# Restorer

**FEBRUARY 2018 | \$7** 

THE HOW-TO GUIDE FOR CAR & TRUCK ENTHUSIASTS



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# Remembering The One You Gave Away...



'm sure that on more than one occasion you and your car pals have talked regretfully about "The One That Got Away." You know the scenario...

One day you spotted the vintage car or truck that you'd wanted for years. Maybe it was a vehicle that had made your pulse run a little faster since you first saw it brand-new in a dealer's showroom during your younger days.

And now, all these years later, there it was, parked with a For Sale sign propped up on its dashboard. You circled it a few times inspecting its exterior. Sure, there was some rust, but nothing you couldn't fix or live with. The interior was nice as well, so you called the number listed on the sign, met with the owner, went for a test drive and were ready to make the

But then you hesitated. Maybe you thought the price was a bit too high or you weren't certain if the time was right to take on another vehicle. For whatever reason, you shook hands with the owner and told him you'd get back with him.

Then, a few days later, you were certain...that fabulous vehicle, the one you'd wanted for so long, had to be yours. So you grabbed your phone and called the owner...only to learn that he'd sold it a few hours earlier.

Yes, it truly was The One That Got

But while that's a very sad automotive tale, I think there's one that's even more regretful and that has to do with The One You Gave Away.

We've all been there, and on these wintry days as you sit in your favorite chair watching the snow or rain pass by the nearest window, you've had more than one remorseful thought about a car or truck that you used to own. Maybe you had bought it new, used or as a collector car, but whatever the circumstances, at the time you were very glad to have it. You enjoyed driving and maintaining it. You felt good whenever you got behind the wheel, and whenever you parked that car or truck you always took a few steps and then stopped, turned and took an admiring look before you went on

That's how it was for you and your

special vehicle for some time. This wasn't just a means of transportation, it truly was a "car pal" who you looked forward to seeing every day.

Things continued that way for some time until one day your feelings changed. It wasn't that you now disliked your pal, it was just that you had an itch for something different. So you sold that special vehicle...then came to regret the decision and have ever since. Sure, you got some cash out of the deal, but the money became immaterial. What's important here is that you had owned and enjoyed that vehicle, but you willingly handed it over to someone else...You Gave It Away.

Let me share a personal example to show you what I mean.

Readers who have been with us for a while are familiar with the special '66 Valiant that I owned years ago.

I first spotted the Valiant 100 on a Plymouth dealer's used car lot and as they say in the movies, there was a feeling of instant chemistry. It was as basic as a car could be...a Slant Six engine hooked to a three-speed column shifter, with a vinyl interior and light blue paint. But I was a college student at the time, working to pay school and living expenses and that economical little Mopar was just what I needed...and wanted. I drove that car for about a half-dozen years and during that time my Valiant took me where I wanted to go and brought me home again. It wasn't a luxurious or high-performance experience, but I came to think of the two of us as a team...and my teammate never let me down.

Then, after I landed a job as a newspaper reporter, I decided that I needed to get a brand-new car to go with my brand-new career.

I sold my Valiant pal for a few hundred bucks, but even as the new owner was driving away something told me to go after them; tell that guy I've changed my

No doubt by now my little blue Mopar has long since gone to Recycling Heaven. But if there were some way to find out for sure, I'd do just that. Yes, I'd certainly like to know whatever happened to The One I Gave Away.

-Ted Kade, Editor



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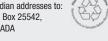
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# Our Award-Winning Cover Car

he 1954 Pininfarina Jaguar XK120 seen on our November cover was judged to be the Restoration of the Year at the annual Octane Awards in London. The prestigious awards "recognize the elite in the international historic motoring world," and the judging panel included industry and hobby experts such as five-time Le Mans winner Derek Bell, and noted collector and TV host Jay Leno.

Our award-winning cover Jag took 6725 hours to complete and was restored by Classic Motor Cars (CMC) a major shop in Bridgnorth, a town in central England.

The Jaguar is a one-of-a-kind car that features unique bodywork by the famous Italian design house Pininfarina. After being unveiled at the 1955 Geneva Motor Show it went to its original owner in New York but a subsequent owner brought it back to Europe and it was in Germany when CMC learned of the car and purchased it in 2015. That's when CMC decided to perform what it says became "an epic 6725-hour journey."

And the car truly was in need of much work at the time. It had not been treated well over the years.

During the forensic inspection it was found that a previous owner had painted the exterior in burgundy, covered

the seats with tan leather and changed various other aspects of the vehicle. Some of the original parts were impossible to find such as missing bumpers and chrome work, so CMC remade them by hand from photographs. The rear window was missing and 3D scanning technology was used to scan the window opening and make a replacement.

There were no signs of the original paint color, but when the windshield was removed a small section of original paint was discovered and used as a color match by CMC's paint specialist.

The interior door panels were missing along with the carpets and at first even the original trim color could not be determined. Then a small sample of original leather was discovered while stripping the car down. That was color-matched and the original leather type and color was used to recreate the original Ochre tan interior. The shape and pattern of the interior door panels were recreated by looking at similar Pininfarina-designed

cars from the period.

The company said this "was one of the most challenging restorations ever undertaken by CMC, who managed to restore every aspect of it, from the unique body and structure through to paint, trim and mechanical elements, whilst saving as much of the original car as possible."

This is the second time that CMC has taken home the Restoration of the Year accolade, having done so previously in 2011 with the restoration of the Lindner-Nocker Lightweight, a legendary racing Jaguar that many thought to be beyond repair. CMC is the only company to have won this competition twice.

In accepting the award, Nigel Woodward, Managing Director at Classic Motor Cars, said: "CMC is tremendously grateful to the judging panel for their recognition of the skill and craftsmanship of our team of specialists who created this restoration. We are also blown away to have won this award for the second time."

-Ted Kade, Editor

Feb. 18—St. Charles, IL: Annual Buick-Olds-Pontiac-Cadillac Swap Meet and Car Corral, hosted by Chicagoland Buick, Pontiac, and Olds clubs at the Kane County Fairgrounds, 525 S. Randall Rd. Meet is mainly indoors with an outdoor car corral. Hours: 8 a.m.-2 p.m. Admission: \$6. Heated indoor vendor spots: \$40. Visit www.bopcswap.com, email bopcswap@gmail.com or call 630-554-2383.

Feb. 23-25—Palm Springs, CA: McCormick's 64th Palm Springs Collector Car Auction, at the Palm Springs Convention Center, 277 N. Avenida Caballeros. Some 580 vehicles are to cross the auction block over a three-day period. Auction hours: Friday, noon-8 p.m.; Saturday, 10 a.m.-7 p.m. and Sunday, 10 a.m.-5 p.m. (Gates open at 8 a.m. on Saturday for preview viewing.) Spectator admission: Friday, free; Saturday and Sunday, \$15 per day or \$25 for both days. Visit classic-carauction.com or call 760-320-3290.

**Feb. 23-25—San Diego, CA:** The 52nd Annual BIG 3 Auto Parts Exchange and Car Corral, at Qualcomm Stadium, I-8 at I-5. Car corral is for vehicle models 1990 and older. Spectator hours: Fri., noon-4 p.m.; Sat., 8 a.m.-4 p.m. and Sun. 8 a.m.-noon. A parking fee is charged by the stadium. Visit big3partsex-change.com or call 619-599-0708.

March 10 & 11—Louisville, KY: The KYANA Giant Indoor Swap Meet, sponsored by the KYANA Region of the AACA, at the Kentucky Exposition Center Pavilion, West Wing Hall and Broadbent Arena. Billed as the largest indoor swap meet in the country, it covers some seven acres. Event includes a 100-space car corral. Hours: Sat., 8 a.m.-6 p.m. and Sun. 8 a.m.-4 p.m. Admission: Adults, \$10 per day. Those under 12, free. Email kyanaswapmeet@gmail. commedia.com or call 502-619-2917.

March 24—Florence, SC: The 6th Annual PeeDee Mustang Roundup, hosted by the Eastern South Carolina Mustang Club, in downtown Florence (Cheves & Dargan Streets). Open to all Ford, Lincoln and Mercury vehicles. Visit escmustangclub.com or call 843-206-9712.

April 21—Newton, KS: The 15th Annual Wheat State Antique Truck Show, hosted by the Wheat State Chapter, American Truck Historical Society, at Newell's Truck Stop, I-135/US 50 exit 31. Hours: 9 a.m.-3 p.m. Free show entry and spectator admission. Open to trucks of any sort along with cars, racers and tractors as well. Visit www.aths-kansas.org, email: dmarkshiffett@gmail.com or call 316-288-3443.

May 5—Overland Park, KS: The annual Shawnee Mission West High School Car Show/ Swap Meet, 8800 W.85th St. Open to all makes and models of cars, trucks, bikes—anything on wheels. Hours: 11 a.m.-2 p.m. Fee for show participants/vendors: \$20. Free admission/parking for spectators. E-mail: shawneemissionwest-band@gmail.com or call 913-963-2952.

May 5 & 6—Seabrook, TX: The 23rd Annual Keels & Wheels Concours d'Elegance, a classic car and vintage wooden and fiberglass boat show, at the Lakewood Yacht Club. The event draws some 200 cars and 100 boats. Cars generally are pre-1975. Hours: Sat., 10 a.m.-5 p.m. and Sun., 9 a.m.-4 p.m. Admission: \$35. Those 10 and under, free. Visit www.keels-wheels.com or call 713-521-0105.

News Wanted Auto Restorer welcomes news, club and event information. Items must arrive at least three months before an event.

Contact: Auto Restorer News, 5151 California Ave., Suite 100, Irvine, CA 92617; or email: tkade@ luminamedia.com



#### **Some Help for That Tire Search**

Here's a quick response that may help Howard Klein (November Mechanic on Duty) solve his basic dilemma..."I can't find tires for it," namely for his '48 Pontiac Torpedo Eight. (In his letter, Howard said his Pontiac has 16-inch wheels and he can't find tires for it. He says he can get 14- or 15-inch wheels that will fit, but he's concerned about the effect this size change might have on the car.)

I was surprised that there was no mention of Coker Tire in your response to Howard. While I haven't used their business it seems they are quite popular and several of my friends use them as a source with good success; including some "concours" prize winners. Coker can be reached on the web at: https://www.cokertire.com

My quick look there showed me several replica makes as well as multiple widths in the 16" wheel size.

A more modern approach would be that he upgrade to radial tires. My own experience as well as several of my restorer friends show this works out to be a very beneficial change for ride, handling and, of course, availability.

A search for availability on the website Tire Rack gave me these results:

Found one at this size: 185HR16 93H

Found three at this size:

195/75R16C 107/105R

https://www.tirerack.com/content/tirerack/desktop/en/homepage.html

In all cases their load rating was well above what a '48 Pontiac would need.

These example tires are just a little wider than the stock tires by about 3/16 to 1/2" on a side (3/8 to 1" overall) so a preliminary check for sidewall clearance to suspension parts, brake hoses and sheet metal would be wise.

Also, the 75 aspect ratio tires will be slightly smaller in diameter (and circumference) than OEM but not nearly as much as a reduction in wheel diameter would cause. This would result in some inaccuracy in the speedometer and odometer readings which may be easily correctable with a speedometer pinion gear change.

Another idea: I'd suggest that Howard shop for stock-looking modern steel wheels. If nothing else technology has progressed since 1948 to improve the

rim's bead formation to better retain the tire and provide a better support surface for the bead; especially with radials.

A possible additional advantage I'll suggest (and look for some further input by other Auto Restorer readers for their experience) is that since radial sidewalls flex more and differently than bias tires, the strength of the stock wheels may be less than desirable for this different loading. Still, that's a very modest possibility and no way a deal-breaker.

For tires and wheels there are many sources and alternatives. So these should not be a cause to stall such a worthwhile project.

I hope this helps Howard keep his fantastic Torpedo running straight and normal!

Bob Swartz Waterford, Michigan

*Editor's note:* Readers will recognize Bob as a regular *AR* contributor.

# **Keeping Those Whitewalls Really White**

On the "How can I whiten these whitewalls?" question from Chuck Johnson in the October Mechanic on Duty section...I have had great success on my Model A with what you guys call Mr. Clean Magic Erasers (mrclean.com). We call them Vanish over here in the UK. A bucket of water and one of these and away you go!

Regards, Kevin Flood Reading Berkshire UK

*Editor's note:* That's Kevin's Model A showing off its whitewalls on this page.

We saw the October inquiry from Chuck Johnson of Bloomington, Minnesota, regarding his yellow whitewalls. We purchased five new whitewalls from Coker Tire. They came yellow. We called them and they said to use Scrubbing Bubbles or Simple Green. We tried both but to no avail.



A reader in the UK has found a way to keep the whitewalls looking like new on his Model A.

Then we went to a car show and Coker was selling Wide White Whitewall Cleaner. We tried it and it worked a little. So we got fed up and used the Whitewall Cleaner along with steel wool. It did a great job the first time through. We'll take more time and redo it again. They really look good now. We didn't want to try Comet yet but may give it a try.

Thanks for the info. Your articles are very helpful and informative.

Susan Dellinger Plattsmouth, Nebraska

#### **Some Free Back Issues**

Ted, I'm a long-time subscriber and have almost every issue since April 2013 and am cleaning house.

If any of the readers would like these, all they need do is take care of the shipping cost; the magazines are free.

Sorry, but it's all or none; no cherry-picking of the issues.

I'm still a paid subscriber and look forward to each issue.

Phil Fortier Santa Cruz, California pf108@comcast.net

## More On Using Teeth-Cleaning Tools On Our Vehicles

I have some further thoughts on the teeth-cleaning device letter in the November issue.

The use of a Waterpik dental tool to remove grime stuck in delaminating glass and the follow-on question on using a dental pick for the same purpose made me wonder if dental floss might not be a valid tool to try. It is sufficiently fine to pass between the delamination and might loosen the crud so the Waterpik could be unnecessary or the floss would assist in making it more effective.

I would have suggested fishing line but most don't have wax to capture the crud and it wouldn't be consistent with the dental tool theme.

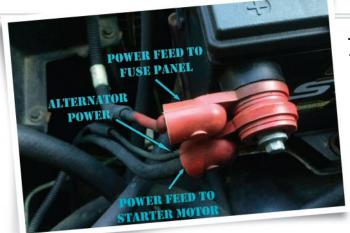
I enjoy every issue and always read them cover to cover.

Robert Hemsen Via email

## Here's How I Solved the Starting Problem on My Chevy Truck

I have some recommendations for Bill Allard regarding his '94 Suburban that has an intermittent starting issue (Mechanic on Duty, June 2017). The symptom he described is that his truck starts perfectly nine times out of 10, but occasionally will not crank no matter how many times the key is turned.

I am pretty certain that I know the cause of his problem, and have fixed this same problem on my '95 Chevy Silverado. It has to do with how the positive battery cables are installed



Maintenance of this dual battery connection solved one reader's starting problems.

on that generation of Chevrolet and GMC trucks. There are two battery cables installed at the positive post of the battery. The one closest to the battery runs across the core support and provides power to the fuse box and is the main power distribution cable for all of the vehicle's systems and accessories, including the dash lights, ignition switch, and the power to the solenoid power for the starter. The second battery cable, farthest away from the battery, is the high-current cable that runs directly to the starter motor and provides all of the electricity to make the starter spin.

The problem comes when the battery connections are corroded between the two positive battery terminals. This allows electricity to flow to all parts of the electrical system except for the starter. The result is that the dash lights come on and all systems work properly, except when you try to start the solenoid will pull in but there's no cranking.

When I ran into this problem on my Silverado I was stumped at first and thought it was a defective starter (which was relatively new). However, a little head scratching and inspection with the help of a friend revealed the problem pretty quickly. The fix was very easy. I removed the positive cables and took out the bolt that holds the two cables to the battery and cleaned everything well. I replaced the bolt, which was looking somewhat corroded, then reassembled. The problem has been gone for over a year and I don't expect to see it again.

Thanks for publishing the best howto automotive magazine on the planet! Mike Harlan

Sammamish Washington

Editor's note: We ran an image in November similar to the photo from Mike on this page but we figured that readers would also find this one to be of value due to Mike's identification of the components involved.

#### Thanks For All of the Suggestions Regarding My Suburban's Starting Problem...My Fix Was to Replace the Starter

I appreciate the fact that *Auto Restorer* printed my message in the June issue regarding the episodic non-start problems I was experiencing with my '94 Suburban. I also appreciate the

thoughts and shared experiences set out in the November issue in the Readers Respond section by April Grammont, Charlie BeVille, Charlie Mitchell and Edward Wilburn

In the end, my problem was solved by the guy behind the counter at my favorite repair shop (who has some of the white hair lacking at the Chevy dealership). He walked out to the repair bay where the Suburban was once again up on a lift and scrutinized everything closely.

The connections from battery to starter were once again determined to be clean and tight. But a (no doubt high-tech) hands-on wrestling around of the starter suggested a "loose armature" internal to the starter. Whatever connections were bumping around inside the starter, a new starter solved the problem.

I now drive the truck as a daily commuter without any problem.

Meanwhile, Mr. Mitchell's message in the November issue made me recall a much older incident with the same truck. (Charlie Mitchell said that he solved his problem by rebuilding his starter. But prior to that if he gave the starter "a good rap" it usually would start his Chevy pickup.)

In my case, I went out to Summit Point, West Virginia, with my nephew and three kids. We had a great day of watching road racing.

But then there was nothing but silence from the ignition switch at the end of the day.

A racing team tried to help, but no go. The truck had to be carried back to Great Falls, Virginia—a bummer way to end a great day.

Back home, someone suggested that I should have had sense enough to bang on the starter with a rubber hammer or piece of 2x4, which would have at least gotten me home under my own power.

Thanks to all, Bill Allard Great Falls, Virginia

## Added Insight Regarding Spontaneous Combustion

As a forensic scientist and fire investigator, I had to clarify the "oily rags" mentioned in the December Mechanic on Duty column. Rags oily with petroleum-based fluids—motor oil, grease, gasoline, diesel, etc.—are not chemically competent to self-heat and therefore do not represent a self-ignition risk. They ARE susceptible to ignition by welding slag, electric arcs, prolonged contact with incandescent light bulbs and, of course, discarded burning matches and cigarettes.

The "oily rags" that CAN self-heat are unsaturated oils—often linseed oil, tung nut oil, peanut oil and fish oils. These are found primarily in finishes for wood, not metal.

A serious self-heating risk today in auto shops are the polymer coatings, paints and fillers that use a separate catalytic agent. These can readily create heat as they cure.

All rags used for these products (including drop cloths and papers) should be sealed in a closed metal can as soon as possible after use.

Wadding them up and putting them in an open container like a garbage can or wastebasket can lead to tragedy in minutes to hours.

> Dr. John DeHaan Fire-Ex Forensics, Inc. Vallejo, California

#### Contact Auto Restorer

If you have a comment on something we've published, a suggestion regarding future coverage or would just like to speak out regarding an automotive-related topic, you can write to us at 5151 California Ave. Suite 100, Irvine, CA 92617. You also can reach us by email at tkade@luminamedia.com

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# **Mechanic on Duty**



# Can my depleted battery be charged again?

I have a 1957 Ford Ranchero that is my baby, so much so that I rarely drive it, and that has become a problem. A couple of times over the years I have even had to drain the gas tank and clean out the fuel system. But my biggest problem is that each spring it seems I have to buy a new battery. My garage does not have electricity going to it, so I can't hook up a trickle charger.

I bought an Optima battery last year because I was told they would last up to 10 years, but mine won't even turn the engine over after just a few months. Also, I have been told that once an Optima is deeply discharged it cannot be recharged and will have to be replaced. Is this true? Tell me it isn't so

#### Dean Gillespie Placerville, California

It isn't so...really. You can recharge an Optima that is flat most of the time, but it is a little more complicated than recharging a flooded (wet cell) battery, and you need to keep an eye on things.

This method is for the do-ityourselfer using the equipment most of us have on hand. The plan is to trick your traditional charger into charging that deeply discharged Optima.

Things you'll need:

- Battery charger (under 15 amps)
- Jumper cables
- A good battery, preferably above 12.2 volts. (It can be an absorbent glass mat [AGM] or conventional battery.)
  - The deeply discharged Optima
  - A voltage meter
  - · A watch or timer

Hook up the good battery and the deeply discharged Optima in parallel—that is: positive-to-positive and negative-to-negative. Next, hook up the good battery to the charger. Turn on the charger. The charger will recognize the voltage of the good battery and start providing a charge.

Leave the batteries hooked up for an hour, and then check to see if the Optima is slightly warm or becomes hot to the touch. Batteries become warm during charging, but excessive heat may indicate a fault with the Optima. Discontinue charging immediately if the battery is hot. Also discontinue the process if you hear the battery off-gassing, which usually makes a hissing sound. If it's either hot or gassing, stop charging immediately; the Optima is defective.

Use your voltage meter from time to time to see if the Optima has charged to 10.5 volts or higher. This generally takes less than two hours with a 10-amp charger. If it has reached the desired level, disconnect the charger from the wall outlet and remove the good battery from the charger. Now connect only the Optima to the charger. Turn on the charger and continue until the Optima is fully charged or until the automatic charger completes the charge process. The Optima should be restored and ready for service.



# Why is there a puddle under my car?

I have a 1993 Corvette 40th Anniversary with 27,000 miles on it. I have noticed a brake fluid puddle on the floor and a little fluid weeping between the master cylinder and the booster. I have filled the reservoir with DOT 4 fluid and checked it regularly to see if it loses fluid. The reservoir does not seem to lose any fluid but the puddling continues. Is the seal between the booster and the master cylinder leaking or is there another problem with the system I am not aware of? Do you think the master cylinder or booster is bad or do you think changing the seal between the booster and master cylinder will solve the leaking?

#### Bill Blackmon Brentwood, Tennessee

A car that old with only 27,000 miles on it has done a lot of sitting in the garage and that is worse than if the car had been driven more. If the brake hydraulic system has not been serviced in all that time, I would purge the entire system and replace all the seals. DOT 4 brake fluid is hygroscopic, which means it attracts and absorbs moisture. Also, seals dry out when a car is idle in storage and are perishable in any case.

The puddling may be a slow accumulation or it may happen only when you depress the brakes. In any case, assuming the hydraulics have never been done on the car, I would

purge the system, replace all seals, and have the master cylinder rebuilt. That may sound drastic but remember, when it comes to the condition of a braking system, your life may be at stake.



## Some standard transmission upgrade ideas

I'm restoring my 1957 Chevy 1/2-ton truck and would like to upgrade the transmission from its original threespeed to an overdrive tranny so I can cruise on the freeway. It has its original inline 6. I purchased and read your book "The Classic Chevy Truck Handbook." You recommend using a Mopar A-833. I did a little research and found that the 23-spline U-joint yoke that I would need is hard to find

I also talked to some old-time restorers in my area and they recommend using a T-5 from an S-10.

My questions are: What tranny would require the least modifications to fit in? There were many changes to the A-833 so which model year would fit the best? I scoured the Internet to no avail for the 23-spline yoke; do you know of any source for one? If I decide to use the T5 tranny what year works best with the least amount of mods? Thanks for your help.

Nick Bulzomi New York, New York

Mopar A-833 transmission recommended in my book is a four-speed, with the fourth gear being an overdrive. It was used in Plymouth Feather Dusters and Chevrolet vans and trucks, and is more rugged and heavy duty than the T5 in service. The fine-spline rear yoke you need for the A-833 is available from the source listed below. This transmission puts the shift lever pretty far back in the cab, but it can be bent forward and then back again for convenient shifting.

The T5 is a five-speed with the fifth gear being an overdrive. To make it work with your truck an adapter gear needs to be installed by a technician, and you will need to adapt it to your Chevy's mechanical speedometer, or have Dave Waugh (see below) do it for you. Neither of these adaptations costs much, but they are important. The T5 is just fine for normal use in

your truck, but if you were going to be hauling heavy loads on a regular basis, the A-833 would be a better bet.

You do not want a T5 from the S10, however, because it is too long and the shifter would wind up under the seat in your truck. And with any T5 you will also need to find the correct yoke to work with your driveshaft. There are a number of T10 versions to choose from, but I recommend you call a knowledgeable source for transmissions near you or contact Dave. His knowledge is encyclopedic and he can help you select what you need and adapt it to your truck. You can reach him at:

Dave Waugh Remanufacturing 11965 Rivera Rd. Santa Fe Springs, CA 90670 562-693-0855

#### I want to convert to Dot 5 brake fluid

I read your article in *Auto Restorer* on the differences in brake fluids.

In the article you said the different fluids are compatible. If I wanted to use Dot 5 only, what would I flush the system with?

Jack Ellis Tulsa, Oklahoma

I consulted my friend and brake system guru Vince at C.H. Topping and Company in Long Beach, California, as to what should be used to clean a brake system and he suggested Brakleen, available from auto parts stores and brake shops. However, he said that he would only go to DOT 5 brake fluid if the whole system had been taken apart and overhauled because the DOT 5 fluid can cause existing rust and muck to break loose, and leaks are almost inevitable unless the system is fresh.

However, once your brake hydraulic system is renewed and filled with DOT 5 fluid, that will pretty much end any hydraulic problems for years to come. I can attest to that because I rebuilt my 1940 Packard brake system 30 years ago, filled it with DOT 5 and have had no problems since then. You can consult Vince or have the job done at:

C.H. Topping and Company 520 W. Esther St. Long Beach, CA 90813 562-432-0901 chtopping.com

Removing crust & rust
I've almost finished the restoration
of my 1960 Metropolitan and started
restoring my '51 Studebaker 1-ton truck.



You will need sanding disks, a household drill, wire wheels and putty knives as well as the items in the tools list included here.



Use a putty knife and a propane torch to scrape off caked-on filth, but have an extinguisher handy when you do.



A sharp putty knife will remove heavy dirt and filth.

I have a blast cabinet I've used for hundreds of parts on the Met, and now for pieces of the Studebaker that will fit in it. I've found this a great way to thoroughly remove rust and old paint. How can I get larger, complex truck components—frame, axles, springs, huge split-rim wheels, etc.—to similar condition? How do other hobbyists and professional restorers handle this? Having somebody else blast or use another method to clean these parts is fine with me, but I need to know what method and who can do it for me.

Glenn Johnson Wooster, Ohio

Taking a truck completely apart and cleaning and sandblasting components is a big job, and I don't know of anyone, short of a restoration



A wire wheel chucked into a household drill will make short work of the remaining paint and dirt.



Rust-Oleum or Eastwood's Chassis Black will make your truck's chassis look factory-fresh.

shop—that will charge you upward of \$90 an hour—who will take on such a task. Sandblasting doesn't do much to caked-on grunge, and neither does steam cleaning. And if you go to sand blasting you run the risk of grit getting into little vents on the transmission and differential, as well as other places, and ruining bearings.

There is no quick clean solution to your problem that I know of, but here's my time-tested recipe for transferring years of road grime from your restoration project to your clothes and shop floor. First, assemble the following tools:

e following tools:
Putty knives
Small squirt can
Lacquer thinner
Electric drill
Propane torch
Assortment of wire wheels
Sanding disk and sandpaper
Strong twine
Tri-sodium Phosphate (TSP)
Scrub brushes
Neoprene gloves
Rust-Oleum Rusty Metal Primer
Satin finish black Rust-Oleum
Safety glasses and particle masks
Your first instinct might be to

Your first instinct might be to take your truck to a steam cleaning facility but I don't recommend it. Steam cleaning doesn't appreciably affect caked-on muck anyway and it will damage distributors, generators,

#### **Mechanic on Duty**

voltage regulators and other electronics, even if such items are covered with plastic bags sometimes. And blowing dirty water into the induction system or into your cab air vents isn't such a great idea either.

Before you begin, spread a tarp to catch the dirt, and then drive the truck onto the tarp. Put the vehicle up on jack stands so you can get under it easily and remove the wheels so you can get to the brake backing plates.

Now put on some long-sleeved coveralls, a hat and safety glasses and roll underneath.

The worst stuff you'll have to deal with is the dirt-and-oil combination that forms a kind of tough, asphalt coating (I call it grunge) wherever it sticks. Dissolving it all with solvent is really messy, and as we said before, steam cleaning doesn't seem to affect it appreciably. In fact, it has been my experience that heating it with a propane torch and scraping it off with a stiff putty knife is the most effective approach to its removal. Scraping will remove most of it, and you can use sturdy twine to saw dirt from around bolts and other protrusions. Wire brushes are helpful too.

Put a little cheap lacquer thinner such as you would use to wash a spray gun in your squirt can and squirt it onto stubborn or hard-toreach places to dissolve the grease. Work outdoors in a well-ventilated area, and have a fire extinguisher handy. Lacquer thinner is volatile. Use old absorbent rags to clean up your mess, and dispose of them properly so as not to risk fire or pollute the environment.

Now put a stiff wire wheel in your electric drill and clean as much of the remaining dirt and rust off of everything as you can. There are several shapes of wire wheels that range from the fine to the heavy-duty twisted steel brushes. You'll want an assortment for chassis cleaning.

Next, install a sanding disk with #200-grit open coat sandpaper in your drill and sand as much stubborn rust and discoloration off of everything as you can. Areas that cannot be reached by your sanding disk will have to be done by hand. This is a lot of work, but the cleaner the metal on your classic's chassis, the longer its new paint will last.

When you have everything clean and bright you are ready to wash the chassis. Mix up a strong solution of TSP and hot water and put on neoprene gloves and goggles. Now

wash everything down from front to back to remove any remaining grease or oil. Finally, rinse your work thoroughly using a garden hose.

When the chassis has dried thoroughly, if you have a compressor and spray gun, mix up a pot of Rust-Oleum's Rusty Metal Primer and shoot it on. Use big pieces of corrugated cardboard to shield fenders, bumpers and running gear from over-spray. Give the primer about 45 minutes to dry, and then mix up some Rust-Oleum satin finish black paint or Eastwood's Chassis Black. Use a touch-up gun or an aerosol spray can of the same paint to get into tight places. (You can do the entire chassis with rattle cans and I have done this myself, but it takes time.)

Let your truck sit for at least 24 hours before driving anywhere. Rust-Oleum takes a while to dry, but when it finally does it is very tough and will last for years. The satin finish black is correct for production trucks made in the last 70 years, and the results will surprise you.

#### Should my "fine" tires be replaced?

My restored 1940 Chrysler Windsor has tires on it that are about 30 years old. They look fine, and they still have plenty of tread but a friend told me I ought to replace them just because of their age. But finding the correct 6.25x16 tires with 3 1/2" whitewalls is tough. I would be happy with the correct bias ply tires, but am also considering radials if I can find them. Can you recommend a source and what do you think I should do?

> Bill Wilson Charlotte, North Carolina

Last summer a fellow lost control of his superbly restored 1951 Mercury wagon due to a tire failure on the rear passenger side of the car. The tires were about 10 years old, but had plenty of tread. His wife suffered a broken collarbone and the vehicle was destroyed, but the owner was uninjured. This has persuaded many of my friends who know about the incident to take a close look at their classic's tires.

Truth is, according to tire manufacturers, tires should be changed at least every 10 years whether or not they are worn. It doesn't matter if you only have a few thousand miles on them or not. Air pollution, sunlight, grease and oil, as well as temperature changes, underinflation and uneven roads all take

their toll. There are several sources of vintage and antique tires for your car, and I would recommend Coker and Universal as the best providers.

However, there is one major supplier here in Southern California that I would avoid. They sold a friend of mine tires that were already two years old that they had obtained from Coker originally. In view of that, I would check any "new" tire you purchase for their DOT date code from any of the vendors, assuming one is provided. Some tires for older classics may not have the code.

It will read like CVULL2FC3506 with the last four numbers being the week and year the tire was manufactured. This number is from a tire on my 1955 Chevrolet and it tells me that the tire was manufactured during the 35th week (September) of 2006. It's about time to replace it, even though the mileage on it is negligible.

As for whether to use radial versus bias ply tires, I would say that if the car is restored and still being shown, I would put the correct bias ply tires back on it. But if it has become a driver, you might like the slightly superior handling characteristics of radials. If you decide to go with radials though, I would put tubes in them because a 1940 Chrysler's wheels were not designed for tubeless tires. Give these sources a try:

Coker Tire 1317 Chestnut St. Chattanooga, TN 37402 855-990-1576 cokertires.com

Universal Tire 2994 Elizabethtown Rd. Hershey, PA 17033 877-454-3954 🗘

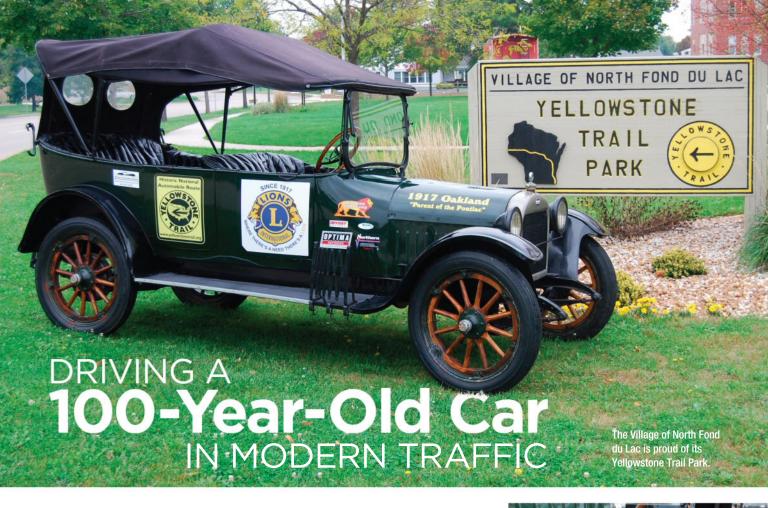
#### Ask The **Mechanic**

Our mechanic on duty, Jim Richardson, is a veteran restorer of cars and trucks as well as a long-time contributor of how-to articles published in Auto Restorer. You can seek his advice by writing to:

Auto Restorer, Mechanic on Duty 5151 California Ave. Suite 100 Irvine, CA 92617

Fax to: 949/855-3045

Email: tkade@luminamedia.com While it may not be possible to answer all the questions received, we'll print those of the greatest general interest. Sorry, but due to the volume of inquiries, personal replies aren't possible.



### Their 400-Mile Tour in a 1917 Oakland Called for Some Special Traveling Tactics. The Heavy Rain Didn't Help Things Either.

#### By John Gunnell

Editor's note: When AR contributor John Gunnell acquired a 1917 Oakland, he and some car pals decided to drive the antique vehicle along Wisconsin's 400-mile stretch of the Yellowstone Trail. The Trail, established in 1912, was the first transcontinental highway through the upper tier of states, running from Massachusetts through Yellowstone National Park in Wyoming to Seattle. They also decided to use the trip to raise money for the Lions Club because just like the Oakland, that group hit the century mark in 2017.

We'll let John pick up the story here...

s we recounted in last month's installment, during the first four days of the trip we were constantly working on the car.

Now let's take a look at the last two days of our trip...when the weather added to our touring problem.

Friday started at an Oshkosh hotel under cloudy skies. For the rest of the day we would cloud the air a little bit more with exhaust smoke from my Oakland. The day ended at the Super 8 in Hartford, Wisconsin, with a roll of duct tape, some borrowed plastic wrap and skies that had become quite rainy.

Shortly after leaving Oshkosh, we stopped at a gas station at the intersection of Highway 45 and County Road R. Hobbyist Kenn Oie had emailed that he'd meet us with his 1960 Thunderbird. Once we arrived, Dave Sarna, who's been doing much of the mechanical work and driving, serviced the Oakland. It has no valve cover, so the valve train has to be oiled daily. He also added coolant to the almost-empty radiator, topped off the oil and tinkered with a few other things.

We started off again on County Road R, with Dave and the smoky Oakland leading the parade, Kenn following in the T-Bird and me driving the F150 Crew Cab chase truck and trailer. The Oakland was running fairly strong and we stayed on R until we came to RP, which took us into North Fond du Lac.



Among the spots where Dave Sarna worked on the car was a Kwik-Trip gas station in Fond du Lac.

Several of Wisconsin's 400 Yellowstone Trail signs were spotted along this route.

#### **Time for More Mechanical Work**

We were early, but Lions Club members were already at the Yellowstone Park in North Fond du Lac. The small park has a large Yellowstone Trail sign that was great for photo ops, including one for us. A minute away from the sign was a warehouse for Northern Battery (www.northernbattery.com) which is located



The Marvel carburetor's float had to be adjusted at the Kwik-Trip.



in another old Yellowstone Garage, a stopping place along the route in the Trail's early days. In fact, the garage belonged to the family of Mark Mowbray, the executive director of the national Yellowstone Trail Assoc. Mark and his brother came to see us in North Fond du Lac. He also had told Kirk Donskey, the vice president of Northern Battery, about our plans to stop at the building. Kirk made a healthy donation to the Lions Club and also helped us out with a technical issue. Our two-year-old battery had gone dead several times, so Kirk told his Fond du Lac crew to put a new 6-volt Northern Battery in the Oakland.

After an hour or so, we were ready to have lunch, take off and smoke up the highway to Hartford, Wisconsin. Dave had been advised to put a little diesel fuel in the Oakland's tank, so we went looking for a gas station with diesel fuel. But we didn't make it to the Kwik-Trip station before the Oakland started acting up. The carburetor was flooding and stalling the car, but the problem also seemed to be electrical. At the Kwik-Trip, Dave took the distributor apart and cleaned the contact points with sandpaper. He then checked and adjusted the carburetor.

#### **Keeping It On the Road**

I suggested we might want to put the car on our trailer and tow it to our next stop at an automotive museum in Hartford, but Dave would have none of that. He insisted the car was going to make it under its own power and continued to adjust the carb the best he could. It wasn't "good," but it was good enough.



We skipped lunch and went smoking through downtown Fond du Lac, then took off for Hartford on Highway 176. Mark mentioned something about a hill we'd be climbing. He wasn't kidding!

In the old days, Oakland automobiles were known as good hill climbers, but our "Sensible Six" huffed and puffed a little climbing those grades south of Fond du Lac. We were beginning to wonder if Dave was driving a car or "The Little Engine That Thought It Could."

Sometimes, he'd come to a halt near the top of a hill and I expected to be loading the trailer. Then the Oakland would shake, puff out a little smoke and start moving uphill again.

#### **Dealing With Modern Traffic**

As you might imagine, we had traffic backed up at various points. Dave was usually going about 20-25 mph. I was driving behind him with my 4-ways flashing. We left room between us for vehicles to pass me, get back in for safety and then pass the Oakland. Not all the motorists caught on right away, but fortunately we didn't become the target of any road rage.

About 10 miles out of Hartford, Dave stopped for a breather and I told him I had checked the GPS for an easier way to get to the auto museum. So I went ahead to lead him in. All went fine until the last couple of turns. Dave got stuck in traffic coming up a hill and lost sight of me turning left. He continued straight. I did a U-turn when I could and went the way he had gone. It was easy to find him. All I had to do was follow the smoke!

The GPS soon got us to the Wisconsin



This 1929 Oakland is housed in the Wisconsin Automotive Museum.



Our tour ended at Gateway Classics, a collector vehicle dealer in Kenosha.

Automotive Museum where members of three different Lions Clubs were waiting, along with Dawn Bondhus, the museum director. After some picture-taking, Dawn offered Dave and me a tour. The specialties there are Kissel Kars, Nashes and short track racing cars, but the overall collection included everything from a gorgeous Ruxton on special display to a 1913 locomotive. We had a pretty long chat with Dawn and though I've been to the museum many times, this was the best visit.



Unloading the Oakland at the old Yellowstone Garage in Waupaca, Wisconsin.



#### **Time to Apply a Protective** Plastic Wrap

The rain had started just before we got to Hartford at 4 p.m. and continued all the time we were there. By the time we left it was coming down pretty steady. It was dark, but Dave wanted to drive the Oakland to the Super 8 where we had a reservation. Amazingly, he was able to make a relatively easy (he only cut off one car) left turn onto Highway 60, a busy 4-lane road. I wasn't quite as lucky with the trailer and had to wait awhile. Dave would need to find the Super 8 on his own.

Dave missed the entrance on the first try but came back and parked the Oakland. It was raining pretty steady, so Dave decided to walk down the street to buy a tarp to cover the car. The Oakland has absolutely no rain protection other than the windshield and the top.

I soon found him sitting in the hotel lobby with scissors and a couple of sheets of shipping plastic that he had received from the backroom crew of a nearby Walgreens. We wrapped the plastic around the car and held it on with duct tape.

I came to realize that if Dave hadn't been involved in this Yellowstone Trail Tour, it probably never would have been completed. Dave just doesn't know the meaning of the word "quit." Two weeks earlier he had realized a personal dream by driving a Trans Am 209 mph at Bonneville (2-way average over 206 mph). After that high-speed adventure, he drove the '17 Oakland at 25 mph across 409 miles in Wisconsin. Somehow, some way, Dave achieves what he sets out to do.



#### We Finally Made It

Saturday was Day 7 of the Yellowstone Trail Tour and it found us dealing with rain all day. The rain was pretty light in Hartford in the morning, got worse in Hales Corners at noon and was pretty heavy in Kenosha late in the day. The 1917 Oakland got a little waterlogged, although its big "convertible top" did a pretty good job of keeping most of the interior dry.

We had starting problems in Hartford and decided to tow the car in the Milwaukee area. In Hales Corners, we stopped at a historic old tavern and the local Lions Club members turned out and gave us a nice donation. Bob Hanson of WPAK Radio in Waupaca caught up with us for the end of the tour. His cousin from Kenosha came along to guide us through the area.

After leaving Hales Corners, we headed the Oakland toward Kenosha. There we ended the tour at Gateway Classics, a giant collector-car dealership.

#### **Towing It Home With** the Top Down

We towed the car home on a windy and rainy Sunday after noting that the fabric top had torn at the upper rear corner on the passenger side. Even though it was raining steadily, we lowered the top to prevent it from tearing to pieces. There are special precautions one should take before towing an early prewar car (see a list of tips below) but we had to avoid taking the time to do them because it was raining so hard.

When we got the car back to my

Yellowstone Garage in Waupaca, Dave removed the top and took it to the Appleton Awning Co. to get the tear repaired. He also took the Marvel carburetor off and brought it to Bob Buchman who will be restoring it.

Shortly after the Yellowstone Trail Tour, we heard that this endeavor had raised over \$7000 for the Lions. We now plan to take the car to several upcoming events such as the NEW Motorama show in Green Bay on March 23-25, the Pontiac-Oakland Club International Convention in Wisconsin Dells June 24-26 and the Iola Car Show in Iola, Wisconsin, July 12-14.

#### **Some Tips for Towing** an Early Prewar Car

Towing or trailering an early prewar car calls for some special precautions:

- 1. It's a good idea to tape or cover the headlight lenses.
- 2. Use padded tie-down straps to keep the hood on the car.
- **3.** Lower the top if possible and strap it with tie downs or bungees.
- **4.** If you must tow with the top up put the car on the trailer backward for added protection.
  - **5.** Remove the seat cushions.
- 6. Remove everything from inside
- **7.** Tie opposite doors together with straps or bungees.
- **8.** Wrap the windshield with plastic
- **9.** If practical, wrap the car with plastic shrink wrap as used with boats.
- 10. Remove easily removable accessories like accordion luggage racks. O

# THE CASE OF THE PONTAG, PT. 1



### After It Had Spent 40 Years In a Small, Junk-Filled Shed With a Dirt Floor, Removing the Station Wagon Would Not Be An Easy Task. Still, He Was Determined... By Curt McConnell

n late 2002 a friend of mine, John, began circulating a photocopied sheet listing 15 older cars scattered about his grandparents' farm near Syracuse, Nebraska. Would I like to see them in person?

Well, sure!

John's grandfather had died some 14 years previously; his grandmother had died only recently. It was, consequently, time to clean up the farm and sell it.

John laid claim to a '64 Imperial that, fortunately, his grandfather had parked inside. The rest of the vehicles scattered about the farm were up for grabs.

It turns out John's grandfather had a propensity to park a disabled car outside, lined up in a grove of trees, whenever it was time to buy another cartypically another used one. I bypassed various 1950s Chrysler products as too weathered, something I now regret as at least two of them were equipped with early Hemi engines.

But—Aha!—a certain General Motors car, in much better condition than the others for having been parked in a shed, had unexpectedly captured my fancy.

#### A Hidden "Woodie"

The massive 1950 Pontiac station wagon, powered by a flathead straight-8 engine, was an "internal woodie." That is, it sported wooden door panels and other interior trim while merely using paintedon woodgraining to create the illusion of wooden exterior panels. (For the story of two more such "woodies" see page 26.)

The Pontiac was an 8-passenger standard model—it had a vinyl instead of the deluxe model's leather interior, for one thing—that used a "3-2-3" seating layout. In simpler terms, it had two bench seats behind the front seat, allowing it to carry 8 people versus the deluxe model's 6 people.

Sensing my interest in the old wagon, John drove me over to visit an uncle, who, as a child, had ridden in the car on a family vacation to Colorado in the early 1950s.

His uncle, also named John, recalled that in 1962 when the car's Hydra-Matic transmission quit shifting into reverse, his father (grandfather to my friend) drove the wagon into a shed on the farm and simply left it there.

Seems he'd been too busy farming to attempt his own repairs and was reluctant to spend much money on a 12-year-old car.

The Pontiac had been sitting, forlorn and forgotten, in the shed for upwards of 40 years. (The 1963 license plate stickers suggest that Uncle John's memory was off by a year.)

From Uncle John and other family members. I learned that the storied wagon once hauled a stud ram, purchased at the Nebraska State Fair, down Lincoln's busy O Street and back to the farm at Syracuse.

As the kids grew up and family vacations tapered off, the car saw less and less usevery little, in fact, after 1958.

#### **A Surprisingly Nice Exterior**

Just four blemishes marred the station wagon's otherwise pristine body: 1) a puncture wound in the center of its tailgate; 2) the left front fender's bowedout lower lip, caused by the car's settling into the shed's dirt floor; 3) a dent low on the left quarter panel near the rear bumper; 4) and a bent front-bumper tip.

Inside, despite a distinct mousy odor, the car's vinyl upholstery, floor mats, dashboard and the like were as nice as you'd expect from a car driven just 51,918 miles. A virtual time machine, the car had been abandoned in the prime of its life, the key still in the ignition switch.

#### The Recovery Became an Ordeal

After buying the old wagon, my struggle to remove and load it turned into the longest car-recovery campaign of my life for manifold reasons (none actually involving a manifold): 1) the shed was not only narrow and low but one of its twin outward-swinging doors was stuck; 2) mountains of heavy junk limited access; 3) the car's wheels and tires were missing; and 4) both of its rear brake drums, which had settled into the dirt floor, were frozen tight.

A day after viewing and buying the Pontiac, I returned with John to inspect several more outbuildings on the farm. To our disappointment, none harbored old cars. Thus at about 11 a.m. John

pitched in to help me begin digging out the Pontiac on what would become Day 1 of a 3-day ordeal.

As we'd learned a day earlier, the right half of the shed's twin swing-out doors opened easily; the left half was stuck, its lower edge pressed into the hard ground. I'd brought a shovel and was ready to excavate.

But at John's suggestion, rather than dig out the bottom of the left-hand door, we pried out the long and heavy nails that secured its two hinges to the door frame. We then half-lifted, half-dragged the door aside.

#### **Bared to the Light**

With both halves of the swinging doors now open, we could see inside for the first time without using flashlights. Coated with dust, the squared-off rear end of the station wagon sat just inches behind the shed doors.

Like a meandering river, the leaky old shed had gradually filled with silt. Over the decades, several inches of soft, powdery dirt had accumulated on the shed floor. Similarly but more noticeably, junk had drifted in to accumulate in towering piles next to the old Pontiac: easy chairs, engines, window panes, farm equipment and on and on. Like the Pontiac, it was all stashed in the shed for "some day."

The concrete blocks that John's grandfather (I presume) had placed beneath the brake drums in the early 1960s were still in place, if barely.

Evidently, the car had settled forward over time, and its rear blocks angled forward like a pair of sinking ocean liners, leaving the differential half-in, halfout of the dirt.

Although someone had shoved boards under the back of the car to prevent it from happening, the rear universal joint and brake drums had also become partly buried in the dirt. The boards did save the gas tank by keeping it from sitting directly on the ground.

Not surprisingly, the Pontiac's rear drums had rusted up and refused to turn. I got better news at the car's front end, which had remained above the shed floor: both brake drums still turned easily by hand.

#### **Digging Out the Derelict**

Here my shovel came in handy as I set about raising the four corners of the 3800-pound station wagon, starting at its most-accessible right rear corner.

I began by digging out as much loose dirt as possible. Next, I placed a piece of plywood on the ground to support my floor jack, which I slid under the car. Finally, I raised the corner far enough to block it up.



This was my first view of the Pontiac station wagon that had been parked in a shed near Syracuse, Nebraska, since the early 1960s.

I performed the same tasks, though with increasing difficulty, at the Pontiac's other three corners.

The problem was the shed, so lowslung that I had to watch carefully to avoid bumping my head. It was, essentially, an early pole barn: a wooden framework with corrugated sheet metal nailed on to form the side walls and roof. Wooden siding covered the front end wall. As viewed from the front, the entire building was leaning lazily to the right.

"We'd better hurry," I joked with John at one point. "There's no telling how much time we have before the whole thing caves in on us."

After raising the car's right front corner, I ran into trouble while blocking up both left-side corners. For one thing, because of a low rafter just ahead of the car, I found it hard to wield my shovel to dig out under the front bumper.

#### **Dodging Sharp Nails**

What's more, the driver's side of the car cleared the shed wall by perhaps 16 to 20 inches. While jostling around in this tight space, I had to dodge dozens of sharp points from the nails that attached the steel siding.

A day earlier, we'd been unable to open the glove box. Today, we met with similar results, even after trying to open the glove box lock using two keys folded into the ignition key's leather fob.

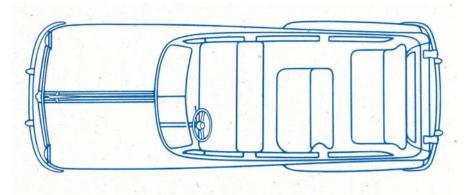
We got in, ultimately, by using John's pocket knife to reach past the top edge of the glove box door and thereby depress and release the door latch, all without harming the door or mechanism. Sure enough, we found the car's original owner's manual inside...definitely showing its age.

Though tattered and mouse-nibbled, the manual told me the correct tire size— 7.10-15 6-ply, which equals a modern 225/70R15 tire—I would need for getting the wagon rolling again.

#### The Engine Remained **Hidden From Me**

Although this was my second visit to the car, I'd still been unable to open the hood using the remote-control cable on the lower left side of the dash. I was eager to view the straight-8 engine of which the car's fender tags boasted.

It's possible that I didn't pull hard enough on the hood-release cable: I wanted to avoid breaking either the cable or its knob, after all, knowing that a 40-year buildup of rust had undoubtedly frozen the cable or latch possibly both.



#### THREE SEATS - 8 PASSENGER

Pontiac's Standard Station Wagon is designed with the same comfort as the De Luxe, but seats eight persons on a "3-2-3 Seating Plan." Both rear seats are removable and the rear seat may replace the intermediate seat. Even with all three seats in, there's loads of "carrying capacity." Equipment includes: Spare tire, tube and wheel; bumper and bumper guards; metal spring covers; dual windshield wipers; dual tail lamps; dual horns; dual sun visors; permanent oil cleaner; cigar lighter; ash receiver; dome light; outside lock on front doors.

As illustrated in a Pontiac brochure's overhead phantom view, the 1950 standard wagon came equipped with three bench seats.

It appeared that reaching through the grille bars to jimmy the hood latch—similar to the way we'd opened the glove box door—wasn't in the cards, either. As an anti-theft measure, Pontiac engineers had placed a sheet-metal shield around the latching mechanism. I did spray some penetrating oil around the shield, however, hoping that it would somehow drip inside.

Although the hood remained locked at

the end of Day 1's four-hour work session, we did make some progress. For one thing, we'd succeeded in opening a stuck shed door and digging out and blocking up the heavy car in cramped quarters. Best of all, we'd found two of the car's original rims and tires elsewhere in the shed.

#### Two Weeks Roll By...

I devoted much of the next day to seeking two more rims. This meant

driving an hour south of Lincoln to Watt's Salvage & Repair near Wymore, Nebraska, where I discovered four or five 1949-50 Pontiac parts cars, all sedans. From them I removed two rims (\$20 apiece) and a full set of lug nuts.

Ultimately, a local service station let me scrounge four old but decent 15-inch tires from its scrap pile, which a Lincoln salvage yard with a tire machine mounted for a few dollars.

By this time, many days had passed, due in part to conflicting projects and troubles with my truck and a borrowed trailer that sank in the mud at my storage area. Wet weather further delayed me.

Finally, more than two weeks after John and I had previously visited his grandparents' farm, I returned alone to resume extricating the Pontiac—Day 2 of the 3-day expedition.

My plan upon arriving at 11:30 a.m. on a Friday in early November was fairly simple—in theory. First, I wanted to clean up enough of the car's 20 very rusty wheel studs to mount the wheels and tires I'd brought with me. Next I would lower the blocked-up car and begin winching it out of the shed.

In fact, my day proceeded according to plan except that everything took much, much longer than I'd expected it to.

#### Where's the Wire Brush?

I was partly to blame for this delay. When I'd heaped tools and supplies in my truck that morning, I'd forgotten one



Despite a thick layer of dust, the old wagon's dashboard was not only striking but complete in every detail, down to the ignition key.





We decided to remove the left-hand swinging door to give us enough daylight to work inside the shed.

important item: a wire brush. I therefore had to clean the lug studs with the small terminal brush on the battery-post cleaning tool in my toolbox.

But then I was merely planning to load the car on a trailer—not drive it. So I opted to clean just two studs per wheel. This still meant brushing each stud, soaking it with WD-40, running a lug nut on and off to further clean the threads and then giving the stud another blast of penetrating oil to remove any leftover rusty residue.

With the wheels mounted, I centered my floor jack under the frame to raise first the car's entire left side and then its entire right side. This allowed me to remove two concrete blocks at once versus one block at a time, which was all I could have achieved by jacking up each of the car's four corners in turn.

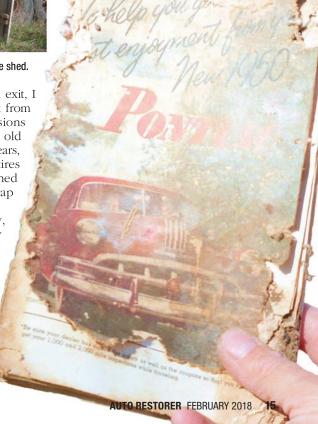
To smooth the car's eventual exit, I shoveled the large piles of dirt from behind each wheel. Depressions remained from where the four old concrete blocks had sat for 40 years, however. To keep the new tires from dropping into them, I lined these holes with chunks of scrap 2-by-4 lumber.

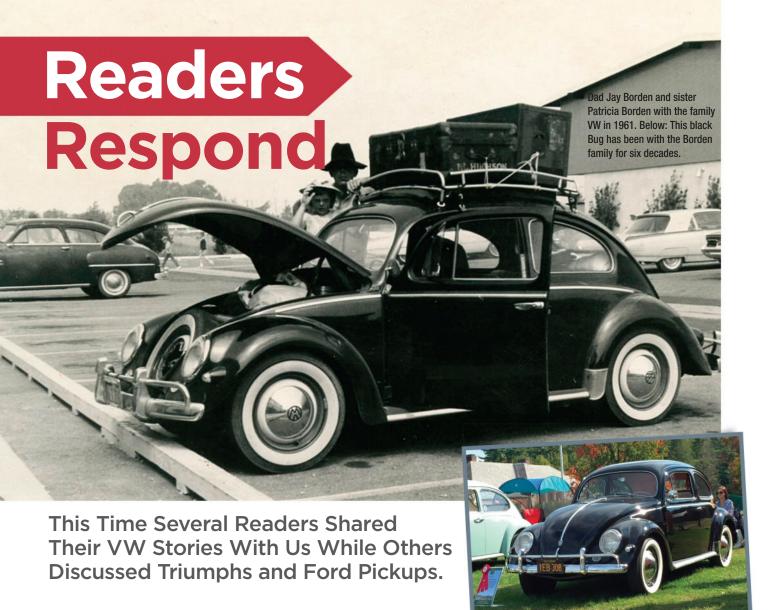
I would have trouble, I knew, pulling a car with locked rear drums backward out of the shed. Though tempted to hunt up a neighbor with a tractor, I ultimately discarded the idea: I didn't want an

It's always exciting to reach into the glove box and pull out an original owner's manual, no matter how abused it may have been. impatient, careless helper to damage my prize.

On the other hand, the wet sod would thwart any attempt to pull the car out with my 2-wheel-drive pickup. Times like this, I knew, called for creative thinking.

Next time, an attempt will be made to extract the 1950 Pontiac station wagon by constructing two roads—one of plywood, the other of bridge planks. •





**Editor's note:** In the September issue we ran photos of a red VW Beetle taken by AR contributor Traci Sipple in Seal Beach, California. As we always invite reader participation, we asked folks to share their personal VW stories with us. Here are some of them:

# The Borden Family's 1957 VW Story

My father ordered the black VW seen here from Glendale Motors in California in February of 1957. It was delivered in August from Germany as a deluxe version with dealer-added options of an automatic radio, stone guards on the rear fenders and chassis undercoating. My father later added a roof rack which was needed to carry the luggage for our family-of-four vacations.

As well as being my dad's daily driver, the VW made numerous vacation trips to Yosemite, including several trips over the Tioga pass (11,000 feet) into Nevada. One attached picture from 1961 was taken in Goleta, California, with my younger sister Patricia and my dad behind the car.

I learned to drive and took my driver's license test in the VW in 1967.

The following year I took a trip with a friend towing a single-wheel camper trailer. That one covered over 3000 miles in California including going over the Tioga pass.

Then we began to move the car around in the family. In the early spring of 1970, in my freshman year at Cal Poly, I traded my 1957 MGA Coupe to my dad for the much more reliable VW.

Still, it had 100,000 miles on it and it dropped the #3 exhaust valve on a Friday evening trip home in the fast lane of the Hollywood freeway. But we easily solved that problem. We purchased a used 1966 1300 engine from a local wrecking yard for \$300, installed it, and I drove the car back to San Luis Obispo on Sunday afternoon.

In April of 1971 my roommate and I picked up his sister to go on a steam train excursion from Sacramento to Truckee. She's now my wife.

In the spring of 1972 the transmission

pinion bearing was failing and I put 180 weight gear oil in the transmission and drove it from San Luis Obispo to Orange County, California, on another weekend visit. I then upgraded to a used four synchro transmission from the same wrecking yard where I had obtained the used engine mentioned above.

In the summer of 1972 I started driving a 1964 VW split window Sundial camper and my sister took over the 1957 as she went off to San Diego State. When my sister graduated from San Diego State in June of 1976 I purchased the car back from her but did not take possession until December of that year as I was in Italy on a foreign assignment.

I used the VW as a daily driver and commuter car in rotation with other VWs that I owned, repaired and restored until 1985 when I took it out of daily service and began a rolling restoration. I had collected a number of 36 hp engines and 3-synchro transmissions while working



on the other VWs in anticipation of restoring the 1957.

I took all of these mechanical pieces to a friend who was the owner of the wrecking yard where I got the engine and transmission upgrades. He also was one of the top VW/Porsche engine/ transmission rebuilders in the country. He located a set of usable 1957 engine and transmission cases and rebuilt both to factory specifications. I restored the engine sheet metal, distributor and carburetor.

Life got very busy, so the VW did not get a lot of attention during the mid- to late-'90s and it was not until 2002 that I started to spend more time on the car's restoration. The VW had no rust issues, being a California car with dealer applied undercoating, but it did need some minor body work to fix small dings and minor accident damage that had occurred during the years the car was a daily driver.

I did some of the work but the final bodywork and painting was done by Benz Auto Body in San Carlos, California, over a one-year period. Getting the body straight for the black paint was more important than getting the job done fast. Benz Auto Body's owner, Sam Dababo, is as much of a perfectionist as I am. Sam was also kind enough to let me complete the restoration work in his shop, installing the interior, windows and have enough garage space at home (too many other cars in the stable).

As can been seen in the other picture, the body and paintwork are top-notch. During this time at the body shop I was lucky enough to locate an original German material headliner which I had professionally installed. I used modern sound insulation in the doors, roof and cargo area.

Within days of completing the restoration I put the car in storage for three years while I was on another foreign assignment, again in Italy. Since returning to the US and relocating from California to Michigan I have driven the car as often as I can.

I'm also very pleased to report that my daughter loves the car and will take it over when I can no longer drive it.

Tom Borden

#### I Bought My '69 Bug New

Hi Ted, I am sure that you get tons of email from readers. I just wanted to say that I have been a subscriber for a number of years and really enjoy Auto Restorer. In the September issue there was a request for VW Beetle pictures and stories so I thought this would be a great time to send in a photo of my '69 Bug.

This is the first car that I ever bought new. It has been with me through many major milestones in my life. Due to its long-term, heavy use it was in sad shape for a while but I never could let it go. So in 2008 I started a complete body-off rebuild which took six years (part-time) to complete. With some help from my son all of the work was done by me in my garage and a temporary paint booth set up in my driveway. As you can see from the "before" photos, lots of sheet metal work needed to be done.

I have not had the opportunity to take it to any shows yet, but I have historic plates on it now and use it for summertime cruising in the area. I hope you can share the photos with the other readers and thanks for putting out a really great magazine.

John Crescenti Freehold, New Jersey

#### We've Owned a Number of VWs

I saw the red VW article in the September issue and would like to add my two cents. The green VW in the attached photos is the one that's mentioned in my article:

It is 1961, just married with a new wife who had landed a job 40 miles away. She needs a car...what to do? No problem. Trade a guy a portable radio for a tired 1956 Beetle with Baldinni tires, a battery on its last legs and a wellworn engine. While driving that VW she met a lot of truckers who helped her change one worn-out tire for another. The battery had to come in each night



to be warm enough to start the engine in the morning and one day, while gently pulling away from a traffic light, the crank became two pieces.

MOTOR MUSTER

Next, VW had a very good delivery plan which allowed you to order a new car from your local dealer for delivery in Europe. The advantage was such that the saving was enough to pretty well pay for your round-trip air fare. Once your trip was over, VW would ship your car to the states.

The day came to pick up our car and when we arrived at the port, our car was pointed out to us. Wait, that couldn't be our car! Our car is blue and this one is grunge! That's what happens when a car makes the journey on the deck. After getting it home and washing off the dirt, we found that an energetic German, not wanting anything to happen to the chrome bumpers or trim, had applied cosmoline—apparently with a four-inch brush.

Volkswagens are economy cars, but that doesn't mean that they can't be made to run with a little effort. We found a 1971 Super Beetle and decided to see if some engine work would help it along. Some VW guys turn up their noses at the Supers, but on balance they are a

bit roomier and can easily outhandle the swing axle cars. The stock engine is restricted with a tiny intake manifold and restrictive exhaust. So, dual Webbers, a mild cam and extractor exhaust works wonders. We finished the engine and installed it on

Friday night. The next day we left in the car for Florida. You do some dumb things when you're younger, but the engine was fine.

I became interested in experimental aircraft but had no knowledge with building except that I knew I wanted to work in metal. I chose a simple design that was inexpensive...and to power it? What else, a VW engine. At that time, the Beetles were still being built in Mexico so new engine cases, cranks, cams, cylinders, etc. were readily available. I built the best-balanced and blueprinted 1600 that I could and installed it in the airframe. The crank nose was machined for a propeller adaptor and a casting on what would be the back of the engine in the car held a large ball bearing to handle the radial loads. An adaptor was turned and installed on the other end of the engine to mount an aircraft magneto. A manifold was designed and installed to hold the carburetor under the engine and a stock VW oil cooler was mounted on top laving horizontally. I successfully flew the plane for a few years before building a more capable plane with an aircraft engine.

Now most of that VW engine powers our 1968 Beetle that's seen on this page.

**Editor's note:** Bo Shaw writes regularly for *AR* regarding his Triumph TR3A and now his Spitfire restoration project, so when we heard he was traveling to a favorite Triumph event, we asked him to tell us about it. Here's his report:

#### **A Trip to Triumphest**

For anyone who is interested in Triumph cars, as I am, Triumphest is a must-attend event. Sponsored each September by a different Triumph car club, Triumphest is held at varying locations throughout California and Arizona. It is open to Triumphs of all years and types, and I was fortunate enough to be able to attend Triumphest 2017 in Flagstaff, Arizona, with my TR3A.

The Desert Centre Triumph Register of America (DCTRA) club of Phoenix sponsored this gathering of the Triumph faithful, and attendance was outstanding with 120+ Triumphs ranging from a mid-1930s Gloria Southern Cross sports car, to 1970s Triumph sedans and "estate wagons," to the final TR8 models of 1980. There was, of course, also a wide selection of all the Triumph sport car models ranging from the various Spitfire marks and early TR2s to the aforementioned TR8.

Most of the participants arrived from California and Arizona, but many traveled from the mid-western states, Canada and even as far as Delaware to attend. Oklahoma and Texas were especially well-represented with several outstanding examples of the Triumph marque.

During the course of three days,



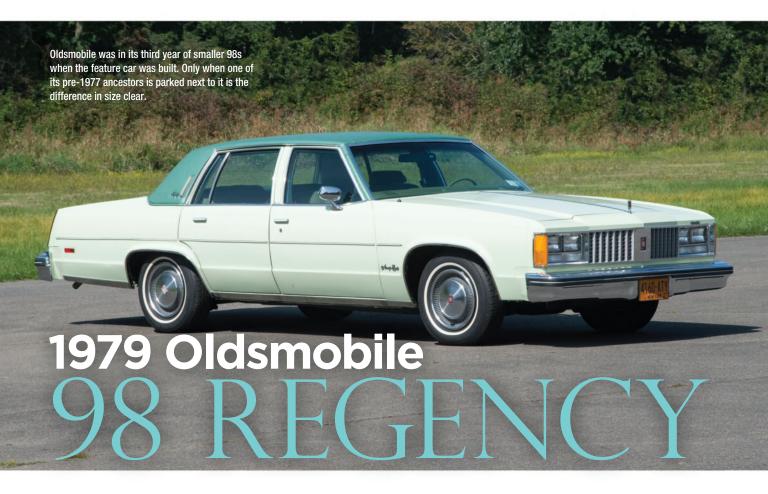
Triumphest attendees could participate in a wide range of activities including tech sessions, self-guided scenic drives and a driving rallye. Participants also had the opportunity to test their driving skills in the professionally operated autocross or the light-hearted "funkhana." (Think gymkhana without the pressure to perform.)

The main Triumphest event, however, is the "funcours" that takes place on Saturday morning. Again, the "funcours," unlike the much more rigorously judged concours of some car shows, is an opportunity for Triumph owners to exhibit their cars no matter what their condition may be.

The next Triumphest will be held in Sacramento, California, in September and is sponsored by the Triumph Travelers Sports Car Club (Triumphest 2018. org). Triumph car ownership is not a requirement to attend, and Triumphest is an excellent opportunity to see these charming cars. You may even catch the Triumph "bug" yourself.

Bo Shaw





It Comes From a Time When Detroit Was "Downsizing" Its Vehicles. But Make No Mistake, It Still Has That "Big Car" Feeling.

By Bob Tomaine

eorge Simon was keeping an eye open for any one of several postwar Oldsmobiles before a few good reasons combined to convince him to buy a 1979 98 Regency four-door sedan.

"I was really looking for something a little bit older," he explained, "either a '49 or a '50, mid-'50s or maybe even early-'60s, but I had had a '78 88 Royale that I'd bought new and I'd run that car for 13 years and 98,000 miles and I'd put only \$1200 worth of repairs into it. So I said 'you know, you can always get a bad one, but the chances are that this is a decent car."

#### A Brand With a Lengthy History

Maybe you can't always get a good one (or a bad one), but enough interesting Oldsmobiles were built over the badge's long life to make hoping for a decent car like Simon's worthwhile.

Oldsmobile's earliest ancestor, P.F. Olds & Son, was formed in 1880, three years before Ransom Eli Olds went into the business with his father and brother and five years before he bought his brother's share. In about 1887, he built a three-wheeled steam car and followed up with another in 1892. His first gasoline-powered car came in 1896, the Olds Motor Vehicle Co. was established in 1897 and an experimental electric was built in 1899. It all wound up in Olds Motor Works in 1899 and would continue until 1908, when it was acquired by William C. Durant for his General Motors Corp.

But long before it had become a part of General Motors, the "Oldsmobile" name had appeared in 1900 and was applied to a vehicle familiar today even to those for whom a car is purely utilitarian. The single-cylinder Curved Dash Oldsmobile was built in several forms from 1901 through 1907.

By 1908 Olds was building fours

and sixes...but a flathead V-8 was introduced in 1916.

The V-8 instantly placed Oldsmobile in a select group that included Cadillac, Peerless. Oakland, Daniels and several makes mostly forgotten a century later, but the V-8 was dropped for 1924 and Olds built only sixes until 1932 brought a flathead straight eight. With its flathead six, it now had the combination that would see it into 1948, but along the way, it introduced a feature whose descendants are with us today, the Hydra-Matic transmission of 1940. The Hydra-Matic was advertised as having "no gears to shift! No lever to manipulate. Simply set the control in 'HI,' and gears shift automatically!" Those who didn't quite understand were told that there was "no clutch to press! No clutch and no clutch pedal with Hydra-Matic Drive no work for your left foot to do!"

However, as commendable as the Hydra-Matic was in both innovation and function, it's improbable that anyone thought of those pre-war Oldsmobiles as thrilling cars. That was to change in the post-war years.

#### **Rocketing to Success**

Olds made up for lost time in the post-war world through a two-phase effort beginning with "the first of the Futuramic cars—the Series '98' Oldsmobile for 1948." The Futuramic look was obviously modern with its slightly curved windshield, its low, smooth lines and its slabsides broken only by reminders of what were once totally distinct rear fenders.

Then in 1949 Futuramic styling was extended to the entire line and Olds announced its "new 'Rocket' engine!" The Rocket was a 303-cubic-inch, 135-horsepower overhead-valve V-8 that replaced the 257-cubic-inch straight eight with its 110 horsepower. The V-8's length and weight were less than the older engine's and it could rev higher. Furthermore, Olds promised that "for the future, the 'Rocket' opens up new vistas of high-compression efficiency."

Like Cadillac's modern V-8 introduced that year, the Rocket was ready for what would become known as the Horsepower Race. By 1953, it was good for 170 horsepower; by 1957, the now-371cubic-inch Rocket could be optioned for up to 312 horsepower.

The horsepower climb went on and as Detroit rolled out compact cars, the basic big-engine-small-car pattern became its route to muscle success, spotlighted in 1964 at Olds with the 4-4-2 package.

"Now ready to put more muscle and hustle into your everyday performance needs," ads promised. The 4-4-2 did that with equipment including a 330 V-8 producing 310 horsepower and for the rest of the muscle car era, the 4-4-2 remained a contender with its high point being the 370-horsepower 455 in 1970.

Olds was wrapped up in performance during those years as was the rest of the industry, but it also found the inspiration to come up with something very different...the Toronado. With its front-wheel-drive, 385-horsepower 425 V-8 and highpriced exclusivity, the aggressively styled coupe was America's first fullsize front-wheel-drive production car since the Cord.

Add the Toronado to Oldsmobile's other achievements such as Hydra-Matic Drive, the original Rocket V-8 and the 4-4-2, and it might be less than obvious how George Simon's 98 Regency-a four-door sedan, no lesscould possibly fit into that group. But it does indeed fit and to understand why, it's necessary to go back a few years before it was built to 1973.

#### **Gas Prices and Downsizing**

In October of '73, Middle Eastern oil-producing countries imposed an embargo on the United States that triggered price hikes in gasoline and diesel fuel. The embargo ended that March, but prices remained high and those who were around then remember gas lines, odd-even sales days, limits on purchases, "no gas" signs, the 55-miles-per-hour national speed limit and conspiracy theories. And with that, the average pump price went from about 36 cents per gallon in mid-1973 to about 65 cents per gallon in 1975, according to the U.S. Energy Information Administration.

More important than the exact prices, however, was that the spike triggered criticisms of large vehicles as being irresponsibly wasteful of what was increasingly seen as a rapidly dwindling resource.

Compact cars acquired a new following and Japanese automakers improved their market share in the United States, but GM was planning a different approach and in 1977 it would introduce full-size models barely larger than their mid-size brethren. The "downsized" 98 rode a 119-inch wheelbase compared to the Cutlass sedan's 116 inches and overall lengths were 220.4 inches and 215.2 inches respectively. The clearest comparison, though, was with the 1976 98 with its 127-inch wheelbase and its 232.2-inch overall length. The 98 Regency four-door went from 4673 pounds to 3840 pounds and it didn't take a rocket scientist to realize that less weight means less fuel consumed.

Advertising cited "the challenge: to build a luxury car that meets the demands of the times we live in. The achievement: the 1977 Oldsmobile 98 Regency. With the kind of uncompromising comfort, quiet, and stability that today's luxury buyer needs-plus the unexpected luxury of improved fuel economy."

Fortunately for Oldsmobile (and the other GM divisions whose large cars had been similarly downsized), the driving public responded in a positive manner. At Olds, sales went from 891,499 in 1976 to 1,135,909 in 1977 and the 98 Regency four-door from 55,339 to 87,970 in the same period.





The rocket in the taillight lens is a direct tie to Oldsmobile's first modern V-8, the Rocket of 1949.



The interior looks very comfortable, doesn't it?





Emissions equipment was growing increasingly complex by 1979, but the 403 is still visible.

GM had made its point and the '79 feature car remains almost identical to a 1977 model. It was now "a beautiful marriage of luxury and logic—designed to reflect your good taste, engineered for the needs of our times."

#### **Low Mileage and Nicely Restored**

"It was one of the cars that you hear about," Simon said of his Regency and the way he discovered it. "It was literally owned by a little old lady who bought it brand-new. I think it was in North Carolina. I bought it two years ago with just a hair over 25,000 miles on it and now it has just a little over 27,000. Between the little old lady and me, it went to a dealer in Florida."

Even with that low mileage, he said, it had needed paint and a new vinyl top, so the dealer took care of that. He also went through the brakes, replaced the radiator and the air conditioning compressor and made several other repairs. Add to that Simon's experience with his 1978 Royale and despite the feeling that the asking price was too high, he decided to learn more about the car.

Simon's home in Vestal, New York, is more than 1000 miles away from the dealership, so he just called for information. It probably would not have gotten much further if the dealer had just told him about the car and stopped, but instead, he made a significant drop in the price. Simon resisted the temptation initially, but after a few days, he called again and asked more questions about everything that had been done to the Olds. As he listened to the rundown, he did the math, realized just how much had been spent on it and decided that buying the car would make sense.

"The price that he was asking," Simon recalled, "even the lowered price, while it was still high, wasn't all that bad."

Simon was convinced and after looking at photos the dealer had provided, he took the chance and bought it. He had the Olds delivered to a mechanic in nearby Binghamton.

"It had to be state-inspected anyway," Simon explained, "so he looked it all over and he said 'George, I cannot find a thing wrong with this car.' That gave me a good feeling...there wasn't anything that was going to cost me an arm and a leg to fix.'

So what was his mechanic's reaction to the car?

"He was very happy," Simon recalled, "because he has bought cars that were supposedly very good and they weren't."

#### **Driving In Your Armchair**

The Olds really was as good as it had seemed to be-the only significant repair since has been another new air conditioning compressor—and the May delivery date for the car meant that Simon was able to begin driving it and enjoying it immediately.

Following some local driving, its first real trip was about 160 miles to Batavia, New York, with no problems. It's been on other trips and combined with the in-town driving, it's shown Simon that few can identify it and most of those who see it say "nice car" and leave it at that.

It's also shown that the Olds is a good choice for a long day on the road. A 1977 ad speaks to that by explaining how "loose-cushion' look seats support you in armchair comfort. Headroom and rear legroom are increased. New body and engine mounts help isolate the interior from road and engine noise. New more absorptive sound-proofing material under the carpeting and in the ceiling liner insulate the passenger compartment."

"It's a very pleasant car to drive," Simon observed. "There is a certain amount of support to the seats but they're not hard buckets like today's cars. They're

"The button-and-tuft seats in the 98s are no different than some of the fancy mattresses we buy. They're the same pattern."

#### Becoming Attuned to the Car's **Suspension and Vinyl Top**

The soft suspension contributes at least as much as those seats when it comes to a good ride and he said that softness would require about the biggest adjustment on the part of a modern driver, particularly as the Olds tends to nosedive in hard stops. Like its lack of antilock brakes, that's something a driver develops a feel for and the feature car doesn't spend all of its time parked in a garage, so Simon is used to it. He's also got his basic plan for taking care of the Olds.

"I will maintain it," he said. "It's probably going to get 1000 to 2000 miles a year and so it'll be regular maintenance. Obviously, keep it clean. It doesn't go out during the winter in upstate New York."

He's already started by using 303 vinyl protectant on the top.

"I put it on last fall before I covered the car up," he said. "I did a little bit of research and it seemed as if that had the makings that would do the job. I put it on and it gave just a very, very slight gloss to it. It's supposed to protect it from the sun's rays and all of that. At this point, considering the car is garaged most of the time, I'll probably put it on once a year, not the same day as, but just before I cover it up."

#### Some Olds Shopping Tips

Not everyone will be as lucky as Simon was in finding a full-size Olds or other GM car of the time having few needs beyond routine care. Chances are better that the car that's found is going to have higher mileage and require at least some attention, but he knows from his 88 daily driver that at least one potential annovance is waiting.

"The brakes are good," Simon explained. "It has front disc brakes and the biggest problem with the brakes was that I had to redo the rotors about every 5000 miles.'

That's far from a deal-breaker and in fact, there aren't many deal-breakers for an Olds like the feature car or any of its corporate almost-twins. One might be the 350-cubic-inch diesel, an engine with a reputation almost certain to scare any enthusiast. Its problems were no secret, but those examples that were properly maintained and properly treated often led fairly long lives. Those that didn't make it were typically replaced by 350 gas engines, but a 350 diesel in running condition today has clearly had the right kind of care and most likely, drivers who understood diesels.

While the list of all engines available during the production runs of these cars is long, those with problems are generally known and can be identified through basic research. Beyond that, routine tune-up parts and maintenance items should present no problem, meaning one of these cars might be a good choice for someone thinking about an interesting older driver. Emissions components might be a bigger challenge requiring hunting and then building up at least a small stock. Simon knows that they might not be the only parts to find and set aside.

"I would start with small trim parts," he explained. "Right at the moment, I wish I could find the 98 emblems that go on the wheelcovers, because they were specific on the 98s. The 88s had the rocket embossed into the wheelcovers. I found one of those."

The interior's woodgrain and chromeplated trim are other items that could be difficult to replace. Simon recalled that those on his 88 were nearly perfect when he sold it after 13 years of ownership, but the youngest of these cars is now well past 13 years old and its trim is not likely to be as good. It's the same situation when it comes to the exterior trim, but with an additional wrinkle in the form of the flexible plastic filler panels,

badges and lenses, the problem of parts that look right is probably going to be a bigger concern than it would be on many other cars because of the sheer number of variations on the same body.

All of that presumes, of course, that the car is in good enough condition to merit serious consideration. Rust is a reality and fortunately, most of it develops in areas that are both typical and visible, such as the rocker panels, quarter panels, wheelwells, lower doors and lower fenders. Less obvious points include the edges of the hood and trunk lid, the area above the rear axle and the sheet metal surrounding the windshield and the backlight. A lumpy vinyl top isn't proof of rust beneath, but it's a good indication that something under there needs to be investigated.

#### Expecting a Long-**Term Experience**

The 1970s are often held up as a decade in which American cars weren't exactly outstanding, but Simon has his own thoughts on that.

"Considering my experience," he said, "I was OK with the late '70s. I was advised to get nothing newer than a 1980 because after that, everything became even more electronic."

As he said, when he was considering the Regency it seemed like it should be a decent car. His instinct has since been proven right, but...

"It would still be nice to have the early-'50s, mid-'50s Olds or something like that," he said. "If, for instance, a mid-'50s Oldsmobile came along, I would have a hard job deciding whether I would keep the '79 or would I sell my Lincoln or would I sell the Thunderbird or not. It basically comes down to garage space. That's why there's only one Lincoln now instead of two."

Realistically, though, the Oldsmobile is going to be around for a long time.

"Probably," Simon observed, "and I say that because I've had my '56 Lincoln for 31 years." O



# Browsing JOHN'S Through TOOL CHEST

This Month's Journey Into the Toolbox Found Something for Removing Wiper Arms and a Set for Dealing With Rounded Fasteners.

By John Armstrong

#### **Tight Quarters Hacksaw**

If someone were to say "bring me the hacksaw," a mental image of a bowshaped tool with a handle securing a blade is generally what comes to mind. These are great for most general cutting tasks...unless you are trying to get into a tight area. For those situations you may need little more than a hacksaw blade, and the saws seen in Photo 1 are among the best for that situation. The reason so many are shown in this photo is twofold. First, these tools were marketed under several different names. One very recognizable name is Blue Point (division of Snap-on) #hs-13, followed by Dreier Brothers Jab Saw, and M. Klein & Sons #703. The second reason is to show that these aren't too difficult to locate used, as it appears no one is currently manufacturing this tool. These were all flea market or automotive swap meet finds, usually in the \$3 to \$8 range. There's always eBay as well, but they're certain to cost you more there.

Photo 2 shows a closer view of the way the blade is secured. The nose of the tool has a tapered conical shape, and inside are two corresponding pieces of steel. When the handle is twisted and tightened they wedge the blade securely in place, making it the most rigid blade fixture. This allows you to choose how much of the blade extends beyond the end of the tool. If you need to reach deep into a cavity, extend the blade far enough to reach the target. Naturally, keep the total length as short as possible for maximum strength.

It's useful for cutting metal, plastic, wood and most anything you encounter. The blade is installed so that it cuts on the pull stroke. This protects the blade from becoming bent and distorted during use. The tool length in 10.5" and with a 12" blade installed the minimum length is 12.5".





The nose of the tool has a tapered conical shape that wedges the blade securely into place.

#### Windshield Wiper Arm Removal Tool

Photo 3 shows two handy tools that make removing wiper arms on many older vehicles easy and they help in avoiding damage. The one at the bottom is made by Anco, while the one above is made by "RO-CRO-BA" out of Orange, Connecticut. The Anco fits two specific sizes, while the one above it is adjustable. Photo 4 shows it being used on my '66 Malibu. If you noticed the damaged paint on the cowl, that was caused by someone previously removing the wiper arm without using the proper tool.

With the tool in place, press down slightly while lifting the wiper arm. The arm can now be easily lifted off.

These are both older vintage tools and due to wiper arm design changes are not required for use on later-model vehicles. Therefore, to locate either one



While not new and shiny, these are two handy tools for removing windshield wiper arms.



The tool is used to overcome spring pressure and make arm removal easy and damage-free.

of these, searching the swap meets or eBay is your best choice. Knowing what they look like will help you spot one in the bottom of a box of tools at the next flea market you visit.

I found nothing on the Eastwood Co. website so I phoned and was advised that they don't offer anything like this. Summit Racing shows a tool made by Dorman (#49023) that while not the same, it may get the job done. O'Reilly Auto Parts shows a tool made by Lisle (#65750) that may also work. Both of these tools are different in appearance and possibly more universal in application, so do some checking to see if they'll work for you.

#### **A Magnification Visor**

Occasionally you find yourself in a situation where your eyes alone can't get the job done. Possibly you may be doing an initial inspection looking for a crack in a mechanical component or inspecting an electrical switch. Soldering small connections is another time where magnification can be very helpful. Trying to use a handheld magnifying glass can be difficult or even impossible in some cases, so an optical visor, like the one seen in Photo 5 is the best solution. This one is an Optivisor Magnifier, and though decades old and showing some wear, it still delivers like the day it was new.

These are still made in the US, and are available in six magnifications: 1.5x-3.5x. The greater the magnification, the closer the focusing distance. For example the 1.5x is 20", while the 3.5x is 4". Choosing one too powerful can be frustrating to use; the bigger is better theory doesn't apply here. I have two different visors, a 1.75x and 3.5x, but by far the 1.75x (14" focus) is used the most frequently. Enco shows them in their current flyer for \$35.95, and for an additional \$8.95 you can add a 2.5x magnification loop that swings out of the way. Naturally you can find less expensive visors by other manufacturers, but if you want a quality product that will stand the test of time, this is it (www.use-enco.com; 800-873-3626).

#### **Tools for Removing Rounded Fasteners**

This is not something you will need every day, but undoubtedly when working on older vehicles you are bound to encounter rounded-off nuts or bolts, and even stripped-out screw heads.

If you're dealing with fasteners that have become rounded due to the threads themselves being rusted and seized, an oxy-acetylene torch is the tool of choice. This is most often the case when dealing with fasteners that are open and subject to weather, like those used in suspension and steering. If it's old, and been subject to northern winters you can be certain to run into this problem frequently. Just getting a better grip or increased leverage on the nut or bolt without the aid of serious heat will usually end up with a broken bolt or stud. In other instances, retaining nuts and bolts, especially those subject to high heat like exhaust manifold bolts can easily become rounded off when trying to remove them. Those bolts just seem to wear away with time to the point that the proper-size socket will spin around, further rounding the bolt or nut head. Always use a 6-point socket when attempting to remove these bolts. Someone using a 12-point socket is very possibly what caused the problem in the first place. If the proper-size socket fits loosely on the fastener (not unusual for old exhaust bolts), look at your selection of metric sockets and see if there is a better fit than the correct-size fractional socket. If your vehicle has metric fasteners then do just the opposite and see if a fractional socket will fit better.

Often you can find another socket that you can tap onto the worn bolt head with a soft-faced hammer, and it will fit snugly enough to loosen the fastener successfully. It is a good idea to remove the socket once the nut or bolt is loosened but not completely removed. You can be certain it's always more of a challenge once it's



Here is a special socket set for removing rounded, damaged nuts and bolts.

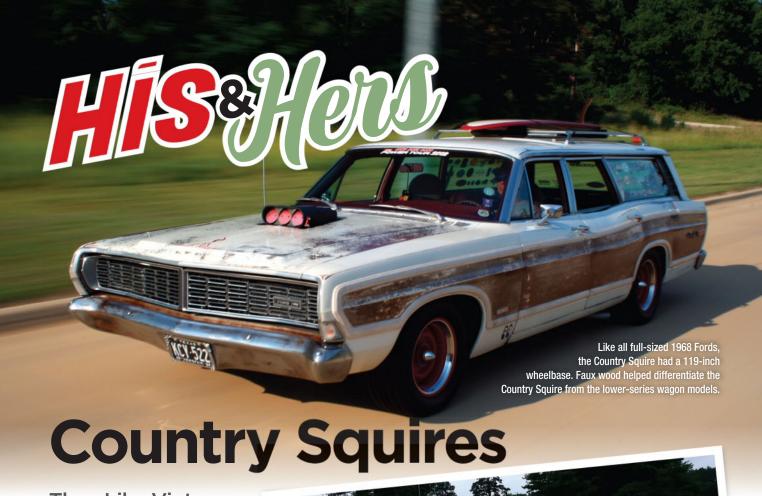


This socket is designed for removing right-hand thread only.

off and stuck inside the socket.

So what's next if all of the above fails? Photo 6 shows the Craftsman 5-piece damaged bolt/nut remover set. It appears my old set has been superseded by another with slightly different-size removal sockets; #0550CRA. At http://www.craftsman.com/ craftsman-5-piece-bolt-out-5-piece-bolt/p-00952061000P is currently priced at \$19.99 or is available on eBay for \$39.99. They also offer a 10-piece set #52166 online at Sears for \$30.39; also available on eBay for \$41.88. Don't you just love eBay? Evidently someone there doesn't realize that Sears runs tools on sale with regularity or doesn't care. The 10-piece set will fit sizes 3/8"-3/4". These special sockets have a spiral fluted bore that's designed for right-hand threads. The business end of the socket has a scalloped appearance as you can see more closely in Photo 7, and the backside has a clearance hole to allow a stud to project through it. Because of this clearance hole, there is no square drive in the center of the socket to accept a ratchet. The socket can either be used with an open end/box wrench or the appropriate socket and ratchet. In the set I have, a 5/8" fits the small and %" fits the large. The more pressure you apply, the deeper the socket bites into the nut or bolt head. This set has been a US product in the past, but online I was unable to determine if the new stuff is still domestic or made in China. Certainly there are similar kits offered by other companies and an online search will answer that question. O





They Like Vintage
Drivers But Weren't
of a Mind to
Perform Complete
Restorations. Here's
the Approach They
Took. By David W. Temple

egardless of practicality matters, in the 1960s woodie wagons with genuine wood became very affordable and somewhat popular for younger car buyers—at least for those involved in the surfing culture.

As a result, today such cars are often displayed at auto shows with a surf board affixed to the roof or sitting in the cargo section projecting through the open tailgate window. Even wagons with fake wood can be considered a "Surf Wagon" such as the 1968 Ford Country Squire seen on these pages which is owned by James Buie of Diana, Texas.

Buie found the car by chance about five years ago when a friend invited him to browse through some items offered for sale in Alba, Texas. He found this Country Squire sitting behind a barn. With the \$500 asking price, James knew he could



this 1967 Country Squire at a car show at the Texas Motor Speedway.

Rather than perform a major restoration, James replaced the front suspension bushings and cleaned the car.

not go wrong in buying the car.

James' Country Squire had been scheduled to be built at the Dallas assembly plant very early in the model year—Aug. 29, 1967—but was not actually built until November 16 according to the Deluxe Marti Report from Marti Auto Works. The reason for the change in the build date is not known. Strangely, the car was to be built with the FMX automatic transmission, but instead got the C6 automatic. Perhaps that had something to do with its lengthy assembly delay.

His car was ordered with several other extra-cost items including the 390 2-bbl., power disc brakes, power steering, wheel covers, remote-control outside rear view mirror with matching passenger-side mirror, roof-mounted luggage rack, tinted glass, and the "Convenience Group" which consisted of warning/reminder lamps for seat belts, door ajar, parking brake and low fuel. It was sold new on December 5 at Horn and Williams Motor Co. on South Buckner just a short distance from the assembly plant.

An investment of an additional \$4500 over his purchase price got this Country Squire functioning as a reliable driver. James elected to not perform a serious cosmetic restoration on his station wagon, but did clear coat the faded paint to arrest further deterioration. Over the decades, leaves and other debris had collected in the lower doors and quarter panels which blocked their respective drains, thus leading to rust-out, but not to the point of losing structural integrity. These areas were cleaned, but no sheet metal work was performed.

Since rebuilding the mechanical systems, he and his wife, Debra, have driven the car on three Hot Rod Power Tours (2012, 2013 and 2015) and have received several awards at various car shows.

#### **Some Country Squire Background**

From 1950 to 1991, the Country Squire represented the top-of-the-line in Ford's station wagons and they were instantly identifiable by their standard wood body structure and trim at first or the application of simulated wood paneling that followed.

In its original guise, the Country Squire was a two-door model, but beginning with the 1952 model year it became a four-door and would remain so for the duration of its production. Also that year, the all-steel body received Di-Noc inserts to simulate the appearance of wood paneling. Surrounding trim remained wood for a while longer until finally being replaced with fiberglass, also with simulated wood graining.

The Country Squire was a descendent of the early station wagons constructed as wood bodies with a steel cowl and front end. They were beautiful when new, but needed constant care to keep the wood preserved—something which was seldom done. Periodic re-varnishing of the wood was not a convenient chore. Eventually, faux wood offered a much cheaper alternative, proved much more practical and provided the appearance of beautiful stained wood or at least it was close enough. With this change came lower prices and higher production of the Country Squire.

Each generation of the Country Squire was updated as often as the rest of Ford's full-size model lineup. Model year 1965 brought the first total retooling of the full-size bodies since 1957—even the keys were advertised as new. The basic design continued to be used through the 1968 model year. However, new sheet metal was introduced each year to refresh the look of Ford's cars and 1968 was no different. Adverting promoted the new Fords as being "quiet, strong, beautiful."





The original Y-code 390 2-bbl. was rebuilt including a .030 overbore and a Holley 770 Street Avenger four-venturi carburetor. James cut a hole in the hood to give clearance for the air intake mounted atop the carburetor.



James replaced the original front bench seat on the '68 with a set of bucket seats from an estate sale. The rear seat and its original upholstery were retained.



An aftermarket, period-correct 8-track stereo (with a Ford-issued 8-track tape) is suspended from the dash and a modern CD player is mounted in a console custom-built by the owner. The optional "Convenience Group" is visible above the stereo equipment.

#### **Model Year Changes**

The annual model year updates differentiating the 1968 from the prior model year once again resulted in a large number of one-year-only components including most sheet metal, grille, headlight surrounds, tail lamps, bumpers, emblems, identification script, dashboard layout, steering wheel and other items. The same had happened with the 1967 models.

Among the changes for 1968 was a special grille with hidden headlights for the top-line models (LTD, XL and Country Squire), a bodyside crease following the sweeping curve of the quarter panel, and revised tail light assemblies. Interior changes included a flat, wide crossbar-type steering wheel and redesigned steering column to better absorb impact during a crash, new instrument panel, updated upholstery pattern, etc. Another safetyminded change was the introduction of shoulder harnesses as standard issue beginning in January. Standard equipment for the Country Squire consisted of the 302 V-8, three-speed manual transmission, heavy-duty suspension, die cast grille, "Limousine-Luxury" pleated cloth and vinyl upholstery, electric clock, woodgrain

accents on dash and door panels, and wheel covers. Additionally, buyers had a choice of a six-passenger version and a nine-passenger type with dual-facing rear seats. Furthermore, the 302 became the standard engine for the Country Squire, replacing the 289.

Optional equipment included a 390 2-bbl., 390 4-bbl., a 428 4-bbl., automatic transmission, power brakes (standard on dual-facing rear seat wagons), power steering, AM-FM radio, air conditioning, tinted windshield or tinted glass, split bench seat with fold-down armrests, two wheel cover options and cruise control.

Performance figures for a big block 1968 Country Squire are not readily available, but one can get a good approximation through the contemporary road test report on the XL hardtop published in the January 1968 issue of Car Life. Their 4568-pound test car equipped with a 428 and automatic transmission along with a 2.80:1 axle ratio required 8.2 seconds to reach 60 mph from idle and covered the standing start quarter-mile in 16.68 seconds with an end speed of 87.3 mph.

#### Concentrating on Mechanical Systems

James performed plenty of mechanical work to make his wagon a reliable driver and made a few changes in the interest of comfort and cosmetics. His goal was not a high-dollar restoration, but simply to arrest the deterioration and make the needed repairs to have a reliable driver.

One of the earliest projects was to rebuild his car's original Y-code 390 2-bbl. The rebuild, done locally, included a .030 overbore and a performance upgrade via a Holley 770 Street Avenger four-venturi carburetor, Edelbrock Performer aluminum intake, Comp cam, double roller timing gear set, Hooker long-tube headers, Mallory distributor, MSD ignition, and a high-flow aluminum water pump. Exhaust exits through three-inch duals. Later he added the appearance of a blower by cutting an opening in the hood for the air intake system used with a supercharger and attached it to the carb. A K&N filter was placed inside the scoop and the linkage for the butterfly valves was connected.

As for the transmission, the car's original C6 three-speed automatic was also rebuilt and upgraded with a TCI 2500 stall converter and shift kit.

Ford's nine-inch rear end was well designed and has a reputation for durability and since it was functioning just fine James did not need to repair any of its components; the original 3.00:1 gear set was left in place.

Handling for the full-size wagon was not up to James' standards, so he added an aftermarket sway bar to the rear end. "It really made a big difference," said Buie, "and it bolted easily to the trailing arms."





The two-barrel version of the 390 was new for 1967 and was rated at 270 horsepower at 4400 rpm. Note the optional air conditioning and power brakes.

#### **Frame Evolution**

Starting with the '65s, Ford employed an all-new perimeter frame with reinforced cross members. It was not simply a new frame, though. In the prior years, the frame was designed to provide complete beam and torsional strength. The frame was somewhat flexible while the body was designed to be much more rigid than in the past. This concept in combination with plenty of sound-deadening insulation provided a much quieter riding car.

The new frame design incorporated a front end assembly, rear end assembly and straight box-section side rails. Torque boxes welded at each corner of these side rails joined the front and rear units. These torque boxes allowed a limited amount of flexing plus dampened noise and vibration that would have otherwise been transmitted to the frame through the suspension system. The design is known for rust-out around the torque boxes, but for cars used in dry regions, away from coastal areas, and away from locations where the roads are salted to melt snow, this is not a problem area. James' Dallas-built car has been a safe distance from such places having stayed in the North

Three basic frames were used—one for sedans and hardtops, one for the convertibles, and the other for station wagons.

The convertible frame did not have an X-member as in the past. Body attachments were at only four points—just ahead of the cowl and immediately behind the rear passenger area. Rubber biscuits were installed between the body and frame side rails. Other than contributing to a quieter ride, the frame also had the virtue of being much lighter than the earlier version.

Along with the new frame was a new suspension. The lower A-arms of the independent ball-joint front suspension were replaced with a single arm; the upper A-arm was retained and was angled back to reduce brake nose dive; a diagonally mounted, rubber-bushed strut was employed to control fore-aft wheel movement; an anti-roll bar reduced body roll during cornering; shocks were placed within the coil springs. The design of the front suspension was so superior it was used for NASCAR stock cars into the 1980s regardless of make.

A three-link, coil spring suspension was employed in back. The longitudinal links controlled fore-aft motion of the rear axle assembly and absorbed acceleration and braking forces. Two of these links were positioned between the lower side of the axle housing and the frame torque box at either side. The third link was installed between the right-hand

side of the differential at the top of the axle housing and the frame crossmember. A track bar was attached near the axle center and to a lateral point on the frame left rear rail. The rear suspension was fully isolated with rubber bushings and sleeves which served to further reduce noise and vibration transmission.

James' car needed only new bushings in front to restore the original ride. Replacement suspension parts are still readily available through retail auto parts dealers (in this case through O'Reilly Auto Parts), though upgraded polygraphite bushings are sometimes preferred by restorers; these can be bought through restoration parts specialists. Buie opted to retain OEM-type equipment.

#### Steering & Brakes

All Fords received a new parallelogramtype steering linkage with a cross link and idler arm for more positive vehicle control under all driving conditions.

A valve-type power steering unit integral with the Magic-Circle steering gear and a new belt-driven power steering pump were additional advances from '65 which were carried forward. Once again, the restorer has the advantage of readily available replacement parts for the power steering system.

A total rebuild of the power-assisted disc brakes renewed the stopping power of the big Ford which was reasonably good by the standards of the day. Some restorers opt to upgrade the brakes of their car with power disc kits. Discs, of course, offer much higher fade resistance in heavy braking conditions, but are not especially necessary unless highperformance driving or hilly terrain is a consideration. A dual master cylinder replaced the single-reservoir system starting with the '67 model year.

A set of 15x8 rims were powder coated bright red and fitted with 245/60x15 BF Goodrich radial TA tires and bright trim rings provided some colorful contrast and a sporty flair. The factory wheels and wheel covers were put in storage.

#### Working With the "Woodgrain"

As noted earlier, the original Wimbledon White acrylic enamel paint and patina received a clear coat to arrest further deterioration. Sun-dried and bleachedout original faux wood remains in place. The woodgrain panels could be replaced with aftermarket vinyl closely matching the appearance of the original material. Most of that new vinvl. however, is not stable under ultraviolet light exposure, so it is not especially durable. Around five to seven years is about the life of it with regular exposure to sunlight. The 3M Co. marketed the OEM Di-Noc, but new 3M material is

not known to be particularly superior in resistance to fading. By the way, the original Di-Noc on these wagons is not simply woodgrained. There are 1/4-inch-wide horizontal black lines in it spaced about four inches apart on both the 1967 and '68 Country Squires. However, restorations without these lines are not uncommon.

Going inside, most of the interior is original. The front bench seat was worn out, however, so James found a use for a set of red bucket seats purchased from an estate auction some time before he bought the wagon. Some of the seat anchors aligned perfectly with the original factory holes, but where they did not James drilled new holes and added some reinforcement with sheet metal since that is what Ford did around the factory attachment points. The original dash pad was a bit too worn, so it was replaced with an NOS part bought on eBay. A home-built console sits between the bucket seats and houses a modern stereo and a period-correct 8-track player.

#### **A Country Squire for Her**

Sometimes when the totally unexpected happens it is a very good thing. Such was the case when James and his wife, Debra, attended an auto show at the Texas Motor Speedway just outside Ft. Worth in 2013. Neither was contemplating the purchase of another car that day.

Just before departing James and Debra strolled over to the swap meet area to browse the cars for sale. Among them was a Springtime Yellow 1967 Country Squire with 79,000 miles. It was sunfaded, but was still wearing its original paint and upholstery.

Debra liked the car, so James made an offer which was acceptable to the seller-but there was one hitch. He had not planned on buying a car, so he was not carrying enough cash and the seller wasn't enthusiastic about accepting a check along with some cash. Then fate intervened in a most unexpected and unusual way. Also present at that moment was Richard Rawlings of the famed Gas Monkey Garage in Dallas. He had observed the negotiations and upon realizing the deal was going to fall through made an offer \$100 below James' and in cash. The seller accepted.

By this time a crowd had gathered having recognized Rawlings from his TV show, "Fast & Loud." Rawlings then turned to James and said, "Work out the title, drive it home, and bring me the money you were going to pay for the car on Monday." James was almost speechless, but said something like, "You don't even know me." But that made no difference; Debra got her car.

The following Monday, James and



The parchment vinyl and cloth interior is original on this '67 Country Squire.



The dual-facing rear seats made this Country Squire a nine-passenger model. When not in use they could be folded down for additional cargo space.



This is the scene James Buie saw when he traveled to nearby Alba, Texas, with a friend to look at some equipment for sale. The 1968 Country Squire immediately caught Buie's eye.

Debra traveled to the Gas Monkey Garage in their '68 Country Squire to pay for the '67. After settling up, the couple got to tour the facilities and Rawlings also signed the dash on James' car. Richard Rawlings had gambled thousands of dollars on their honesty all for a profit of \$100! When James asked why he took the chance, the answer was, "You two had GMG (Gas Monkey Garage) hoodies on-how bad could you be?"

Not long after the purchase, James began making the few repairs needed on his wife's Country Squire. It already had new tires; simply replacing the front suspension bushings and a tune-up kit got the nearly 50-year-old car ready for the road and some local car shows.

#### So Maybe It's Not a Concours Contender...

In the case of each car, James has shown that for those who are not purists and/or do not have the money to spend on a complete restoration, the choice of making a car mechanically sound can be another way to enjoy a vintage driver. Tell us, readers, have any of you taken this approach? O



This Monitor Will Keep Tabs On Your Tires As You Drive. If Something's Going Wrong, You'll Know Within Seconds. By Gary Caviglia TOP: The monitor keeps track of the tires and keeps you informed. Here the right front tire is flashing. BELOW: Once in place, an anti-theft sensor will spin if an attempt is made to remove it by hand. However, air leaks out as you install it with its special wrench.

friend of mine, Brian, and I recently were swapping trailer stories. He makes numerous trips around the United States with vintage race cars during the racing season. These cars include everything from a 1911 National that finished 7th in the first Indy 500 to a 1969 Lola T-163 Can Am car. As you might expect, he has had several trailer tire issues during his travels and was in the process of upgrading his equipment to hopefully eliminate tire problems.

#### **A Faster Tire**

The first upgrade was to replace Load Range E tires with Load Range G. Brian runs these trailers hard and fast at the weight maximums. The only time Brian goes under 75 mph is the last 200 feet before his driveway. The E tire is not designed for these high-speed cross country trips. The G tire has a slightly higher max load but, more importantly, it is designed to run at Brian speed. These tires also take special rims that are rated at 100 psi. And, you guessed it, the G tire costs about double what you'd pay for the E.

#### **Keeping Track of Those Tires**

The second upgrade was to put a tire monitoring system in place to keep track of truck (if needed) and trailer tires in real time. The system he is using and the one I installed on my F350 pulling a 3-axle trailer is the EEZRV Tire 515 TPMS.







The monitor kit can be ordered through www. eezrvproducts.com.

This system has a 3.5-inch monitor that has several options for mounting on your dash. It monitors for low and high pressure, high temperature, rapid air loss, and catastrophic failure. The system can handle up to 26 tires and the monitor can be configured to match your tire setup. Excess tire spacings are simply skipped during the setup mode. The monitor goes from one tire to the next every 6 seconds. You also can manually go to a tire in question by using the + and – keys.

The individual tires flash when the system is reporting their info. In the monitor image shown here, my camera caught the right front tire flashing on.

#### **Mounting the Sensors**

There are two types of sensors that attach to the tire valve stems. The first as shown on the trailer rim is the anti-theft design which is about an inch tall. This sensor has a plastic shell covering the sensor and needs to be put on with a small wrench. Once on, it will simply spin in place if an attempt is made to remove it by hand. The downside to this style is that it has to be removed to add pressure to the tire. It also is difficult to get the exact pressure you want because as you screw it on with the wrench, air is leaking out. So you need to overfill a little to get your correct pressure. I found the wrench provided worked well with rims when the valve stem was exposed on the outside but not so well with the valve stems in the cutouts of the rims on the F350. The wrench on the left in the photo on this page was



Here you can see the flow-through and anti-theft sensors installed on a dual-rim setup. The kit can be ordered with a mixture of these types of sensors.



The author wasn't satisfied with the mounting options provided with the kit, so he made his own bracket.



The kit came with the wrench seen on the left. but the author felt that two types were needed for various installations so he reached into his toolbox and modified the one on the right.

the one provided. I modified the one on the right from my own toolbox to help put the sensors on the truck wheels.

The second sensor is a flow-through type. It is 2.5 inches long and air can be added through the sensor. The company does not recommend this long style be used on trailer rims where it could be exposed to road hazards like curbs. Another downside to this style is that it can be stolen as easy as removing a valve cap.

The kits can be ordered with a mixture of the two types of sensors. I ordered 10 anti-theft and 2 flowthrough to be used on the inside duals where putting on the anti-theft items would be very difficult. The aluminum rim picture shows the anti-theft sensor on the outside and the flow-through on the inside dual.

The sensors have common batteries that are rated for 3 to 4 years. The sensors come apart easily and replacement is fairly simple.

#### **Installing the Monitor**

The monitor came with three different options for mounting...a suction mount, hard mount and a wire-type bracket that propped up the unit on the dash. A fourth way is to simply use some Velcro.

I did not install the factory mounts as they placed the unit too far forward for my liking. So I made my own bracket out of 1/4 x 3 flat steel. I simply put some screws in the plate that matched the recessed holes in the back of the monitor. I was able to give the unit a little tilt toward the driver side and the unit can be easily removed for theft prevention.

#### **How To Get One...**

These kits are available directly from the company's web site www. eezrvproducts.com. The kits vary in price depending on the number of sensors you need. A 6-unit kit is \$289; a 10-unit is \$429. Additional sensors are \$38 but are slightly cheaper if you buy the ready-made kits.

Remember that you can get a kit with a mix of sensors; you just need to specify your requirements when ordering.

Set-up was fairly simple but you need to follow the instructions. Their tech support is excellent.

As a disclaimer, I have no commercial interest in this product, just a desire for everyone to have trouble-free trips. My short experience with this product has been positive and I would buy another one. O

# CAN MAKE

# ATTO Restorer

hen our discussions turn to European auto companies, SEAT generally isn't among the first manufacturers that come to mind. But the Spanish automaker

recently put out a news release comparing a car it built six decades ago with a vehicle that it manufactures today. We found it interesting and thought you might like to consider the information yourself, especially since you're somewhat familiar with these vehicles as one is a rebadged Fiat and the other started life as a Volkswagen.

But before we get into the comparison, a little background is in order. For starters, in this instance SEAT is not a reference to an interior component but instead stands for Sociedad Espanola de Automoviles de Turismo (Spanish Society for Touring Automobiles). The company was founded in 1950 and today is based in Martorell near Barcelona in northwestern Spain. For decades Fiat was a major stockholder in the company and since 1986 it has been a wholly owned subsidiary of the Volkswagen Group which accounts for some of the products SEAT has produced.

Now, for our 60-year comparison we'll be studying the SEAT 600 and its Mii. SEAT says both cars are roughly the same size and are considered "urban utilitarians." But beyond that...

• In the first half of the 20th century, Spain lagged behind most of Europe from an automotive standpoint with a relative small number of cars in the country. That changed with the 600 which you'll recognize as a slightly modified Fiat 600. SEAT says its 600, launched in 1957, put the country on wheels as it "signaled the massive arrival of cars in Spain and completely changed mobility for the middle classes..." Families could even indulge in driving trips together. On the other hand, the current SEAT Mii was created mainly as an urban commuter. But whether you use the Mii for short runs or as a touring vehicle, one major difference is that at 52 mpg it uses about half as much fuel as its 600 predecessor which averaged about 29 mpg.



Sixty years separate the SEAT 600 from today's Mii.



Note the "suicide" doors on the SEAT 600.

- Whether you're taking a trip or just planning to visit a local store, you would be interested to know that the Mii has three times the trunk capacity of the 600. Furthermore, while the 600 was a rearengine, rear-wheel drive vehicle with its trunk up front, the Mii, in keeping with modern small-car design, is front-engine, front-wheel drive with its trunk at the rear.
- The early 600s were not equipped with seatbelts or headrests. On the other hand, the Mii has both along with four
- With the 600, you need "good arm strength to turn the steering wheel," SEAT said. In the summertime this "strenuous effort" is compounded by the fact that "the only way to cool down is to open all the windows to let in some breeze." By contrast, the electrohydraulic power steering on the Mii makes steering "smooth and effortless," and the air conditioning system "makes driving much more comfortable and pleasant," the company said.
- Among the design differences between the two is that the early 600 models had "suicide" doors that hinged at the rear, and while the Mii's seats





Power steering and A/C make driving the Mii "effortless and pleasant," SEAT says. The dash on the 600 is basic while the Mii (shown here) has the Star Wars look of today.

now provide more bolster support, the design and upholstery on the 600's seats "were similar to a sofa."

· Due to advances in manufacturing technology, build time for the current car has dropped dramatically. While it took 40 hours to build a "Little Ball" as the 600 was known, the factory can turn out an Mii in 16 hours, even though it is "a much more complex vehicle."

Now that we know about this 60year evolution, perhaps our best approach would be to buy both cars. Then we could use the Mii for our roll-and-stop workday commutes and save the 600 for the weekends when there's time to enjoy a car with some character. -Ted Kade, Editor