenance also helps keep the apparatus, such as this 1931 Seagrave Model 6ET Ladder Truck, in service for a prolonged period of time.

The city of Prescott has the distinction of having the first—and therefore oldest—fire department in the state of Arizona, and this Seagrave was just the fifth motorized fire apparatus purchased by the city. Ordered in 1931 from the Columbus, Ohio, firm, it was delivered to Prescott by rail and officially placed into service in early 1932. Equipped with a pump, hoses and a water tank, it served the ever-growing city faithfully until 1982.

According to Prescott Antique Auto Club (PAAC) member Jim Schultz, "Over time it had been changed from its original configuration. The factory Hercules 529-cu.in. engine had been replaced by a mid-Fifties Buick 'nailhead' V-8; the four-speed manual transmission was swapped for a five-speed from a truck, and the pump had been removed in part because the Buick engine didn't have the grunt to operate it efficiently. Near the end, it was a backup



Although the chassis still required some preliminary work, the ladder bed framing became a handy makeshift spray booth for small bolt-on components, which were then left in place to cure before being placed into temporary storage until needed.

Primer and paint is next on the list for the Seagrave chassis. The back half is already under cover and receiving its treatment. Note that the basic suspension parts have been left in place, done so to assist its mobility to and from the clubhouse confines.

Restoring the Seagrave's factory wooden ladders was just as important. The process started with a chemical stripper, which was later followed by extensive, labor-intensive sanding and several coats of black varnish.

Earlier, a rebuilt military-surplus 529-cu.in. Hercules straight-six had been obtained from a vendor in Ohio. Once delivered to Prescott, Arizona, club members gave it a thorough inspection and test run in preparation for its later installation.

vehicle for the department and used for Fire Prevention Week events in the area and at schools. It had been quite an icon in the Prescott area for years until the city decided to put it up for bid. Although a couple PAAC members placed a bid, the city of Caborca, Mexico, submitted the winning offer. When Caborca found out it didn't have a pump, officials refused the Seagrave, and we as a club ended up with it—for $1—in June of 1985. I think a good part of the price was that the club made it known we intended to restore it."

The first concern was where to store the 40-foot-long truck. A solution was found courtesy of the nearby Chino Valley Fire Department; however, two years later, the decision was made to man that station, forcing the club to relocate the Seagrave to Jim's property for the next 10 years. To keep it protected, the club bought materials to extend an existing lean-to. When Jim moved, so did the truck—under the watchful eyes of other members. In 2006, a 30 x 60-foot structure was donated to the club. It was at that time that they reached an agreement with the city to erect the donated structure adjacent to an existing building on what is now called the Prescott Rodeo Grounds, giving the Seagrave a permanent home for the next 25 years. Finally, in 2009, the time was right for its restoration to commence.

To be fair, some restoration work had already been begun in 1989 when club members Pat Mackin and Rich Echert located and purchased a correct six-cyl-

The Hercules engine is being lowered into position. This massive six-cylinder was rated for only 143 hp; however, it was selected by the factory not for speed, but rather its torque—a whopping 488 lb.ft.—to drive the water pump with ease.

Here the cowl has been reunited with the chassis, while at the opposite end, members are carefully repositioning the upper ladder bed. Look close and you'll note that this upper structure has been carefully pinstriped based on pre-restoration photos.

An incredible amount of preliminary work went into locating the replacement water pump, which paid off when it came time to introduce it to the chassis on a more permanent basis. Several details needed to be addressed before its housing could be fabricated.

Again using detailed pre-restoration photos, every aspect of the Seagrave's as-delivered livery was replicated with great care. This is the hinged side panel of the hood receiving its golden number, the black pinstriping having already cured.

inder Hercules engine. Accompanied by a correct four-speed manual transmission, the Hercules supplanted the Buick engine; a first step in returning the truck to its original configuration. Unfortunately, the replacement engine was well-worn, its prior service leaving it smoking and burning oil. Complicating matters was the fact that Hercules parts were hard to come by, making the prospect of performing a proper rebuild relatively daunting.

Jim tells us that "Club president Charles Rulofson went on the Internet and found a guy in Ohio who dealt with quite a bit of military surplus. He advertised that he had a military-rebuilt Hercules in the crate and was selling it for $2,250. The engine was rebuilt in 1966; it was complete and ready to go in the truck, so we opted to put that one in, rather than the tired unit, during the restoration."

With a new engine at the ready, the club carefully documented the nearly complete ladder truck with many photographs, power washed it and then began disassembly. Using electric drills with wire brush attachments, chemical paint stripper and whatever other tools the club could obtain, the team scrubbed every reachable surface to bare metal. Initially, the engine/transmission, ladder bed framing and suspension systems were left in place.

"We were able to locate a pump that was close to what had been in place originally," Jim explains. "Pat, Rich and Charles took on the yeoman's task of calculating and mapping its mounting points with the intent of eventually making it

A new water tank is being positioned on the chassis. With the original heavily damaged, a replacement was fabricated from a fuel tank obtained from a tractor-trailer. Also note the newly minted water pump casing that has yet to receive paint.

The engine, cowl—now outfitted with its refurbished factory gauges—and water pump have been installed. At the opposite end, the full complement of restored ladders has been carefully loaded into the associated steel framing; running boards are next.

Using reproduction materials, the engine has been wired, as have the rest of the components requiring electricity for operation. Note the two large vacuum tanks near the cowl and the incredibly wide pulley and fan belts.

The 1931 Seagrave nears completion. Everything was accomplished by club members within a three-year period, including bench seat upholstery. The only exception was trim that required new chrome plating, which was accomplished by an outside firm.

functional. It was no short feat, because we also had to fabricate a driveshaft. There's a short shaft that comes from the transmission to the pump, and then a second shaft from the pump to the differential—the driveline goes through the pump. A fire truck is basically a pump on wheels, and that's why this had a 529-cu. in. engine in it; not for horsepower, but for torque to drive the pump."

Once the pump location was completed, and the shaft fabrication under way, the chassis was relieved of its engine and transmission, enabling the team to finish stripping the paint. Ready to refinish the chassis was club member Ted DeVries, who is known for his restoration work that has appeared at the Pebble Beach Concours. Aiding the effort was a temporary, handcrafted paint booth erected just outside the shop, but due to the vehicle's length, Ted could complete only half the chassis per each session.

Finish began with six coats of two-part urethane PPG primer in two sessions. Once cured, it was sanded using a step process that began with 120-grade paper and progressed to finer 400-grade. Having achieved a smooth surface, two-stage PPG urethane paint was applied: three coats of color, followed by three coats of clear. Final sanding was achieved using 600-grade paper, before buffing brought forth the fire-truck-red luster we're all familiar with. This same process was employed by Ted at his home shop when he refinished the Seagrave's removable panels—cowl, hood and fenders—and

water tank, which had been fabricated from, of all things, a tractor-trailer's fuel tank; the ladder bed was finished on-site. Before primer, however, a skim coat of filler was applied to these panels where needed, which was then sanded with 80, then 120-grade paper.

In addition to the body and chassis, the team—including club members Bob Hanshaw and Ed Hoffman, who both served as firefighters on the truck when it was still in operation—carefully restored the Seagrave's array of wooden ladders. According to Jim, "We had to locate a couple of them first. One of our members found the longest ladder hanging off the side of a building in a town south of Prescott, while the city returned another. They are important, because the ladders were assembled and patented by Seagrave. The guys sanded every inch of each ladder and then sealed them in several layers of black varnish. This was also done outside; the fumes would knock you off your feet. We asked a fire fighter if it made sense to climb a burning building with a wooden ladder, and we were told they actually last longer than aluminum ladders."

Reassembly started with the military-rebuilt Hercules engine—now repainted to a factory-correct hue—and transmission. The pump followed; however, further fabrication work was required. "We had to get it mounted properly so that the guys could craft new surrounding panels based on what we saw in the day-of-completion factory photo we had obtained. Ted painted the panels and then set about pinstriping the truck using detailed photos we had taken before disassembly. He did the front end with paint, while the rest was accomplished with vinyl," remembers Jim.

Other details were still being tended to. While members made several trips to the hardware store to purchase replacement slotted screws, Pat, Rich and Charles redid the wiring, Jim restored the siren and Jim Mercado reupholstered the seat in a correct pleated pattern. New running board stainless trim was purchased, which was then sanded with 600-, 1000- and 1500-grade paper, then buffed, to replicate the original factory chrome-like luster.

As the Seagrave neared completion, the team considered a safety modification. "At 40 feet long, and with modern distractions, we began to think that most of today's drivers might not see the hand signals from the driver. We fabricated turn signal lamps from Model A cowl lamps; one of our guys was able to locate red lenses for the rear pair. They made them work and they look really good," remarks Jim.

As of today, the Prescott Antique Auto Club is still seeing to the Seagrave's final finishing touches, particularly the pump—which will be operational shortly—and returning the hand rails to the cowl. For all intents and purposes, they proclaimed the project complete in 2012, the same year it was invited to be a part of college footballs' famed Fiesta Bowl parade in Phoenix. The historic ladder truck—of which very few survive—has also once again served the Prescott community by representing the department during the funeral procession for the 19 Prescott Hotshot fire fighters who lost their lives battling an Arizona wildfire during the summer of 2013.

"Reflecting on it, I think the remarkable thing about this project is that we did everything as a club in-house, except replating; and we did it in a three-year period, for the most part on Tuesday mornings from 9 a.m. to noon or 1 p.m. To have it done in time for the 2012 and 2013 Fiesta Bowl and, most importantly, for the community, was very rewarding for us as a club."

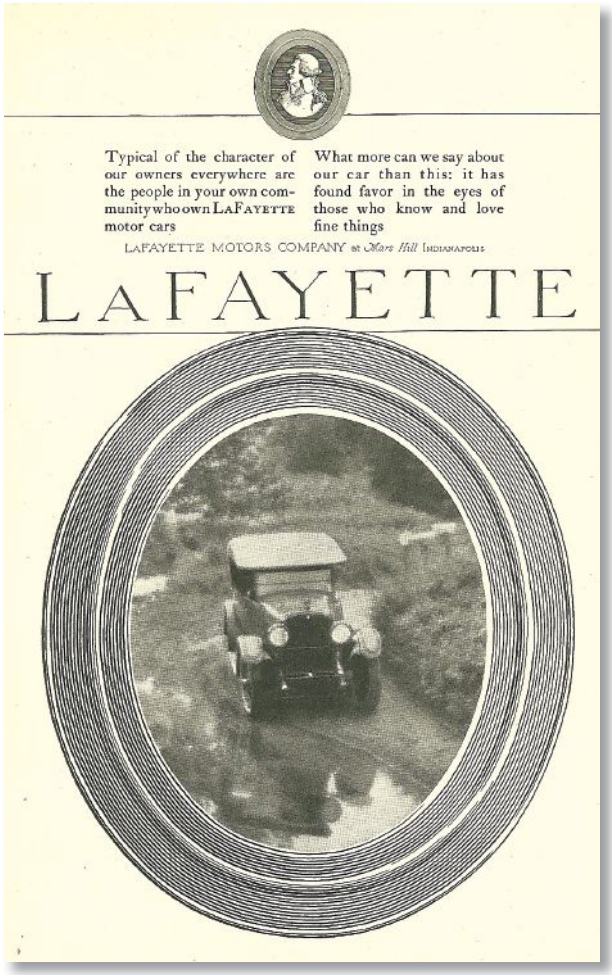
owner's view

Everyone seemed to pitch in. It was one of the most remarkable things: to have a project of this magnitude and all these people from all walks of life come together on this thing and have it turn out the way it did without much bickering or infighting—it was almost surreal how everything kind of went together. The Seagrave has entrenched itself in the minds and hearts of the whole area, and as far as our club goes, and me personally, it's been one of the most rewarding and satisfying things—to have a part of this truck's history, to have it come out the way it did and to have our guys pretty much do it all. The quality of the job and the accolades are just incredible. The history keeps moving ahead with it. We're all very proud of that truck and ourselves.

– Jim Schultz, on behalf of the entire Prescott Antique Auto Club

1922 *The National Geographic Magazine*

Of the 244 pages of the February 1922 edition of *The National Geographic Magazine,* there were three full-page automobile display ads touting the many attributes of these fine motor cars from LaFayette, Maxwell and Reo. The copy of each advertisement was carefully crafted in praising the people who own the cars, or should own them.



LaFAYETTE

Typical of the character of our owners everywhere are the people in our own community who own LaFayette motor cars.

What more can we say about our car than this: it has found favor in the eyes of those who know and love fine things.

REO

Each of these Closed Reos is distinctive—each is ideally suited to a special class of service.

All are mounted on that "Incomparable Six" Chassis—the "Six of Sixty Superiorities."

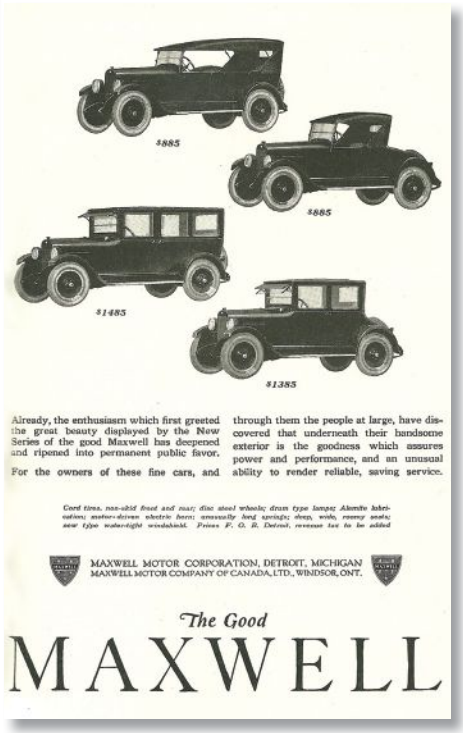
All are of the same quality too—Reo quality—which is to say the body-craft and finish are of the highest order of excellence.

Sedan seats five; Coupe, four—the two handsomest models that ever came out of the Reo shops.

Full aluminum bodies—richly upholstered and exquisitely finished.

For the professional and business man—for a thousand kinds of purely practical service—the new Business Coupe was especially designed and built.

If your needs call for more than one car—"Standardize on Reos."



MAXWELL

Already, the enthusiasm which first greeted the great beauty displayed by the New Series of the good Maxwell has deepened and ripened into permanent public favor.

For the owners of these fine cars, and through them the people at large, have discovered that underneath their handsome exterior is the goodness which assures power and performance, and an unusual ability to render reliable, saving service.


ME
Ogunquit, ME
VT
NH
Bennington, VT
Lowell, MA
NY
MA
Poughkeepsie, NY
Long Pond, PA
NJ
Valley Forge, PA
MD
DE
Millsboro, DE
VA
Norfolk, VA
Elizabeth City, NC
NC
New Bern, NC
Clinton, NC
Wilmington, NC
SC
Myrtle Beach, SC
Mount Pleasant, SC
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BY CHRIS RITTER

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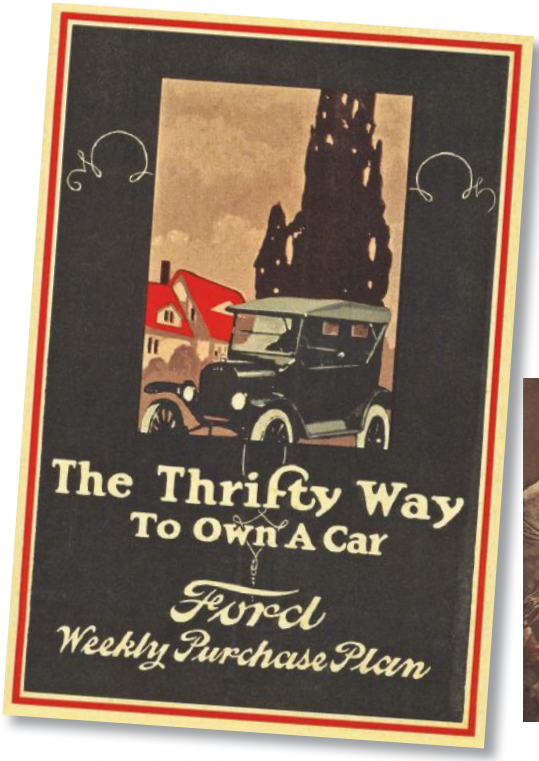
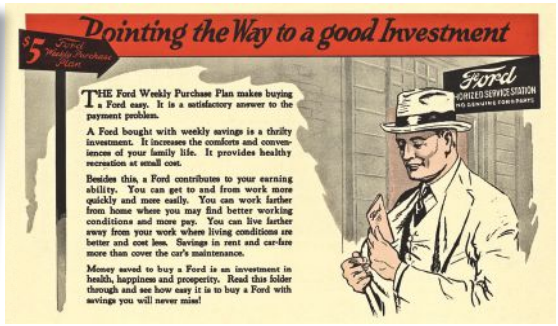
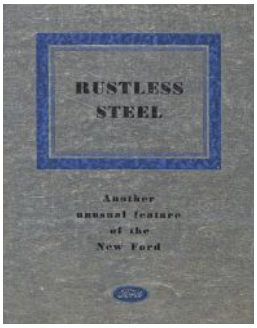
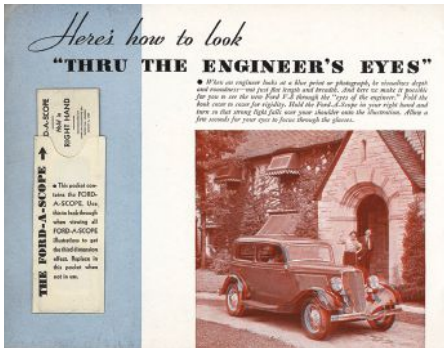
Prewar Ford Sales Literature Part 2









FROM 1910 TO THE MID-1920S, the price of a Model T would fall nearly 70 percent. While Model Ts were the most affordable car on the market, buyers still needed to pay for the entire car at once. GM would begin offering loans to consumers in 1919, but Ford wouldn't offer a similar loan program until 1928. Instead, Ford offered a program similar to layaway called the "Weekly Purchase Plan."

As described in a 1923 booklet, the Weekly Purchase Plan simply required a visit to a dealer where the buyer would select a body style and place a down payment as low as $5. From there, the buyer would arrange weekly payments and (eventually) own the car. Ford described this as a thrifty buying approach pointing out that "Weekly payments are so small you will scarcely miss the money." Key selling points for the Model T in this booklet are: increased comfort and convenience, an opportunity for healthy recreation at small cost and the ability to get to work more quickly and more easily.

To emphasize Ford's willingness to improve the quality of its cars while maintaining a price point, Ford issued a small folder titled *Rustless Steel* in 1930. This folder instantly catches a reader's attention because the paper is reflective and looks quite a bit like stainless steel. Inside are brief descriptions of vehicle safety and convenience features like shatterproof glass, Houdaille shock absorbers and aluminum pistons. The main point of the folder, however, is to brag about the use of "Rustless Steel" on Ford headlamps, radiator shells, hubcaps, cowl strips, tail lamps and gas and radiator caps.

The folder states "This bright, lustrous metal will not rust, tarnish or corrode in any kind of weather. There is no plate to wear off…it never requires polishing…and has twice the tensile strength of ordinary steel." Tests of the "Rustless Steel" are described where a sheet of metal was placed in corrosive mine water in central Pennsylvania. This corrosive water had been known to destroy metal shovels overnight, but the "Rustless Steel" remained unblemished after six months underwater. The folder closes with the statement that "Rustless Steel is expensive to manufacture, yet it is used on the new Ford without extra cost to you—another indication of the high quality that is built into Ford cars."

While the cover of the *Rustless Steel* catalog was certainly flashy, in 1933 Ford raised the bar for attention-grabbing literature with their 3D catalog look *Thru the Eyes of the Engineer*. With the help of red/blue glasses dubbed the "Ford-A-Scope," readers were able to see images of the car and components in 3D. The 3D images included the 1933 car itself, engine, differential, transmission, bare chassis, interior and testing photos. The "Ford-A-Scope" glasses have instructions for use printed on them and measure 5¼ x 1½ inches. The cover of the catalog shows a couple using the glasses to look through the same catalog. There are 16 pages in the catalog, and readers are reminded of Ford value and quality within the first two pages where a letter from Henry himself reports that Ford has never built a car that would only last two or three years. Instead, Ford insists on a car that will be dependable for the life of the vehicle, pointing out that "It costs more to build a durable car—but two items we don't skimp on are cost and conscience."

Next month is the last of our three-part look at select pieces of Ford's prewar sales literature. The focus of that column will be Ford's attempt to match sales literature offerings from high-end manufacturers and the company's early efforts to market cars to women. Stay tuned!

BY MILTON STERN

What's a Matador?

DO YOU WANT AN INEXPENSIVE, mid-size sedan with a pleasant ride and decent performance that is also easy on gas? Take this month's Detroit Underdog… please.

In 1970, AMC's mid-size offering was the Rebel, a car whose controversial name and not-so-impressive sales numbers dictated creating a new model. With the magic of badge engineering, a new grille and styling in the rear, AMC introduced a replacement—so to speak.

What's a Matador? The ads said it all. What was at one time America's most under-appreciated mid-size car can be yours today for an affordable price. The best part—and we always have a best part—is that you can choose a sedan or station wagon. In 1977, the Matador wagon was declared by a popular automotive magazine as America's "best kept secret" that apparently no one wanted to know.

Usually, when I push a car into your garage it's a rare find. That can't be said about the Matador. I have never been to an AMC or orphan car event where someone did not show up in a Matador four-door sedan, and not a week goes by that I don't see one for sale somewhere.

The 118-inch-wheelbase, mid-size Matador shared its platform with the flagship Ambassador, which gained its length forward of the cowl. In addition, your prized Matador has as much, and sometimes more, interior room than other mid-size cars of the time, especially the station wagon.

For three model years, you could choose a two-door hardtop along with the four-door sedan or wagon. In 1974, the two-door hardtop was replaced with the Matador coupe, one of the most memorable designs to come out of Kenosha. Love it or hate it, the coupe has a strong following among independent enthusiasts—at least I hope it does. I am not here to sell you a coupe—Oleg Cassini version or not. For now, we are all about sedans and wagons.

That same year, the Matador gained the unfortunate "coffin nose." The protruding front end on the Ambassador was somewhat attractive, but the 1974 Matador sedan grille was less than flattering, with an odd split that Pontiac and

Oldsmobile would have rejected even before a clay mock-up was created, and it may be why one rarely sees a 1974 Matador. At the end of the model year, AMC retired the Ambassador, which at the time was the longest-running model name in the industry, and the 1975 Matador essentially became AMC's flagship. The good news is that the coffin nose was updated and made more attractive (notice I said "more," not "completely"). Through the end of its short life, the Matador would be marketed as a mid-size car even one year after Chevrolet downsized its full-size models to a two-inch-shorter wheelbase.

Matador sedans were popular as police cars and taxis as well as other government fleet cars, due to their manageable size and available power. I just saw a few, including a wagon, on a rerun of *Adam-12*. AMC offered 360- and 401-cu. in. V-8s as well as heavy-duty suspension packages on the build sheet.

The wagon offered a rear-facing third seat, so you and seven of your friends can cruise in coffin-nose comfort, and AMC still offered the two-way tailgate. If you look closely at the door frame, you will notice something else they still had—vent windows! Sometimes, you just can't hide 1960s engineering. I wish cars still had those vent windows.

For the economy-minded, you could order your Matador from the beginning until its last model year with a 258-cu.in. straight-six and an automatic transmission in all the models except the wagon. While I always say such six-cylinder, mid-size cars rarely exist, the Matador is an exception. Many of those Matadors for sale today have a six-cylinder engine under the hood.

Still not convinced?

I have driven a Matador four-door sedan, and I can say in my biased opinion, it is a comfortable car with plenty of power that handles quite nicely. The Matador featured an all-coil suspension with those high-set front coils and an anti-roll bar. You could find a wagon with a towing package if you plan on taking along your Airstream or want to trailer an American Bantam to your next show.

Perhaps the most coveted Matador sedan of all was the 1978 Barcelona edition. Previously offered only on the swoopy coupe, this version gave you, and I quote from the brochure, "individual reclining front seats in velveteen crush fabric with woven accent stripes." In addition, this final-year package included custom door panels, unique headliner, full vinyl roof, deep carpeting and color-keyed slot styled wheels. To complete the package, you had two choices of two-tone combinations: Golden Ginger Metallic with Sand Tan or Autumn Red Metallic with Claret Metallic.

I have a friend who drives only Cadillacs. He was at an out-of-town car club event and in need of libations (no big surprise there). The only sober person available drove him to the liquor store in a 1978 AMC Matador Barcelona Edition four-door sedan. From then on, he only had nice things to say about that car—not AMCs in general, but definitely that particular car.

You do a rum run in your Matador, and you will have new fans, too.

BY ROBERT GROSS
REPRINTED FROM *SIA* #181

James Ward Packard

PACKARD. THE NAME ALONE conjures up images of wealth, sophistication and class. And it should. These were the cars driven by movie stars, entrepreneurs, presidents and other dignitaries. From its very inception, the men who built Packard were adamant about producing high-quality automobiles. In this never-ending quest for perfection, some of the most extravagant vehicles ever to be built were those offered from Packard. While the company founder, James Ward Packard, was already a wealthy businessman, he still believed that customers deserved not only a quality product for their money, but also a strong support base to assist in servicing and repairing the automobiles. By offering the Packard to the retail market, which began simply enough as a project to fix the shortcomings of an automobile he himself purchased, James Packard built one of the most renowned motor vehicle companies ever created in the past 100 years.

James W. Packard was born on November 5, 1863, in Warren, Ohio. His father, Warren, was a successful and self-made hardware and lumber mogul, owning many retail stores in Ohio and Pennsylvania. When James and his older brother, William, were old enough, they became interested in their father's business. William's interests were in sales and accounting, and James was fascinated with mechanical and electrical engineering.

Packard attended Lehigh University. While studying engineering, he concocted many electrical devices, including an electromagnetic door lock for his dorm room, a wall-mounted alarm clock that he controlled at his bedside, and even an alarm system.

After graduating in 1884 with a mechanical engineering degree, Packard was employed by the Sawyer-Mann Electric Company—an early pioneer in light-bulb manufacturing. Within six years, he had more than 40 patents and eventually became the plant manager. Although the young Packard found great success at Sawyer-Mann, he decided to leave the large New York City-based firm and return to Warren, Ohio.

There, he and William started the Packard Electric Company and the New York and Ohio Company in 1890 to make their own electrical components.

While the company was very successful, Packard was still fascinated by all things mechanical, including the then-new "motor wagons."

After an impressive demonstration of a Winton automobile, Packard decided he needed one of his own. He bought the car and drove it from the Winton shop in Cleveland more than 75 miles back to Warren. Much to Packard's dismay, the car had many mechanical shortcomings and proved to be unreliable. At first, Packard fixed the car. But as problems became larger, he found himself back at the Winton shops for heavier repairs. During these visits, he developed a good working friendship with two of the company's employees, shop foreman William Hatcher and head engineer George Weiss.

Every time Packard showed up at the Winton shops, he always had a few ideas on how owner Alexander Winton could improve his vehicles. One time, Packard caught Winton on a bad day and, after sharing a few of his ideas for improvement, the shop owner barked back at Packard: "If you're so damned smart, why don't you build your own car?" Packard left the shop that day, thought about Winton's challenge, and decided to do just that—build his own cars. Not only did he take his advice, but he also took Hatcher and Weiss for his staff.

In 1899, the men had successfully built their first automobile, the one-cylinder, four-passenger Model A, in a small wing of the New York and Ohio Electric plant. It was succeeded by four more cars. The following year they decided to show their cars at the New York Auto Show. Response to their automobile was tremendous. Their keen sense of high-quality parts drew the most attention, resulting in the sale of more than 40 vehicles.

Taking what was learned from Winton on how not to run an automobile manufacturing company, Packard insisted on a strong customer service base just in case a vehicle had a problem. He also insisted that with every sale, a Packard representative would instruct the owner on how to operate the new vehicle. Improving mechanical innovations was a continuous progression. By 1901, Packards had a floor-mounted accelerator, automatic spark control and a spring-operated clutch cam to absorb vibrations from the flywheel during actuation.

Being strongly disposed toward high quality, Packard rigorously tested all components before they were installed on a car. In many cases, parts that were procured from outside vendors were rejected to the point that automobile production was slowed down. Some vendors even refused to supply parts to the obsessed car builder.

In 1902, the company was incorporated as the Packard Motor Car Co. By the following year, Packard had outgrown its shop complex and relocated to Detroit. However, James Packard, the soft-spoken and somewhat elusive president, still lived in Warren, Ohio, although he made regular trips to the Detroit factory.

Packard served as the company president until 1909, but remained the chairman of the board until 1915. To show appreciation to his alma mater, Packard donated $1,000,000 to Lehigh University. Although he never sold any of his treasured company stock, he actually gave much of it away shortly before his death in 1928.

James Ward Packard's yearning for all things mechanical was the reason Packard became one of the most successful automotive companies in the prewar era; it was an empire that was worth millions by the mid-1920s. His insistence on quality control and durable components became a Packard hallmark, characteristics that are still revered in these timeless classics today.

BY RICHARD LENTINELLO

Plastic Model Kits

THEY WERE THE STUFF DREAMS WERE MADE OF: plastic model car kits. Once the three-o'clock school bell rang, a side trip with your friends to the local stationery store or toy outlet before walking home occurred at least once a week in order to keep up on the newest plastic model kits that hit the shelves. Later on in the evening, you would lie on your bed, while listening to Donovan or the Monkees, thinking of ways to scrounge up the $2 to buy that next kit. I know I did.

Back in the '60s, building plastic model car kits was the thing to do among pre-teen boys. It's how guys spent their free time in the years leading up to acquiring their driver's license. So because they couldn't drive, or even think of buying their first car, they would satisfy—and cultivate—their car-crazy passions by constructing car models. They were fun to build, even when the tube of glue oozed out all over the kitchen table, and were the perfect excuse to avoid doing math homework.

The primary scale was either 1/24th or 1/25th size, and they almost always came in white. Once you decided on which color to paint your dream car, you would then jump onto your Stingray and head back to the store to buy a couple of 25-cent jars of Testors enamel, or a small can of 75-cent metallic spray paint in order to finish it. Later on, plastic models would be molded in color, as was the bright-green *T'rantula*, Monogram's Wild Fuel Drag Coupe.

Each model's greatest allure was its fantastically illustrated box art, which drew you in in a hypnotic-like trance. These were the days right before color photography became so prevalent on packaging, but this original artwork had so much more influence in capturing our imagination than still photographs ever could.

The cars, of course, were the main attraction. But it wasn't the production-based cars that got every kid's blood racing, although many did; no, it was the wild and crazy cartoon-like machines created by some of the most fertile minds of the '60s-era custom car culture scene. Models of Ed "Big Daddy" Roth's *Beatnik Bandit*, *Tweedy Pie*, *Road Agent* and *The Outlaw*, among many others, were some of the hottest models that every kid had to have. So, too, were those created by Tom Daniels, which, in addition to the *T'rantula*, included the *Paddy Wagon*, *Tijuana Taxi*, *Red Baron* and the *Pie Wagon*.

Today, original model kits are highly collectible. However, what collectors are mainly interested in are kits that are unbuilt and still in their original boxes. And if the cellophane wrapping has never been removed, then those model kits will be all the more collectible and valuable.

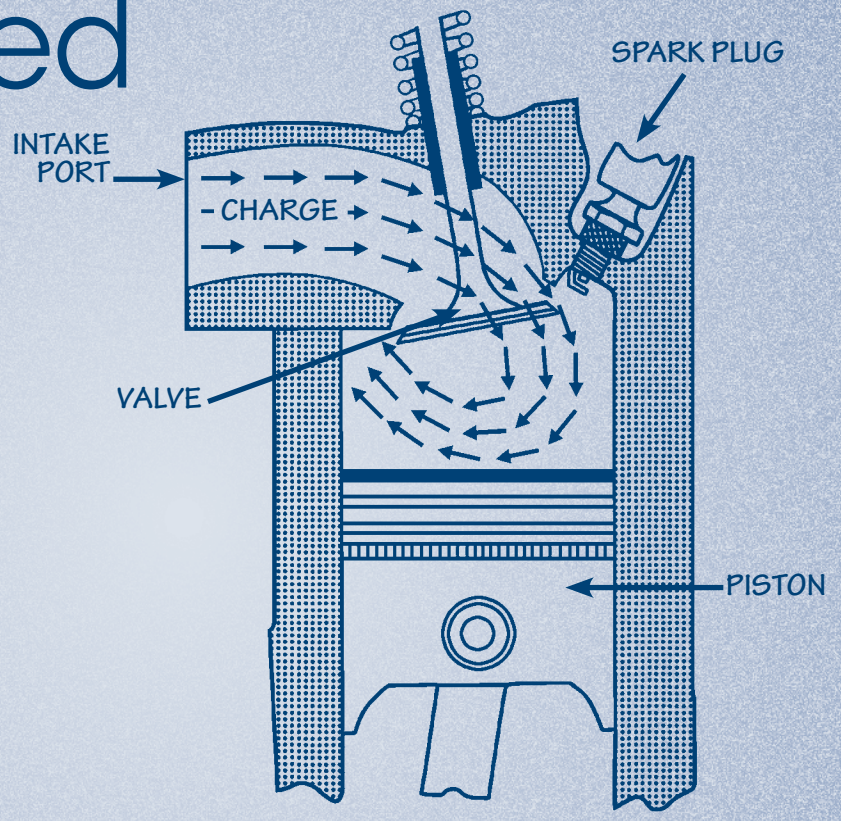
Fortunately for those of us whose models were thrown away or were subjected to being blown up with firecrackers, many of these celebrated model kits have been re-released. They are exactly the same as the originals; even the box art is the same, apart from a few minor details to set the newer boxes apart from the near 50-year-old originals.

The original versions can sell for as much as a couple hundred dollars if the model is untouched and its box is in excellent condition. The re-released models, many of which came out in the mid- to late-'90s only cost between $18 and $24. In fact, because their second production run was highly limited, and these models themselves are already nearly 20 years old, they, too, are fast becoming collectible.

If you would love to relive those quiet times of your childhood, when you used to sit at the kitchen table, radio on, while waiting for the decals to loosen in the warm water so you could finish the model and place it on the shelf in your bedroom, consider building one of these model kits...again.

Controlled Chaos

Detroit Exploits Charge Motion



JOB: Combustion Chamber Mixture Motion

BY RAY T. BOHACZ

THE BLOODLINE OF AN automotive brand or model is often quite clear-cut, but when discussing particular engineering principles and theories, the pathways are often not quite so definitive. In the early 1900s, when the industry was still young, many individuals were exploring the same concepts, albeit using different approaches. Thus, it is almost impossible to identify who stumbled upon what would eventually be considered the standard protocols of engine design. When it comes to the benefit of charge motion in the cylinder bore, it has no clear father and continues to be a relevant and dynamic aspect of engine design that is still being explored today.

Mix It Up Good!

In engine parlance, the term "charge" describes the fuel and air mixture. The emulsification of the gasoline and air becomes a charge as it exits the carburetor and enters the plenum of the intake manifold.

When discussing the effects that are imparted to the charge, there are two distinct areas to consider: internal and external charge motion. The external motion occurs prior to entering the cylinder bore, while internal motion is the action that occurs when the charge is in the cylinder. It is necessary to identify the two areas since each can be developed independently.

Early on in engine development, it was discovered that if a charge has motion, two things occur: it burns more thoroughly, and the rate of burn is faster. The more motion, the greater the benefit. Rather than an outright discovery, this was more likely an empirical transfer from the ages when human beings were commonly exposed to open combustion when cooking, working metal or doing a host of other tasks requiring a flame.

The benefit of an improved burn in the cylinder as the flame expands across the bore ignited by the spark plug means there is a greater amount of energy transfer from the latent potential in the fuel when measured in Btu. Combustion in an engine is what allows the transfer from chemical to mechanical energy to occur. The goal of any engine designer is to minimize the energy lost, or conversely, to free as much energy from the gasoline as possible.

A quicker burn rate has multiple benefits. It allows the cylinder pressure, through expansion of the flame, to increase faster in fewer degrees of crankshaft rotation past top dead center. This means that more of the energy is being used to push against the piston and then, in turn, to work with the crankshaft. A slow-burning fuel will allow the piston to greatly outrun the flame and move with inertia from the last cylinder's combustion event. The peak cylinder pressure in the most

efficient engines occurs as soon as possible and then continues in a linear manner. The second characteristic of a fast burn rate is the decreased chance of a rogue flame occurring. In engineering terms, this is what is known as abnormal combustion, but motorists know it as "ping" or "knock." An engine with an increased burn speed will be able to run on gasoline with a lower octane and produce the same power without entering abnormal combustion conditions. Remember, "octane" describes a fuel's ability to resist combustion through pressure and heat while waiting for an arc at the spark plug tip.

As an aside to this, improved octane tolerance allows for an increase in the engine's designed compression ratio. A higher compression ratio not only improves power and throttle response, but greatly impacts the thermal efficiency of the engine. This translates into an increase in fuel economy.

With these facts established, it is beneficial to have an engine with a high degree of charge motion.

External Charge Motion

The design of the cylinder head intake port, bowl area (on the intake-port side of the seat), along with the angle of the valve in regard to the centerline of the cylinder bore, all work for or against motion.

Two types of external charge motion can occur: swirl or tumble. "Swirl" can be likened to the motion of water exiting a drain in a sink. It moves out to the perimeter and goes around the circumference until it hits the crown of the piston. A special meter that has the cylinder head attached to a test fixture while air is moved through the port is used to determine the amount of swirl. A mock cylinder bore is moored with the cylinder head to simulate the engine bore. Swirl is the most common mixture formation employed by Detroit engineers, but historically not all cylinder heads have been good at creating this phenomenon.

Some cylinder heads did not induce swirl, but instead only managed a chaotic filling of the bore, a charge almost spilling into it. These designs offered poor burn characteristics, and motion was so undefined that it could not even be quantified. Very early engine designs suffered from this inability to induce a swirling motion and were not only physically rough-running, but the sound of the combustion event was coarse too.

By the time WWII came about, Detroit had collectively acknowledged the need to fill the cylinder with charge motion, but often this wisdom got lost somehow between the engineering department and the investment the corporation was willing to make in a particular engine design. Even to many of those in the engineering community, swirl was still seen merely as a byproduct of the cylinder head design and not something that could be intentionally created. If it happened, great; if not, so what?

At the time, engines were low-powered and operated at low speeds, and even those benefiting from improved combustion through induced swirl did little for customer satisfaction. After WWII, when consumer demand for better and more powerful engines had taken hold, and the transfer of knowledge from the war effort impacted gasoline octane, mixture motion became a matter of intent and not just happenstance.

Once swirl was recognized and looked for, it was discovered that if the engine's valves were placed at the perimeter of the bore instead of in the center—as was the case with the hemispherical combustion chamber later popularized by the Chrysler Corporation in the 1950s in its "Hemi" engines—a different motion occurred. Resembling wine being poured into a goblet from the edge, the charge in this design followed the perimeter of the cylinder wall, and after colliding with the piston, would roll partially back up the other side and then fall back over. The charge did not as much swirl, as it tumbled into the bore. It was found that "tumble" was as effective as swirl in increasing the burn speed and energy transfer. In turn, the placement of the valves at the bore's perimeter allowed for a central position for the spark plug, which is the most desirable location. When a flame is initiated in the center of the bore, it expands outwardly in uniform fashion with a linear rise in pressure against the piston in the very same way a wave rolls out across a still body of water from the location where a stone is dropped into it.

The problem with tumble was that it required an entirely new approach to cylinder-head design. A current in-production combustion chamber could be modified very cost effectively to increase swirl with something as simple as the incorporation of a swirl dam—a wall-like structure—cast into the bowl of the cylinder head. Many Cadillac engines, such as the maligned HT 4100 from the early 1980s, along with the Ford 2300 HSC (High Swirl Combustion) found in the Tempo and Mercury Topaz, are common examples of swirl dam technology.

Once a cylinder is filled with a charge, regardless of the motion or lack thereof, in-cylinder charge acceleration would occur as the piston swept toward top dead center. A wedge-style combustion chamber or a closed design (not open to the entire bore) would often include a squish pad. The easiest way to recognize this element would be to take a cylinder head and place a head gasket on its deck. The region that is in the bore area and not exposed is often the squish pad. The squish pad serves two purposes: It causes turbulence and accelerates the charge as the volume in the bore diminishes and the piston approaches top dead center. It is used to steer the turbulent charge to the spark plug electrode to help promote better combustion. Regardless of any charge motion that is induced externally, internal charge acceleration occurs and is a function of the design of the combustion chamber and the piston crown. Internal charge acceleration is often used to help make up for a cylinder head that induces little to no mixture motion.

By the time the 1960s rolled around, it became apparent which auto companies had offerings with high rates of charge motion, even though it was not something mentioned in advertising brochures or talked about by enthusiasts. The average consumer recognized but did not know why the engine in his or her car was different from another brand with regard to fuel efficiency, the octane requirement and overall running and sound. The engines that mixed it up good had a reputation for being able to provide stunning performance on low-grade fuel, with no tendency to knock or ping.

Maybe James Bond was on to more than he knew when he asked for his martini to be shaken and not stirred.

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SUPER COUPON

MECHANIC'S GLOVES

Item 93640 shown

WESTERN SAFETY

MEDIUM LOT NO. 61235

LARGE LOT NO. 93640/60447

X-LARGE LOT NO. 93641/60448

SAVE 63%

YOUR CHOICE! $3.69

REG. PRICE $9.99

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SUPER COUPON

2.5 HP, 21 GALLON, 125 PSI VERTICAL AIR COMPRESSOR

CENTRAL PNEUMATIC

"The Perfect Compressor with Powerful, Quiet and Consistent Airflow… Plus we Love the Low Price" – Street Trucks Magazine

LOT NO. 67847/ 61454/61693

Item 67847 shown

SAVE $67

$152.99 REG. PRICE $219.99

49593069

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SUPER COUPON

1/2" ELECTRIC IMPACT WRENCH

CHICAGO ELECTRIC POWER TOOLS

Item 68099 shown

LOT NO. 68099/45252/ 69606/61173

SAVE 45%

$37.99 REG. PRICE $69.99

65859720

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SUPER COUPON

SAVE $150

20 TON SHOP PRESS

Central Hydraulics®

"Great Press for an Incredible Price!" – American Iron Magazine

PAIR OF ARBOR PLATES INCLUDED!

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LOT NO. 32879/60603

$149.99 $199.99 REG. PRICE $299.99

97833463

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SUPER COUPON

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"Impressive Accuracy, Amazing Value" – Car Craft Magazine

ACCURACY WITHIN ±4%

YOUR CHOICE!

1/4" DRIVE LOT NO. 2696/61277

3/8" DRIVE LOT NO. 807/61276

1/2" DRIVE LOT NO. 239

Item 239 shown

$9.99 REG. PRICE $34.99

SAVE 71%

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SUPER COUPON

1000 LB. CAPACITY ENGINE STAND

CENTRAL MACHINERY

SAVE 31%

Item 32916 shown

LOT NO. 32916/ 69886/69520

$47.99 REG. PRICE $69.99

85260173

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SUPER COUPON

PITTSBURGH AUTOMOTIVE

LOW-PROFILE CREEPER

Item 2745 shown

SAVE 64%

LOT NO. 69262/ 2745/69094/ 61916

$17.99 REG. PRICE $49.99

90514529

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SUPER COUPON

SUPER QUIET!

• 70 dB Noise Level

4000 PEAK/ 3200 RUNNING WATTS 6.5 HP (212 CC) GAS GENERATORS

PREDATOR GENERATORS

Item 68528 shown

LOT NO. 68528/69676/69729

LOT NO. 69728/69675/68527 CALIFORNIA ONLY

SAVE $200

$299.99 REG. PRICE $499.99

83152929

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SUPER COUPON!

AUTO-DARKENING WELDING HELMET WITH BLUE FLAME DESIGN

LOT NO. 91214/61610

Item 91214 shown

CHICAGO ELECTRIC WELDING

SAVE 53% $41.99 REG. PRICE $89.99

67589274

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SUPER COUPON!

US★GENERAL PRO

56", 11 DRAWER INDUSTRIAL ROLLER CABINET

LOT NO. 67681/69395

Item 67681 shown

3458 LB. CAPACITY

WEIGHS 441 LBS.

SAVE $300 $699.99 REG. PRICE $999.99

57693921

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SUPER COUPON!

SAVE 62%

CENTECH

12 VOLT, 10/2/50 AMP BATTERY CHARGER/ ENGINE STARTER

LOT NO. 66783/60581/60653

Item 60653 shown

$29.99 $49.99 REG. PRICE $79.99

14121276

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SUPER COUPON!

MECHANIC'S SHOP TOWELS PACK OF 50

LOT NO. 46163/ 68442/69649/ 61837/61878

Item 46163 shown

SAVE 44% HFT $9.99 REG. PRICE $17.99

51304307

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SUPER COUPON!

6" SELF-VACUUMING AIR PALM SANDER

CENTRALPNEUMATIC

Item 98895 shown

LOT NO. 60628/98895

SAVE 66% $19.99 REG. PRICE $59.99

72922069

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SUPER COUPON!

3/8" x 25 FT. HEAVY DUTY PREMIUM RUBBER AIR HOSE

LOT NO. 69581

NEW!

CENTRAL PNEUMATIC

SAVE 35% $12.99 REG. PRICE $19.99

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SUPER COUPON!

12,000 LB. ELECTRIC WINCH WITH REMOTE CONTROL AND AUTOMATIC BRAKE

BADLAND

LOT NO. 68142/61256/60813

"Voted the Best Deal in Winching" – Off-Road Magazine

Item 68142 shown

SAVE $200 $299.99 REG. PRICE $499.99

34284310

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SUPER COUPON!

Item 31277 shown

7 PIECE BODY AND FENDER SET

PITTSBURGH AUTOMOTIVE

LOT NO. 31277/60812

SAVE 58% $24.99 REG. PRICE $59.99

82745039

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SUPER COUPON!

WITH REMOTE CONTROL

440 LB. CAPACITY ELECTRIC HOIST

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SUPER COUPON!

LOT NO. 93888/60497/ 61899

MOVER'S DOLLY

HaulMaster

Item 93888 shown

SAVE 46% $7.99 REG. PRICE $14.99

1000 LB. CAPACITY

14221862

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SUPER COUPON!

PITTSBURGH AUTOMOTIVE

1 TON CAPACITY FOLDABLE SHOP CRANE

SAVE $150 $99.99 $189.99 REG. PRICE $249.99

INCLUDES RAM, HOOK AND CHAIN! LOT NO. 69445/ 69512/93840

Item 69512 shown

87138512

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SUPER COUPON!

7 FT. 4" x 9 FT. 6" ALL PURPOSE WEATHER RESISTANT TARP

LOT NO. 877/69137/ 69249/69129/69121

Item 877 shown

HFT

SAVE 66% $2.99 REG. PRICE $8.99

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SUPER COUPON!

CENTRAL PNEUMATIC

3" HIGH SPEED AIR CUT-OFF TOOL

LOT NO. 47077/60243/ 60374/67425/69473

Item 47077 shown

SAVE 70% $5.99 REG. PRICE $19.99

68965343

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SUPER COUPON!

ENGLISH WHEEL KIT WITH STAND

Item 68385 shown

LOT NO. 68385/95359

CENTRAL MACHINERY

SAVE $70 $279.99 REG. PRICE $349.99

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SUPER COUPON!

PITTSBURGH AUTOMOTIVE

6 TON HEAVY DUTY JACK STANDS

Item 38847 shown

LOT NO. 38847/ 69596/61197

SAVE 62% $29.99 REG. PRICE $79.99

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SUPER COUPON!

7 PIECE RATCHETING COMBINATION WRENCH SETS

Item 95552 shown

PITTSBURGH PRO

SAE

LOT NO. 96654/61396

METRIC

LOT NO. 95552/61400

YOUR CHOICE!

SAVE 55% $17.99 REG. PRICE $39.99

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SUPER COUPON!

CHICAGO ELECTRIC WELDING

Welder and accessories sold separately.

MIG-FLUX WELDING CART

Item 69340 shown

LOT NO. 69340/ 60790/90305/61316

SAVE 50% $29.99 REG. PRICE $59.99

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SUPER COUPON!

NEW!

6" VARIABLE SPEED DUAL ACTION POLISHER

CHICAGO ELECTRIC PLATINUM

LOT NO. 69924

SAVE $80 $49.99 REG. PRICE $129.99

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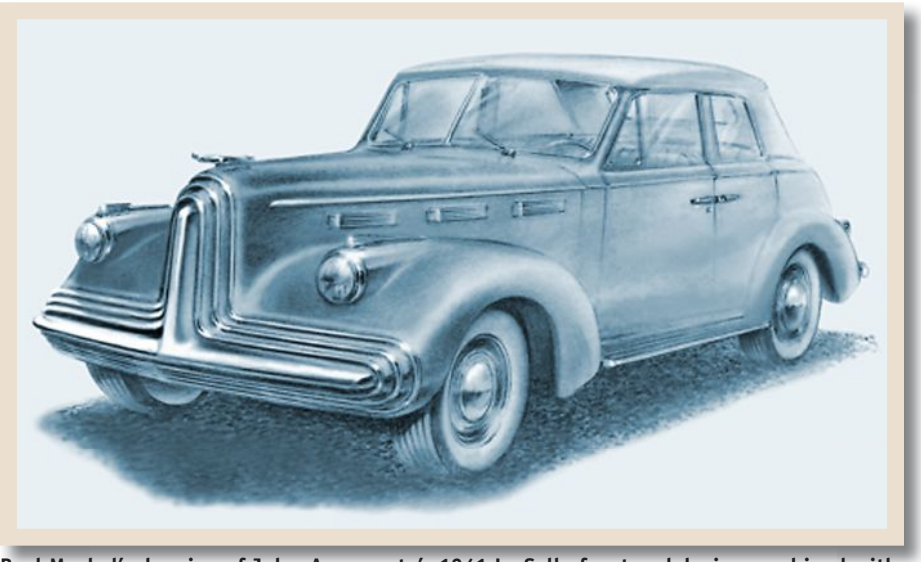
Paul Jones Mochel

Stylist

General Motors



Paul Mochel's drawing of Jules Agramonte's 1941 La Salle front end design combined with an earlier Fisher body.

IN 1941 JULES AGRAMONTE (see I Was There, *HCC* #113) attempted to save *Harley's La Salle,* as Jules' design came to be known, with a completely new front end. Jules asked me to bring his concept to full-size on the blackboard. This was not a schoolroom chalkboard. It was a huge, plywood-backed, vertical surface that could be raised or lowered depending on the area being worked on. A large sheet of vellum was stapled on to this surface, and it was on this surface that I rendered Jules' design as he directed. If Earl had approved it, the next step would have been to do another huge drawing on "black paper." Actually, the paper was cardboard and such a dark green that it gave rise to the term blackboard. This time it was a corporate decision that was the source of Jules' disappointment. The decision was that there would be no more La Salles. The wisdom of this was borne out by the fact that in 1941 GM sold more small Cadillacs than La Salles and Cadillacs combined in the previous year.

I had been riding to work and back with Jules and Tom Hibbard each day from nearby Birmingham, Michigan. By 1941 Tom Hibbard had finished his contract job with Harley Earl and left GM. Jules had simply had enough and he, also, left, but before doing so he introduced me to Steve McDaniel, who also lived in Birmingham, and would be my new companion on the way to work. On the day that Jules left, he told me to report to George Snyder, who headed up the other Special Projects Room. George was expecting me. Earl disbanded our original Special Projects Room. With Jules and Tom gone, the remaining group members were either reassigned at General Motors or left to join the military.

Jules and his wife, Edie, and two children went to live in Madeira, Portugal, for a few months. When he returned, they built a house in Laguna, California, and invited my wife and me to come down and see him. By that time I was working for Douglas Aircraft in Los Angeles. Jules asked that I arrange a meeting for him with the head of the Personnel Department there. The distance from Laguna to Douglas was too great, and Jules ended up as a production illustrator at Consolidated Aircraft in San Diego.

Two La Salles That Never Happened

For many years, I have felt privileged and proud to have worked for two years with Jules Agramonte at the General Motors Styling Section in 1940. I say privileged, because Jules was a very creative designer and an inspirational studio head. As head of a Special Projects Studio, Jules was responsible for assessing dozens of design sketches and picking the one or two that would merit further development in a constant quest for a totally new theme. I say proud, because I was selected by Jules to produce a drawing in full size for what we both hoped would be the front end of a 1941 La Salle. The body, from the cowl back, was to be that of the previous year.

1941 La Salle in wood and metal with Bill Mitchell's front end design combined with an earlier Fisher body.

IMAGES COURTESY OF THE GENERAL MOTORS DESIGN STAFF AND ROY SCHNEIDER

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.

Therefore, the front end was the only place to incorporate anything completely new.

By 1940, this highly regarded front end theme was copied by most of the rest of the industry. By then, La Salle had a V-8 engine and cost almost as much to build as a Cadillac. In addition, it had a host of competitors, including Buick, in the same price range. The La Salle marque was in the same kind of trouble that beset it in 1934. Jules figured that it was time for a completely new front end. After all, this approach had been very successful when he designed the 1934 La Salle. About this time there was a trend calling for a combination bumper and grille. The sketch, opposite, shows how this combination might have looked on a 1941 La Salle.

Oldsmobile attempted to provide such a solution in 1942. Wartime, of course, brought further development to a complete halt. A successful bumper and grille did not appear until the 1950 Buick. Unfortunately for me, the 1941 La Salle did not appear either.

Years ago, I was introduced to Roy Schneider, who has written, with impeccable accuracy, several hard-bound, coffee-table type books on the history of Cadillac and La Salle. This friendship broadened, and soon Roy showed me photographs of a 1941 La Salle in wood and metal. These photos looked nothing like the sketch. Roy said the model came out of the Cadillac studio, which was headed by Bill Mitchell. As nearly as I can tell both La Salles were done concurrently. Mitchell, as head of a production studio had a much tighter completion schedule with more people assigned to the task than did Jules as head of a special projects studio. All studios were locked and there was very little information passed from one to another. I'm sure Harley Earl knew of Jules' efforts, maybe even solicited them, but together they could not prevent La Salle from becoming an orphan.

The La Salle That Never Was

This model has the characteristic narrow grille of the previous La Salles. It does, however, carry many of the features of the 1941 Cadillac—no belt molding, covered running boards and what were called suitcase fenders, to name a few.

The demise of the La Salle significantly altered my plans and aspirations. But the economic aspects are noteworthy as far as the General Motors Corporation was concerned. By eliminating further engineering, manufacturing and tooling costs, the division sold more small Cadillacs in 1941 than La Salles and Cadillacs combined during the previous year.

TECH TALK

BY MIKE McNESSOR

AIR NOT APPARENT

Q: I have a 1965 Mustang on which I recently mounted radial tires that listed a maximum pressure of 51 psi. The original door sticker lists a tire pressure of 24 psi, which I am sure won't work. I have inflated the tires to 42-44 psi, cold, and have experienced even wear on all as well as a firmer ride and better mileage.

I am sure others have the same question as to what is the best ballpark pressure to use since there is no real guide and many differing opinions as to what is reasonable.

Bill Luckenbill
Doylestown, Pennsylvania

A: The tire manufacturer's website or customer service line is the best place to get air pressure recommendations, but assuming that you're running a standard 14-inch radial passenger tire, I'd suggest 35 psi, cold.

NEED FOR PRE-WAR SPEED

Q: I recently restored a 1931 Studebaker Commander four-door Regal sedan to stock condition and enjoy driving it. I cruise comfortably at about 50 MPH but do not push it to go any faster because of the high engine revs. I would like to drive it faster because I do not feel safe driving 50 MPH on a 70 MPH highway. Is there an alternate transmission or rear end that I can bolt up to my bell housing with a minimum amount of modification? The current transmission is a three-speed with free wheeling. I do not know what the gear ratio is in the rear end.

Jim Vetrano
Fort Lauderdale, Florida

A: Your best bet would be to adapt a Borg-Warner overdrive to your transmission. Lloyd Young in Canal Winchester, Ohio installs them in practically everything and sells the units as well as parts. His number is 614-837-7832. Please keep in mind that old cars will often drive very comfortably at highway speeds, but they don't stop like modern vehicles with disc brakes and ABS.

STICKY SITUATION

Q: I just purchased a 1982 Mercury Colony Park station wagon in excellent condition, however the previous owner apparently never met a bumper sticker he didn't like. They're not only on the bumper but on the tailgate and the rear window. What's the best way to remove them without damaging the finish or the glass?

Peter Smith
Philadelphia Pennsylvania

A: There are solvents that will do the job, like Goo Gone and WD-40, but I prefer to just use heat and water. On a hot day when the car has been parked in the sun, first try just carefully peeling some of them off. You can add extra heat with a hair dryer or a heat gun while wetting the area down with a garden hose and gently working at the stickers with a plastic scraper (a plastic body filler applicator works well). Hot water is the best, because the water acts as a solvent while the heat softens the glue. A good hot water pressure washer will often peel them off. Alternatively, you could rig up a garden hose from the drain valve on the base of your house's hot water heater and keep wetting the stickers down while you gently work at them with the plastic scraper. Glass cleaner also does a good job removing stickers, without harming surfaces. Saturate the entire area and let it stand for a few minutes, then keep applying the cleaner while you work on it with the plastic scraper. On the glass and bumper you could carefully work at the adhesive with a razor scraper tool. Some people recommend cooking oils or mineral oils, but elbow grease, heat and water will do the job just as well.

READERS RESPOND

I'm of the generation that grew up with cars of the 1950s and 1960s, and I still drive the 1974 Hornet that I bought new. The question about the noise in the Thunderbird ("Humming Bird," Tech Talk, *HCC* #112) reminded me of a strange noise in one of my cars. Many years ago my 1967 American developed a humming noise that varied with airflow through the heater. It turned out to be a leaf that was on the heater core — the airflow would make it vibrate. Keep those maintenance hints coming!

Donnie Coody
Chicago, Illinois

Regarding the Buick with the skip (Problem of the Century, Tech Talk, *HCC* #112), I have had this problem on many GM cars with HEI distributors. The high ignition or secondary voltage in the distributor would burn an electrical hole in the distributor's rotor. The coil's high voltage acts like pulsed DC current on its path from the coil across the rotor to the distributor cap terminals. The plastic rotor material would become like the dielectric in a capacitor and allow voltage to pass through to the distributor shaft.

The electrical hole would not be a physical hole. A distributor with a hole burned in it would have discolored the plastic around the metal strap that connects the rotor to the coil carbon button. I always tried to use Delco Remy distributor caps and rotors. The cheaper distributor caps and rotors available at most of the local parts stores were usually made of thinner material and were more susceptible to failure.

Usually the problem with the distributor rotor would cause a slight engine misfire. I could always tell when the rotor on my 1978 Chevrolet El Camino needed replacement. The engine would have a slight miss.

If the problem is not corrected, the distributor centrifugal advance weights, springs and post would be damaged. Arcing would occur between the advance weights, springs and posts. Usually the advance weights' mounting hole would enlarge and elongate because of the metal transfer from the arcing. The advance weight posts would also wear. Red dust created from the arcing would cover the moving parts.

The problem would be made worse if the advance weight posts lost metal from the arcing. If the advance weight posts lost a lot of metal the distributor shaft would have to be replaced.

I remember checking swap meets for Chevrolet small-block distributors that were usable. Many times I would find a distributor that looked in good shape to discover that the advance weight post was almost completely worn in half from the metal transfer from arcing.

Donald Tutt
Austin, Texas

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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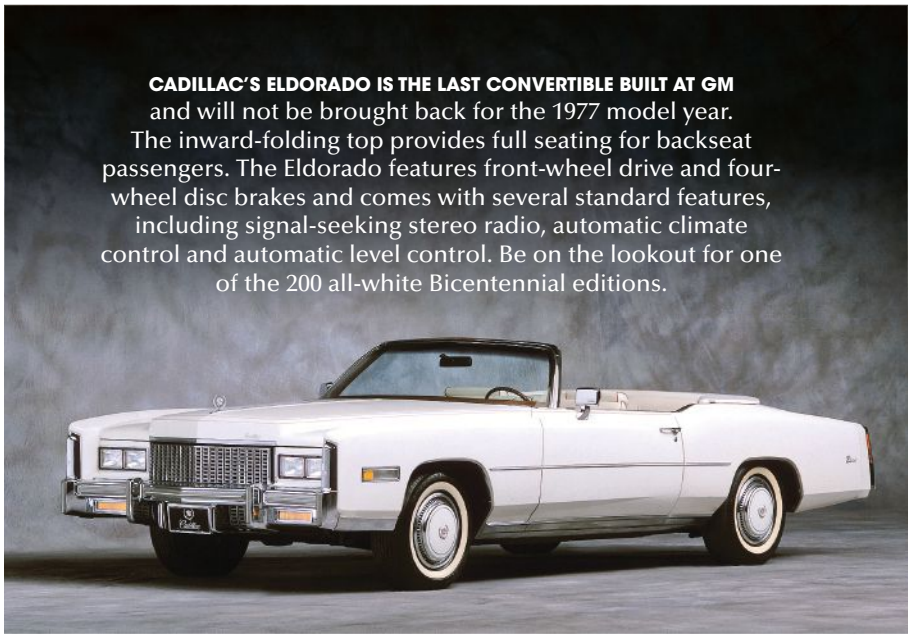
REARVIEW MIRROR 1976

BY TOM COMERRO



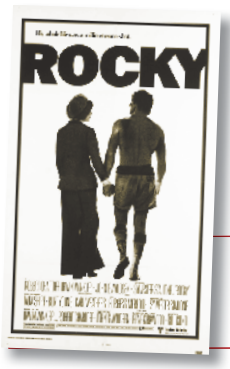
CADILLAC'S ELDORADO IS THE LAST CONVERTIBLE BUILT AT GM and will not be brought back for the 1977 model year. The inward-folding top provides full seating for backseat passengers. The Eldorado features front-wheel drive and four-wheel disc brakes and comes with several standard features, including signal-seeking stereo radio, automatic climate control and automatic level control. Be on the lookout for one of the 200 all-white Bicentennial editions.

Dollars & Cents

New house – $45,000
Average annual income – $11,430
One gallon of gas – $0.58
Average new car – $4,500
Sony CF-580 Stereo Cassette System – $400
First-class stamp – $0.13
Lawn mower – $79
Ticket to the movies – $2.00

VOLKSWAGEN ANNOUNCES PLANS to build an assembly plant in the United States. This would be the first foreign automobile plant since the Rolls-Royce was manufactured in Springfield, Massachusetts, between 1921 and 1931.

THE FORD MUSTANG II OFFERS TWO NEW APPEARANCE OPTIONS, the Stallion and Cobra II. The Stallion includes dual mirrors, pivoting rear quarter windows, bumper guards, RWL radials and optional aluminum wheels. The Cobra II is smaller and more economical than its predecessor, but it's still a Cobra. Front and rear spoilers, non-functional air scoop, dual remote mirrors, 2.3-liter engine, manual four-speed, front disc brakes, styled steel wheels and RWL radials all come standard.



ROCKY is the top-grossing film and wins the Oscar for Best Picture.

DODGE'S ASPEN R/T is a popular package installed on most of the Aspen V-8 coupes produced in 1976. Its updated styling includes a blacked-out grille, wide rally wheels and special body and decklid striping. The R/T Aspens come with either the 318- or 360-cu.in. V-8.

THE EAGLES release the album *Hotel California* in December.

THE UNITED STATES CELEBRATES its bicentennial with countless national and locally sponsored events.

JIMMY CARTER defeats Gerald Ford, becoming the 39th President of the United States.

BOB KNIGHT'S INDIANA HOOSIERS finish their championship run with an impressive 86-68 win over Michigan, concluding the 1975-'76 season 32-0.

JOHN WIPFF • SAN ANTONIO, TEXAS

The Night I Stole the Truck

"HEY, LET'S EACH TELL A STORY about an unforgettable experience we had with Dad."

My family was all together at our father's 80th birthday party. "Let's see if Dad remembers it the way we do."

At 80, Dad had a problem remembering to zip his pants, let alone remembering something that might have happened 40 years ago. The question was, could any of us remember anything correctly?

Being oldest, I went last. And suffered through the usual, "He grounded me for…" or "He spanked me for…" or "I had to wash dishes for a month because…"

I had a story that actually hadn't finished yet. It was the time I stole the truck.

It was the summer of 1949, I was 14 and had been a car—specifically Studebaker—freak for a couple of years. But we had no car. We lived in Urbandale, a new pre-fab part of Dallas. Dad was manager of the Checkerboard Feed Store, owned by Ralston Purina.

Though we had no car, Dad always drove one of the trucks from the store: a new 1948 Chevrolet pickup—one of those models with the two curvy little windows on the cab's rear corners. I wanted to learn to drive something fierce, but Dad would never even attempt to teach me in the truck. "Insurance," he'd say.

My friend, George, was 16 and had a driver's license. One day while talking cars, I told him that I'd watched Dad's clutch/gearshift action and thought I had it down pretty good, but I knew Dad would never let me drive the truck. George said, "Ya know, it's pretty easy to hot-wire a car. Dad did it once when he lost the keys to ours. There's two wires going into the switch. Just put a piece of wire between 'em and step on the starter. It'll start right up."

Wide-eyed, I said "Yeah?"

"Yeah, com'ere, I'll show ya." We went out to his father's Chevy parked at the curb. "Put your head under there and look at the switch. See those wires?" I saw lots of wires. "I see two screws with wire going to 'em. Which one do I cross?"

"The switch just connects the one with one wire to the one with 3-4 wires. All you gotta do is run a wire from one screw to the other one and it's done." That settled it; I was going to hot-wire that truck one night after I got home from work.

I had noticed that some nights, a train came huffing down the tracks near our house just about 10 p.m.—the time I got home—so the roaring sound of the wheels and whistle would cover any noise I might make in the commission of my nefarious deed.

It took about a week until the train and I synchronized. I had bought a penlight at the drug store for just this occasion. I had also managed to purloin a six-inch piece of 12-gauge wire, ends stripped. I stuck it inside the handlebars of my bike, ready for action. It had been raining for the past couple of days, but that in no way managed to deter me in my theft of the Checkerboard truck. I stuck my penlight in my mouth, pointed it toward the wires on the switch, and the deed was done. Took my inexperienced hands (and mouth) only about 10 seconds. The train was still huffing past as I eased the gearshift into reverse, let the clutch out and—killed the engine. Oh, man.

Start it again. This time let the clutch out slowly and...give it some gas and… it actually backed—jerkily—out of the drive. First gear, clutch out. Man, I was driving! Turn on the lights, shift gears and I was two blocks away and on my way to...where?

Frankly, I hadn't thought that far ahead. Stealing it was the thing, not actually going somewhere in it. I had no idea where to go. Let's see—was already past George's house, and he was probably asleep anyway. As a matter of fact, everyone I knew was probably asleep. Ha, what a farce.

I know. I'll drive past Ginger's house. Maybe she's still up.

Ah, yes, Ginger Rogers Bruce, a girl built like a brick mausoleum. Plus a perky voice, yet soft as Beethoven's "Moonlight Sonata." In addition to her dimples, super smile and big…er, eyes, she was intelligent. She was a teenage Betty Grable with brains!

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But that night, when I turned down her unlighted street, the mud immediately got so thick the truck bogged down and refused to move. I revved the engine, but one wheel spun while the other did nothing. Out of the truck to assess the situation; I shined my penlight on the wheels. Not yet up to the axles, but stuck, nevertheless. And my shoes were becoming muddy, too. So when I got back into the clean truck, I tracked mud on the mat and pedals—how do I explain that to Dad?

A couple of guys had heard me revving the engine and asked if they could help. "Sure can. Can you push from the front and I'll try to back out?" Having not even seen Ginger's house, I pointed the truck home. As I passed under streetlights, I looked at the mud inside the truck. There was no way I could explain it. And I couldn't clean out the entire inside of the truck without leaving some evidence of my stupidity. And even if I could, what about the mud all over the outside?

When I arrived home the lights were on. No point in lying. I was in deep you-know-what. Dad came to the door in his skivvies. "Who do you think you are, George, stealing the truck?" (When he was upset with my brother or me, he called us "George." I never knew why.)

"Dad, I'm sorry. I know I'm wrong and whatever you do, I deserve it."

"Do you realize you stole that truck? Do you realize I could have called the cops? And I would have, if I hadn't seen your bike on the porch. What do you think I should do to you because of this?"

That was a switch. My deed had been so devious even Dad couldn't think of strong enough retribution. "I don't know. Whatever you think is right," I replied. "I know I shouldn't have done it, and I know that saying I'll never do it again sounds like a cop-out. So…you tell me."

He sat down in a big, overstuffed chair, his head in his hands. Every so often, he'd sigh and shake his head. After a minute or so of this, he shook his head one last time, then said, "Well, we'll talk about this in the morning. Go to bed."

But we didn't talk about it in the morning. However, every time after that when he'd get upset with me for some rule infringement, he'd say, "And I haven't forgotten the time you stole the truck. I still haven't punished you for that one, either."

"So here we are at your 80th birthday, Dad. I'm 58 and I'm wondering, have you ever decided what to do to me for stealing the truck?" With everyone laughing, Dad replied, "No. But, don't worry, I'm still thinkin'!"

Shiftless Wanderer

GMC pickups were rarely built with automatic transmissions, yet this 1953 truck with Hydra-Matic is one such example

BY MIKE McNESSOR • PHOTOGRAPHY BY DANIEL STROHL

You don't often see Hydra-Matic-equipped 1953 GMC pickups on the road. But don't blame that on Bill Miles—he's doing everything he can to change that.

Since discovering this truck for sale in the pages of *Hemmings Motor News* more than 13 years ago, Bill has driven his reliable old automatic-equipped pickup truck from his home in Massachusetts to American Truck Historical Society meets in Syracuse, New York; Auburn, Indiana; and Baltimore, Maryland. He regularly drives the truck to Hemmings summer cruise nights in Bennington, Vermont (where it's won several awards), and last year, he drove it to our annual concours in Saratoga Springs, New York.

In 2009, Bill shipped the truck to his friend Ken Brown's home in Yacolt, Washington, then flew out with his son Connor and drove the truck back across the United States: a 26-day, 5,200-mile journey. The only special preparations to the 50-plus-year-old truck included the installation of a 16-gallon auxiliary fuel tank and a pair of bed-mounted toolboxes, stocked with an array of parts and tools. Before the trip, Bill also stripped the truck's interior and installed sound-deadening insulation.

Breakdowns? Minimal: an issue with the driveshaft and a fuel pump failure, both repaired roadside by Bill, who'd packed spares for both emergencies. "Ken, who accompanied me on part of the trip driving his own 1950

It's strange to see a 1947-'54 GM pickup without a clutch pedal and with the Hydra-Matic range indicator on the column, but GMC first installed the automatic in light trucks in 1953. The driver had three ranges to choose from, plus reverse and neutral.

GMC, teased me, telling me I was prepared like a Boy Scout," Bill said. "I recommend a trip like that to anybody—it was the first time since I was a teenager that I really disengaged from work and from society. My son was 14 at the time, and he still talks about it."

Bill, who serves as chief of the Sudbury, Massachusetts, fire department had been on the lookout for an Advance Design series pickup, when in 2000, he spotted this GMC advertised in *HMN*, for sale on Long Island. The automatic transmission initially struck him as odd, but after some consideration, it endeared the well-optioned pickup to him.

"I had been looking for a truck like that, but I didn't know about the Hydra-Matic," he said. "I didn't buy it right away—I did some research before I made a decision."

The Hydra-Matic made its debut in GMC light trucks in 1953, but by then, the transmission had already proven its mettle in battle. During WWII, American M5 and M24 tanks relied on Cadillac V-8 engines with Hydra-Matic transmissions for power. By 1950, GMC M135 2.5-ton "deuce and a half" military trucks were using Hydra-Matics.

In a commercial application, the benefits of an automatic transmission in light trucks were (and are) numerous. Drivers don't have to be able to operate a manual transmission to do the job; clutch and drivetrain wear from inexact driver input is eliminated; and operator fatigue is lessened, among other things.

The revolutionary Hydra-Matic transmission used a fluid coupling (not a torque converter) and two planetary gear clusters to get the vehicle moving and provide four forward speeds; reverse was handled by a separate planetary unit. Speed changes were accomplished by

More often than not, our featured GMC's wheels are turning. Pictured below right, the '53 poses for a photo at Grand Teton National Park in Moose, Wyoming, alongside Ken Brown's 1950 GMC.

Shortly after the truck was purchased, the 1956-vintage 270 six-cylinder was rebuilt and the engine bay detailed. A 302 GMC six is currently being rebuilt for it.

In addition to the automatic transmission, this '53 GMC was ordered with the Deluxe five-window cab. Though the exterior hasn't been painted since the curent owner purchased the truck in 2000, the chassis and firewall have. The final drive ratio has also been changed from 4.10:1 to 3.55:1.

alternating the front and rear planetary gear clusters between a slower reduction mode and a faster direct-drive mode.

The Hydra-Matic's lowest speed would occur when both of the transmission's planetary units were in reduction mode; for second speed, the front planetary was in direct drive while the rear planetary was in reduction; third speed was achieved by putting the front planetary in reduction and the rear planetary in direct; while the fourth and top speed required both planetary units to be in direct drive. This, of course, all had to happen free of driver input, so the transmission's clutches and bands had to alternately apply and release themselves at precise times in order to allow the planetary units to change modes, which was accomplished with hydraulic fluid pressure.

The driver could use the column-mounted range selector to select from 1-4 (for all four forward speeds), 1-3 or 1-2. There was no park as in later automatics, just the drive ranges, as well as neutral and reverse.

The Hydra-Matic was long-lived at GM, and when these transmissions aren't worn out and everything is properly adjusted, they work well. Over 13 years and thousands of miles, Bill has never rebuilt the Hydra-Matic in his truck and has had no problems with it. "It's been awesome," he said. "I'm religious about changing the fluid and adjusting the bands, but it has never skipped a beat."

When Bill acquired the truck, it looked much like it does now, but needed some mechanical attention as well as underhood and chassis detailing. Since owning the GMC, he's rebuilt the engine, which is a 1956-vintage GMC 270, and detailed the engine compartment; painted the firewall and frame; rebuilt the front suspension and steering components; added a custom-made front disc brake setup and dual master cylinder; rebuilt the rear brakes and installed new brake lines; swapped the original 4.10 rear gears for a 3.55 set and added an anti-roll bar from a 1953 GMC panel truck.

"It needed a lot of mechanical work, but I still haven't done anything to the body," he said. "I may paint it if I ever stop driving it."

Currently, Bill is building a 302-cu.in. GMC straight-six engine, with a mild performance cam and forged pistons to give the truck a little boost on the highway. "I have had the 302 engine for six years needing to be rebuilt. It's at the machine shop now," he said. "The 270 is a good engine, but it doesn't have a lot of power on the hills."

While waiting for the new engine, Bill plans to service the Hydra-Matic, just to ensure it's ready whenever the open road calls. "Every time I do something, I do my best to make the truck more reliable," he said. "I want to use it, because I enjoy driving it places and meeting people."

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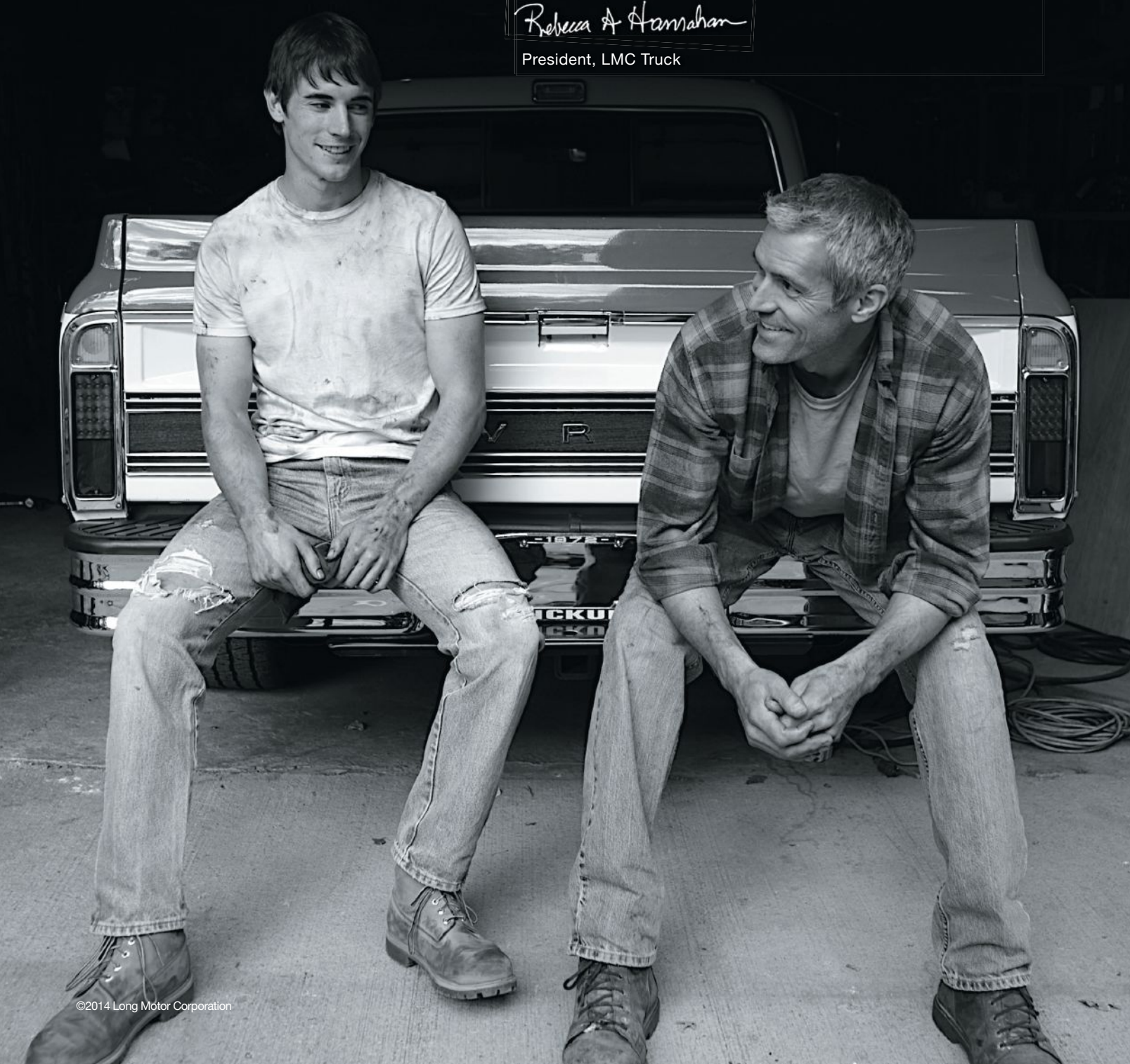
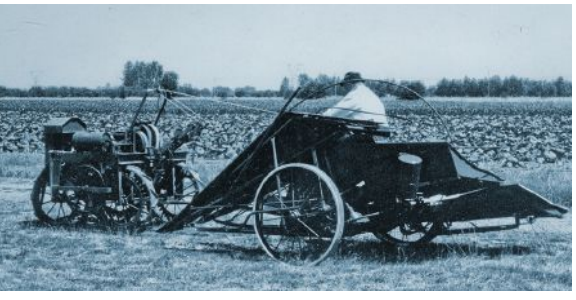
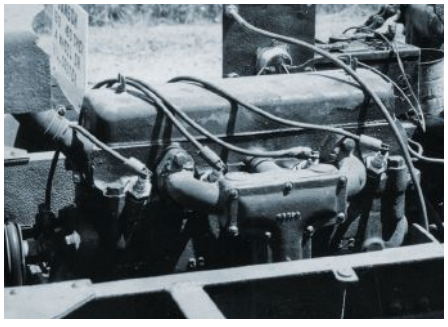


Samson's Iron Horse

GM's answer to the Fordson – Billy Durant's Chevrolet-engined $33 million boo-boo





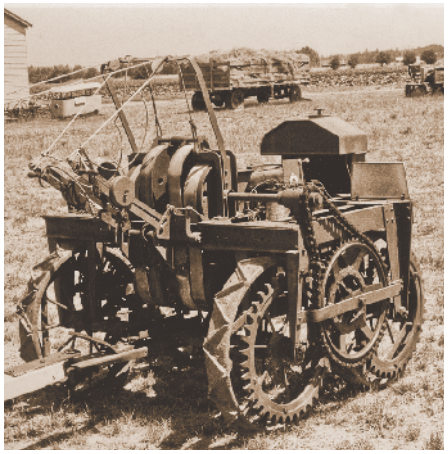
REPRINTED FROM *SIA* #42—NOV.-DEC. 1977 • PHOTOGRAPHY BY DICK LARROWE

William Durant, during his second tenure as General Motors' guiding light, made a tremendous mistake when he bought the Samson Sieve Grip Tractor Co. of Stockton, California.

Durant had been buying up all sorts of large and small companies, and he entertained real hope for the Samson. It would be a challenge to Ford's and International Harvester's farm-tractor supremacy. Unfortunately the Samson proved a disappointment to Durant and had something to do with his ouster.

Samson, in addition to making a fairly conventional three-wheeled tractor with perforated driving wheels (thus "sieve grip"), produced a model they called the "Iron Horse." The Samson Iron Horse was just that: It replaced the flesh-and-blood horse and could hook up to horsedrawn farm implements. The farmer rode or walked along behind and controlled the Iron Horse with reins. Everything worked as it would with a horse, except for gee and haw.

Durant figured the Iron Horse would be a lot more popular than regular tractors, because farmers didn't have to get rid of their old implements and invest in all-new ones. They could keep the old horsedrawn plows, binders, reapers, etc.



Trouble was, the farmer had no love for either his horse or horsedrawn implements. So when he switched to mechanical power, he went all the way and bought a new tractor plus new tractor-drawn implements.

If you've never plowed or tilled behind a horsedrawn rig, here's how it worked. To turn left, you pulled on the left rein. Vice versa for turning right. To stop, you pulled back on both reins at the same time. And to start moving again, you gave both reins a quick flick. That's how you drove a Samson Iron Horse as well as Old Dobbin.

Except sometimes the Iron Horse misunderstood and went into reverse when you didn't want to, in which case you had to trot backwards to get the reins tight enough to signal whoa!

The 1919 Samson Model D Iron Horse you see here belongs to Bill Oester of Portland, Oregon. It uses the original four-cylinder Chevrolet 490 engine and has four-wheel drive.

The Samson Iron Horse wasn't unique – other manufacturers offered similar machines. The Iron Horse idea persisted at least through 1935, when Massey-Harris still offered a rein-guided machine, although it had a seat for a driver.

Samson did bring out a conventional tractor, the Model M, to rival the Fordson, but it arrived too late and proved too expensive. As it was, GM dropped Samson altogether in 1923, after losing something like $33 million.

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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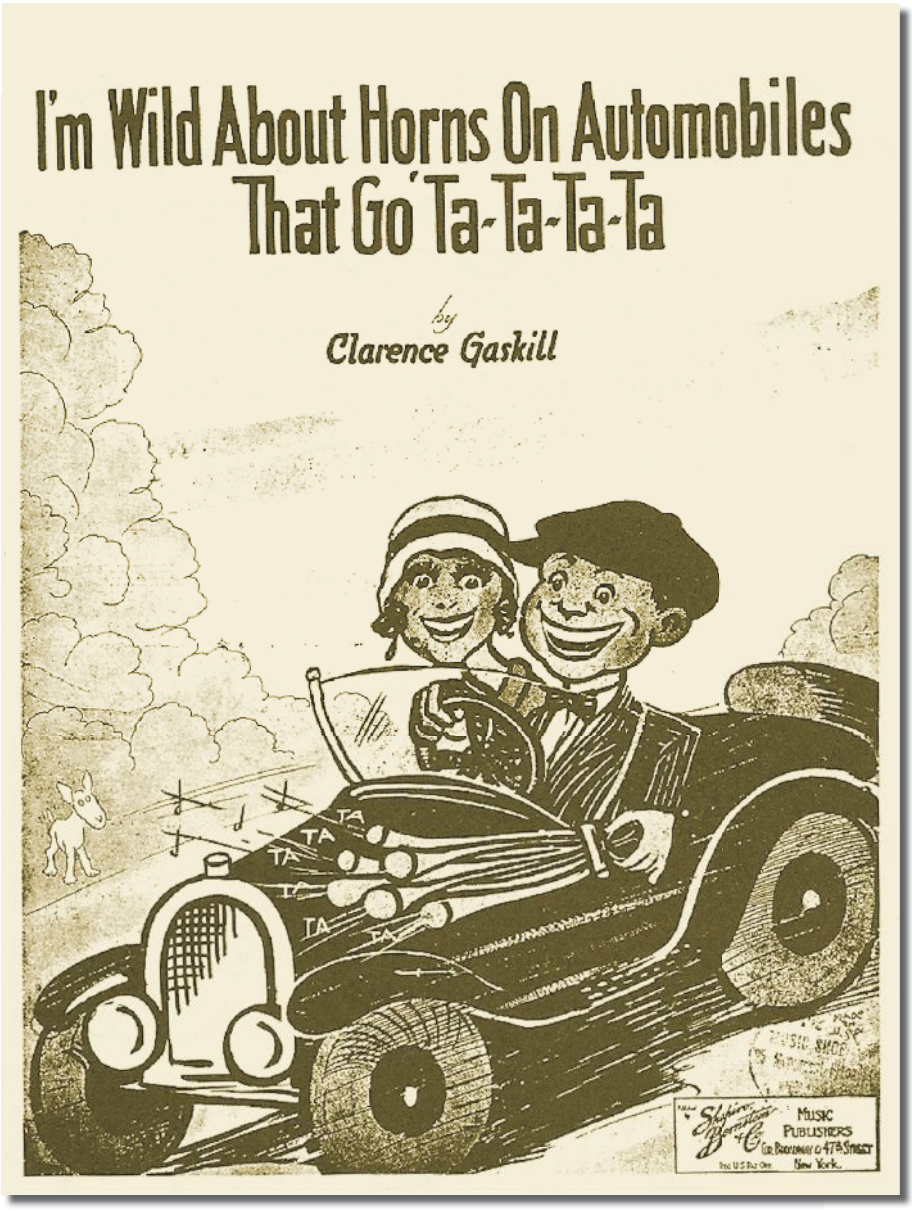

Treasury of Early American Automobiles 1877-1925
Floyd Clymer
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"Choosing a place to eat that would suit Henry Ford was a challenge. He preferred a diet that was, shall we say, out of the ordinary."

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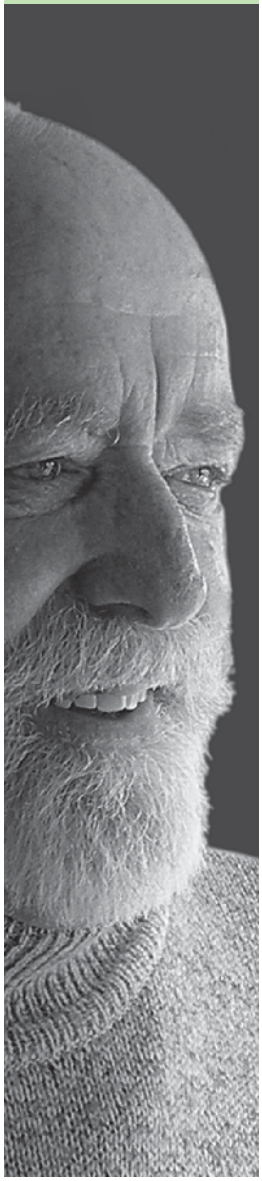
Let's Do Lunch



Some of us with a few miles on the odometer remember a TV show on which Steve Allen would have lunch with famous figures from history. One I remember was when he broke bread with Attila the Hun. Attila invented horse cavalry, and instead of having horses pull chariots, he simplified things by having his soldiers climb on the backs of the beasts. Attila was an early transportation pioneer. And according to the show, Mr. Hun wasn't such a bad guy. There was some plundering, but…

Anyway, remembering this old show got me thinking about with whom I might like to have lunch. I think I would start with Henry Ford, and I would invite Childe Harold Wills, too. The two of them would not enjoy the lunch as much as I would, but the tension between them would be interesting. You see, Wills was Ford's chief engineer during the early Model T days, and he was the one who figured out how to produce the lightweight, strong, vanadium steel alloys that made the Model T so durable. He also figured out the Model T's two-speed planetary transmission, and even came up with the Ford logo. Wills and Ford parted company acrimoniously in 1919. Wills' severance pay came to a million and a half dollars, so he built his own car in 1921, called the Wills Sainte Claire. It sported an overhead-cam V-8! It was expensive, so it didn't sell well and the company folded in 1927, but its engineering was revolutionary.

Choosing a place to eat that would suit Henry Ford was a challenge. He preferred a diet that was, shall we say, out of the ordinary. You see, he was a friend of George Washington Carver's, and Carver was an advocate of eating weeds for their nutritional value. Ford liked the idea, and started eating his "roadside greens" and even dressed as a carrot and gave carrots out to his employees as snacks. And in his dotage, he believed mother's milk would extend his life, so he kept nursing mothers on hand to provide it for him. Thankfully though, he also loved buckwheat pancakes, so I decided we could meet at IHOP. Here's how it went. Ford ordered first:

Ford: I'll have the buckwheat cakes—dry—a dinner salad, no dressing, and, uh, milk. What do you want C.H.?

Wills: Burger, fries and a regular Coke for me. What do you want, kid?

Richardson: Same as you ordered.

Ford: Well, C.H. how's that new car of yours coming?

Wills: We're still working on it, but it will be three times the car your Model T is, Henry.

Ford: Yeah, and three times the price. Besides, the T is the perfect car.

Wills: Have you ever heard of overhead cams, Henry?

Ford: Of course, but I'm not sure you've grasped the idea of "overhead," let alone cams.

Wills: You're always thinking of money, Henry. That's why the T is obsolete.

Ford: Then why have people the world over bought more of them then all other cars combined?

Wills: Because they don't know better. And by the way, who is this kid with no cap or tie?

Ford: His name is Jim. He writes for some magazine called *Hemmings Classic Car,* and he offered to buy lunch, so here I am.

Wills: Oh, yeah…I remember now.

Richardson: Mr. Ford, I have been an admirer of yours all my life. What do you think is the future of the industry?

Ford: Soybeans.

Richardson: Soybeans?

Ford: Yeah, you can make anything out of them, even car bodies.

Wills: Have you forgotten all I taught you about metallurgy, Henry? Soybeans, indeed…By the way, how is that son of yours?

Ford: Edsel? Takes after his mother.

Wills: He's a sharp kid, Henry. You should encourage him.

Ford: Nah…He wants to spend me into the poorhouse making cars pretty. No red-blooded American would buy a car because it's pretty!

Richardson: I would.

Ford: You look like a bum and have an unkempt beard…what do you know from pretty?

Wills: Don't pick on him Henry. You said he's paying for lunch.

Ford: Bah! There are no carrots in this salad!

We said our goodbyes; Henry got into his Model T and crawled away in a wisp of white vapor; Wills got into his Wills Sainte Claire Gray Goose and took off, grabbing a little scratch in second gear. It was an enlightening repast. Next, I am going to invite Walter P. Chrysler and Billy Durant. That should prove interesting.

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