

**SMOG**—Is fuel injection the answer?

# MOTOR TREND



Mk III "Baby" Lincoln

50c

UK 413  
SWEDEN KR. 3.95  
INKL OMS

MARCH 1968

**68<sup>1</sup>/<sub>2</sub>S** THE  
FIRST  
LOOK

AMX—a true sports car?

Mk III—new trend in luxury?

**COMPARISON TEST:** Galaxie 500XL,  
Impala SS, Sport Fury and Ambassador DPL

**428 Cobra vs. 427 Corvette—POW!**

 **NASCAR "Baby Grands," Trans-Am**





## Where Tigers fear to tread.

If the world of motor racing is a jungle—and most agree it is—why, then, is it so strangely devoid of animals, or rather cars that purport to be animals?

Where are they, anyway?

Where are all these would-be animals when the green light goes on at Darlington or Daytona or Tulsa or Cecil County? Where were all these cars, with their racing stripes and ferocious nicknames, at the Springnationals?

At Rockingham? At the start of the Shell 4000?

Plymouths\* were there in every instance. And when all was said and done, the competition came out second best.

In short, Plymouths won.

Plymouths won stock car races: 31 out of 49, NASCAR Grand National.

Plymouths won drag races: 5 out of 10 Super Stock classes, NHRA Winternationals; 6 out of 10, NHRA Springnationals; 6 out of 10, NHRA Summernationals; 6 out of 7 Super Stock Regional championships; Super Stock Eliminator, World Championship Finals.

Plymouths won rallies: 1st in class, Canadian Winter Rally; 1st in class, 2nd overall, Shell 4000; 1st overall, Andiamo National Rally.

Plymouths even took top honors in the Mobil Economy Run; Valiant recorded best MPG of all cars entered.

We won in NASCAR, IMCA, ARCA; in the NHRA, the AHRA, the SCCA—virtually every place cars compete—out there in that asphalt jungle, baby, where it's strictly no-quarter-asked/no-quarter-given/and-may-the-best-car-win.

Perhaps that's why the Tigers and such hide in the bushes.

After all, they might lose. And if they do, they don't look so good.

And with Plymouths around, the chances of that happening are pretty darned likely.

... the Plymouth win-you-over beat goes on. ♥

\*All Plymouth race cars are specially prepared within the rules established by NASCAR, IMCA, ARCA, NHRA, AHRA, SCCA and USAC. The competition does the same.

**Plymouth**



# new chromed legs for your body

**New Kustomag Klassic**  
Finest wheel ever made. Triple plated with 50% more corrosion-resistant chrome set against a rich satin black background. Die cast aluminum center. Machine aligned. Hand inspected. Torture tested for torque and endurance. N.H.R.A. approved for all competition. 13", 14", and 15" wheel sizes in up to 6" rim widths. \$53.95 suggested list, each, including chrome hub cover and deluxe lug nuts.

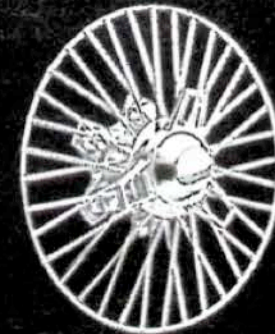


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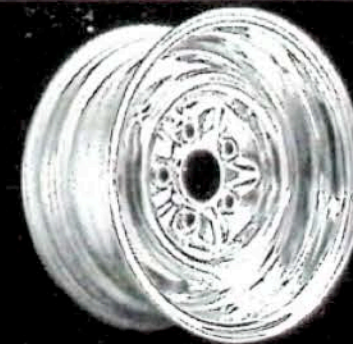
### New K-Rally

A groovy new slotted look in a competition designed, all steel wheel. The strongest one of its kind ever made—utilizing more costly, heavy gauge, high strength steel. Triple chrome plated. Machine aligned. Hand inspected. 14" and 15" sizes in up to 6" rim widths. 4, 4 1/2, 4 3/4 and 5" bolt patterns. \$35.95 suggested list, each.



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### Keystone Krome Reverse

Designed with a wider track for better roadability. Machine aligned. Hand inspected. Torture tested for torque and endurance. Triple plated with 50% more corrosion-resistant chrome. 13", 14" and 15" wheel sizes in up to 6" rim widths. \$26.00 suggested list, each.

**KEYSTONE**



World's Largest Custom Wheel Manufacturer



# People write to



Have a question about motor oil? Lubricants? Engines? Ask the Pennzoil experts...

**Trouble Ahead?** We've been using Pennzoil in our cars for a number of years. If we now change to your multi-vis oil with Z-7, will this cause any trouble—such as loosening sludge and stopping oil lines?

L. O. W., Mercury, Nev.

*Pennzoil straight graded and multi-viscosity have the same detergency level, so there wouldn't be any problem in changing from one to the other. The main advantage of multi-vis is faster engine starting during cold weather, thereby reducing wear at that time of the year. It would be beneficial, therefore, to use it during winter months.*

**Clean-up Time.** I've just bought a 1957 car with 40,000 miles on it. There is some sludge build up, and I've tried to clean it where possible. Do you think a high detergent oil would break up the sludge to a point where it would cause trouble in the engine?

W. L. P. Jr., Parsippany, N. J.

*Since you have cleaned most of the sludge away, the use of a high detergent level oil like Pennzoil Z-7 will definitely help clean the engine. We suggest you have a new filter installed and maintain oil change periods of 500-800 miles for the first two or three drains, to gradually clean the engine. It's very important that this schedule be followed to avoid serious engine damage.*



**Water, Water Everywhere.** Is it bad if water gets into the air cleaner? What will happen?

T. D., Whitestone, N.Y.

*If water gets into the air cleaner of an engine, an abnormal amount of humidity could cause combustion problems, as well as engine rusting. Don't waste time! Have the water source eliminated right away.*

**Break-in Tips.** What's the best way to break in a recently overhauled engine?

B. S. Jr., Bakersfield, Calif.

*For the first few hundred miles, don't drive a rebuilt engine at any constant speed for long periods of time. Changing speeds will seat the rings faster. Driving it reasonably hard will help, but don't stay at any high speed for long. The most important thing is acceleration and deceleration.*



**Poor Dad.** I want to put an eight quart oil pan in my car instead of a six quart pan, but my dad says it'll cause sludge in the pan and valve train. Tell him he's wrong!

R. R., Danville, Va.

*Okay, Dad, look at it this way. Increasing the capacity of the crankcase means a larger amount of oil... and a larger amount of oil will control and disperse larger amounts of solids and other oil contaminants. As far as sludging is concerned, greater crankcase capacity should actually help reduce it. Remember, though, that increasing the capacity of the crankcase is not a substitute for regular oil drain periods.*

**Old But New.** I've just taken possession of a 1953 Plymouth with the original flathead 6 engine. This car has only 15,400 original miles on it—obviously it has spent most of its life parked in a garage. I don't know what weight or type of oil has been used, and I don't know how much sludge has accumulated. What oil should I use in this car, and what should I do to insure that engine damage doesn't occur when I start driving it on a regular basis?

J. S. R., Cuyahoga Fall, Ohio

*From your description of this car, chances are there may be some rusting in the engine. We suggest the crankcase be refilled with Pennzoil Z-7 and a new*

*oil filter installed. Then, operate the engine at low speeds for the first 500 miles. (In other words, re-break-in the engine.) Use 1,000 mile drain periods for the first two or three periods with accompanying oil filter changes. After that you can resume normal oil drain periods and filter changes.*

**No Change.** When I bought my car new in '63, I noticed my 4-speed transmission had no drain plug. While having it serviced, the dealer told me that having transmission oil changed was not recommended. This has bothered me ever since. I now have 81,000 hard miles on the car, without adding or changing transmission oil. Am I worrying needlessly? What would you recommend? (Remember no drain plug.)

A. V., Fortuna, Calif.

*Transmission oil does not become contaminated like engine oil and will last for long periods of time. However, transmission oil additives do wear out in time, so it might be wise for you to drain the oil and replace it with Pennzoil SAE 80 multi-purpose gear oil for added protection. Since there is no drain plug, a suction gun should be used.*

**WE'RE OPEN TO QUESTIONS** about motor oils, lubricants, engines. But, you can tell us a few things, too. Maybe you have discovered something interesting about motor oils or lubricants. Or you have a special reason for being a Pennzoil fan. We would like to hear from you. Write to: Pennzoil Company, Research Department, P. O. Box 808, Oil City, Pennsylvania 16301. Note: sorry no pictures or material can be returned. Letters chosen for publication are subject to revision necessary for publication requirements.

The Pure Pennsylvania Motor Oil with Z-7



ask for it!

MARCH 1968  
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# MOTOR TREND

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ROAD TEST EDITOR / Steven A. Kelly  
FEATURE EDITOR / Julian G. Schmidt  
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Detroit, Mich. 48226  
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CHICAGO  
401 No. Michigan Ave.  
Chicago, Ill. 60611  
Everett Allen, Mgr.  
CLEVELAND  
One Public Square  
Suite 905  
Cleveland, Ohio 44113  
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ST. LOUIS  
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St. Louis, Mo. 63105  
Chris Moran, Jr., Mgr.  
LOS ANGELES  
5959 Hollywood Blvd.  
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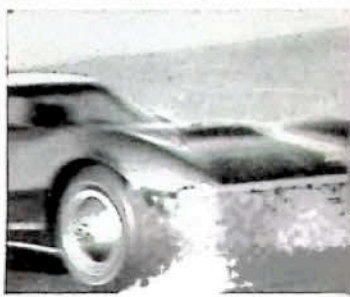
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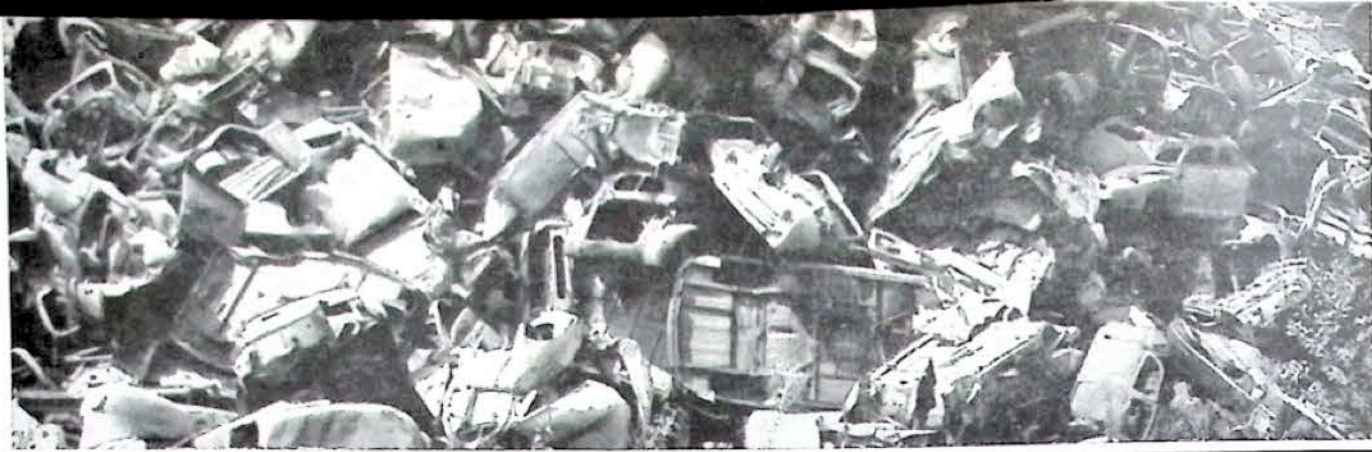


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## OPINION & COMMENT

IF YOU NUMBER YOURSELF among the nearly three million total readership of MOTOR TREND, which includes 250,000 subscribers, around 260,000 newsstand buyers and the rest of you who are reading the magazine through the courtesy of a friend, we look upon you as a pretty special person. We like to know what you do, what you think, where you live, what your special interests are. These are what are known in the advertising trade as "demographics."

That's why we have for the past two years been among 54 magazines that subscribe to a readership survey that searches out these questions. These studies, conducted by W. R. Simmons & Associates Research, Inc., plus our own subscriber surveys, are highly enlightening and enable us to draw many valuable conclusions about YOU — our most important asset.

It would be a gross error on our part to state that the "average" of what has been disclosed in these studies applies to all of our readers. Have you ever seen an "average" person, or for that matter, average anything? Worse yet, have you ever been called average? That really hurts!

So take these examples for what they are: extrapolations — and sometimes interpolations — of a certain percentage of the three million total readership each month (for every copy we sell, through subscriptions or on the newsstand, there are another five readers).

For example, MOTOR TREND seems to appeal to all ages, from the teenager through the senior citizen, but the "young adults" (those of you falling in the 18 to 34 age bracket) make up 39.6% of the total. The "median age" — or midway point between the lowest and highest ages — has been determined as being 31.0.

Naturally, you own more cars than the general public. (If you *didn't*, why, oh why, would you be reading MOTOR TREND?!) Some 34.8% of you who are 18 and over live in households owning two or more cars and a healthy 13.1% of you own three or more cars.

And boy, do you *drive*. All of you drive more than the general motoring public, with 41.4% of you putting on from 10-20,000 miles annually, 19.3% clocking 20-30,000 miles on the odometer and an outstanding 12% chalking up over 30,000 miles a year.

You seem to come from all walks of life, with the largest percentage (51%) being professional and technical personnel, managers and various types of "craftsmen."

Most of you are home owners (almost

63% of men readers 18 or older own their own homes), many of you have higher-than-average incomes (nearly 34% of men readers 18 or over live in households with incomes of \$10,000 or over and 8% live in households with incomes over \$15,000) and the great majority of you (68%) have either a high school or college education.

We also know a few things about you that don't show themselves in any usual survey and that is — you're vociferous. And, this shouting of yours has a way of being heard all the way back to Detroit — and even overseas to Europe and Japan.

Time after time your letters — or the opinions expressed in them — are passed on to where they're not only read with interest, but many times acted upon. You have a voice — and deserve to have one — in what the manufacturers put on the market. If it's not the product you want, if you see ways of improving it, if you wonder why Detroit, Milan or Stuttgart doesn't do certain things, or if you approve (or disapprove) of stricter government controls, you're generally not bashful in saying so.

But now comes the time for you to REALLY voice your opinion!

This country needs some really fresh approaches that might solve a problem that is becoming increasingly difficult to cope with: the future of automotive transportation.

Just think for a moment about the complexities of the situation:

- Detroit is pumping out cars at an annual rate of 7.5 to 8.5 million. Last year, we imported another 760,000 and this figure appears to be on the way up. We have a total of over 100 million cars and trucks on the highways and byways of the country.
- You can't drive on expressways or freeways in any major city in the country at any time of the day or night without encountering the same amount of traffic that had been programmed for them at the peak hours. It takes as long to get across the island of Manhattan today as it did in the horse-and-buggy days. Traffic congestion has become a way of life.
- The 41,000-mile Interstate Highway System is running woefully behind schedule, despite the fact that the Highway Trust Fund (contributed to by you and us chiefly through "use" taxes on cars and trucks) has a \$5 to \$6 billion per year surplus.
- No program has been established for disposal of those cars that must be

from the publisher

scrapped. (Have you seen the eyesores of abandoned, punched-out, ripped-up wrecks on many of our city streets and the row-on-row of junkheaps blotting the countryside in so-called "wrecking yards"?)

- And what about air pollution? We said in February, and repeat here, "... the investment [of \$428 million over three years by the Federal government to sponsor air pollution research programs] is hardly proportional to the problem." We'll make it even stronger than that. It's a *minimal* investment. If the Federal government *really* wants to find a solution, why not enact a Federal grant for a crash program? We can be taxed to send a man to the moon and to put an SST into the air, yet we can't divert some important tax dollars to help the auto, fuel and power industries to solve the air pollution problem. Why?

We know that you, as our readers, possibly have among you the answers to some, if not all, of this vexatious problem. We know that the great percentage of you are young, affluent, knowledgeable about cars, have a great thirst for continually more car knowledge, are better educated than average, appreciate quality in all products, and are in fact, quite sophisticated. We can, therefore, conclude that by posing the above problem to you we're challenging you to emerge with a workable solution.

We issue that challenge. And, in return for the answers we think that many of you will propose, we'll not only publish the most thought-provoking of them, but we'll send those writers a little remuneration as well.

For the best article of 1500-2500 words proposing a workable solution, we'll pay \$500. For the next best, \$350. For the third best, \$150. If you intend to compete for the prizes and/or expect to have your views published, please submit your thoughts in typewritten form, double-spaced and on one side of the sheet of paper only. No manuscripts will be returned until after the final judging and only then if it has been submitted with a self-addressed, stamped envelope. Deadline for receipt at Motor Trend is April 15.

Don't let this frighten you off if you think you are not a "professional" writer. We're more interested in *what* you say, than *how* you say it. We want to hear from all of you "shouters." We'll also publish excerpts from as many letters as possible.

So... here's a real opportunity for you to SPEAK OUT.

- Walter A. Woron



# It always looks like next year's car.

The 1968 XKE really looks as if Jaguar designed it too soon.

By not having to give the XKE a cosmetic overhaul every year, Jaguar engineers have more time to concentrate on engineering.

The 1968 XKE is more powerful than any imported car selling for less than \$10,000. Yet, for all its power, the XKE manages to cover 20 miles of turnpike on a gallon of gas.

All 1968 cars sold in the United

States had to meet a long list of safety requirements. Jaguar engineering not only met these requirements, but exceeded them.

The '68 XKE has radial ply tires, 4-wheel disc brakes, 4-wheel independent suspension, accurate 7-dial instrumentation, rack and pinion steering, (all included in the price). Yet the XKE above sells for \$5,352.

This price includes many luxury items you'll find in cars cost-

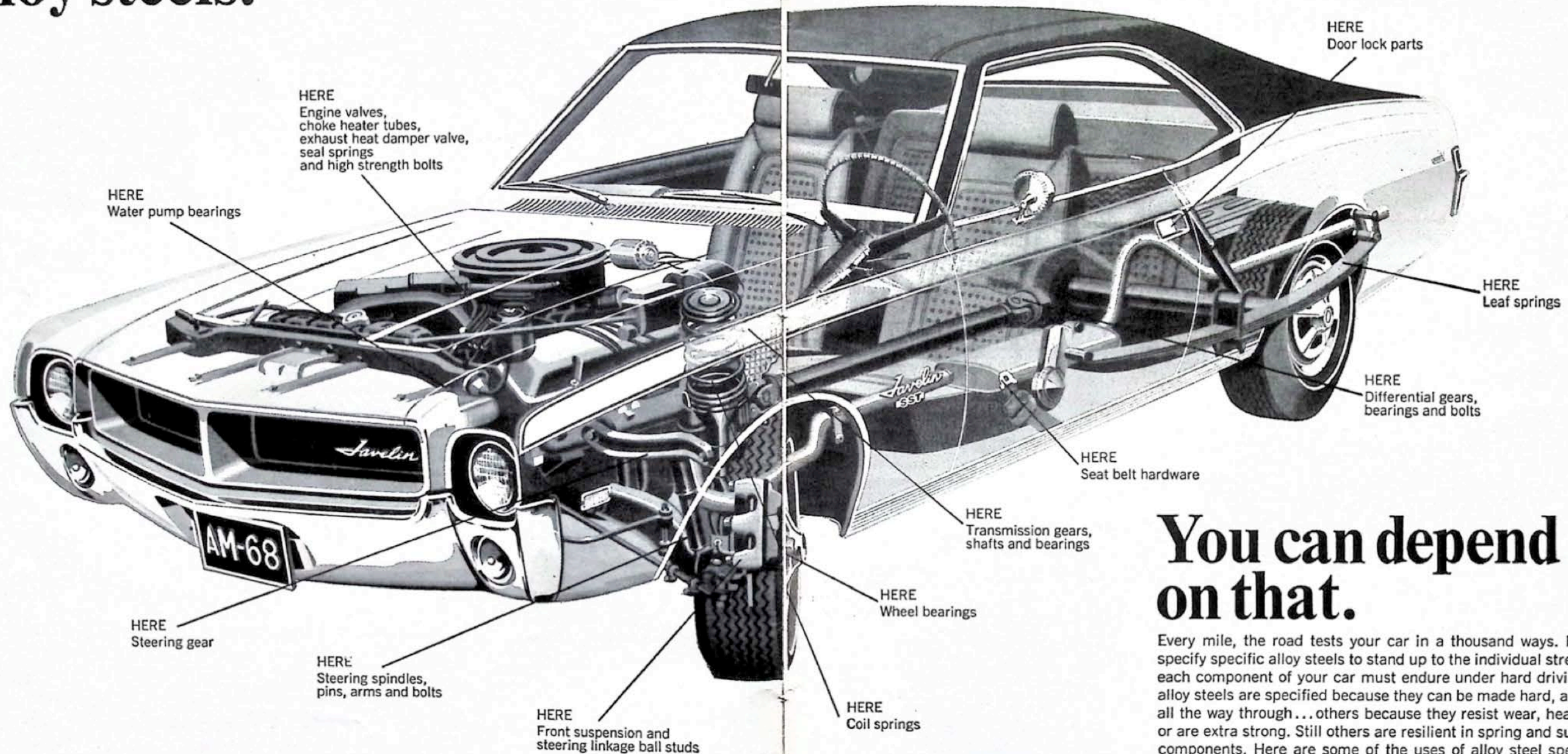
ing twice as much. All leather is prime hide. The bucket seats recline. The steering wheel adjusts. And the wire wheels are real.

The XKE may look as though Jaguar designed it too soon. But that doesn't mean it's too soon for you to own one.

# Jaguar



When a car has to stand up to everything the road can give it, engineers specify alloy steels.



## You can depend on that.

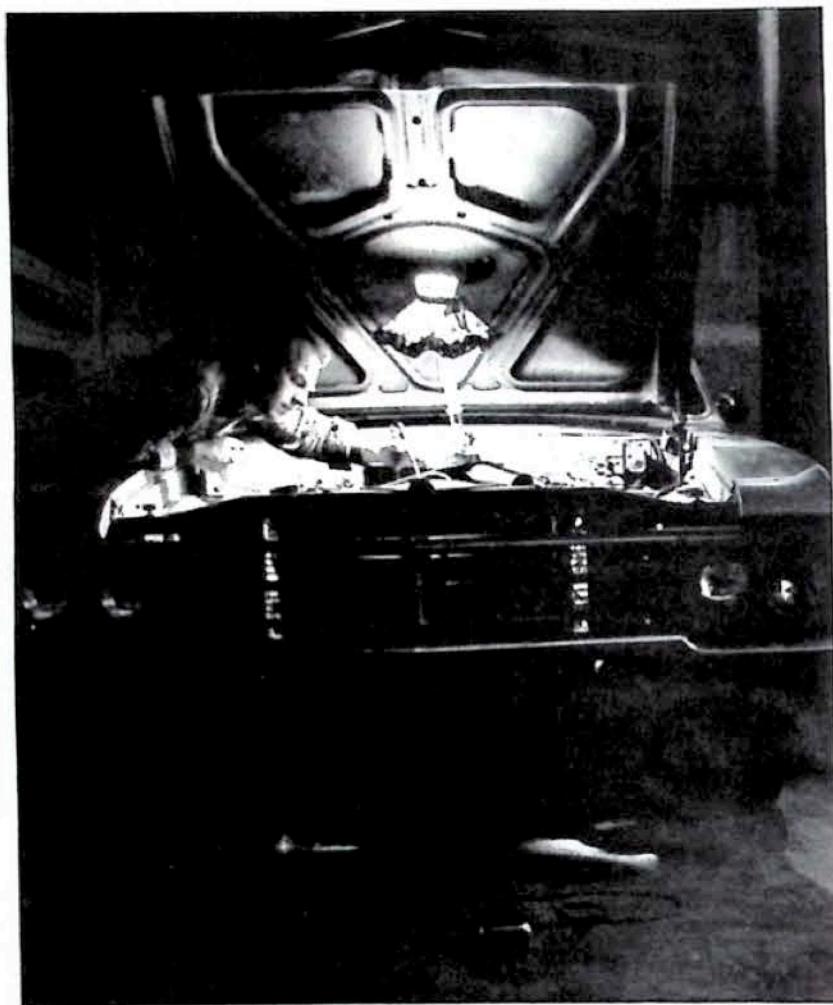
Every mile, the road tests your car in a thousand ways. Engineers specify specific alloy steels to stand up to the individual stresses that each component of your car must endure under hard driving. Some alloy steels are specified because they can be made hard, and tough, all the way through... others because they resist wear, heat, impact or are extra strong. Still others are resilient in spring and suspension components. Here are some of the uses of alloy steel specified by American Motors engineers in the design and production of their new Javelin. Committee of Hot Rolled and Cold Finished Bar Producers, American Iron and Steel Institute. 150 East 42 Street, New York, New York 10017.

THE TOUGH STUFF





# Night Owl



If your car's engine is doing the cha-cha, wasting gas, and balking at hills, put the Full Time Firepower of AC Spark Plugs under the hood.

That'll keep your engine wide-awake.

When spark plugs allow combustion gases to escape, there is a partial power-failure. Gasoline is wasted. Leakage can also cause overheating and engine-damaging pre-ignition.

Lock the gate! AC Fire-Ring Spark Plugs' gas-tight internal construction withstands pressures of thousands of pounds per square inch. Your car runs smoother, responds to the accelerator better, gets more gasoline-mileage.

Now get some sleep.



For Safety's Sake, Check Your Lights—Replace with AC Guide Lamps.



AC SPARK PLUG DIVISION

## INSIDE DETROIT

### COMPUTERIZED SHIFTING

An electronic transmission? Chrysler is believed to be working on one now, and there are predictions General Motors will introduce such a transmission in 1971. It would be an automatic transmission using integrated circuits and would replace the present hydraulic system. "This would be a simplified version of the Chaparral type electronic transmission system," says one supplier, referring to the Chevrolet-powered sports car campaigned by Texan Jim Hall. It's said that in the Chaparral system a computer determines optimum gearshift conditions, after integrating information on speed, tachometer rpm, manifold pressure, torque, tire pressure and other factors. There's no 1st, 2nd or 3rd gear as such. "The circuitry now costs about \$35, but GM/Delco hopes to get the cost down by 1971 to about \$4 per unit," the supplier says.

### PRE-PLANNED WRECKING

Who should pay for getting rid of junk cars? The guy who bought the car in the first place, according to one proposal. The director of the Illinois Auto Salvage Dealers Asso. suggests that a "disposal fee" be added to the price of every new car. A fee of, say, \$20 or \$30 would cover the cost of disposing of the car.

### CORTEZ PICKS FORD

The Cortez Motor Home, made by Clark Equipment Co., is going to be Ford-powered starting this summer. A new 351-inch Ford V-8 will replace the 225-inch slant-6 of Chrysler. The powertrain was first tried and proved to be a big success on a scientific expedition in Mexico.

### CONGRESS EYES WARRANTIES

Some sort of law governing new-car warranties may pass Congress this year. Bills to give the consumer more protection in warranty cases have been introduced by Senators Warren G. Magnuson (D-Wash.), and Carl Hayden (D-Ariz.). One bill requires manufacturers to spell out the guarantee and warranty terms far more clearly than is done at present. Another bill would lead to government standards for such guarantees and establish an arbitration panel to settle disputes between the car maker and buyer. The two powerful senators said they have

received hundreds of complaints from irate customers. "Too frequently there is a seemingly endless succession of return trips to a dealer to obtain the repair or adjustment which should have been performed properly on the first visit," Magnuson said. The manufacturers recognize they have a problem trying to back up their guarantees, part of which is of their own making, however. During the "warranty war" in recent years, the guarantee went from three months or 4000 miles to five years or 50,000 miles. With the introduction of the 1968 models, the companies started tightening the provisions, but perhaps too late to head off the legislation.

### SPRAY-ON CHAINS

Dow Chemical Co. has calculated that about nine million drivers in the snow belt states get stuck sometime during the winter. So it decided to capitalize on the market. It introduced a product called Liquid Tire Chain. It comes in a 2-ounce aerosol can and sells for 98c. The product is "a combination of specially blended resins in a solvent system," Dow says. "When precipitated by the water in ice or snow, the resins form a sticky 'extra tread' on tires that is abrasive to ice and packed snow."

Dow says drivers who are stuck merely have to spray the compound on the exposed tread of each rear tire for five seconds, spin the rear tires slowly, wait 60 seconds for the chemicals to "set up," and then pull away. The product was test marketed a year ago. About 50,000 cans were distributed and a survey showed 46% of the persons contacted used the product at least once, and 78% of those persons said it helped them get out of the ice or snow.

### SAFETY CAN BE COMFORTABLE

The federal auto safety czar predicts the auto industry will make seat belts more convenient to use within the next year or two. Dr. William Haddon Jr., director of the National Highway Safety Bureau, says the major change will be the use of inertia reels to roll up the belts when not being worn. The system will also allow a person to move about while wearing a shoulder-lap safety belt arrangement because  
(Text continued on page 14. Turn page for pictorial.)

## RUMORS

### True or False?

Some of the new federal vehicle safety laws may not make it past the courts . . . Probably true. More courts around the country are following the lead of a Detroit judge in ruling unconstitutional laws requiring motorcycle riders to wear safety helmets. The theory that's being upheld is that if a person wants to take his chances, that's his business. Looks as if this is one part of the federal vehicle safety program that won't stand the test of time or the courts.

Some auto executives seem more worried about the new air pollution control standards than safety regulations . . . True. California's proposal to reduce unburned hydrocarbons to 180 parts per million and carbon monoxide to 1% doesn't worry manufacturers as much as the federal government's proposal to base future standards on total emission rather than "parts per million." One auto official said, "This could make it a whole new ball game."

Ford plans to manufacture a small car to compete with imports . . . Probably false. Top brass at Ford insist there's no small car in the works, despite growing competition from the imports. "We have no plans to bring out any cars other than replacements of present cars that are in production," says Henry Ford II. Does this mean the Falcon might be replaced by a smaller car? "We naturally will have Falcon replacements as the years go by, but we don't discuss ahead of time what the replacements are going to be like, exactly. I was referring to a new type of car in a new class or a drastically different-sized car," Ford said. "We are not going to have anything like that." Ford president, Arjay Miller, says the company will try to compete in this market by bringing in more of its British-built Cortinas. The costs are still too prohibitive to build a car like that in this country, he insists. Others maintain privately that Ford engineers are working on just such a project.

The glass industry is working to develop a car windshield with a hard glass outer surface and a soft plastic inner layer . . . Probably true. Some auto engineers say people in the glass industry are hot on the trail. The idea would be to offer more protection for passengers in an accident and yet enable the windshield to be used as a structural member. "Building a car with a stressed windshield and no A pillar and yet still meeting the safety tests is a tremendous problem . . . but I think it will be done some day soon," said one top auto designer.



**FROM RACETRACK TO SHOWROOM**

Introduction of a pair of true performance engines by Ford this spring will easily move them into contention for dominating areas they should've conquered years ago. Their active engagement in racing has given Ford fans much to brag about, but not much to work with on the buyer level. The flaw in the racing program was that knowledge gained there, seemed to stay there. Good image ruboff helped showroom sales and traffic, but their closest rival, Chevrolet, still managed to capture the NHRA Manufacturer's Championship two years in a row while not being actively engaged in racing.

Anyway, that may be a thing of the past now. Ford Motor Co.'s light (Mustang, Cougar) and intermediate (Fairlane, Montego) models have now got what it takes to arrive first in straight-line and closed course contests.

Both new powerplants are designed for street use, but each satisfies a different need. The new 302-cu.-in. V-8 is basically the Trans-Am Group II sedan racing engine, to be fitted into the '68 lineup of factory backed and/or individually owned Mustangs and Cougars. The factory-release engine is rated at 240 hp @ 5000 rpm (we know it's low, but Ford engineers call this "observed" horsepower), and develops 310 lbs.-ft. of torque at 3000 rpm. Bore is 4.00 inches, and stroke is 3.00 inches. Compression is 10.5:1, and carburetion is via 2 4-bbl. carbs on a dual plane aluminum intake manifold. Heads are of the tunnel port design, meaning they have round intake passages, and are so big that the pushrods must pass through the ports protected by steel tube inserts. Rocker arm ratio is 1.60:1, and hydraulic tappets are used.

A long list of options for this engine are available from dealers, legalizing their use among many racing organizations. Domed full trunk pistons are offered, and metal combustion seals and rubber "O" rings can be had. Compression ratio is boosted to 12.5:1 with use of the pistons. Sets of welded steel tubing headers and hi-rise aluminum 4-bbl. intake manifolds are cataloged. Shaft-mounted rockers to replace the stud-mounted spherical seat type are listed and advisable. A forged steel crank is also a welcome addition to the list for this high winding V-8. High rpm ignition assurance is offered with a breakerless transistor unit, and buyers may also pick up sets of mechanical lifters. This engine is definitely out of the "street" category, but it's safe to predict some will be there.

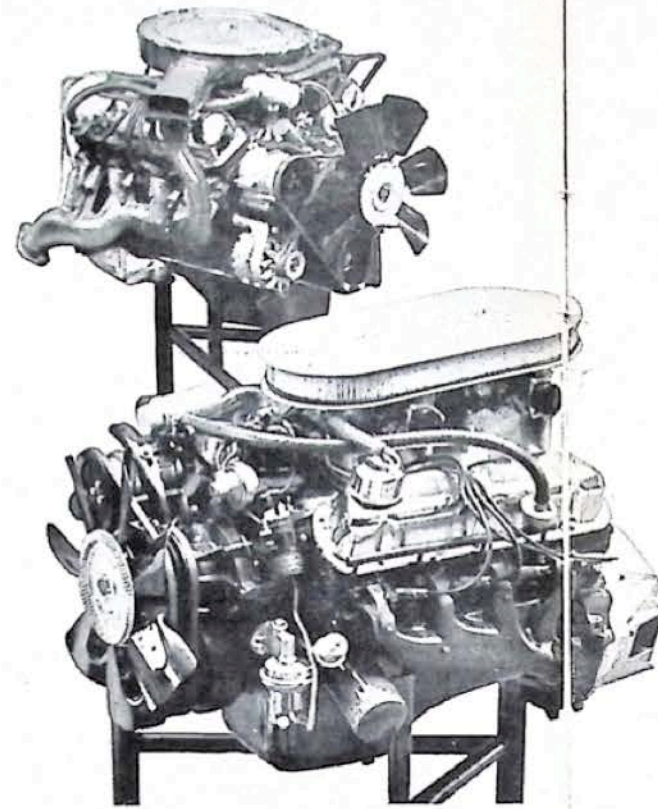
The big inch stormer is a 428-cu.-in. size, a bit more domesticated than the

302 "modified" wheel churner, but nevertheless it hauls in a manner befitting any striped-rump simian.

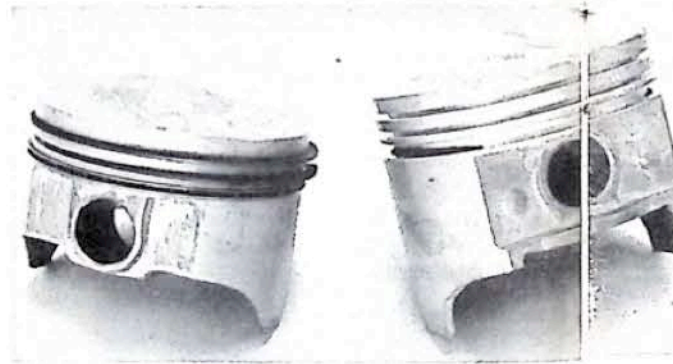
The release engine develops 335 hp at 5600 rpm, and produces 445 lbs.-ft. torque at 3400 rpm. Bore is 4.13 inches and stroke is 3.98. Compression is above average at 10.7:1, and fuel is ushered through the large port (not tunnel) cast iron heads to 2.06-inch intake valves. Exhaust is through 1.625-inch diameter valves to cast iron headers. Basic carburetion is through a 710-cubic-foot-per-minute Holley 4-bbl., mounted on a cast iron intake manifold. Rocker arm ratio is 1.73:1, and lifters are hydraulic.

Quite a list of dealer-available options are shown, to make Mustangs or Fairlanes really get "het up." Light-weight valves, of the same size as stock may be had, and the exhaust stems are sodium filled for better heat dissipation. The intake manifold can be replaced with its twin in aluminum, and triple 2-bbl. or dual 4-bbl. types, same as used on earlier 406-cu.-in. V-8s, can be bolted on. Carburetion is up to the user. Fairlane 427 exhaust headers are offered, but the 427 tunnel port heads can't easily be used due to exhaust valve interference with the combustion chamber wall. Mechanical lifters and ultra-high lift cams (same as 427 V-8s) are a good hp boosting addition, and a rocker arm ratio of 1.76:1 may be obtained. There's also a deep sump oil pan listed, but it does cut down on ground clearance. Most 427 V-8 parts are interchangeable with the 428, but this can't be done at the factory because of the high cost which accompanies hand-fitting. Owners can even put in cross bolted mains if they desire, providing they know a competent machinist.

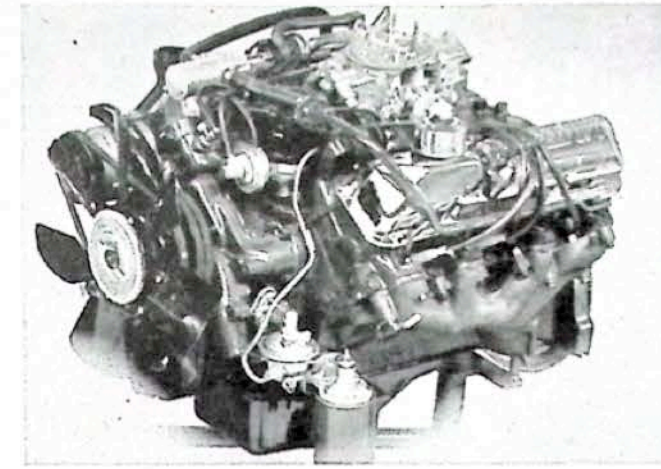
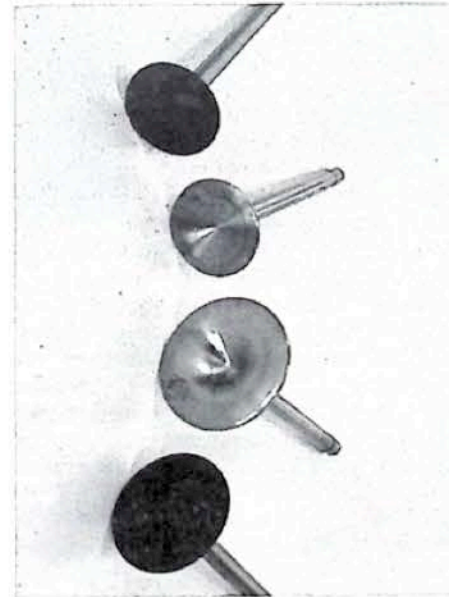
Hopefully more good performing engines will be finding their way to the assembly line at FoMoCo. They certainly have shown they know how to make 'em quick and reliable. All that's left is to make them available. JMT



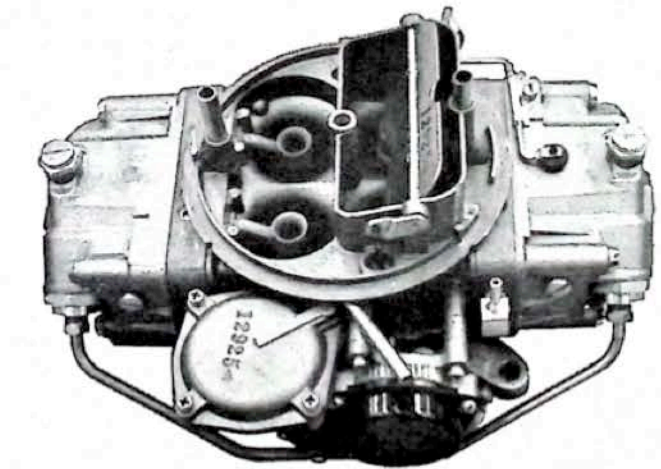
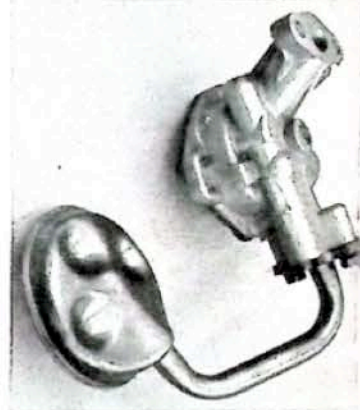
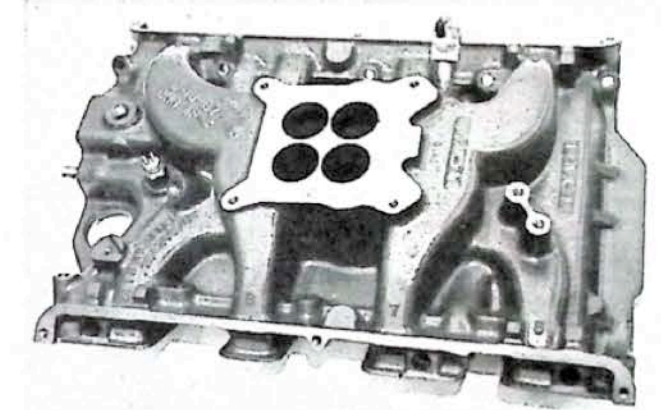
(Top) 302-cu.-in. V-8 put out 240 hp @ 5000 rpm in street version. More powerful, beefed-up version has higher compression and transistor ignition. (Above) Domed piston from new 302 left, standard 302 right.



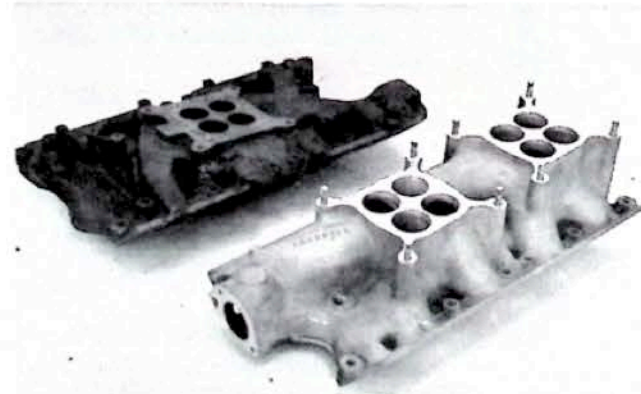
(Above) Connecting rods in the street version of the 302-cu.-in. V-8 have larger, stronger bolts than the standard 4 bbl. version. (Below) Larger intake valve (second from bottom) and exhaust valve (second from top) of the 8-bbl. 302 engine are shown in comparison to the intake and exhaust valves from a standard 302.



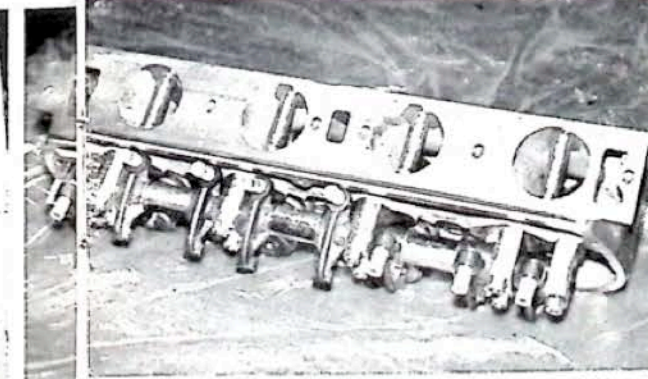
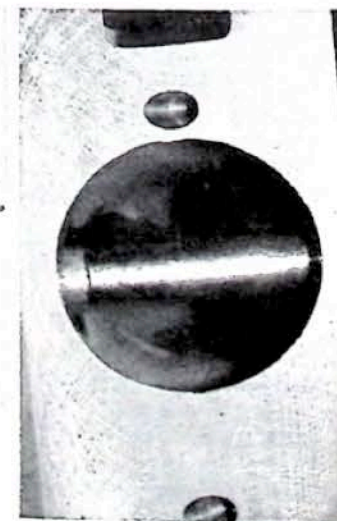
(Left) 428 engine rates at 335 hp @ 5600 rpm with powerful 445 lbs.-ft. torque @ 3400 rpm. Compression is 10.7:1. (Below left) 428 Cobra Jet 4-bbl. intake manifold is a cast-iron version of aluminum manifold used on police interceptor package. (Below) Beefed-up oil pump features extended reach for more pressure. Deep sump pan is available from Holman-Moody, but has minimum ground clearance.



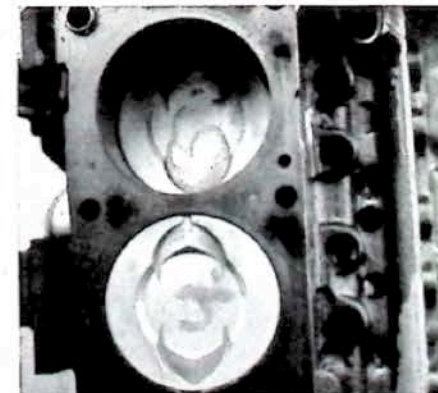
(Left) Holley dual feed 4-bbl. carburetor has 2 floats. Idle is smooth with 715 cfm. Three 2s and two 4s available with flow up to 1800 cfm. (Below left) Shallow, deep-dish racing pistons are used with larger valves. Eyebrows in piston allow close valve tolerance. (Below) Large, non-restrictive cast iron headers are stock Fairlane 427 with good flow efficiency.



(Above) High-performance intake manifold from 8-bbl. 302-cu.-in. street version (foreground) features radically different design from the 4-bbl. intake manifold of standard 302.



(Above) Cylinder head assembly from 8-bbl. 302 engine shows 1.60:1 spherical seat rocker arms, hydraulic tappets. (Right) intake port shows tube pressed through for push-rod passage.







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try JADE EAST or  
Jade East GOLDEN LIME

INSIDE DETROIT  
continued from page 11

the inertia reel doesn't lock itself until there's a sudden stop, such as in an accident. "These are technically feasible and you'll see them increasingly on cars over the next two years," Haddon said. This should eliminate the objection of many people to the shoulder belts which are regarded as hard to use and tough to store when not being worn.

#### ELECTRICS WATCH OUT

An Indianapolis teenager has just the thing for the government's experts on air pollution from automobiles. He's invented an air engine. And since it runs on air, the exhaust naturally seems as pure as the mountain breeze. Robert Deardorff, 18, has only a small 6-hp version of the engine now. But he says that with development it eventually "could take the place of any gasoline engine... at less cost. It could drive a car."

The engine uses dry ice. It's dropped into a pressure vessel with water in it. Carbon dioxide gas pressure builds up and is fed into the cylinders to drive the engine. It might be a little awkward to use, though. "As soon as you got out of bed in the morning you would have to go outside and drop dry ice in the tank," Deardorff said. "But by the time you finished breakfast, enough pressure would be built up to run the car." The operating cost would be only 1c a mile. He says seven pounds of dry ice at a cost of \$5 would propel the car 500 miles.

#### FIND THYSELF 'O MERCURY

Mercury will have a new type of convertible for 1969. There are reports it may have a roll bar built in. It's part of a continuing program to give the Mercury a separate identity from the Ford. "It's still regarded by too many people as just a more expensive Ford," complains one Lincoln-Mercury Division official. With new bodies for all the full-size cars next model year, there'll be an intensive effort to give the Ford and Mercury cars more distinctive features. The top-of-the-line Mercurys will be built on a 124-inch wheelbase, same as the Pontiac Bonneville. That's one inch longer than at present. The standard Mercury will come in a 121-inch wheelbase, the same as the Pontiac Catalina. Right now, the Merc is built on the single 123-inch wheelbase.

#### OUT OF THE RED

American Motors' financial results for their first quarter, which ended Dec. 31, showed a substantial improvement over the previous year, when the company had a net loss of nearly \$8½

million. AMC built twice as many cars this January as it did in the same month in 1967. Increased buyer interest in 1968 AMC cars has been led by the all new Javelin and sales will probably jump even more with the introduction of the little sports AMX.

#### DEALER LEGISLATION

Still in the hopper for 1968 is a bill (S. 2321), sponsored by Sen. Philip Hart (D., Mich.), that would spell out legal technicalities involved between franchise owners and their dealers. Although the bill covers a wide market area of franchise owner/dealer relationships, adamant and opposing stands were taken in 1967 by auto manufacturers (franchise owners) and their dealers. The pending legislation seeks to assure that the rights of dealers are protected when franchises are terminated. Auto manufacturers are in strong opposition to the proposed legislation and insist that present operating arrangements are economically sound without undue risk to dealers.

#### TRUTH OR CONSEQUENCES

The auto companies are going to have a tough time explaining a government study of the recent round of new car price hikes. Prices went up more than \$130 — and safety was listed as a major reason in most auto company press releases. Specifically, the hikes were blamed largely on the cost of implementing the new federal safety standards. Now, however, the Bureau of Labor Statistics has made a study on just what was actually added to the 1968 cars to make the price go up so much. The bureau concluded that only \$29.65 worth of safety equipment was new to the '68 models. The study was prompted by congressional pressure. Congressmen, naturally, passed the law setting up the safety program but didn't want to be blamed for causing higher prices. Obviously, they feel the BLS study gets them off the hook. Actually, the BLS figure of \$29.65 was only the manufacturer's list price to which must be added the average 25% sticker price markup and the 7% excise tax. On the list price basis, the bureau also figured the cost of the anti-smog equipment as only \$11.20, which some auto men were quick to label unrealistic. The average retail price increase, according to BLS, was \$116 and of this \$56 went for safety and air pollution items.

#### CAVEAT EMPTOR

Ever had your car recalled? If you do remember this: don't let the dealer try to charge you, even if he claims additional work is necessary because of the defect that led to your car's recall. The manufacturers are supposed to pay for the recall work. When Chevy recalled 1.2 million 1965 cars for inspection and

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Improves gas mileage and engine life. Knocks out knock and ping. Unsticks sticky valves. Cleans out plugs, fuel system, carburetor and engine deposits. Helps fight carburetor icing, smog, rust and corrosion. Lubes and protects upper cylinder area. Removes gum and varnish. And smooths out engine performance. Phew!  
So get your gas moving. Add STP to your tank.  
You'll feel the difference with the very first can.

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**INSIDE DETROIT** *continued*

possible replacement of an idler arm assembly, one enterprising dealer told owners the work wouldn't be guaranteed unless they also got a front end alignment, which happened to cost \$10.95. "That's ridiculous," said one company man who heard about it.

**GET A PADLOCK**

At a time when authorities and auto-makers are trying to devise ways of cutting down the number of car thefts, a Florida company is sending out circulars offering to provide for \$10 a set of 15 keys it claims will open all American automobiles. The circular is addressed to dealers, service stations, police agencies, repossessioners and "parking lots, etc." One Detroit parts dealer said "It's the 'etc.' that bothers me. Here we are, screaming about car thefts at the same time people are trying to sell master keys."

**ELECTRONIC LIBRARY**

Chrysler has built more than 8,000,000 cars and trucks since 1963 and can prove it with a new electronic computer built by the company. It's used in processing warranty claims. One company official says the computer is also useful for engineering and quality control checks. "By evaluating dealers' claims we can determine the rate of failure on certain parts and initiate quick corrective action," he said.

**CAR PRICES STILL GOING UP**

The average price of a car went up \$261 in a 10-year period. That's the conclusion of Dr. Morton Ehrlich, senior economist on the National Industrial Conference Board. Starting in the late '50s, the period included the early and middle '60s, a time when the government and the auto industry were claiming price cuts. In the government studies, prices are compared after adjustments are made for quality differences and added features that were formerly optional. The press had traditionally fought this approach because in those same years the real, or sticker price of cars actually went up. Generally, the companies no longer use the "comparably equipped" theory in their pricing announcements any more. An *Automotive News* survey found that the 1968 prices went up an average of \$116.

**SAFETY STANDARDS HIT GT RACE CARS**

The federal auto safety standards threw a scare into racing officials. They were worried about the vague wording of customs regulations covering cars that can be imported under the new safety standards. The regulations exempted from meeting the standards vehicles brought into this country for the pur-

poses of show, test, experiment, repairs or alteration providing they will not be sold or licensed for use on the public roads. This would seem to include race cars. But what about GT cars which are supposed to meet the normal highway requirements for things like headlights and taillights? Must they also have a collapsible steering column, 4-way emergency flashers and the like even though they are to be used only on the racetrack? The government promised to straighten out the regulations. And, as Dr. William Haddon Jr., director of the National Highway Safety Bureau, said, "We are not opposed to racing vehicles so long as they are kept off the public streets. We wish that many of the people who are interested in racing would insist on the same crash protection for their passenger cars as they have built into their competition vehicles." That was a sly dig at Ford and the other auto firms because Haddon mentioned such things as roll bars, complete restraint systems, automatic fire extinguishers and fire-resistant fuel tanks.

**SAFETY BUREAU BUDGET CUT**

The National Highway Safety Bureau, launched with a great hoopla 18 months ago, has had trouble getting into high gear because of the government's budget cutters. First, highway safety funds were pared to the bone. Then traffic safety money was withheld. Last October, a complete personnel and contract freeze was placed on the bureau. No research contracts are being renewed. People can't be hired for job openings. Was it only 18 months ago that President Johnson called traffic accidents the nation's biggest problem next to Vietnam?

**AMC NOT ALONE**

Federal safety officials are not going to be maneuvered into crucifying little American Motors Corp. That's why on hearing of a report that some Ramblers spill gasoline in panic stops the safety officials' reaction was to ask other auto firms whether they had similar experiences with their cars. It's understood at least two competitors' cars had gas spillage in fast stops. To eliminate it on Rambler Rebel and Ambassador models, AMC added another foot and a half of venting to the gas tank. AMC engineers said they didn't consider it a problem in the first place, however, because only a few ounces spilled under conditions when the fuel tank was completely full and the car was panic stopped.

**PEDESTRIAN INJURIES CITED**  
Now that hood ornaments have been eliminated from American cars, the

(Text continued on page 20.  
Turn to page 19 for pictorial.)

# Find another car under \$2,000 that has all that the Renault 10 has, and we'll buy it for you.

*We believe the Renault 10 gives you more for your money than any other car.*

*And the fact that sales have soared since we introduced it, leads us to believe that quite a few people agree. We sold 72% more 1967 Renaults than 1966 Renaults.*

*But if some doubters remain, we offer this challenge:*

*Find another car under \$2,000 that has all that the Renault 10 has, and we'll buy it for you.*

**The Renault 10 has, as standard equipment:**

- 4-wheel disc brakes  
Disc brakes take hard braking better than drum brakes. They have long been used on super-speed, super-priced automobiles.
- 4 doors instead of 2  
You don't have to fight the front seat to get to the back seat.
- 35 miles per gallon  
Some people say they get more.
- Contoured seats that recline for sleeping  
Plus 18 other positions for when you're not sleeping.
- Engine weight over the drive wheels  
The drive wheels bear down on snow and ice because the engine weight bears down on them.
- Turning circle of 30 feet  
You can make most u-turns in one clean sweep.
- 4-wheel independent suspension  
Each wheel moves up or down without affecting all the other

wheels. So when one wheel hits a bump, only one gets bumped. The other 3 keep the car and you going in a level position.

**4-speed synchromesh transmission**

This matches the speeds of the engine and transmission to allow the gears to mesh easily. Which makes shifting a lot easier on you and your transmission.

**Replaceable wet cylinder sleeves**

When the cylinders wear out in a conventional engine, the whole engine has to be pulled out and rebored. Sometimes it pays to buy a new car. But a Renault piston moves in a replaceable wet sleeve. If the sleeve ever wears out, you can put in a new one easily and inexpensively.

**Sealed liquid cooling system with expansion tank**

Water-cooled engines are much quieter than air-cooled engines. However, water and anti-freeze can frequently overflow. But Renault's water-cooling system has an expansion tank to keep the overflow from escaping.

**5 main-bearing engine**  
Instead of three bearings sup-

porting the crankshaft, we have five. (As many as most V-8's.)

**Special vents for draft-free ventilation**

You can get plenty of fresh air with the windows shut. Which, incidentally, shuts out noise.

**Rack and pinion steering**

Eliminates play in the steering.

**2-speed hot-water heater and dual defroster**

Our heater uses the same hot water that circulates in the engine. So our heater heats faster and produces a more even temperature than any air-type heater.

**15 inch wheel**

Most economy cars have 13" or less. Our larger wheel makes fewer revolutions to go the same distance. Which saves rubber. Which saves money.

**Spare tire not in trunk**

If you get a flat you don't have

to unload the trunk and get everything dirty.

**11 cubic foot trunk capacity**

We're not the biggest in this department, but neither are we the smallest. The smallest only has 2.3 cubic feet, which is about as much space as we have behind our back seat alone.

**Hits a top speed of 85**

That's pretty surprising considering the mileage we get.

**Unique warranty**

12 months/unlimited mileage.

**Price—Under \$2,000**

Way under \$2,000.



THIS CHALLENGE APPLIES TO ALL 1968 STANDARD EQUIPPED CARS LISTING FOR UNDER \$2,000 AND INTRODUCED FOR SALE IN THE UNITED STATES BY JANUARY 1, 1968.



AUTOMATIC TRANSMISSION OPTIONAL FOR NEAREST DEALER OR INFORMATION ON OVERSEAS DELIVERY, WRITE RENAULT, INC. BOX 19, 750 THIRD AVE., NYC 10017



# Tiger powers Foyt to 5th USAC Championship!

For a record-smashing fifth time, A.J. Foyt has won the annual USAC Championship and the honor of carrying the number "1" on his car in 1968. He earned it on the toughest racing circuit going, the United States Auto Club Championship trail. (Where no one else has ever won more than 3 Championships.)

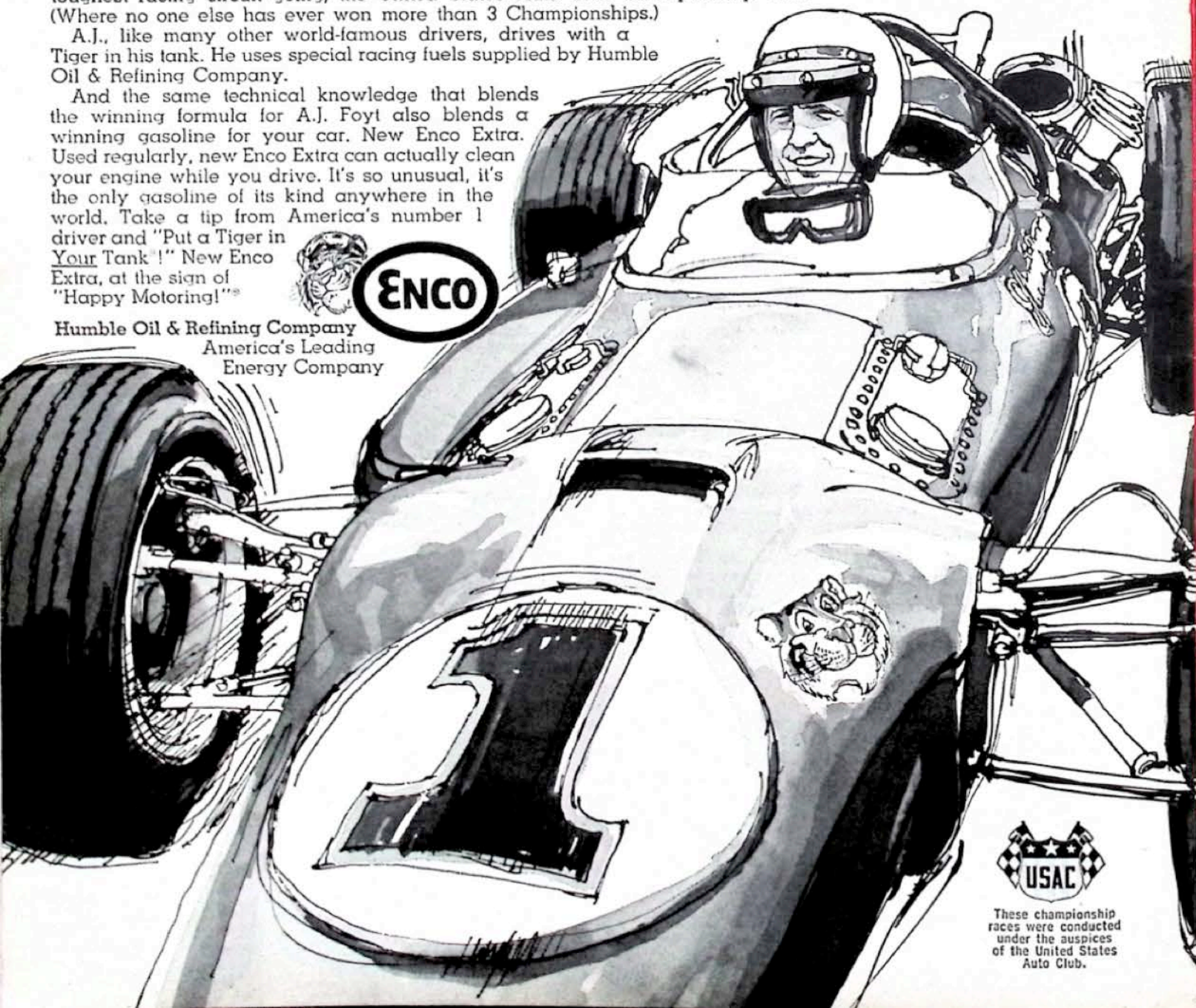
A.J., like many other world-famous drivers, drives with a Tiger in his tank. He uses special racing fuels supplied by Humble Oil & Refining Company.

And the same technical knowledge that blends the winning formula for A.J. Foyt also blends a winning gasoline for your car. New Enco Extra. Used regularly, new Enco Extra can actually clean your engine while you drive. It's so unusual, it's the only gasoline of its kind anywhere in the world. Take a tip from America's number 1 driver and "Put a Tiger in Your Tank!" New Enco Extra, at the sign of "Happy Motoring!"



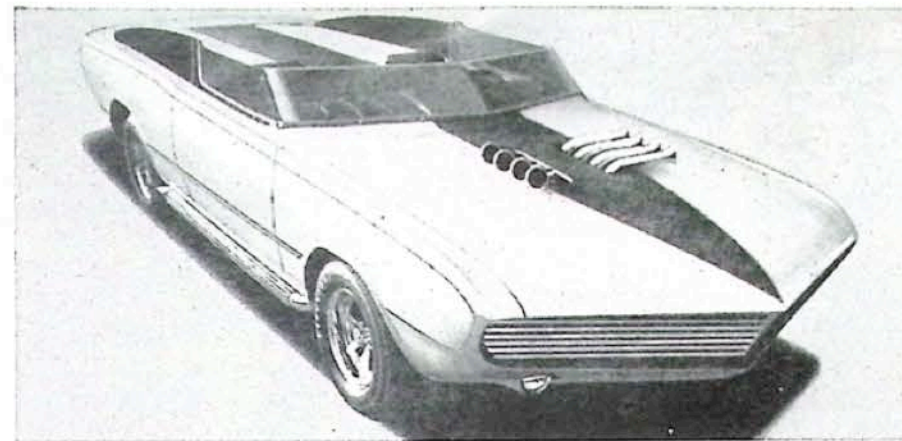
**ENCO**

Humble Oil & Refining Company  
America's Leading  
Energy Company



These championship races were conducted under the auspices of the United States Auto Club.

INSIDE DETROIT *continued*



**DAROO I**

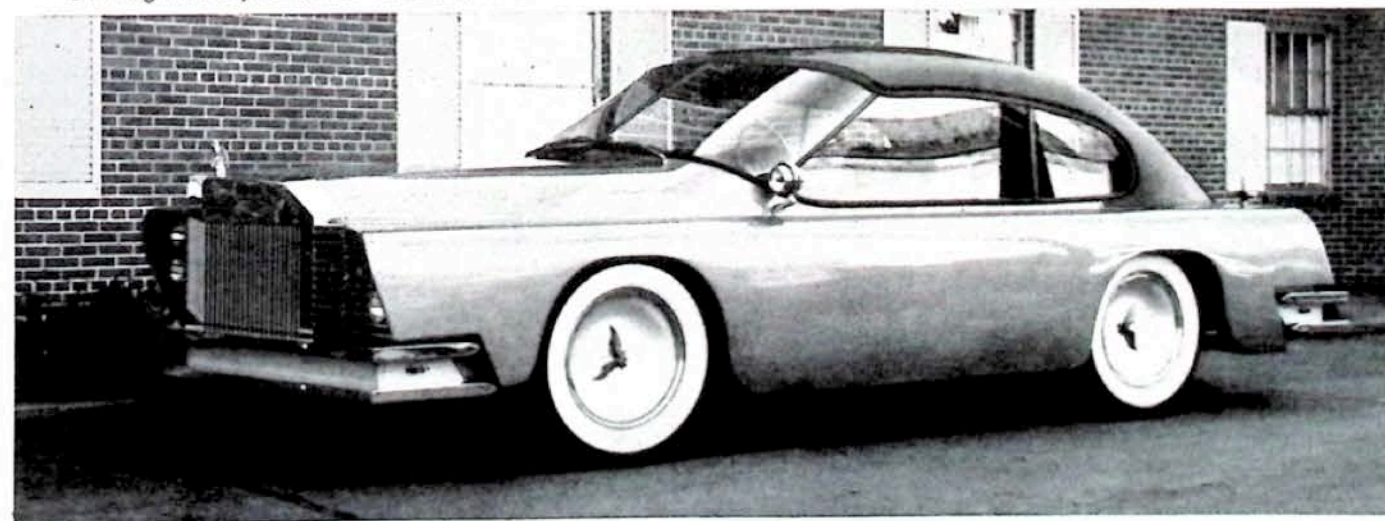
(Left) Give a new Dodge Dart GT to George Barris, Barris Kustom City, North Hollywood, Calif., let him cut the top off, add a dash of customizing and resculpturing, and there you have a show car. Paint is "Pearl Honey Yellow." Engine is 340 CID, GTS with 4-bbl. carburetor. (Above) special instrument pod and 4-on-the-floor.



**DAROO II**

(Left) Dodge and Ron Perau's Imperial Kustoms, Tulsa, Okla., went one step beyond. Another Dart GT went under the kustom surgeon's knife and emerged as Daroo II. Engine is the same 340-cu.-in. and paint is "Frosted Fire," a combination of "Arctic Orange" and "Pearlescent Gold." (Above) Contour seats and automatic shift.

(Below) Safety also gets the "Kustom" treatment in this creation by Bruce Mohs of Madison, Wisc. Called the "Mohs Ostentatienne Opera Sedan," it is loaded with unique safety and convenience features. One rear entrance door allows unusual body and chassis construction. Special side frame rails at elbow height run the length of the car from the firewall back and are welded to main chassis rails below floor. Side rails act as bumpers in side collisions. Cantilever beams support roof, eliminating need for heavy corner posts and will support car upside down. Inside, the area in front of front-seat passenger is completely padded and contains no instrument panel or glovebox. Cantilever seats suspend driver and passengers so centrifugal force is countered by simultaneously leaning them into turns. Headlights are quartz-iodide, providing 250,000 candle power and seal-beam tail lights light road in rear for 50 to 100 feet. Power is supplied by a 304-cu.-in. V-8 with 343- and 549-cu.-in. V-8s also available as options. Other standard features include power steering, power brakes, a water cooled transmission, a refrigerator and a 2-way radio. (Right) Rear entrance means no side doors to pop open in case of accident. Car weighs 5740 pounds and costs \$19,600 delivered in United States.





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As the tray turns, gravity takes over... gently lowers each slide into place for perfect projection. There's no pushing or pulling... and never a jam session.

Each spillproof tray holds 80 slides—a whole show—and it gives you instant access to any of them.

Choose from five KODAK CAROUSEL Projectors. The CAROUSEL 850 Projector, for example, has automatic focusing, automatic slide change, remote slide change—less than \$170. Other CAROUSEL Projectors from less than \$80.

See them at your Kodak dealer's. Prices subject to change without notice.

*Kodak Carousel Projectors— as dependable as gravity.*

INSIDE DETROIT  
continued from page 16

government is stepping up its campaign to eliminate other sharp projections which might injure pedestrians. The National Highway Safety Bureau recently sent a letter to all manufacturers calling attention to two cases of pedestrian injury. In one, a hole was torn in a man's side by the headlight cowling of a 1967 car. In the other, the ornament from a 1951 car went through a child's head in an accident. To make sure the auto firms got the message, the safety bureau sent photographs of the two accidents along with the letters.

#### LUXURY ROAD RUNNER

That was a nice idea Plymouth had to make the Road Runner a low-priced, high-performance car. Eliminate the fancy trim and upholstery, so the thinking went. But the result was a little too gaunt, with some nicknaming the car the "taxi cab package." So the division bowed and for \$80 you can now get a decor group featuring an all-vinyl interior, a deluxe steering wheel, bright side molding for the center pillar and a color instead of a black and white rendering of the Road Runner cartoon bird on the rear deck.

#### ONE YEAR AHEAD

How tough will the 1969 safety standards be? The first one out deals with lighting, requiring such things as 4-way hazard warning flashers and side marker lights or reflectors—features already on 1968 passenger cars.

#### TIMES ARE 'A CHANGING

In 1922 the country had 378 Kings and 2119 Earls. These were two of the 58 different makes of cars included in the first registration report compiled by R. L. Polk & Co. By contrast, the 1968 Polk report covers only 12 makes of cars. Of those, only Buick, Cadillac, Chevrolet, Dodge, Ford and Lincoln appeared on the original Polk report.

#### ALUMINUM USE UP

About 72.2 pounds of aluminum will be used in the average 1968 model car. While the estimate from Alcoa is up from the 71 pounds of 1967, it's still slightly below the record 72.4 pounds used in 1964.

#### WE TOLD YOU SO

Auto execs admit they're hearing some complaints about the super-sharp angle on some of those fastback roof-lines. But, insists the research director for one car division, "We've studied and surveyed this and conclude the vast majority of people don't object." Common complaint among older ladies is they can't see the rear end of the car and feel nervous about backing

# The winner.

First rechargeable that dares any blade to match it for closeness.  
Beats all rechargeables for the number of shaves per charge.



Step up and meet the Norelco Rechargeable Tripleheader Speedshaver® 45CT. A winner twice over.

First, an independent laboratory tested this Norelco Tripleheader for closeness against a leading stainless steel blade. In more than half the shaves, the Norelco came as close or closer than the blades.

Then they tested all the leading rechargeable shavers on the market, and this Norelco delivered more than twice as many shaves per charge as any other rechargeable.

What's behind this double Norelco victory? 18 rotary blades stroke whiskers away without a nick or a pinch. Floating Microgroove™ heads even thinner than the paper of this page. Heads swinging in and out as close as they can get to every nook and cranny of your face.

And a motor that's a Powerhouse. Delivers more than 3 weeks of shaves on a single charge.

There's a pop-up trimmer, too. Altogether, more features than any other shaver on the market. Including a 115/220 voltage selector so you can really shave with a cord or without,

anywhere in the world.

Any other shaver that comes close to this? Only one. The new Norelco Tripleheader 35T. Same great features but works with a cord. It joins the battery-powered Norelco 20B, and the Norelco 'Flip-Top' 25... the great beginner's shaver.

Come meet the champions from Norelco.

Close up.

**Norelco**

the close, fast, comfortable electric shave.







CORVAIR



VW



MUSTANG

## IT'S FOR THE WHAT?

Get with the action! Join the group, and wear a GO-BUTTON! It's for the esoteric... For the Corvaair buff there's the Classic Corvaair Club button. Because he drives the classic of the time! The Mustang wears his Mostly Modified Mustang pin to prove he cruises in style! The Volkswagen man sets the trend with his Very Virile VW... he commands the action machine!

Get your GO-BUTTON and a membership card. With it you'll get IECO's completely illustrated catalog of action goodies for your car. IECO has the parts to make your car respond with the twitch of a finger, stop with the slightest touch, and go at your command! You'll own a car so custom engineered that it will have no equal. It's easy. IECO takes out all the guesswork for you... Get your individual action packed catalog for your Corvaair, Mustang, or VW. Send 50¢ now.



Name \_\_\_\_\_

Address \_\_\_\_\_

City & State \_\_\_\_\_

I own a  Corvaair  VW  Mustang  
1541 Third St., Santa Monica, Calif. 90401 Dept. 10  
(213) 394-7019

### INSIDE DETROIT *continued*

up. "I asked the dealer to attach two vertical rods to the back bumper," insisted one lady who called a newsmen to complain. Dealer wouldn't do it, but she says a garageman did.

#### INFLEXIBLE RUBBER RULES

Senator Gaylord Nelson is trying to get rubber companies to announce tire recalls the way the auto firms disclose car recall campaigns. The Wisconsin senator has already drawn public admissions from Goodyear and Dunlop that they have recalled almost 110,000 tires since 1964. The largest number was a group of 107,000 Goodyear tubeless tires recalled in 1965. After inspection 13,000 were destroyed because they had questionable soft beads and could affect air retention.

Nelson was obviously happy with the report this fall, noting that they were the first two companies "to concede that defective tires are sometimes manufactured and do slip by quality controls into the hands of dealers and consumers." Nelson tried to get such information from all the major tire companies but most others either refused to supply the data or denied they had any problems with tire defects.

#### PUT YOURSELF DOWN

Success of the Road Runner prompted one Chrysler Corp. official to jokingly suggest that the way to get Imperial sales moving was to come out with a special edition called the Road Hog. Instead of "beep beep" it would go "oink oink."

#### BETTER DIAGNOSTIC CENTERS

Most diagnostic centers charge about \$10 to check your car's ills. Goodyear feels that eventually the work may be done for nothing. A. P. Favalon, manager of the service departments of Goodyear's retail store division, said, "Computers are going to take over and make diagnoses of cars a lot quicker. When this happens, eventually the diagnosis will be offered free for competitive reasons." Goodyear now operates about 50 diagnostic centers, located at their tire stores. Almost 20 were opened in the Chicago area alone last year.

Mobil Oil, however, is given credit for opening the first one. That was at Cherry Hill, N.J., in 1962. Mobil now has many more, and has checked over 100,000 cars so far. They provided some interesting statistics on the state of repair of today's cars. Of those checked by Mobil, 58% needed spark plugs; 51% wheel alignment; 48% wheel balancing; 42% carburetor adjustments; 69% engine tuning and

points and condenser; 55% headlight aiming; 41% hoses and belts; and 45% wheel bearings. Toward the end of the year, Shell closed its only diagnostic center—in Detroit—but says it has not lost interest and will announce early this year a new program to be carried out in Shell stations.

#### MORE WEAR TIRES

The bloom may be off the boom for radial ply tires. The reason is the new belted bias-ply tires. They combine the best features of radials and the conventional bias-ply tires. The new tires were introduced early in 1967 by Mohawk and Armstrong, two small tire firms. But they got their biggest push soon after the first of the year with the introduction of a version by Goodyear, giant of the rubber industry. Called the Custom Wide Tread Polyglas tire, Goodyear has a bias-ply polyester cord topped by two fiberglass belts under the tread. The tire tread is approximately two inches wider than that of a conventional tire. Goodyear claims the tire provides 50% more mileage than conventional tires, although some tests indicate it may be as high as 100%. In some tests, radial ply tires deliver up to 100% more tread life, also. But the bias-cord eliminates the harsh ride associated with radials. The tires cost about 30% more than present premium tires, which would seem to put them in the same price range as radials. As with radials, handling is improved with the new tire over conventional ones.

#### CHEVY COPIES PONTIAC

General Motors has traditionally followed the practice of letting the car division that develops a new device have it exclusively for at least one year. Latest examples: front-wheel drive on the Toronado and a year later on the Eldorado; also concealed windshield wipers on the 1967 Pontiacs and then on other GM cars for 1968. Because of this policy, observers were a little surprised to find the vinyl side moldings developed by Pontiac for 1968 also show up on some '68 Chevrolets. It's been learned that Chevy found out about the Pontiac development two months before the start of '68 production and asked its sister division for the tooling. Pontiac refused but Chevrolet put through a crash program and ordered its own tooling in near record time. This vinyl molding is ideal for preventing parking lot damage like that which occurs when someone opens his car door and strikes the side of your automobile. It's expected to be widely copied in 1969.

#### INSURANCE INVESTIGATION

There is talk on Capitol Hill about a full-scale investigation of auto insur-

# Test Drag a Javelin.



Don't laugh. The Javelin SST is even faster than it looks.

When equipped with a 343 cube/280-BHP 4-barrel V-8, and a 4-speed manual transmission with a 3.54 rear axle, it will move from a standstill to 60 in about 7.86 seconds and pin your backbone to the bucket in the process.

The engine pumps out a tough 365 lb.-ft. of torque at 3000 RPM. This SST in pure stock form will cover a standing quarter in 15.8.

But performance just begins there.

The real surprise comes in the Javelin's handling.

The Javelin can be equipped with front disc brakes, and a special handling suspension that includes a larger diameter sway bar and heavy-duty springs and shocks.

You'll notice the Javelin's

phenomenal control in tight turns and high speed cornering.

Popular Science Monthly wrote that "The Javelin reacts almost the same at high speed as it does during low-speed maneuvers. Steering ratio was 18.1 to 1 overall and it felt just right for this car. Not too slow, not too fast. I particularly liked the action of the power steering. Aside from handling, the ride is excellent—tight and firm, yet comfortable enough for long-distance or everyday driving."

That's what the experts say. And they say it better than we do.

## American Motors

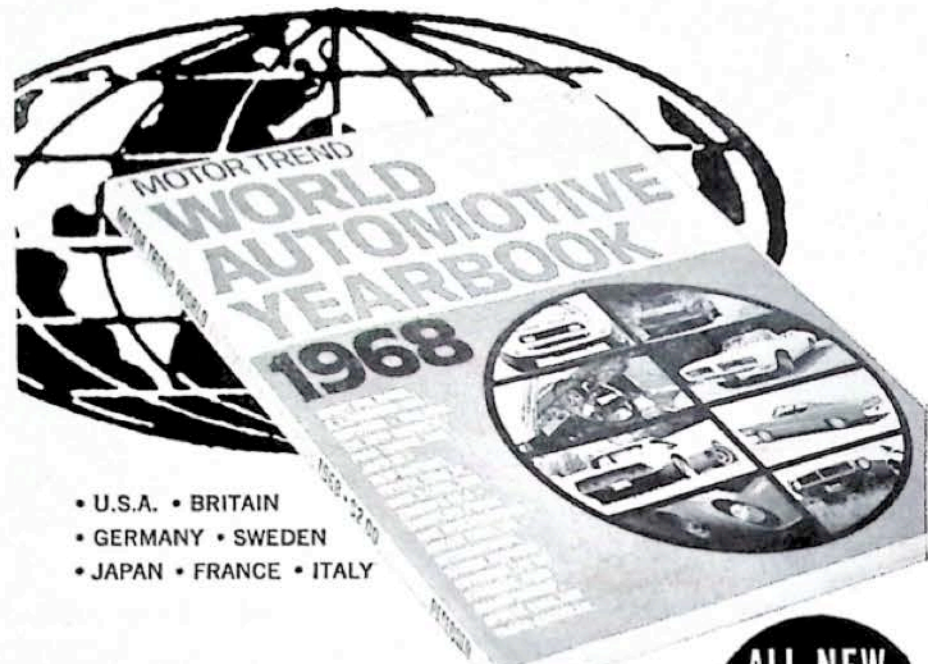
Ambassador • Rebel • Rambler American • And the new Javelin



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ON THE MAJOR DOMESTIC AND FOREIGN RACING  
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ON-THE-SPOT REPORTS,  
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OF EVERY HIGHLIGHT.

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INSIDE DETROIT *continued*

ance rates. Some officials in the auto and insurance industries expect it in view of complaints about rising rates and cancelled policies. Interestingly, though, the Automobile Club of Michigan actually reduced its rates in 1967. Nevertheless, nationally it's a big problem. In fact, Ford Executive Vice President, Lee A. Iacocca, calls the problem of mounting insurance costs for young drivers the biggest problem now facing the auto industry.

#### AMC ELECTRONIC ELECTRIC

American Motors hopes to have a working model of its experimental electric car on the road by summer, but it may even be as early as April. The vehicle, called the Amitron, could be in production within five years, "but that might even be shaved a bit," says AMC Chairman Roy D. Chapin, Jr. "The early '70s would be a pretty good way to put it," he says. However, Chapin indicates Washington could have one earlier. "If there is an urgent need for such a car by a government agency, this project could be expedited."

The 3-passenger vehicle will use lithium and nickel-cadmium battery systems and controls supplied by Gulton Industries. AMC agrees with Ford that there is a market for an electric car designed for urban use. As Chapin puts it, "We envision electronic (he prefers that to electric) cars as not replacing but supplementing conventional gasoline-powered vehicles in future total transportation needs."

The company insists it's serious. "We would not engage in anything but a real project with a real end—production of vehicles," says Victor G. Raviolo, AMC's top engineer. AMC officials indicate they would aim the car at a price target \$400 to \$500 above the Rambler American, which sells for about \$2000, with the higher initial cost being offset by lower operating expenses. Would it sell? "I don't know," replied William S. Pickett, AMC's vice president for sales. "It would cost a fortune to get it started. But the buying public has been preconditioned to this type of car because of the publicity and the government's statements, so it might go over very easily." As Raviolo sees it, "We have the very real potential of creating a new market here. We think we are past the point of feasibility. We are moving into the engineering phase."

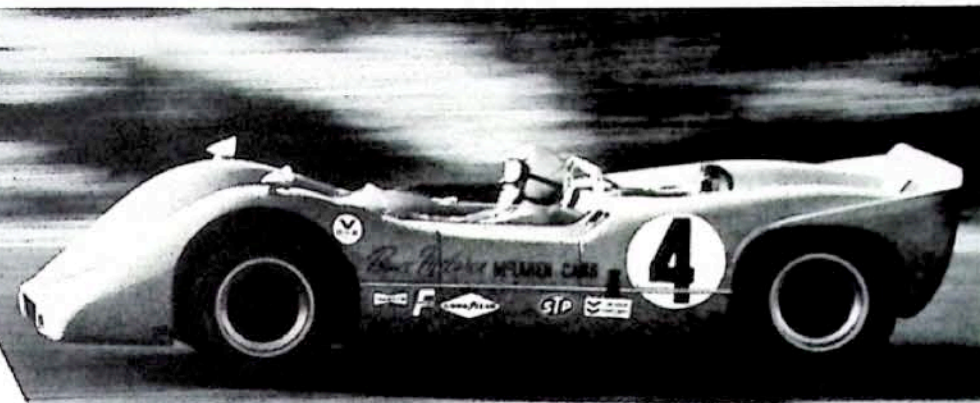
See the April MT for feature article on trends and development of electric cars. /MT

# How did Chevies sparked by Champions do in the Can-Am Series?

## They finished-

### FIRST!

*Bruce McLaren—piloting a Champion-sparked McLaren Mark 6A Chevrolet that he designed and built himself—hurtles to the top of the Can-Am standings with 30 points. He won at Monterey and Riverside, placed second at Bridgehampton and Mosport*



### SECOND!

*Denny Hulme, who captured the 1967 World Driver's Championship with Champions, scored 27 Can-Am points—including victories at Elkhart, Bridgehampton and Mosport—in a Champion-fitted McLaren Mark 6A Chevrolet*



### THIRD!

*John Surtees—piloting the same Champion-equipped Traco-Chevy-powered Lola that carried him to first place in the '66 Can-Am series—wrapped up the season with 16 points*



### AND FOURTH!

*Mark Donohue took 16 Can-Am points in a Roger Penske Sunoco-Lola-Chevrolet—a car similar to the Champion-sparked machine that won him the '67 SCCA U.S. Road Racing crown*



Canadian-American Challenge Cup winner Bruce McLaren had Champions in his Chevy engine. So did his teammate, Denny Hulme, second place finisher in the series. And John Surtees and Mark Donohue—third and fourth place finishers—also sparked their Chevies with Champions! It's more proof: Chevrolet engines deliver peak performance when their spark plugs are Champions! Why settle for less in your car? Always specify Champions!

TO FEEL NEW POWER INSTANTLY, INSTALL NEW CHAMPIONS NOW AND EVERY 10,000 MILES



CHAMPION  
SPARK PLUG COMPANY  
TOLEDO, OHIO 43601





# When An Accident Strikes..

Keep cool — and refer to these tips which you should put in your glovebox now.

As any insurance agent can tell you, the driver's actions immediately after an accident can make or break a legal case. Look after your own and passenger safety first. If possible, drive the car off the road. If the car is disabled, get out of it and away from traffic lanes at once. Do not stand around the wreck arguing with the other driver. After seeing that any injured have been cared for — then what? Here are some steps calculated to reduce your problems with insurance claims and legal liability...

## BE OBSERVANT, MAKE NOTES

1 — Get your pad and pen. Start gathering information and noting details about the accident. Begin with basics. Exchange driver's licenses with the other driver. But don't just casually write down his name and address. Study that license! Does it contain a reference to eyeglasses? Perhaps he was restricted to driving only while wearing them. Does he have them on? Make a note. Check the reverse side of a driver's license, too. Police sometimes make notes on them about a driver's habits. A medical condition, for example.

2 — Be a good listener. Your mind will be filled with a thousand panicky thoughts but try to concentrate on every word the other driver utters. Even a stock comment like "... guess I should have checked that tire last week," or something similar may prove helpful later on. Write down such comments (on the sly). That goes for bystanders and police, too. Remarks from the crowd can tip you off to something you personally missed.

3 — Check the physical condition of the other driver. Does he reek of alcohol, for example? Does he have trouble focusing his eyes? Is his speech coherent, normal? Jot it down!

4 — Now turn to details which are necessary for your claims form: Time of day. Direction of travel. Condition of highway (wet, dry, crowded, lonely — whatever it is). Was it dark enough for headlights to be on? Were his on?

5 — If passengers were in the other car, get their names and addresses if you can. Don't expect them to make any statements — but they might. For example, one of the passengers might complain that "he was driving much too fast!", or something similar. Passengers involved in an accident are not always friendly to their driver, or aware of the significance of their comments.

6 — Now get an accurate description of the other vehicle(s). License number, year, model, make, color and general condition.

7 — Here is something very important: walk around his car and see if there might have been prior damage. For example, if you collided with only one side of his car, the other side should be untouched (unless it slid into another car or roadside object). Quite often a driver will claim that old damage is part of a new claim. Make note of the general damage to his car and to yours as a direct result of the accident.

8 — Police will arrive on the scene, eventually. You are required to make out an accident report, in most states. Whether or not you think the accident falls into the category where reports are mandatory — report it anyway. Getting it on the record may help your case.

9 — Make sure that you get the name and badge number of policemen who arrive on the accident scene. The insurance company might wish to question them.

10 — Don't overlook the registration certificate on the other car. Get the name and address off it. You may find the car belongs to a person other than the driver. It may be stolen!

## GET PICTURES IF YOU CAN!

Have a camera? By all means put it to work. If possible, shoot pictures of the accident scene from four directions. Take some back far enough to show the overall perspective

of the specific location. If a drugstore is close, it might pay to buy a cheap box camera for the purpose. The photos may prove extremely valuable and beneficial to your case.

## NOW GET WITNESSES!

People these days often say "I don't want to get involved!" So don't be surprised to find eyewitnesses who won't cooperate. Some of them will stand there arguing with both drivers, giving a blow-by-blow description of how they saw it all happen. Then the minute you ask such a person to be a witness, watch him clam up! If a policeman is handy, ask him to obtain the name and address of any eyewitness. In some areas, witnesses are required by law to cooperate if you can prove they actually saw the accident happen.

## ANYTHING UNUSUAL?

Look for the unusual. Was a traffic signal inoperative? Was a part of the street slick from spilled oil or loose gravel? Was the street or roadway under repair — or traffic lane conditions out-of-the-ordinary? These facts could help your insurance investigator establish negligence or blame for the accident. In any case, such facts may result in faster claims adjustment.

— V. Lee Oertle

## DON'T

1 — Don't walk around the street measuring skid marks or taking measurements. Let the police handle that detail. They're trained for it — and courts usually accept their statements about measurements. Yours would be suspect.

2 — Don't argue with the other driver. It won't help, and it might hurt. Be cooperative — up to a point. **YOU ARE NOT REQUIRED TO ADMIT GUILT EVEN IF YOU THINK YOU WERE AT FAULT!** The facts may later prove that you only thought the accident was your own fault. This happens frequently.

3 — Don't refuse to give details to a policeman, but remember: don't pre-judge your case. Just give him the facts and no personal opinions or judgments. You may elect not to make any statements to the police, other than to answer routine questions, but you must show them your driver's license and perhaps other evidence at the scene.

4 — Don't try to include old accident damage in a new claim. It won't work. Not only will the trained investigator spot old damage, but he'll then be forced to presume you are trying to put one over on him. Likely result: slower settlement.

5 — Above all else, **DON'T SIGN ANY DOCUMENTS HANDED YOU BY THE OTHER DRIVER OR BY HIS INSURANCE AGENT** at the accident scene. The lure of quick claims settlement has torpedoed many a driver. You may be settling for much less than the actual cost of repairs.

/MT

## It'd be a big mover on looks alone.

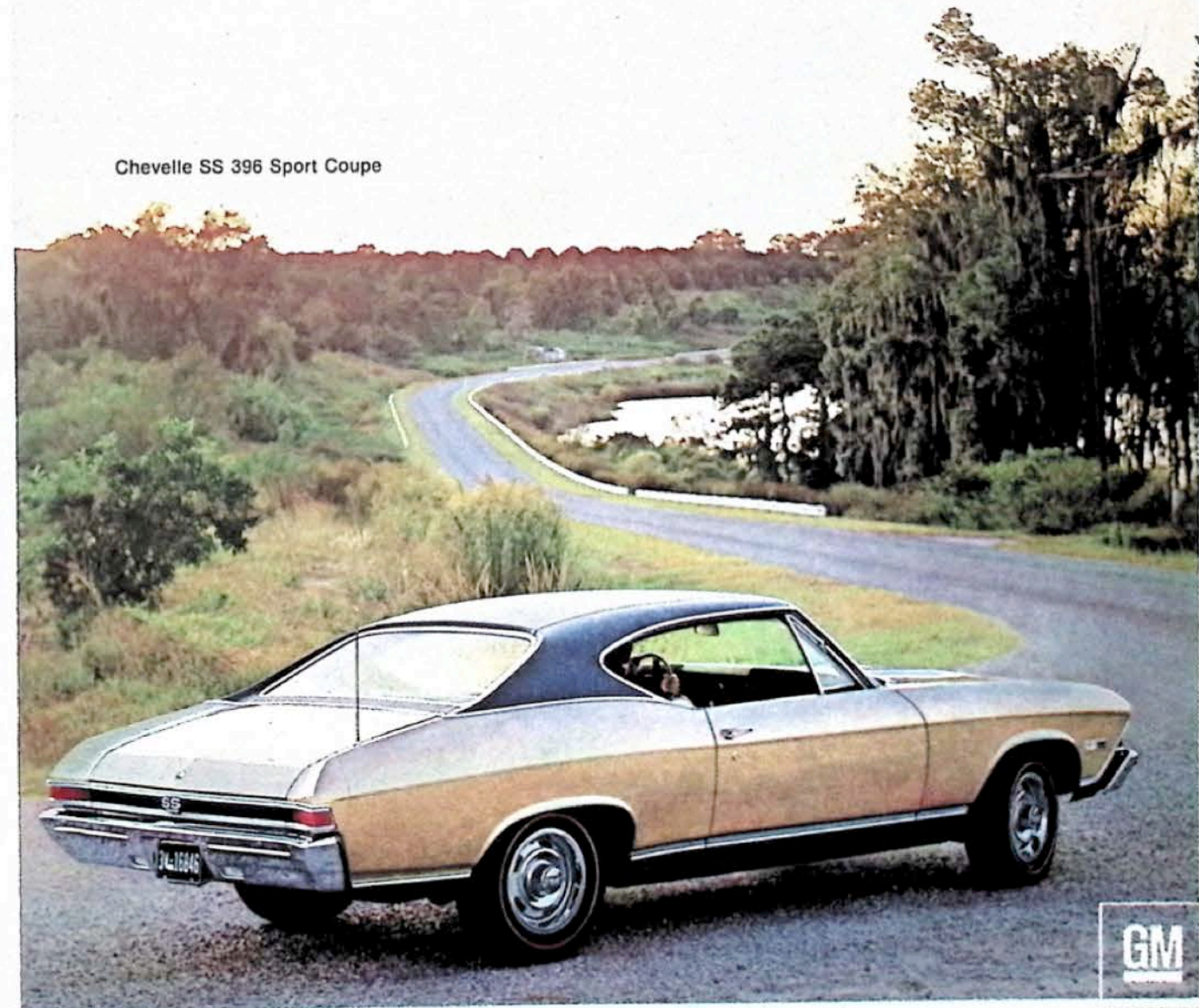
It's domed. It's striped. It's got bulges on its bulges. It's SS 396, boss of the Quick-Size Chevelles. But don't let all the niceties fool you. Underneath, it's got everything you need for your kind of driving. 396 cubic inches, beefed-up shocks and springs, wide oval treads, the whole thing. With credentials like that, you could get along nicely without the glittering goodies. You could, but why play it down when you're living it up?

## Chevelle SS 396

Be smart. Be sure. Buy now at your Chevrolet dealer's.



Chevelle SS 396 Sport Coupe



GM

MARK OF EXCELLENCE



# Start your own party!



You get the beer . . . we've got the buttons.  
 Want a dozen? We've selected 12 to send you.  
 Mail \$1 and your name, address, and Zip Code to:  
 Buttons, P. O. Box 58, Dept. S2, St. Louis, Mo. 63166.  
 Offer void in states where prohibited by law.

A Budweiser  
 in every  
 Refrigerator

BEST REASON IN THE WORLD TO DRINK BEER

PUT A GLYDESDALE  
 IN THE WHITE HOUSE STABLE

STUMP FOR BEECHWOOD AGEING

LONG LIVE THE KING (OF BEERS)

TIP-A-CANOE AND A BUDWEISER TOO.

BUDWEISER is right on the button

CHOICE OF THE BEER PARTY

Support Your Local Bartender

BUD IS A LANDSLIDE (ALSO A SEASIDE)

I'M A PRISONER IN A BUDWEISER BREWERY (Don't send help)

OUR CAN-TO-DATE

I'M PULLING FOR BUDWEISER

FRANK SCHWABER FOR PRESIDENT

"IN A GLASS BY ITSELF"

VOTE FOR BUD

DISTINGUISHED MEMBER OF THE BAR

JOIN THE WORLD'S BEST BEER DRINKERS

I LIKE BUD

Put a Bud Behind Your Button

GET ON THE BUDWAGON

RALLY ROUND THE BUDWEISER

GULP!

THE SPIRIT OF '68

Budweiser. Forever

BUD





# MOTORRANDOM

flashbacks by Al Michaelian



PRESTOLITE CO.



EASTIN-PHELAN CORP.

(Top) San Francisco Marmon agency in 1918 displayed Liberty V-12 aircraft engine, built by firm. Marmon started in 1851 as a maker of flour milling machinery.

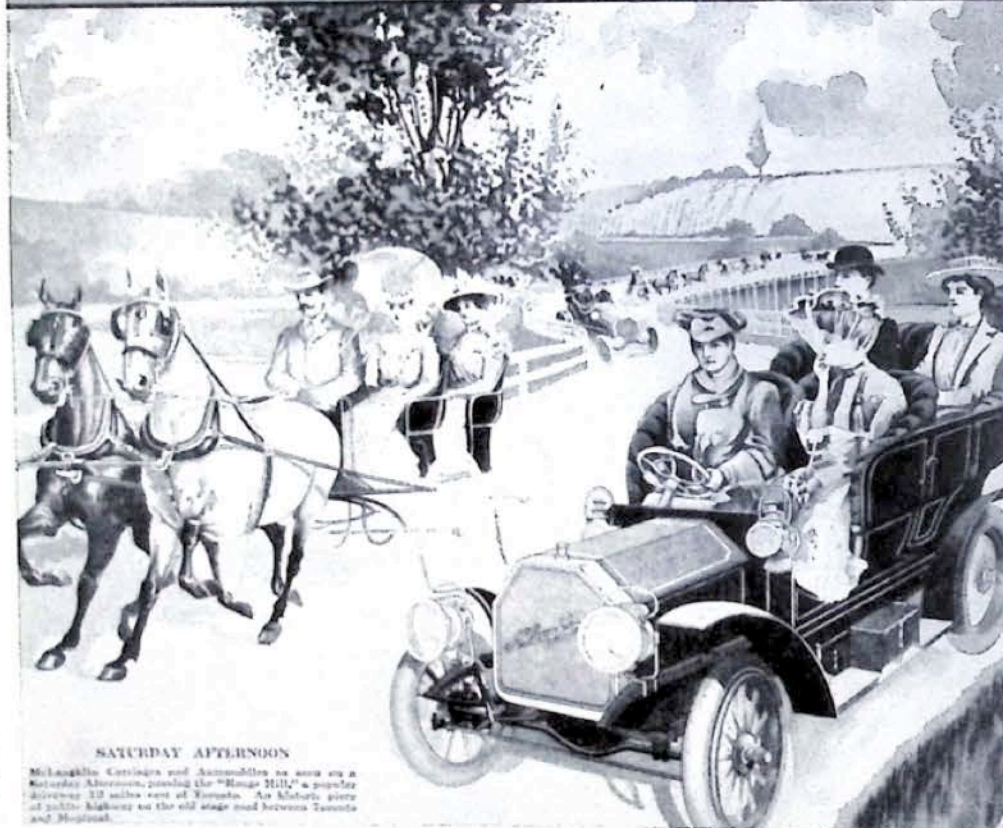
(Above) Charlie Chaplin and Edna Purviance make get-away in a 1910 Hupmobile in scene from 1915 Essanay comedy, "A Jitney Elopement."

(Right) Poster for 1908 Canadian McLaughlin car, powered by a Buick engine. Company was merged into General Motors 10 years later.

(Below) Renault's 1934 8-cylinder, 4.8-liter Nervasport covered 4990 miles in 48 hours at Montlhery, France.

## McLAUGHLIN CARRIAGE CO

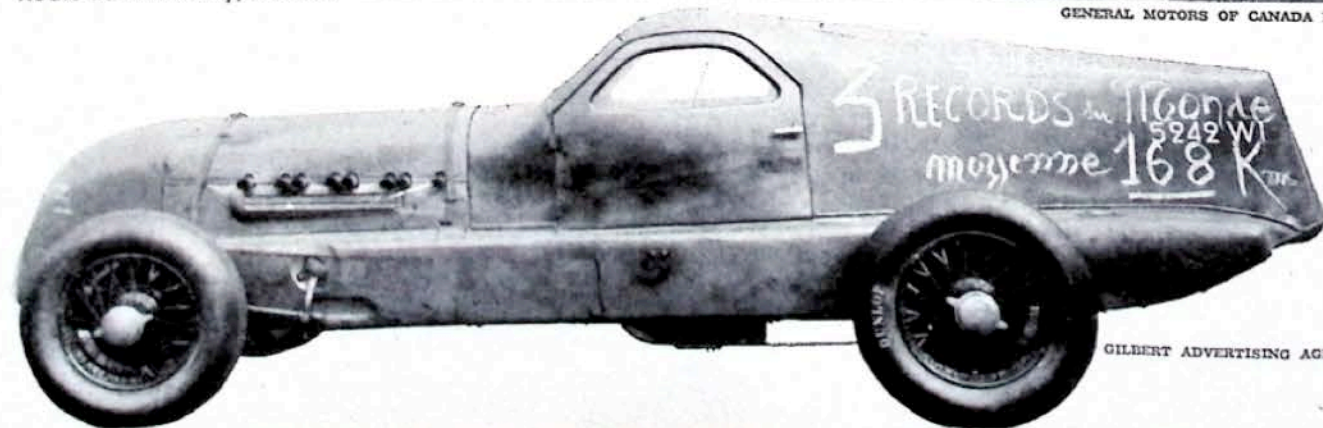
OSHAWA, ONT., CANADA.



SATURDAY AFTERNOON

McLaughlin Carriage and Automobiles as seen in a Saturday Afternoon, passing the "Range Hill," a popular driving 1.5 miles east of Toronto. An historic point of public highway on the old stage road between Toronto and Montreal.

GENERAL MOTORS OF CANADA LTD.



GILBERT ADVERTISING AGENCY

## Confessions of a flamboyant balloonist, or

### How the Insistent Metal from Alcoa has a lofty attitude about automobile weight

One day, we asked a balloonist to air his thoughts on Alcoa® Aluminum automotive parts. "Aluminum cuts excess weight," he answered. "Makes for all-around better driving! Of course, ballooning is much more adventurous..." It's easy to get puffed up about Alcoa Aluminum. Because no other metal is so light and strong at the same time!

Lightweight aluminum automotive parts mean smoother, more responsive handling. Quicker acceleration. Faster stops. More go per gallon, too! Alcoa's cooperation with automakers makes aluminum insist on being used anywhere an extra pound cuts performance. And production economies are a must. In the words of a windy balloonist, "It takes my breath away!"



Change for the better with Alcoa Aluminum

**ALCOA**







## What are those funny things under the bumper?

Air scoops, that's what. Snagging cool air for Oldsmobile's new performance-boosting Force-Air Induction System. It's now available for the first time on all three Cutlass S models (a similar performance package is offered on Cutlass Supreme and F-85 coupes).

Though Cutlass S has plenty of other good things going for it, too. Here's what the specs look like when you equip it with the Force-Air Induction System:

### ENGINE

Type.....Rocket V-8  
Bore x stroke, inches.....4.057 x 3.385  
Displacement, cubic inches.....350  
Compression ratio.....10.25-to-1  
Bhp.....320 at 5800 rpm  
Torque, lb.-ft.....390 at 4000 rpm  
Carburetion.....Specially calibrated Quadrajet 4-bbl.

System includes dual air scoops, ducts and hoses; dual-intake air cleaner; extra-large intake and exhaust valves with spring dampers; special high-lift cam-

shaft; special crankshaft vibration damper; specially calibrated distributor; dual exhaust system.

### COOLING SYSTEM

Heavy-duty radiator, viscous-drive fan clutch, 6-blade aluminum fan, heavy-duty water pump.

### DRIVE TRAIN

Transmission.....Heavy-duty, fully synchronized 3-speed floor shift with Hurst Competition Shifter  
Clutch.....Heavy-duty, 10.5-inch diam.  
Rear Axle.....3.91-to-1 heavy-duty performance type with h.d. shafts, bearings, differential gears.

Available: 4-on-the-floor (close- or wide-ratio, with Hurst Shifter).

### CHASSIS and BODY

Suspension.....Four-coil-spring with front stabilizer bar.  
Available: Rally Sport Suspension (h.d. springs, shocks, front stabilizer bar).  
Steering ratio.....24-to-1

Tires.....7.75x14"  
Blackwall (Std.), Whitewall (available).  
F70x14", Nylon-Cord Wide-Oval  
Red-Line Tires are also available.

### ALSO AVAILABLE

Anti-Spin Differential. Simulated-wire wheels. Super Stock Wheels. Radial-Ply Whitewalls. Rocket Rally Pac. G.T. pin-striping. Bucket Seats (std. in Convertible). Sports Console. Custom Sport Steering Wheel. Stereo tape player. Others.

### GENERAL

Wheelbase.....112"  
Overall length.....201.6"  
Overall width.....76.2"  
Overall height.....52.8"  
Curb wt. (lb.) Holiday Coupe.....3487  
Tread.....front 59.0", rear 59.0"

### SAFETY

And all the new GM safety features are standard, of course.

## Olds Cutlass S

DRIVE A YOUNGMOBILE FROM OLDSMOBILE





Would you believe a Rambler at Le Mans?

Don't laugh! American Motors may be represented at the 24-hour French endurance race this June.

The car would be the firm's new AMX—the sports model AMC officials have dubbed "the hairy little brother of the Javelin."

Whether the AMX is hairy enough for the Le Mans circuit remains to be seen. But the fact that the company is even thinking about competing there indicates the scope of the new look at AMC.

The company, which appeared on the brink of disaster in recent months, is endeavoring to save itself by using the same formula that resurrected Pontiac 10 years ago. It's trying hard to build a performance image. Gone is all the talk about compact cars. And no latter-day George Romney flails away at the "gas guzzling dinosaurs" of the Big 3.

Instead, you hear about the family of big new V-8 engines, the Javelin sporty car and now the AMX, AMC's answer to the Corvette. "This does represent a little change in our thinking," laughed John Adamson, AMC's vice president for engineering.

The new boss of AMC, Chairman Roy D. Chapin Jr., has long been a sports car buff. So has Richard Teague, AMC's vice president for styling. Abernethy, before he left a year ago, "had finally come around and was starting to think in terms of young cars—but by then it was really late in the game," said one official.

However late the cars may have been in arriving, the new brass fully expects the AMX and Javelin to mark another

turning point in the company's fortunes, just as the compact Rambler did in the late 1950s.

"I believe this is the most notable achievement of 1968 in the auto industry—two cars in one year," Chapin said. "The AMX has a completely different character from the Javelin. As a 2-passenger car it doesn't have universal appeal. It's aimed at a specialized market."

But Chapin feels it will do well, particularly since it has a price of "not much more than \$3000." This places it \$1300 under the Corvette. He calls the AMX sales goal "one of the most interesting problems we have. Our present program is very modest—the target is under 10,000 cars this year. But we may get a big surprise—on the upside."

The man who has to sell it, AMC Vice-President William S. Pickett, says the car is "sure properly timed for me. It will increase showroom traffic. People who aren't interested in the Javelin because they think it's another Mustang will take notice of the AMX. It will be a great image car—something we haven't had."

AMC is going to push the car first in the warm climates. "We have made a detailed study of where cars of this type should do well and dealers in those areas are more stirred up than in other areas," Pickett continued. "It will be a very effective car in some places like the Los Angeles area, Florida, the Southeast from Washington down, Texas, Denver and the like." The big push in the northern climes will come in the spring.

Pickett says he's convinced the car "will get a lot of attention from people

interested in performance. We are not getting that attention now. But this company has made a decision to go after the youth market. We're going to stay with the other products we have but we are also trying to sell the young people."

A lot of AMC's dealers "are competition-conscious," Pickett says, "and they are delighted with our new stance. The AMX will help convince people that this is a performance-conscious company—that we are thinking of people who like a high-performance car."

And this is why a guy named Carl Chakmakian is now a big man around AMC. He's in charge of the firm's budding racing program. Chakmakian began last year a modest effort to get seen on the drag strips, partly through an arrangement with Grant to build a funny car. Next he laid out plans to compete with the Javelin in a dozen Trans-Am sedan races. "We hope to do fairly well there," he said.

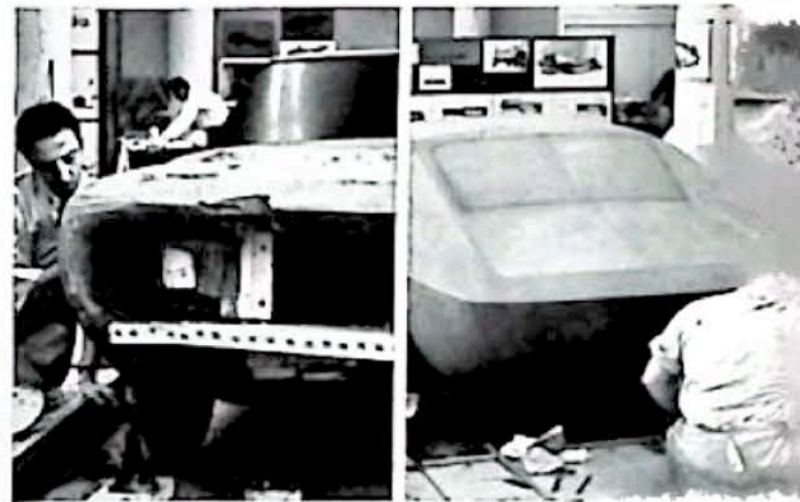
Now Chakmakian is in the midst of setting up a sports car racing schedule for the AMX. "We are tentatively thinking of getting into SCCA's Class A and B," he said. The firm passed up the chance to enter the 12 Hours of Sebring, however. "We would have had to homologate the car by last November 10 and that was quite a ways in advance of the introduction date in February," he continued. The AMX may be eligible for competition by April.

What about Le Mans in June? "I would be unrealistic to say we have no aspirations," he answered cautiously. "This is one of our plans which we haven't firmed up yet. If everything goes well, we possibly will be there."

He reminded an interviewer that

## Is The AMX a True Sports Car?

*Maybe full-bore competition is an ambitious goal for American Motors, whose performance image still has to be shaped before it can be polished. But if determination wins trophies, AMC's shelf might not be bare for long...*



Clay models of future AMX were being prepared way back in Oct., 1965. Many body style configurations were made and discarded before final lines were decided upon. Production AMX uses many body compounds that are interchangeable with Javelin.



## Is The AMX a True Sports Car?

He reminded an interviewer that "this is not new ground when you look back to the early '50s. Some Nash-Healeys ran at Le Mans in 1952 and one came in 3rd place overall behind two Mercedes."

Teague agrees. "This car's genealogy goes right back to the Nash-Healey," he says. And that even pre-dates the Corvette. In December, 1950, the old Nash-Kelvinator Co., forerunner of AMC, decided to build a sports car. It shipped the engine and other major components to England where Sir Donald Healey put them in a car body. About 100 were built this way in 1951. Then in 1952, Pininfarina of Italy designed a new body and it was all mated by Healey again. A total of 506 cars were built from 1951 until the car was discontinued in August, 1954.

"When it came out we called it the

first American sports car in 20 years," recalled one AMC official. But price and the introduction of the Corvette in 1953 killed it. "At \$5500 it was just too expensive," Teague said. "And the timing was off. There wasn't the market then that you have today. The war babies were just children then."

The old Nash-Healey is now a collector's item and will bring a minimum of \$2500 in any condition, says Teague, a classic car buff who once owned a gull-wing Mercedes 300SL but got rid of it because "it was too hot in the summer and I didn't want to drive it in the winter because it might rust." He now owns a 50-year-old Panhard and a 1932 2.6 Alfa.

This is by way of showing that Teague isn't a johnny-come-lately. "It reminds me of an old JFK quip that 'Success has 1000 fathers and failure is an orphan,'" Teague said.

He traced the history of the AMX through the first show car by the same name, the Javelin sporty car introduced last fall, and finally to the current model. It still retains a lot of the flavor of the experimental model introduced two years ago, minus, of course, the rumble seat.

Recalling a talk with his stylists, Teague said "we decided to do a really hot 2-place car — one like Ferrari would do, but instead of 10 a year, design it

so we could build 10,000. I said one of the things I'd like to see in a car was a rumble seat and they looked at me like I was from the moon."

After seeing the mockup, Abernethy gave the go-ahead to construct a working model. It was built by Vignale in Turin and displayed at the 1966 International Auto Show in New York. The company had just completed plans for the Javelin when it started work on the AMX.

To convince the public it was doing things despite skidding car sales, it exhibited the AMX, the AMX II and a pair of small experimental cars in what was billed as AMC's Project IV. About this time, Detroit industrialist Robert B. Evans bought 200,000 shares of AMC stock, became the firm's largest shareholder and was elected to the board of directors. At one of the Project IV showings, Evans dropped the word that AMC was going to build a production version of the AMX.

The company was then embarked on parallel development programs. One was to build the production AMX by modifying the Javelin, and the other was to create a new car out of fiberglass. Evans was a prime mover in the second phase of the project.

"He wanted the car very quickly and felt at the time that this was the fastest way to get it," Teague recalled. It

seemed like a good idea at first because plastics are considered a good bet for low volume work since tooling costs are less although unit costs are higher. Dow-Smith built two running models. At the same time, it was working on a plastic car for Pontiac.

And while the Corvette has been plastic since it was introduced, "our situation was different because we are a frameless auto builder," Teague said.

Consequently, the Dow cars were unique in that they had a unitized steel underbody. "But from a feasibility and an economic standpoint we felt that the better route was to come up with the AMX off the Javelin," Teague said. "From a tooling standpoint, this would cost a lot less than to have built a new car in plastic."

This is one reason many interesting designs were scrapped, the rumble seat was discarded and the resulting car looks very much like the Javelin. Safety also reared its head. "We didn't have enough time to study the structural integrity of an FRP-frameless body," Teague said. "There were just

too many unknowns without a rugged frame." The rumble seat also figured in the safety issue. Some AMC officials felt the car's safety could be challenged if it had a rumble seat, while others said it was no worse than a convertible. Nevertheless, caution prevailed — and the rumble seat went.

So did designs for sports cars bearing names like the Mach 1 (before Ford's Mach 1), the Demon and the Stiletto. The Demon design was discarded because of poor rear vision. The Stiletto had retractable headlights and would have required too many sheetmetal changes from the Javelin. The same was true of a third design with a "cute but costly" duck tail, Teague said. The design, however, recalls the current 'Vette.

The final product, with changes to the grille, hood and roofline from the Javelin, "is a very hot little vehicle with a strong family resemblance," Teague said. "We have tried to keep the cost down and build an uncomplicated vehicle," he continued. "It is still a different type of vehicle because it is a foot shorter than the Javelin and is a 2-place car."

Engineer Adamson figures there are two basic areas of difference between the AMX and the Javelin. "One in which the Javelin will catch up is the engine," he said. "With the 390 incher,

there is more power than we have ever had in an automobile. The other important difference is that while all design functions are a compromise, in the past our tendency has been to compromise cornering ability in favor of a softer boulevard ride. With the AMX we turned this approach around and now have superior handling at the expense of a superior ride."

Adamson also figures the company "played it safe" in designing the larger engine. "We decided to overdesign if we had to to make sure we had the durability we wanted since it was our first push into engines of this size."

"I think the car can be competitive," Adamson said. "We have all the basic hardware there to make it so."

"I believe it will stack up very well," says Chakmakian.

The original AMX was dubbed that to show it was an "American Motors Experimental" car. The name stuck. "It had a good ring," said Pickett. "Everybody's been calling it that so we decided to officially name it AMX," said Chapin.

In a way, it's appropriate because the AMX is truly an experiment for the No. 4 automaker — and one where the results won't be known for at least several months.

(Turn page for driving impressions.)





# AMX Debut

American Motors scoops the field with an exciting new 2-seat "Fun" machine that has everything but a big price tag.  
— By Bill Sanders



"It." That's the word. No definition necessary. Some people have "It." Some cars have "It." Such an endowment is the great enigma. "It" isn't necessarily contingent upon great beauty, a big price tag or ostentation. "It" can be planned, but doesn't always succeed. The first unpretentious MG TC, with big, gangly wire wheels... had "It." Ask anybody. They'll shoot you three or four cars right off the top of their head without losing a snap of their chewing gum.

Perhaps it's involuntary, but occasionally a jaded attitude becomes discernible as our sedentary years take their toll and a blasé sophistication sets in. Then suddenly, unexpectedly, "POW," "ZAP," "WHAM." Right between the eyes. A car with "It." In living color. Sitting there in front of you. Turn on time. Pop, Op, Mod, Camp. Somebody has finally done it. A car with "It"... that any guy can afford. Who? American Motors. American Motors?

Yes, they've done the deed. AMX is here and it's about time. If a short wheelbase, 2-seater in the GT tradition is your bag, AMX is a salty little bomb, and will really let you know it. Not content with a brand new car,

American Motors has also introduced a brand new engine, a 390-cu.-in. V-8, the highest displacement engine ever offered by AMC. The AMX has a standard 290-cu.-in. V-8, with a 343-cu.-in. V-8 and the 390 available as options, so there are a variety of packages to build on. Our test cars, yes, cars, we had two, were both equipped with the big 390. Several years of engineering and development have produced an unusually rugged engine in the 390. A beefed up block includes such important features as a forged steel crankshaft and connecting rods, plus heavier-duty bearings. A new intake manifold featuring intake runner passages that were scientifically flow-designed for higher airflow efficiency gives better breathing and a higher power/torque output. A 10.2:1 compression ratio and a hp rating of 315 @ 4100 rpm give this little jewel plenty of "GO."

To eliminate the hypocrisy of "base price," AMC has done away with the 3-speed transmission and instead offers an all syncromesh, 4-on-the-floor gearbox as the standard transmission. The only optional unit is their 3-speed Shift-Command, console mounted automatic. One of our test cars had the

4-speed, the other the automatic. Four-on-the-floor is nice to have, but on the AMX the bell housing is located well forward, necessitating an extremely long throw on the shift lever, which takes some getting used to. We drove the automatic first, and this probably had some bearing on the uncomfortable feeling with the 4. AMC's Shift-Command automatic is a smooth, easy shifting transmission. No horse-shoes, special mountings or gimmicks. Just 1-2 Drive and a straight stick lever. Actually, we got our best times with the automatic. Perhaps this would be improved with more time on the 4-speed, but who knows maybe the sedentary years are taking their toll. The standard rear end ratio is 3.15:1. Options up to 4.44:1 are available with the 4-speed. A 2.87:1 is the only option with the automatic. A Twin-Grip Differential is a good option with the 390 V-8. With 425 lbs.-ft. torque at 3200 rpm putting the horses where you want them, the twin-grip comes in handy.

Handling the AMX is something else. It has approximately the same dimensions as the Corvette, a wheelbase of 97 inches, with front tread measuring 58.36 inches and rear, 57 inches even.

Wheelbase is 12 inches shorter than the Javelin. An all-steel, unit construction body/frame is carried in an extra-stable manner by the wide track stance in tandem with the short wheelbase. Standard, heavy-duty suspension components include large-diameter front sway bar, heavy-duty springs and shocks, and rear traction bars designed to prevent rear axle "power-hop." Coil springs are used up front, with 4 1/2-leaf semi-elliptics in the rear. These components, especially the short wheelbase, all combine to give unusually agile and responsive handling characteristics. Performance is exhilarating under any circumstances; on the drag strip, on a road course or on a mundane pleasure ride. Mild understeer is encountered during moderate cornering maneuvers, and, at first, the tendency is to oversteer when the corners are taken at some hairy speeds. That tendency soon leaves with the confidence junior puts to you, and the corners seem to straighten out magically. Because of its size, AMX has a short, stiff body with high bending stiffness, utilizing engine mounts as isolators and eliminating any uncomfortable lagging feeling associated with polar inertia when the urge arises to put the old lead foot into it, an urge which

could become increasingly prevalent with the AMX.

High-performance, E70 x 14 tires are standard. Our test cars were equipped with power front disc (an option) and 10-inch rear drum brakes. Surprisingly little fade was encountered, especially when you encounter that a few old hands such as Johnny Parsons, Rodger Ward and Mario Andretti had taken several turns through a road course with the same cars just prior to our test. Stopping is fast. Without any swerve or sway. The way you want it. Braking was almost effortless in the corners and in panic stops on the straight, giving you a comforting feeling without reservations, knowing the binders were there when you needed them. Three steering selections are available: manual, power, and "Quick-Ratio" manual. All have a turning diameter of 33.5 feet.

Interior comfort is surprisingly gratifying in a car this size. Although snug, it is far from being cramped or crowded. Two hefty men and a jumble of equipment and cameras didn't create any uncomfortable compromises, and there are a multitude of cubic inches behind the seats to stow extra gear. Slim-shelled, reclining bucket seats hold you in place and there isn't

'much tendency to go slippin' and a slidin' in the hard pressed corners. A safety-styled, aircraft-type dash is one of the shared components with big brother Javelin, and the deep-set, functionally-located instruments and controls are all easy to see and reach. A big drawback with this otherwise top-drawer dash is the tachometer. It is much too small. If you are an astute tach man (or gal), this one requires too much attention away from the road to find out what and how you are doing. To say the least, it is especially frustrating when you are cornering and need all the physical coordination you can muster. Frameless side windows without vent-panes give an "open-air" look without rumpling the coif.

A car with "It" should be a solace for what ails you, should bring out a zest for living, moving, going, and AMX does. The problem was simple. Come up with an impeccable 2-seat continental body design, join it with a good performance chassis and powerplant, incorporate the result into mass production to fit the average guy's wallet, and you have a winner on your hands. American Motors should. The AMX goes a long way to fulfilling the pet phrase of Vic Raviolo, AMC group vice president: "The Walter Mitty Ferrari."

At the drag a strip or on a Sunday drive, the AMX owner shouldn't develop any inferiority syndromes. Big brother Javelin is comparable, but similarity ends there. Short wheelbase and big engine in AMX make a world of difference in all performance characteristics. AMX interior is capacious for 2-seater, with huge storage area behind seats. Interior comfort is also first cabin with well contoured seats.

Passing Speeds (2nd gear):	
40-60 mph	3.4 secs. 248.8 ft.
50-70 mph	3.8 secs. 334.4 ft.
Standing Start 1/4 mile:	
92 mph	15.2 secs.
Speeds in Gear:	
1st	48 mph @ 5000 rpm
2nd	79 mph @ 5000 rpm
3rd	90 mph @ 4000 rpm
MPH Per 1000 RPM:	22.5
Stopping Distance from 60 mph	119 ft.
Speedometer Error	
Electric Speedometer	30 45 50 60 70 80
Car Speedometer	34 51 57 69 81 92

PERFORMANCE	
Acceleration	
0-30 mph	2.9 secs.
0-45 mph	4.5 secs.
0-60 mph	6.9 secs.
0-75 mph	9.9 secs.

**SPECIFICATIONS**  
ENGINE: V-8 OHV. BORE & STROKE: 4.17 x 3.57 in. DISPLACEMENT: 390 cu. in. HP: 315 @ 4600 rpm. TORQUE: 425 lbs.-ft. @ 3200 rpm. COMPRESSION RATIO: 10.2:1. CARBURETION: 1 4-bbl. Carter. TRANSMISSION: 4-speed manual, all syncromesh forward gears. FINAL

**DRIVE RATIO:** 3.15:1. **STEERING:** Recirculating ball type. 20.0:1 gear ratio. **TURNING DIAMETER:** 33.5 ft., curb-to-curb. **TIRES:** E70 x 14 wide profile, fiberglass-belted, high-performance. **BRAKES:** Hydraulic drum type. 10 in. diameter drum. **SUSPENSION:** Front: independent coil spring. Rear: Hypoid axle. 4 1/2-leaf, semi-elliptic springs. **BODY/FRAME:** Unit construction. **DIMENSIONS:** WEIGHTS, CAPACITIES: Overall length: 177.2 ins. Overall width: 71.6 ins. Overall height: 51.7 ins. Wheelbase: 97.0 ins. Front track: 58.36 ins. Rear track: 57.0 ins. Curb weight: 3035 lbs. Fuel capacity: 19 gals.

**OPTIONS**  
Tilt steering wheel; air conditioning; automatic transmission; rear bumper guards; engine block heater; heavy-duty engine cooling system; performance "GO" package; power brakes; power disc brakes; power steering; "quick-ratio" manual steering.





# FUEL INJECTION: ONE ANSWER TO SMOG?

A dozen years ago f.i. seemed just around the corner for your car, but numerous problems caused its fade-out. Today simpler, more effective systems are getting a hard second look from emission-conscious automakers—both in Detroit and overseas.

By Karl Ludvigsen

Fuel injection is one of the most fascinating features ever invented for the automobile engine. There's something hypnotic about its appeal that has kept many engineers hard at work on its improvement for many years with, so far, very little indeed to show in return. Until now, that is. For fuel injection at last appears to be coming into its own.

Six of the world's car makers now offer standard models equipped with fuel injection. That's an all-time high. They are Volkswagen, Mercedes-Benz, Peugeot, Lancia, Maserati and Triumph. It appears that only the first two will, in 1968, be offering their injected cars on the U.S. market, but the entry of VW alone means that more fuel-injected cars will probably be sold in the United States this year than ever before.

What accounts for this new interest in injection? Back in 1956 and 1957, when f.i. was The Big News of the business, we were told often of its many advantages. It would give more power and more economy at the same time, and who could ask for more than that?

Unfortunately for the advocates of injection, the industry moved to make these improvements in other ways. Added power came from dramatic displacement increases and breathing improvements, and economy was added by higher and higher rear axle ratios. Air cleaners and carburetors were compressed and wrapped inside each other until they opposed no serious challenge to the stylist.

While the backers of f.i. had been grooming their challenger, the supporters of Champion Carburetor had not exactly been allowing him to rest on his laurels. Engineers at Holley, Rochester, Solex and Weber had been coming up with new combinations of throats, smaller, more economical primaries and bigger, better-breathing secondaries, lower profiles—and lower costs. For cost was their big advantage over fuel injection, then as today.

But now a new challenge has been thrown at the mechanical devices that mix fuel with the air that goes into an automobile engine. National regulations based on California's pioneering standards require sharp reductions in the volumes of carbon monoxide (CO) and unburned fuel or hydrocarbons (HC) that emerge from the exhaust pipe. Regulatory agencies currently believe that these are major contributors to air pollution and the development of smog. Today the challenge of reducing these quantities to currently-required levels and to the even further reductions needed in the future is one of the major engineering preoccupations of Detroit. Both power and economy are, necessarily, secondary. They have to be, because the mix of fuel and air that's best for emission control is not right for either best output or best mileage, contrary to the pronouncements of the anti-smog zealots.

Late in the Fifties fuel injection researchers began to realize that their pressure fuel delivery systems had advantages that the suction-powered carburetor does not have in the control of emissions. Fuel injection's very accurate metering of fuel to each cylinder means that mixture strength can be very lean for all cylinders equally.

Pure Oil recently conducted some tests on Chevrolet 283 V-8 engines which directly compared emissions performances of carburetors and injection under actual road conditions. They showed that the injected engine could operate well with a leaner mixture than the carbureted engine could even attain and still run. This proved to be a big help in cutting down the CO in the exhaust. Dramatic reductions were achieved. HC emissions were also reduced but not enough, through f.i. alone, to meet the national standards. Nevertheless the improvement shown has been enough, together with other detail engine design changes, to allow Volkswagen and Mercedes-Benz to rely mainly on fuel

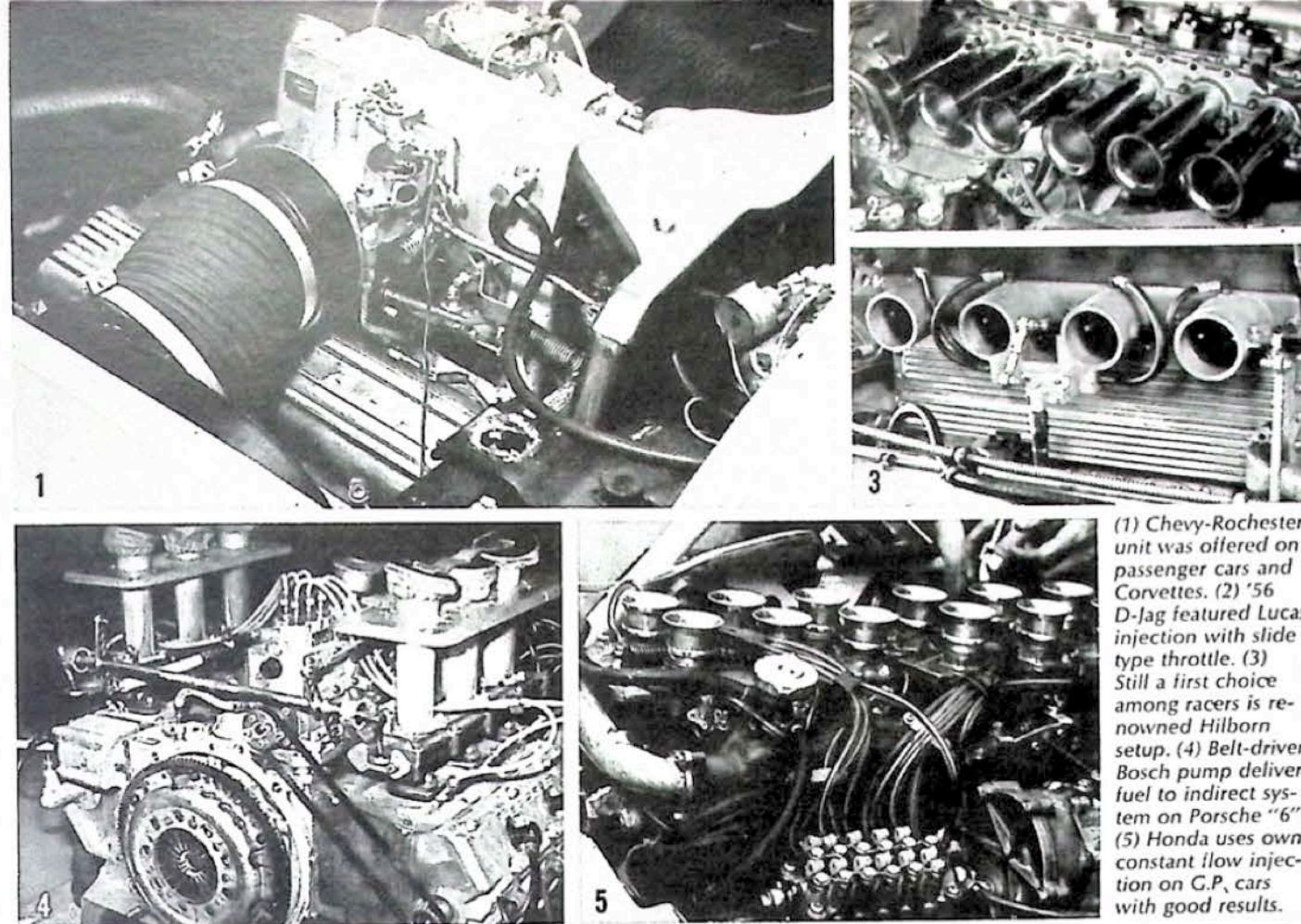
injection to meet the 1968 standards on certain models. And as the standards get tougher in 1970 and beyond, designers will need to use injection together with other emission-reduction techniques to get a sufficiently clean exhaust.

In '68, just as in '56, the big challenge facing the f.i. designer/builder is cost. The emissions battle does alter the picture, because other anti-smog apparatus has been added to the carbureted engine, raising the cost of the target equipment that the injection maker has to match. But almost all f.i. systems devised so far have just been too expensive to be considered as a standard-equipment item on a car that's in a part of the market that is highly price-competitive.

Fuel injection is getting less and less expensive but it has a high-cost heritage to overcome. Its origins go back as far as the turn of the century, when Deutz used f.i. for stationary engines, but the automotive applications did not arise until the Thirties, following successful German work based on the complex injection pumps developed for Diesel engines. By 1937 Mercedes-Benz was producing a fuel-injected aircraft engine, and in 1939 Bosch injection equipment was tried on Mercedes racing cars experimentally.

Early in the Thirties a DKW 2-stroke engine had been injected, in trials that were continued after the War by Gutbrod and Goliath on small 2-cylinder 2-strokes with Bosch injection. Goliath sold injected models from 1951 through 1957, and Gutbrod built a total of 14,000 f.i. vehicles up to mid-1955. Mercedes, meanwhile, tried injection in 1946 on its 170 four, then tried it again, much more successfully, in 1952 on its 300-series 6. When the famous 300SL went into production, in 1954, it was equipped with a Bosch fuel injection system.

All these Bosch/German injection systems were *direct* injection, right into the cylinders through the walls, not by



(1) Chevy-Rochester unit was offered on passenger cars and Corvettes. (2) '56 D-Jag featured Lucas injection with slide type throttle. (3) Still a first choice among racers is renowned Hilborn setup. (4) Belt-driven Bosch pump delivers fuel to indirect system on Porsche "66". (5) Honda uses own constant flow injection on G.P. cars with good results.

way of the intake valve. The valve had to pass only air, and the fuel could be injected after the valve was closed and while the piston was on its way up, swirling and compressing the mixture. This meant that the injector had to pump against very high pressure (nothing new to the Diesel developers) and that it had to be exposed to the full heat of combustion (ditto). Both these meant that the equipment had to be made with high precision out of exotic alloys. It was expensive.

Direct injection has been tried since for racing, first by Maserati and later, in 1963-64, by Ferrari, who achieved very good results with Bosch equipment after arduous experimentation, winning a World Championship with John Surtees in 1964. But today direct injection is used for neither production nor racing.

Direct injection had to be "timed," each cylinder getting the right squirt of fuel at the right time. At the opposite end of the spectrum of cost and complexity is "constant-flow" injection, which doesn't try to time the fuel flow any more than the carburetor can, simply allowing it to escape into the intake port at a controlled rate, feeding it under pressure instead of requiring a venturi to draw it in, as a carburetor does.

The classic constant-flow injection is the Hilborn system, universally used today on Indy engines and dragsters.

Stuart Hilborn and Jim Travers developed it in the late Forties and brought their first Offy set to Indianapolis in 1949. Simple and reliable and easily adapted to different fuels and fuel/air ratios, the Hilborn systems have been fine for big-bore U.S. racing engines but have never been considered for production because their ability to vaporize fuel in small quantities at low air speeds is not good. Idling speeds must be kept high to compensate for the lack of a metering system at idle conditions.

Detroit engineer Ben Parsons developed his Fuelcharger system in the early Fifties, plumping for a constant-flow system after he had worked on the direct cylinder injection planned for the first Tucker car. Parsons used a variable-output generator to drive a variable-speed electric pump at the fuel tank which supplied the injection nozzles directly.

Constant-flow injection in its most sophisticated form was represented by the Rochester equipment that was tried fitfully by Pontiac and Oldsmobile and finally adopted, in late 1956, by Chevrolet. The Rochester system gained extra power from the ram pipes in its special cast aluminum "doghouse," and it carried its own fuel delivery pump immersed in an integral sump for bypassed fuel. It used a rather severe venturi at the air inlet to get the strong signal variation that a

constant-flow system must have to vary the volume of fuel delivery over the wide range that a road engine needs, a ratio on the order of 40:1.

The Rochester-injected Chevrolet engines were impressive for their strong, smooth response, though one writer sardonically observed that the injection was "a vast improvement over the Chevrolet option of dual 4-bbl. carburetors, but then this arrangement is certainly no criterion for comparison with anything." The injection remained a Corvette option at the steep price of \$400+ through the 1965 model year, being phased out when the big 396 and 427 engines came in. Pontiac introduced an injection system in '58, also a Rochester design, but it was produced in very limited numbers. It differed from the Chevrolet system in that it was low-profile since it didn't have the "doghouse."

One constant-flow injection system remains very much in the running for consideration for production today. It's the British Tecalemit-Jackson, a relatively new development with its origins in 1962. It uses a rotary pump and a complex system of restrictors bypasses and overrides to get the right amount of fuel to the injector nozzles. Holman-Moody is working with the Tecalemit-Jackson injection in the U.S. and used it on Mario Andretti's Honker II in the Can-Am races last year.

continued on page 70



# The Most Grueling Test of All

by Julian Schmidt

MT PITS FOUR FAMILY-CARS AGAINST FOUR FAMILIES TO SEE WHICH SIDE WINS

Our first annual full-bore 528-mile People Test was a smashing success. For two days and a night we plied the formidable deserts and mountain recesses of Southern California with four typical - common - denominator - non-entity-type American sedans, emerging after the ordeal with enough data to arm the medical annals of the Mount Sinai Hospital of Psychoanalytic Research for at least another two decades.

From the start, the trip was a revelation, and by the first night it had limned at least four parameters, none of which would have been detected under standard testing techniques: (a) the male threshold of patience is lower than the female's, as is his sense of responsibility; (b) children are more tolerant than anyone, but they get sick easier, except for women; (c) cars are built better than humans; (d) the American female and her infant progeny represent one of the automotive industry's most valuable untapped sources of research information in existence.

Come to think of it, it wasn't a bad automobile evaluation, either. Sure, you can pit any car against whammy-eyed road testers or even acts of God, but their attrition rate won't be half as high as it would under the flagrant neglect of Mom and the kids. Add on a demanding set of creature-comfort values that are not entirely inferior to those of the Shaker Heights Executive Wives League, and, man, you have a test.

So, we collected one of each—Am-



bassador DPL, Ford Galaxie XL, Chevrolet Impala SS, Plymouth Sport Fury (all 2-doors, their own version of fastback or notchback, and with the biggest engines available for the Ford and Chevrolet) in assorted colors—those effeminate admixtures designed deliberately for modern woman, a sort of tribute to Susan B. Anthony and the "bloomerism" bouleversement—Autumn Gold or Tawny Sand or Caribbean Shrimp or any other bilious hue as long as it isn't red, green or blue. Alas, the family car now remains solely as another of the spoils of Susie's Conquest.

Everything attests to her victory . . . all were air conditioned, and on the

DPL even that's not a choice, but rather, standard equipment. The XL and Sport Fury were all-electric, with 6-way adjustable power seats and power windows.

The route was plotted—leave Los Angeles early Friday, stop at Palm Springs, Salton Sea, drive into The Narrows through the Vallecito Mountains, then over Anza-Borrego Desert, back into Cleveland National Forest, aiming for a first night's respite at the multi-million dollar Vacation Village Hotel complex in The Establishment's Disneyland known as Mission Bay on the coast of San Diego.

Three durable children and four young married distaff members comprised the durability portion of the



PHOTOS BY GEORGE FOON, PAT BROLLIER

test . . . they were accompanied by five male drivers . . . and there was no hope for glee. If mountains and deserts didn't upset feeding times, the impulsiveness of liberated urban dwellers would.

Trunks were crammed with diapers and hair spray, cameras and candy, blankets and boots . . . especially the Ford's, which was by far the smallest of all. For a 1-night weekend, the XL trunk barely makes it, and then only if you use your head. Space utilization is poor, but you can improve this by stuffing small sacks and suitcases between front seats, beside the console, and in that huge cache behind the rear seat and under the rear window—

which should have been delegated to trunk space anyway.

The Plymouth, on the other hand, accepted all the overflow from the other three, leaving its luxurious interior clean and sumptuous for those who appreciate that kind of function in an automobile.

Chevrolet's Impala SS, on the other hand, is a fine compromise for both good looks and capacity. The semi-fastback design of the body allows access to the trunk from three sides, liftover is low, yet trunk capacity is second only to the Sport Fury.

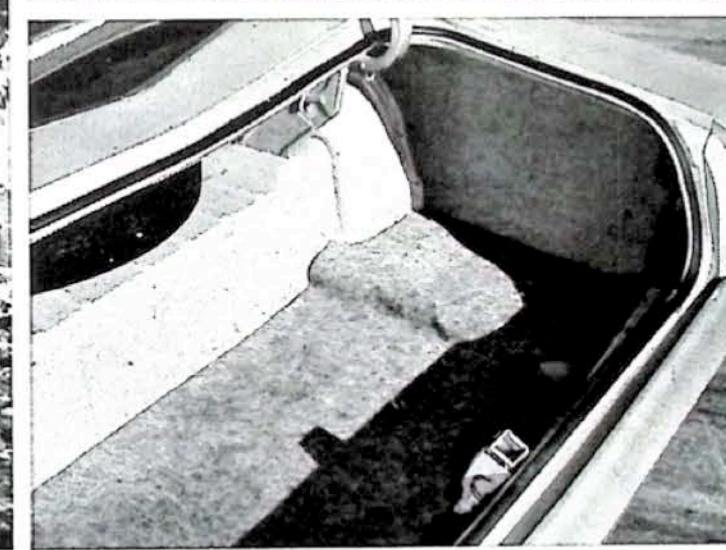
The Ambassador's trunk may not hold as much as either the Plymouth or Chevrolet, but it was obviously de-

signed for convenience. Liftover was the lowest of all, and access to the most remote corner was the easiest. It's a rare case these days that the spare tire and jack must be used, but if that becomes necessary on the Ambassador, their location at the most intimate recesses of the trunk, makes things difficult.

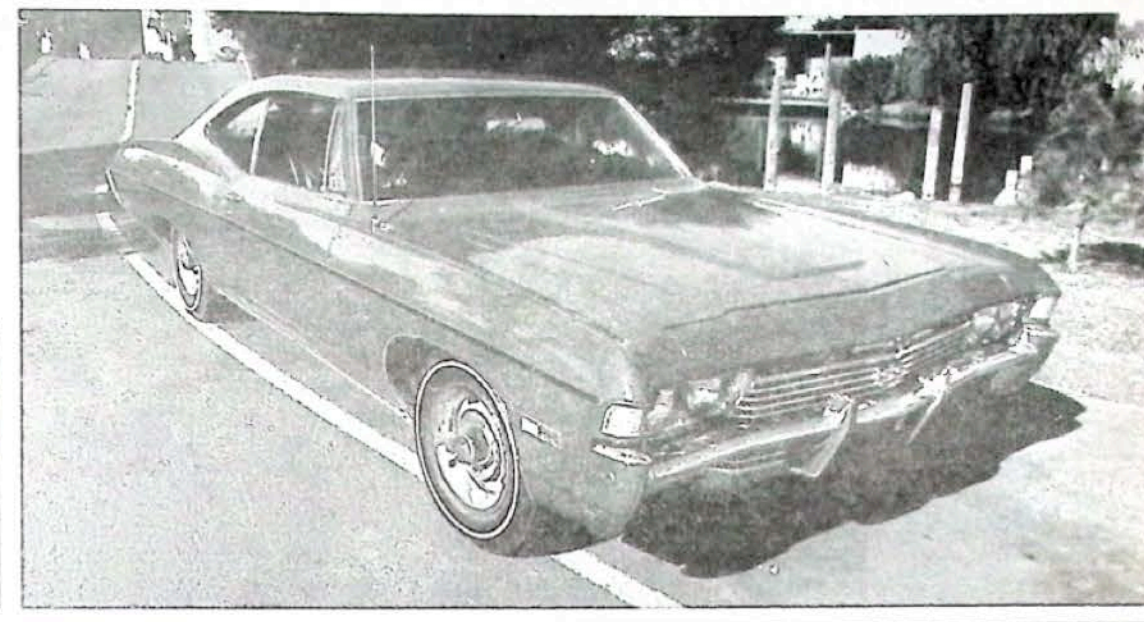
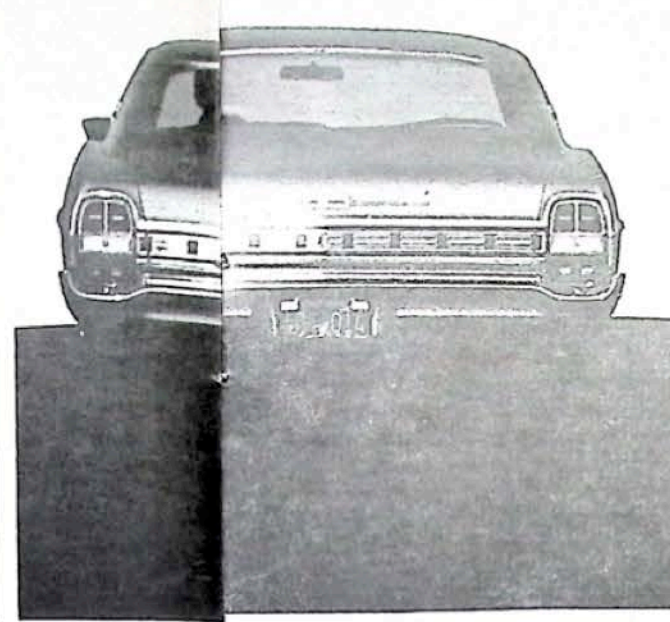
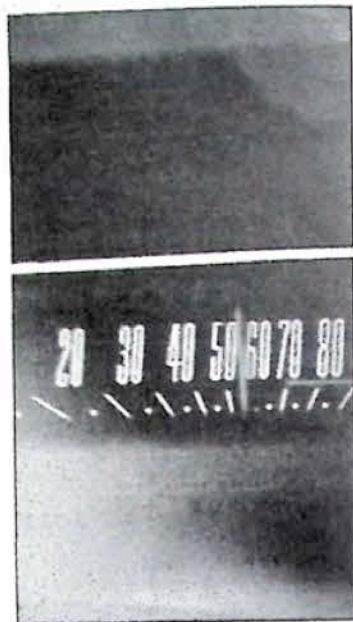
The curse of the fastbacks was painfully present in both the Impala SS and the XL, in the form of poor visibility and poor space utilization. Ford tried to improve visibility by inserting a huge rear window with a V-shaped bottom, but even though it provides better visibility than the Impala, the basic design problem is still there.



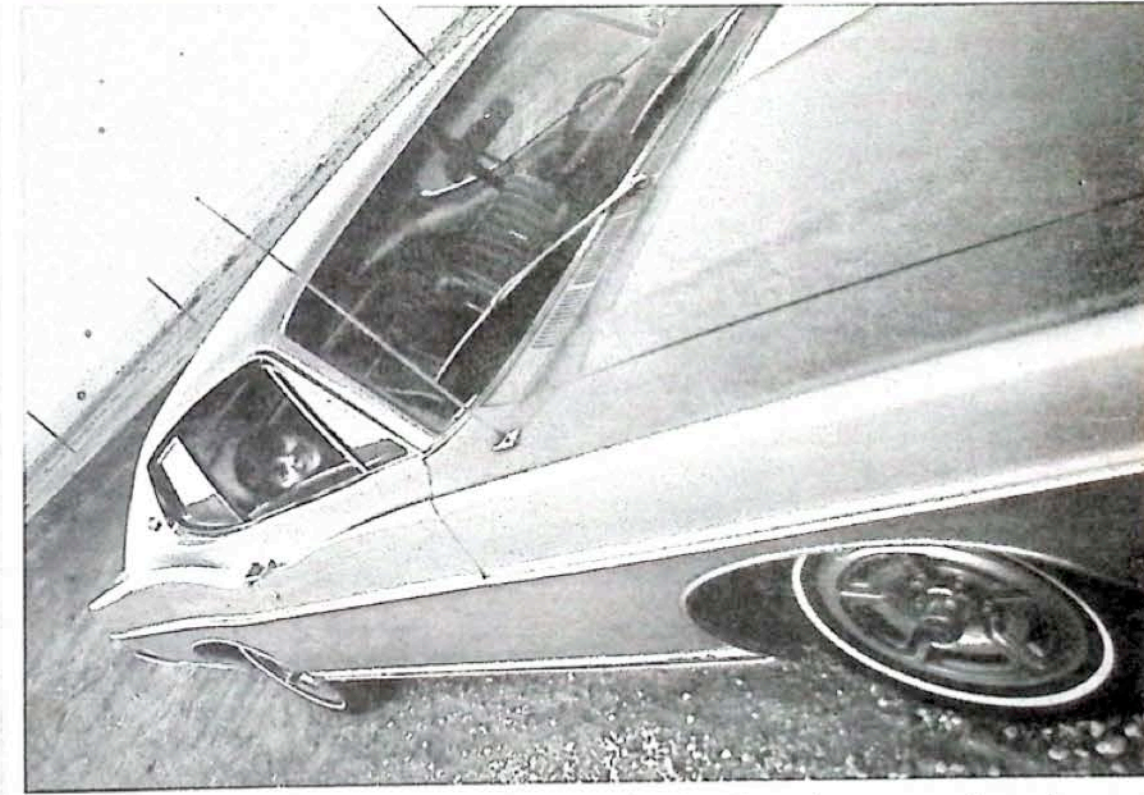
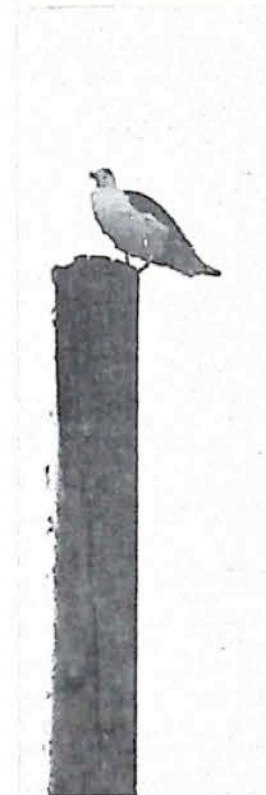
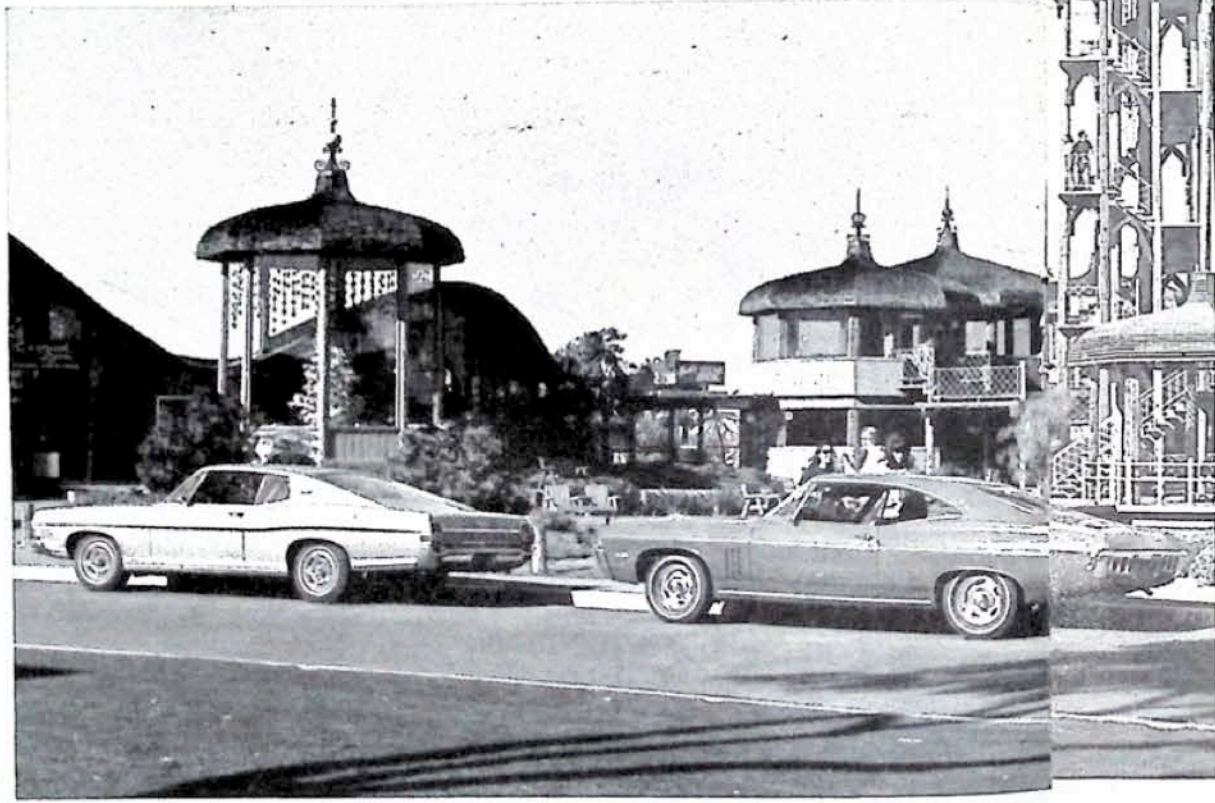
Palm Springs Aerial Tramway provides a perfect setting for test cars on first leg of trip. A happy, adventurous group showed enthusiasm on morning of first day. Frequent stops made trip pleasant during early going. Ford trunk was smallest by far, with limited access as well as limited space.







After a grueling afternoon and evening of desert and mountain driving, the sheltering haven of Vacation Village Motel afforded rest for worn and battered souls: Bright glare of the morning sun revealed no change in the cars, but the occupants were a different story. Tired and weary, they milled about, listless, ready to brave the new day with sinking hearts. Children suffered the most in mountain terrain, but women weren't immune. Rolling and swaying caused extreme cases of car sickness among the young set.



Headroom in both rear seats is also at a minimum, but since the DPL with its modest notchback was nearly as restrictive, we could only conclude that it was a universal latter-day affliction for the entire industry.

Vanity has damaged rear visibility, but the forces begun by Nader have ruined it at the front. Detroit came a long way in thinning corner posts so the driver could finally see laterally, but the addition of all that swell padding set us back 20 years with blind spots worse than before.

Entering these areas in all 2-doors demands a ritual surprisingly similar to initiation night at the Beaver Club. Safety latches on all cars must be re-

leased before the seatback can be folded. Once that is accomplished, it is still necessary to contort the body in order to negotiate oneself into the rear of a fastback. Here is where Plymouth played it smart. They made no attempt at being facetiously fashionable, so it left them with a walk-in rear seat and enough room to keep the kiddies entertained for hours.

For the first 45 minutes, the journey was pure fascination, filled with wonderment and awe at the modern automobile's imponderable gimcracks. Hundreds of blinking red lights that tell you when a warning light for a gauge that tells you when its caution light for a danger meter of a signal

light is on; buzzers that warn you when a caution light, that tells you when a gauge is high, is on; and all those neat little safety devices like padded toggle switches and window knobs—your senator's dispensation of immunity from carnal harm in case your obese mechanical beast flies hopelessly out of control after an emergency maneuver and disintegrates under tons of momentum against one of its siblings.

But until that time, you lose yourself in the soul-selling comfort of the Sport Fury's luxurious split front bench seats with fold-down armrest, incomparable material and high backs, the DPL's well-anchored button-tufted tight-

weave black-on-black upholstery—also with split front bench seats, the Impala SS's firm, excellently contoured, high-backed front buckets covered with durable black vinyl, and the XL's thick, soft, heavy, elegant, deeply pleated, massive, Continental-like, etc., interior.

You also lose anything pocket-sized if it happens to fall between the console and seat in the XL or Impala SS. Bucket seats are necessary for proper fatigue reduction, but you either go all the way by preventing the body from moving at all, or you design the seat for the greatest convenience and practicality. Never try both.

Thirdly, you lose your objective per-

spective and forget about such things as lack of leg room in back seats of 2-doors and high driveline tunnels (except in the DPL, which leaves considerable toe room under the back of the front seats).

Complete orientation with each car required exactly 117 miles, and stages of knowledge came in shock after shock. For 34 miles, our freeway speed was restricted to 50 mph as we tried in vain to establish some pattern in the inordinate movements of the septuagenarian at large ahead of us in his drive-it-yourself limousine that swayed and lumbered from shoulder to shoulder of the 4-lane freeway like some enormous, steel Toscanini conducting

the De Gotterdammerung funeral march, aptly.

In fits of desperation, we would bury our feet in respective throttles while the infinite energy from our super-torque engines would project us joyfully ahead of the ament ass, only to be suddenly smothered in a blanket of blue smoke that eventually cleared to reveal that our efforts had all been in vain. Obviously, there was a message in all this, so we cooled it until the inevitable moment he left the road in a totally unexpected voluntary action.

But the encounter was edifying. The Chevrolet's 427-cu.-in. engine is versatile and quick, and passing speed performance is amazing. In fact, during





Late afternoon stops in desert country brought all travelers together to discuss trip. Enthusiasm was lagging by then, but worst was yet to come. Gas stops also gave time to stretch and shake off fatigue.

acceleration tests it was discovered that acceleration time differs by only bare tenths of seconds from those of the 435-hp Corvette. Ford's 428 is exceptionally strong in torque, and reacts explosively at highway speeds, even though you become accustomed to a lag or extensive delay period before the response. Too much throttle from a dead stop however, produces uncontrollable wheelspin, which doesn't speak too well for the car's traction. The Sport Fury is a very large car, and the 383 engine is quite adequate for any normal freeway condition; it lacks the impact of the Ford or Chevrolet, but not by much. The Ambassador, with the smallest engine of all—343 cubic inches—nevertheless gave all occupants sufficient confidence. Nearly all of this can be attributed to its tight, heavy-duty suspension, though much credit goes to its lighter weight, better proportions, excellent space utilization and lower height. By far, it was the

most agile of all four cars, and where sheer power enabled the Impala SS and Ford XL to overwhelm our adversary, the Ambassador's clever broken-field running did a perfectly adequate job.

In the XL and Sport Fury, the driver begins to suffer after 100 miles, continually hoping that soon his constantly groping fingers will find a button that will make the seat more comfortable rather than merely move it mysteriously up, down, forward, backward, and any other infinite number of directions except the right one. But that's not what matters, as long as the missus is happy, draped languorously over the metallic-silk-teflon-synthetic-velvet seats, or playing with the air conditioning or AM-FM speaker controls, or even bouncing with baby somewhere in all that space. Anything to properly satisfy those maternal instincts, as long as it can be done in enough posh luxury to make your

neighbor's wife back in Royal Elms Heights sick with envy.

Seat-to-steering wheel relationships have improved greatly during the past two years, and with proper combinations of bucket seats or adjustable seatbacks with telescoping or tilting steering wheels, ideal driving positions can be attained in any sedan. However, all these combinations are absolutely necessary. Leg room is still a rarity, and power seats in both the Sport Fury and XL never did provide enough of an angle between the seat and seatback for proper support. Tilting the entire seat backwards only cuts off circulation in the legs by lifting the knees too high off the floor.

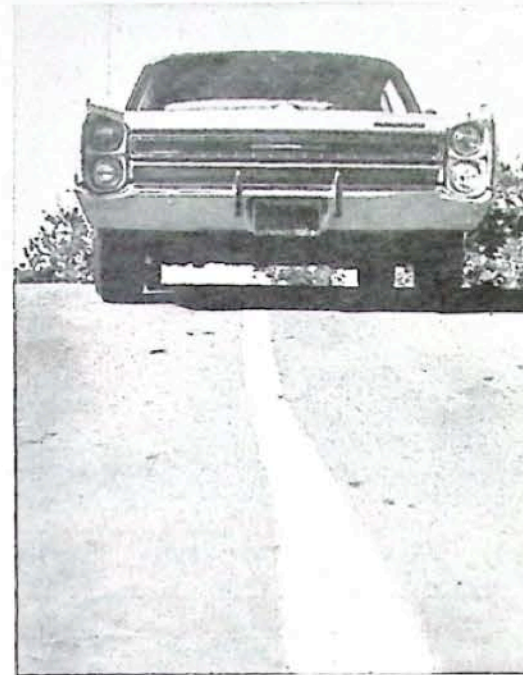
It was but temporal pleasure.

By the time we reached Palm Springs the cold, eerie facts hit us like the resurrection of Sinclair Lewis . . . the last hour was hopelessly lost and all that remained was a vague, wispy dream that was impossible to relate to reality. An interval of time had passed—we knew that much—and it was possible . . . just possible, that the Impala's hood had snapped open a couple of times, requiring a stop, and that the great Palm Springs Desert or whatever it was called had been silently panned past the car on a vast 4-dimensional screen, and perhaps the sun was only a klieg light. We'll never know, for there was little, if any, sense of movement. Air conditioning kept the insides of our cars constant, and the soporific effect of hypnotic freeways, combined with insensible comfort of passenger compartments, isolated us from all external influences. Events consist only of departure at point A and arrival at point B. Give travel for travel's sake another five years before its extinction, and the "enthusiast" will go with it.

The Plymouth was the quietest of all, and, even though fitted with the quite noisy 383 engine, it failed to convey any sound during invariable freeway speeds. It is undoubtedly a very soundly built and heavily insulated car, and the engine could only be heard under hard acceleration.

Engine sizes are also deceptive in terms of mileage. With gas tank capacities of 24 gallons being commonplace in modern cars, one receives the impression that mileage has gone unchanged from prior years, since one can still travel two hundred miles between refills. A quick check, however, reveals a norm of 12 mpg, for all cars but the DPL. On one leg of the trip, it gave an incredible 20.5 that was substantiated by 16 to 18 mpg averages under all other conditions.

If you want status to be measured by size, you'll be satisfied by these four basic sedans, but if you respect common sense and minimum intelligence, you had better make some basic mechanical adjustments and alterations



Comfort, convenience and ride weren't the sterling characteristics they should have been with All-American family cars, but Ambassador reclining front seats were perfect for napping, and, pound for pound Ambassador was comfort champ.



first. Not one of our sedans could make the nearly 2000-foot climb to Palm Springs' Aerial Tramway at the asinine rate of the 20 mph posted speed limit without overheating. By increasing our speed to 45 or 50, we were able to reach the tramway station with the engine still intact, only to find that exactly 100% of all other visitors who were lawfully obedient, suffered the consequences of being so.

It was basically a problem of having the wrong transmission. A 3- or 4-speed box would have been the sensible arrangement. As it was, the lowest gear in the automatics was too low, and the next gear was too high.

It was our last major stop before the Salton Sea Desert, the one leg of the trip that made us thankful for air conditioning and capacious passenger compartments . . . but why did it have to precede the Vallecito Mountains?

The kids reveled in the journey through Salton Sea's desolation, sleep-

ing half the time and romping the rest, in the climatic perfection of the modern age. It was their last meal—figuratively and literally—for 14 hours . . . not because they didn't have the opportunity, but there are basic limitations to modern man's stomach.

After 200 miles of existence in our respective voids, we were suddenly thrown mercilessly and violently into reality (even though occupants of the Impala SS, by this time, were quite accustomed to the terrain, having had to emerge every 30 minutes to re-secure the hood). Two-lane roads, hills and curves. It was a painful situation that separated sensible automobiles from naive, mobile wombs. None survived. The message was clear: emetic car-sickness struck the female factors in three out of four cars, and the only reason the fourth was spared is because the occupants had the good sense to stop every mile and neutralize their ozone-lined lungs with mountain

air. They arrived at Vacation Village exactly one full hour later.

It was the only technique that worked. Even slowing to a 10 or 15 mph average, and cutting apexes and shoulders on both sides of the road, didn't alleviate pitch and roll. Only the men basked in glee . . . the point was made, and very well taken, that this time automakers' concessions to motherhood had gone too far. You can bring the country to the city, but . . .

Whatever tragic proof this experience offered, it does deserve clarifying. The Ambassador was outstanding, and yet it was handicapped by an engine that had suffered a combination of maladies and was running at about 50% efficiency. Its handling was so far superior to the other three that it required only four miles to build up a margin of a half-mile between itself and the second fastest car—the Impala SS—and this was done without either tire squeal or dirt-tracking. The



car tracked beautifully, its taut dimensions and suspension being detectable at all moments. Naturally, it understeered, but it never plowed agonizingly, like the Impala SS and, especially, the XL. Because of this, however, there was not nearly as much warning before the rear end lost adhesion. On the Impala SS, its excess length was obvious, and that moment of force would come early, lifting the rear end and throwing it violently out of control with no progressive polar inertial build-up. The Plymouth was somewhat better, its heavy rear leaf springs making the front of the car plow heavily, but pressing the rear tires firmly and giving very predictable tracking. The Ford felt similar to the Plymouth at lower speeds, but its huge engine, poor balance and execrable traction when accelerating soon dropped it far behind the others.

To complicate matters, many sharp edges on the Impala's steering wheel spokes discouraged fingertip manipulation, and the Ford's plate-like wheel prevented it.

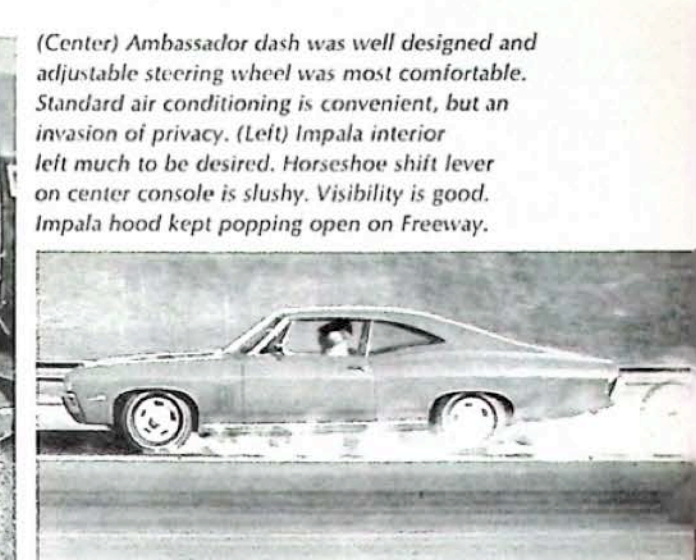
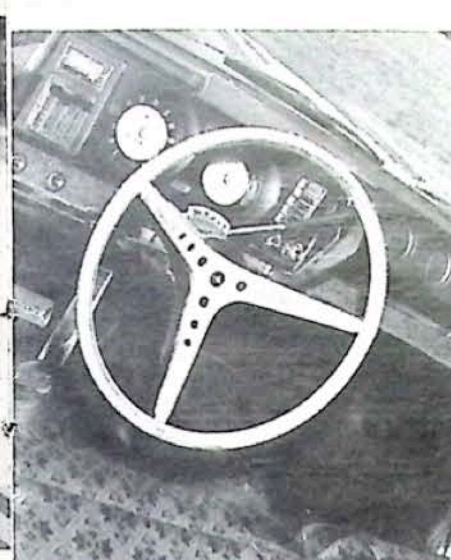
Twelve hours of driving and three of illness were forgotten in the arms of Morpheus, but displeasurable moments apparently linger unsuspectingly. The next morning we threw back the shades, drank in the sparkling southern sunlight, yanked open the window, gasped at the cool ocean air, took one look at the waves and our stomachs erupted.

All of which meant that the most demanding test for the suitability of these cars was still ahead—the trip home, better known as the day after the night before. At least the route was predictable. Solid freeway. And the assurance of no rain meant that none need worry about the Impala's leaks, the Sport Fury's poor adhesion in the wet, or the Ambassador's wipers that were located so badly off-center that the left arm overlaps the left front pillar while the right arm misses its pillar by two and a half inches.

There was a rush for the Ambassador. Its reclining seats and air conditioning vent that could be adjusted to focus directly into the driver's face, beckoned deliciously.

Next to go was the Impala SS, and after that, the Sport Fury, while the XL sat forlorn and alone, its deep, soft, luxurious interior and overt ostentation somehow having lost much of their original luster.

The ladies saw things differently and preferred the Sport Fury, XL, Impala SS, DPL, in that order, but with a quick and graphic narration of the prior night's journey, the male contingent triumphed without a struggle. Susan B. Anthony was wrong. /MT



(Center) Ambassador dash was well designed and adjustable steering wheel was most comfortable. Standard air conditioning is convenient, but an invasion of privacy. (Left) Impala interior left much to be desired. Horseshoe shift lever on center console is slushy. Visibility is good. Impala hood kept popping open on Freeway.

	Ambassador DPL	Chevrolet Impala SS	Ford XL	Plymouth Sport Fury
<b>PERFORMANCE</b>				
<b>Acceleration (2 aboard)</b>				
0-30	4.2 secs.	3.1 secs.	3.3 secs.	3.4 secs.
0-45	6.0 secs.	5.2 secs.	5.6 secs.	5.6 secs.
0-60	9.2 secs.	7.0 secs.	8.0 secs.	7.9 secs.
0-75	13.5 secs.	10.8 secs.	11.9 secs.	11.4 secs.
<b>Passing Speeds</b>				
40-60	4.8 secs.	3.8 secs.	4.0 secs.	4.0 secs.
50-70	5.4 secs.	4.3 secs.	4.7 secs.	4.6 secs.
<b>Standing Start 1/4-Mile</b>				
	17.0 secs. @ 84 MPH	15.4 secs. @ 90 MPH	16.4 secs. @ 86 MPH	16.2 secs. @ 87 MPH
<b>Speeds in Gears</b>				
1st . . . mph @ rpm	42 @ 5000	42 @ 5500	48 @ 5500	43 @ 5000
2nd . . . mph @ rpm	68 @ 5000	70 @ 5500	82 @ 5500	72 @ 5000
3rd . . . mph @ rpm	90 @ 4500	106 @ 5500	105 @ 5000	107.5 @ 5000
<b>MPH Per 1000 RPM</b>				
	20 mph	19.2 mph	21 mph	21.5 mph
<b>Stopping Distances</b>				
From 30 mph	28 ft.	30 ft.	32 ft.	33 ft.
From 60 mph	152 ft.	157 ft.	167 ft.	169 ft.
<b>Mileage Range</b>				
	17.3-20.5	14.0-16.1	9.6-10.8	13.9-14.7

	Ambassador DPL	Chevrolet Impala SS	Ford XL	Plymouth Sport Fury
<b>SPECIFICATIONS</b>				
Bore & Stroke	4.08 x 3.28	4.251 x 3.76	4.13 x 3.98	4.25 x 3.38
Displacement — Cu. In.	343	427	428	383
HP at RPM	280 @ 4800	385 @ 5200	340 @ 4600	330 @ 5000
Torque: lbs.-ft. @ RPM	365 @ 3000	460 @ 3400	462 @ 2800	425 @ 4200
Compression Ratio	10.2:1	10.25:1	10.5:1	10.0:1
Carburetion	1 4-bbl. Carter	1 4-bbl.	1 4-bbl.	1 4-bbl.
Transmission Type — Std.	automatic	automatic	automatic	automatic
Final Drive Ratio — Std.	2.87:1	2.73:1	2.80:1	3.23:1
Steering Type — Std.	manual	manual	manual	manual
Steering Gear Ratio	28.6:1 manual 20.9:1 power	30.7:1 manual 21.2:1 power	30.9:1 manual 21.9:1 power	29.2:1 manual 19.12:1 power
Turning Dia. — Curb-to-Curb	39	43.5	41	42.8
Wheel Turns — Lock-to-Lock	6 manual 4.4 power	5.8 manual 4.0 power	5.2 manual 3.7 power	5.8 manual 3.5 power
Tire Size — Std.	7.75 x 14	8.25 x 14	8.45 x 15/4	8.25 x 14
Brake Type — Std.	Drum	Drum	Drum	Drum
Brakes — Optional	H.D. Drum	Disc	Disc	Disc
Fuel Capacity — Gals.	21.5	24	25	22
Curb Weight — Lbs.	3500	3800	4200	4000
Body/Frame Construction	Single Unit	Body/Frame	Unitized	Unit
Wheelbase — Ins.	118	119	119	119
Front Track — Ins.	58.58	62.5	62	62
Rear Track — Ins.	58.50	62.4	62	60.7
Overall Length — Ins.	203	214.7	213.9	213.3
Width — Ins.	77	79.6	78	78
Height — Ins.	53.57	54.3	53.9	56.3

	Ambassador DPL	Chevrolet Impala SS	Ford XL	Plymouth Sport Fury
<b>OPTION &amp; PRICES</b>				
Mfg's Suggested Retail Price	\$3024.00	\$3105.50	\$2962.22	\$3199.00
Engine Options	58.30 (235 hp, 343 V-8) 90.70 (280 hp, 343 V-8) 168.40 (315 hp, 390 V-8)	263.30 (385 hp, 427 V-8) 158.00 (325 hp, 396 V-8) 92.70 (275 hp, 327 V-8) 63.20 (250 hp, 327 V-8)	78.25 (265 hp, 390 V-8) 158.08 (315 hp, 390 V-8) 244.47 (340 hp, 428 V-8) 622.97 (390 hp, 427 V-8)	69.70 (330 hp, 383 V-8) 268.05 (375 hp, 440 V-8)
Automatic Transmission	223.05	237.00	233.17	227.05
4-spd. Transmission	184.25	184.35	184.02	188.05
H.D. 3-spd Transmission	not offered	Std.	79.20	not offered
Limited-Slip Differential	41.90	42.15	41.60	138.90
High-Performance Tires	42.80	Std.	35.47	75.60
Special Instrumentation	22.05	94.80	32.44	not offered
Tachometer	48.05	incl. above	47.92	48.70
AM Radio	61.20	61.10	61.40	none
AM/FM Radio	133.80	133.80	181.36	134.95
Stereo Tape	133.80	239.15	133.86	196.25
Custom Wheels	not offered	10.55	not offered	24.60
Power Brakes	43.15	42.15	with discs	41.75
Power Front Disc Brakes	97.15	121.15	64.77	72.95
Center Console	not offered	50.60	90.68	no charge
Power Steering	95.00	94.80	94.95	94.85
Adjustable Steering Wheel	42.15	42.15	42.76	86.86
Power Windows	77.40	100.10	99.94	100.25
Air Conditioning	standard (218.50)	368.65	368.72	350.25
Vinyl Top	84.90	89.55	84.99	86.75

	We Like	We Don't Like
<b>COMMENTS</b>	Standard air conditioning . . . reclining front seats . . . good handling and mileage . . . adjustable steering wheel.	Lack of power . . . slow steering ratio . . . ride with heavy-duty suspension.
	Performance . . . bucket seats . . . coil suspension . . . good ride . . . styling . . . disc brakes . . . wide selection of options.	Center console . . . excessive length of car . . . poor visibility . . . poor space utilization.
	Posh upholstery . . . soft seats . . . solid construction . . . large rear window provides better fastback visibility . . . clean 428.	Poor handling . . . lack of trunk space . . . phony wood veneer on dash . . . poor traction . . . brakes . . . uncomfortable power seats . . . mileage . . . weight.
	Luxury . . . comfort . . . roominess . . . soft ride . . . big car look . . . excellent visibility unhampered by fastback styling.	Poor handling . . . uncomfortable power seats . . . excessive weight of car . . . driver position is too low.



**Rare or not, a good old car—like gold—is where you find it.**

**The trick lies in knowing where to look...**

People simply don't believe it—that interesting classic, antique, and special-interest cars still live in boarded-up old barns. That's fine, though, because it means the armies of collectors who so avidly combed the back country 10 or 15 years ago have now given up and taken to reading the classifieds. Which in turn means less competition for the few of us who still have faith in Duesenbergs in barns.

The fact is that Duesies don't jump out of their hiding places—never did. You have to play detective to find them, which is hard work at best and takes lots of time and money at worst. But the fact is, too, that there are still Duesenbergs resting in barns, and while I can't lead you straight to one right at the moment, I can take you to barns that contain all of the following:

—A 1928 Auburn boat-tail speedster, one of the first made, rotting in a Texas barn. It's owned by a school teacher. I also know where there's a '28 Auburn sedan for parts.

—A 1930 Cadillac V-16 Fleetwood 7-passenger sedan. It's about 50 miles from the Auburn speedster, resting under a ragged brown tarp under a lean-to beside an ancient old house trailer. The owner will sell this car as soon as his wife dies.

—A 1937 Cord 812 supercharged phaeton, unrestored but in nice shape.

—A 1936 Cord 810 Beverly sedan, minus engine, the body good, with morning glories growing up through the frame.

—Two potentially valuable Model A Fords: a 1929 Briggs-bodied station wagon (perfect wood, but

## DUESIE IN THAT BARN

it's painted blue), and an A-400 convertible sedan, a 1930. These cars are 1500 miles apart. One's good, the other's fair.

—A 1929 Packard 8 roadster, a basket case, resting on a farm where no one will ever find it. The farmer started restoring it, gave up, and will probably never do a thing with it. Yet he wants too much to make it a good deal at the moment.

—A 1951 Frazer Manhattan 4-door hard-top, 98,000 original miles, mint condition, a bargain at \$200.

—A 1936 Ford 4-door touring car, no engine, perfect body, needs everything. No bargain at the asking price of \$150.

These are just a few cars I've staked out around the country in the last year or so.

### HOW TO LOOK

There's a certain amount of science involved in ferreting out old cars. Some general hints:

a) Never pass up an interesting unrestored car anywhere without stopping to check it out. Even if you don't want that particular car or know it isn't for sale, stop anyway and talk to the owner. Chances are he knows someone else in the area who has an old unrestored car tucked away somewhere.

*continued on page 68*

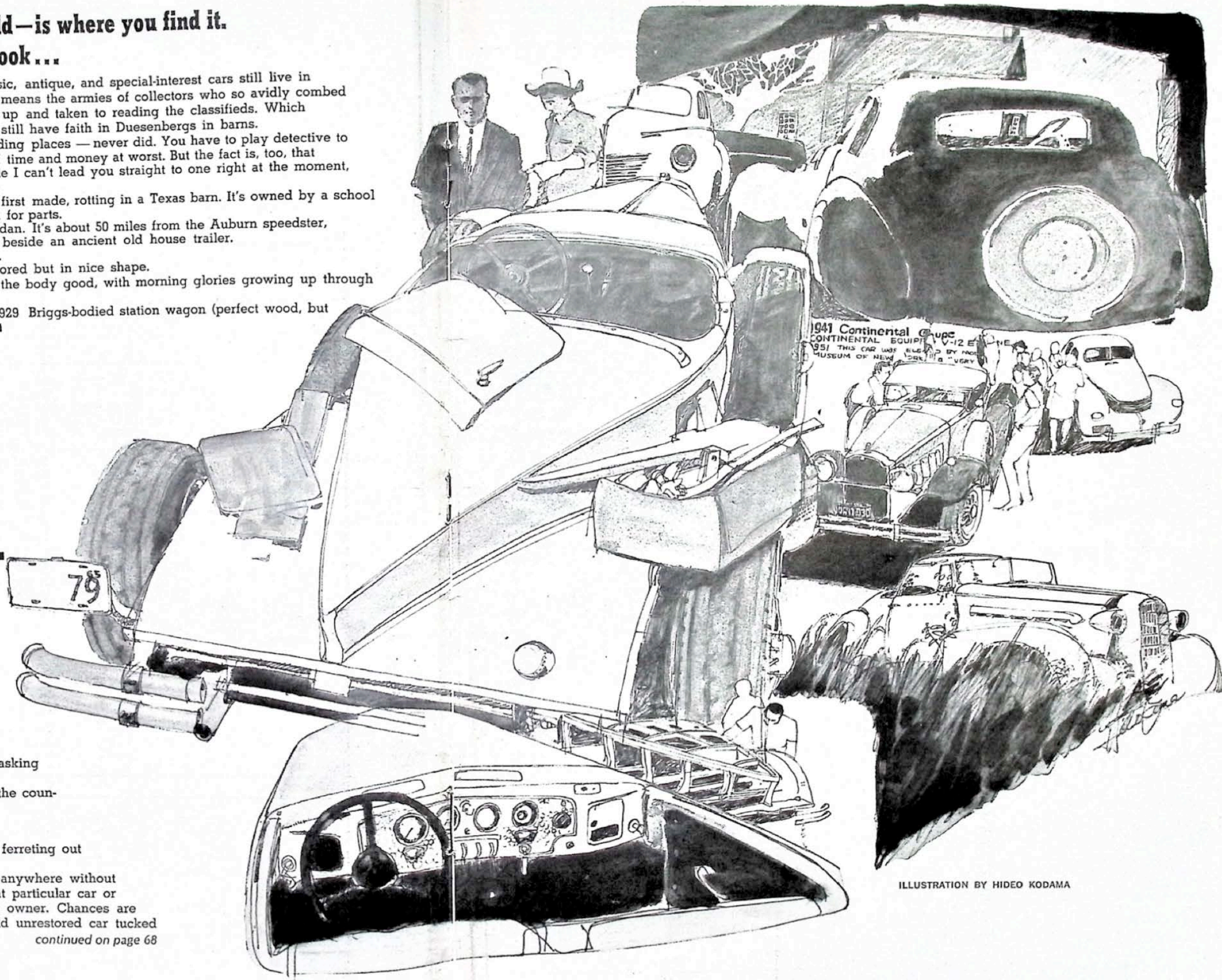


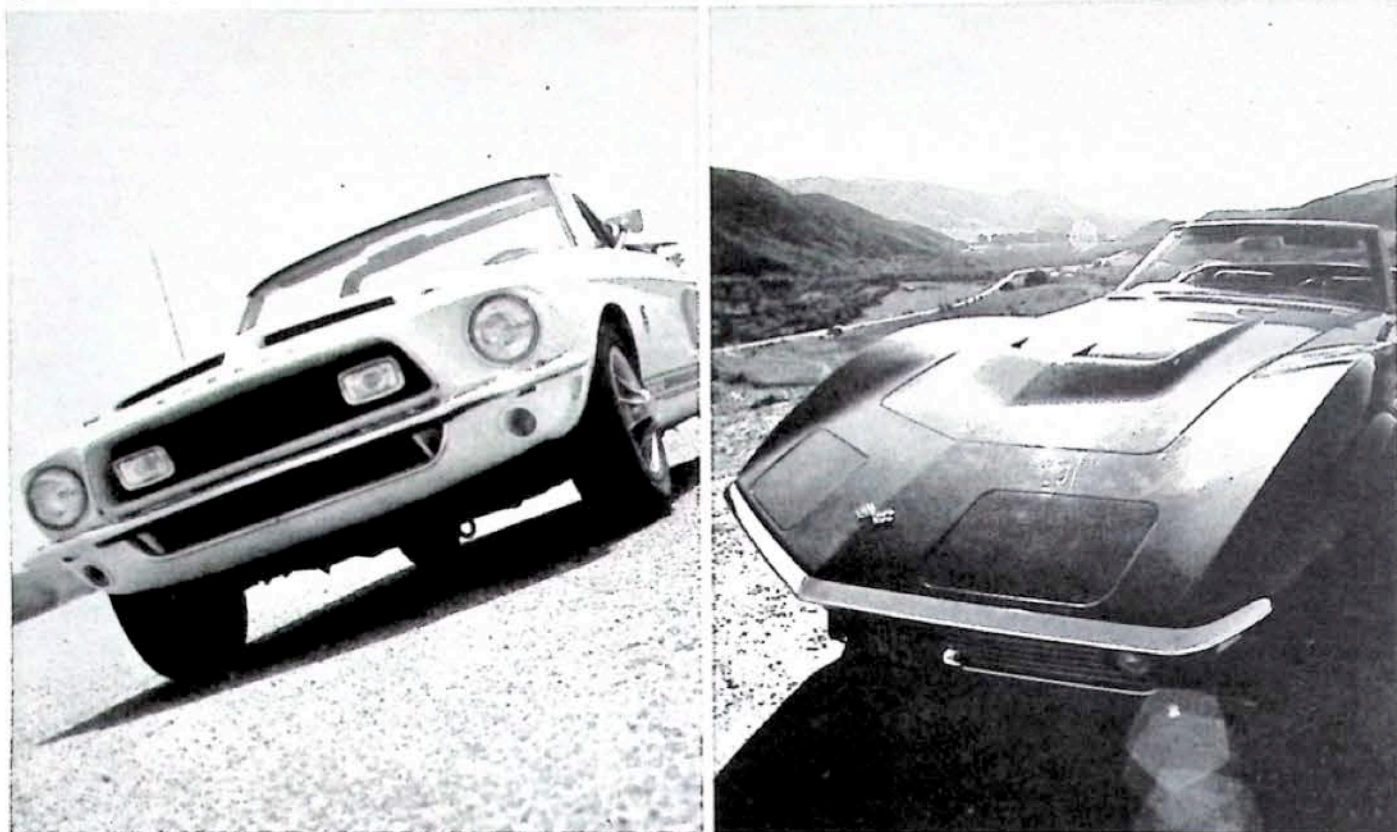
ILLUSTRATION BY HIDEO KODAMA

**by Michael Lamm**



# SPORTS CAR TOURNAMENT: COBRA vs. CORVETTE

By Steve Kelly



## Comparison shows Shelby car has much to do before overwhelming well-established 'Vette.

Just on a subjective basis, comparison between these two is scant. Appearance is vastly different, and on that basis alone, there'd be no stacking them against one another. But they do hit "head on" in the marketplace, and no matter how much either maker likes or dislikes it, they have to meet somewhere. If not in the showroom, then it might as well be here.

The Cobra costs less. Very few options are listed, so a full list Cobra adds up to fewer dollars than a full list Corvette with near-comparable equipment. Resale value may show a higher rate of depreciation, and the Corvette has more in the way of standard equipment goodies. Things like lamp-monitors, 4-wheel disc brakes, flow-through ventilation, forward opening hood, and independent rear suspension are standard Corvette items not even available for the Cobra.

Maintenance will show up as being less on a 428 Cobra than a 427 Corvette. This applies to only the biggest engined cars, and based on the smallest engined versions, it is about a draw. The Cobra, using the Mustang for a birthplace, is more readily acceptable in the average garage, but anyone who kicks out \$4500 or so for any car isn't going to trust the "average" garage for service. He'll go to a specialist, where he will most likely find a Corvette. A draw here too.

Insurance rates are way over in the Cobra's favor. Being mostly steel, body repair costs are significantly lower than for the 'glass Corvette. There's also a reputation factor involved. In its 16-year life, 'Vettes have managed to become unwanted merchandise around many insurance of-

fices. The feeling is—and justifiably so in lots of cases—that the Corvette driver is more likely to become engaged in an accident than if he were driving a more domesticated vehicle.

More people can fit in the Cobra, but judging from letters submitted in response to our '67 article comparing the two, not many people care. About the last thing either car is bought for is carrying the gang around town. Luggage though, is a more acceptable item in the Cobra. The small space behind the Corvette seats will take one or two suitcases, while the trunk and rear seat of the Cobra can hold many more.

Comfort-wise, the Corvette is nicer for drive. The seats don't wear you out on a long trip, nor give you bad aches where they most hurt. Entry and exit are easier in the Cobra since it's higher.

To park the Corvette takes some expertise in deciding where the nose ends. It drops down out of sight long before it ends. This problem exists to a much lesser degree in the Cobra.

True handling and acceleration are best handled by the Corvette. The wide-pattern tires (new, optionally for '68) make it superior to anything made in quantity production in the U.S. And that 427 "rat motor" is an engine which has left every other maker envious. Of course, a MoPar Hemi 426 seems to get the job done a bit better, but at more cost, and besides, you can't get it in the Cobra.

The comparison is here, and in a good number of instances it is straight across. Each has good and bad points, and each has distinctiveness all its own.

## COBRA

One of our office experts claims Shelby-American's last "good" Mustang based car was the '66. We go along with him—almost. The '66 was much more of a sports car than the '67 and '68, but finding a market for it was harder. Performance was there for the real hard-core rough-riding enthusiast, but their number is vastly overwhelmed by the buying group preferring both power and comfort. For Shelby-American and Ford's sake, the last two years have proved better cars, sales and acceptance being the criteria.

In a sense, Shelby has sold out to the add-on and chrome-it establishment. The new cars are more decorated than the old and show strains of having too much ornamentation. The convertible model seems especially so, with too many lines going too many ways.

Because of the now historic Ford assembly line strike, we were only able to obtain a GT 500 for instrumented testing. However, at the preview last summer of '68 Shelby products, we lived with the GT 350, 302-cu.-in. V-8 powered car for a brief session. It lacks substantially in power when compared to its earlier mates, but then has less horsepower. A hydraulic cam and cast iron exhaust manifolds are used, and they tend to tame the power and noise. It is many degrees quieter than the old 306-hp "street" combination on '67s, but is likely to please more than it will offend by this virtue.

Our GT 500 convertible came with the standard 428-cu.-in. V-8, and endeared itself to us by exhibiting calm behavior. It likes to eat gas, but otherwise seems no different from a 390-cu.-in. Mustang. Performance is substantially better than a 390, but not as much as you'd expect. This is more of an engine for "I want power" advocates than anything else. We doubt it'll beat any 427 Corvette for acceleration, and it falls in a bad class for drag racing, per NHRA specs. The size puts it out of contention for sedan racing, so the 428 is relegated to street duties primarily. At that, it is fine.

Slow speed operation isn't cause for trouble. Response from idle or sub 20-mph speeds is quite good. We had a

Cruise-O-Matic transmission in our test GT, and prefer it for normal use. Shifting is crisp, and happens at reasonable speeds. Kickdown is easy, and you can usually reach passing-gear at all maximum speed limits.

The gear selector is of the "sport-shift" type, making for manual control throughout. Second gear has a high-speed monitor preventing over-revving on downshifts. The driver is responsible for this on upshifts. Gear changing on full throttle runs requires a 200-300 rpm anticipation. In other words, if you want to shift at 5500 rpm, better move the lever at 5200.

The 428 will live at 6000 rpm, but better times will come about shifting at 5500. Torque is hefty enough to slip the tires between 1st and 2nd, as well as from standstill.

### Handling, Steering & Stopping

Suspension is less of a "springless" proposition than exhibited in '65-'66 GTs, but still firm. Relocation of the upper front control arms as was done in the early models isn't needed in the new Cobras. Expense and ride harshness rose with this move, and few people understood its value. The overall suspension is very close to Ford's own performance-handling option, yet the Shelys have an edge. High-speed straight-line driving isn't at all abusive, and the cornering work is a safe proposition. We like cars with firm control, and found this in the Shelby Cobras.

Steering is right out of Mustang land. At least the feeling of "plasticity" is. Response is not at all like the Corvette's, and there just seems to be unwanted lag in the unit. The steering wheel is not up to sports car standards. We've a good idea Shelby folks agree here, but the standard wheel meets Federal specs for impact absorption, and a wood rimmed steel-spoke flat disc doesn't (such as the '67 item). It protrudes closer to the driver's chest than is comfortable, causing us to "kink" our arms even with the seat at full travel. We're not positive of the ruling for or against owner installation of the old-style wheel, but we'll bet it will be done often.

*continued*

Photos: Bob D'Olivo, Pat Erollier



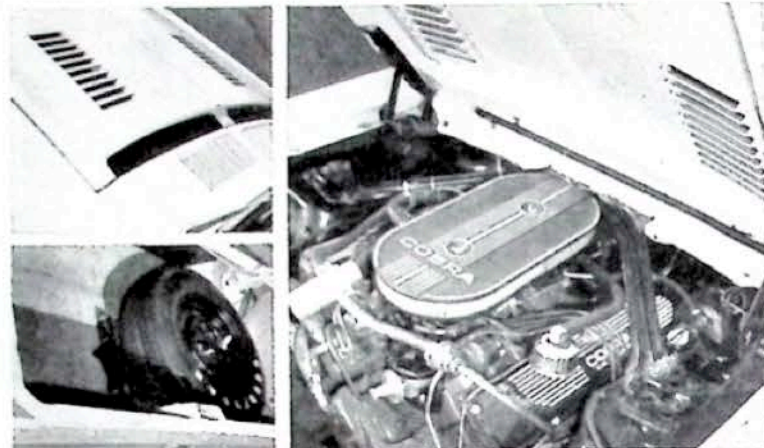
Shelby-American has sold-out to the "chrome-it" and "add-on" establishment. Ungainly roll-bar is best kept covered by the convertible top. Mustang interior has been added to, but not improved. Imitation mag wheel covers add final, phony touch.





Big Ford 428-cu.-in. V-8 is overly generous with torque, and acceleration is a roller-coaster thrill with Cobra. Louvers are functional and useful, but placed directly over spark plugs.

COBRA POWERTEAMS					
Displacement	Carburetion	Horsepower-Torque	Transmission		
V-8 302 <sup>1</sup>	4-bbl.	250 @ 4800 rpm	310 lbs.-ft. @ 3200 rpm	4-speed	Cruise-O-Matic <sup>o</sup>
V-8 428 <sup>2</sup>	4-bbl.	360 @ 5400 rpm	459 lbs.-ft. @ 3200 rpm	4-speed	Cruise-O-Matic <sup>o</sup>
V-8 427 <sup>o</sup>	4-bbl.	400 @ 5600 rpm	460 lbs.-ft. @ 3200 rpm	4-speed	Cruise-O-Matic <sup>o</sup>
1. Std. 6T350 engine 2. Std. GT500 engine <sup>o</sup> optional					



Stopping GTs is about like stopping Corvettes; no trouble at all. The front disc/rear drum setup is power assisted, using FoMoCo's "floating" caliper front brake. The rear drum is revised over the standard Mustang with a 10-inch diameter x 2 1/4-inch wide drum. High-performance lining material is used.

Braking is straight, quick and free from serious fade. Use of the Goodyear E70x15 high-speed tires contributes heavily by planting lots of rubber on the asphalt.

#### Comfort, Convenience & Ride

We'd like to see better front bucket seats in the Cobras. While those in use are fairly comfortable, they get tiresome after 90 minutes driving, or more. They are deluxe Mustang units, with good construction but a need for more seat padding for all-out comfort. The seatback is too straight, and could be neatly reclined a degree or two. Our test convertible had a crooked seatback, and though repairable, it is really a nuisance.

Addition of a center console to all '68 Cobras is a great idea, though decorating it with paper woodgrain applique is not. It's easily identifiable as paper and shows less class than vinyl covering. The just-right height armrest hides a huge storage bin. Because of the near-nothing capacity of Mustang gloveboxes, Cobra owners really make out. If the door armrest were as comfortable as the console pad, things would really be looking good.

Rear seat entry in either coupe or convertible is worthy of study. Some prefer stooping and diving under the roll bar in the convertible and through the shoulder harnesses on the fastback. Others manage to delicately thread their way in, turn around facing forward, then sit down contentedly. We never did set a pattern, but somehow managed the maneuver. It's not all that bad, but a long way from having the convenience of a sedan.

Ride is, of necessity, stiff. Bounce is somewhat hard, but we didn't once incur loss of rear wheel traction over hard dips. The best description might be that you know it is stiff, but nothing more. The cars handle the job of plain riding in good style. This new ride-pattern is about

halfway between stock Mustang and that of the "rough rider" '66 GT.

#### Plus & Minus Features

It might be a good idea to further separate the fog light switch from the convertible top button. They're right next to each other, and at night, without lights, it'd be easy to rip the top right off its anchors.

Another "better idea" would be to soften the trunk torsion bars. After removing the stock sheetmetal panel and replacing it with fiberglass, the hinges have much less weight to carry, and consequently spring the trunk up like a flag in a shooting gallery.

That great big "hatch" type hood interferes with forward vision, cutting off several feet of right-in-front sight.

The hood pins used to release the panel are neat, taking only a turn to undo them. They stay with the hood when raised so theft or loss is discounted. Functional louvers on each side allow air to escape, but we noticed the openings are right over the plug wires, with no deflectors for water being included. We louvered a hood once and put an aluminum panel below the louvers angled down and to the side of the engine compartment. If we can do it, anyone can!

Shelby's integrated roll bar idea deserves high praise. It also deserves to be copied. Any convertible is potentially more dangerous than a hardtop, and occupants lives are worth more than an additional few dollars of tubing.

Cobra shoulder belts are the best yet. The hardtop uses suspender type restraints, stemming from a single strap into an inertia reel harness, allowing slow body movement but locking up on sharp impact. The convertible restraint is housed in the rear quarter panel, pulling out and fitting against the front occupant's chest, and fastening to a center tunnel mounted buckle strap. The inertia reel is featured here also.

The "establishment" has had its impact on Shelby-American, and they've succumbed and resisted. Styling reflects the adoption of the "great" philosophy, but performance and safety still are Shelby's own exclusives.

## CORVETTE

Getting emotionally "hung up" on the Corvette styling takes somewhat longer than becoming enthused over its great driving characteristics—but not much. Getting in and out is more of a chore than on earlier models, but like styling and ride, is only a matter of accommodating one's particular personality.

From the looks of things, it appears that Corvette assembly line workers are taking time getting used to putting the new model together. Rough panels and ill-fitting sections, highly evident on early-run cars, indicate some practice is needed before perfection could be neared.

Our test cars were both convertibles. One came with a 327-cu.-in., 350-hp V-8, the other with a 427-cu.-in., 435-hp "semi-hemi" head engine. Compression on both is 11.0:1, and only 4-speed transmissions are offered here.

The 327 engine uses a single 4-bbl. Rochester carb and quiet running hydraulic cam and lifters. Lift is .4472-inch on intake and exhaust, with 306-degree opening duration on each. Valve opening overlap is 78 degrees, and valve head diameter is 2.02 inches for intake, and 1.60 inches on the exhaust.

Noise out of the engine room doesn't herald an "over-one-hp-per-cubic-inch" engine lurking there. A 3.70:1 final drive gear kept our top speed down to an exacted 117.15 mph at 5500 rpm. The 0-60 mph times and quarter-mile runs could be greatly improved by a stronger clutch and drag tires, but we weren't all that disappointed with the cars' recordings. City traffic operation was so near-perfect that we accepted the semi-compromise between "rump-rump" idling and reliability with praise. Some experiment-

ing with tires and tuning will drop the 350-hp 'Vette into the mid 13-second bracket without difficulty.

The 435-hp test machine had Chevy's L88 aluminum head option, and frankly we thought it'd go quicker than it did. Tuning time was shortened by inclement weather, so we had to settle for 14-second quarter-mile times. But our earlier 427 cars ('66 & '67) both hit the 13s right off the bat. The '68 in proper tune should be high 12s in proper tune. The majority of drag-strip disciplined Corvettes hit the low 12-second mark, with a good many in the 11-second bracket. The potential is undoubtedly there.

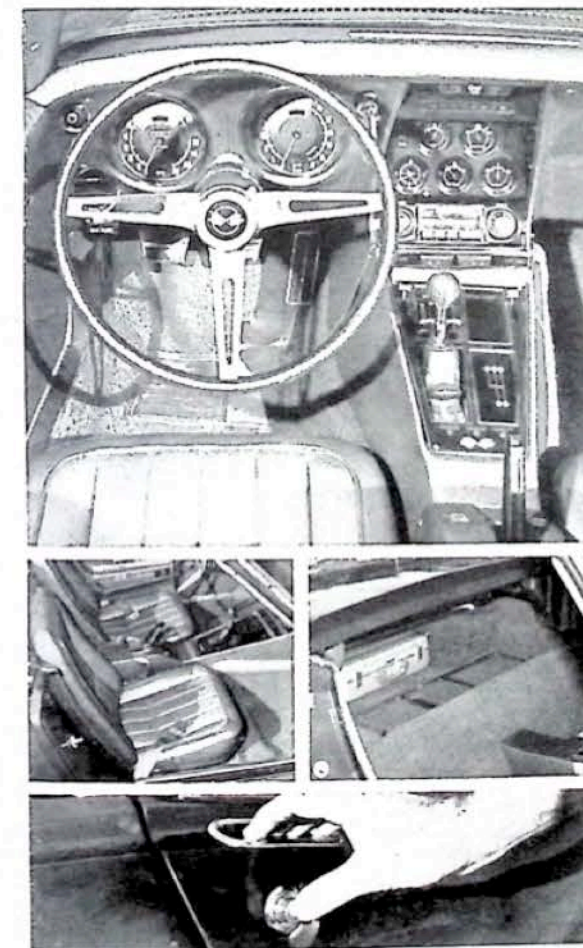
We encountered trouble getting the triple carburetion to work in unison. Several times, the front and rear Holley 2-bbls. refused to work. Some jerry-rigging on the vacuum linkage helps, but there's no substitute for mechanical actuation—available at most speed or specialty shops.

This big engine objects to long idling periods, but cleans out quickly once on the move, with only a small amount of plug fouling. Clutch action is stiff, allowing the driver to object to idling time also. The throw is much shorter than on the 350-hp engine, negating much worry about the pedal hanging-up between power shifts.

Solid lifters are used on all 435-hp engines. Valve diameter is 2.190-inch intake, and 1.720-inch exhaust. Lift is .5197-inch on both, intake opening duration is 316 degrees and exhaust is 302 degrees with overlap being 80 degrees.

#### Handling, Steering & Stopping

Handling, both on twisting roads and straight-arrow



Corvette interior is well laid out; all gauges are easily visible. Seats are extremely comfortable, but when driver seat is in full rear position, safety latch is impossible to reach. Handling and steering are excellent.



CORVETTE POWERTEAMS					
1. Std. GT350 engine	2. Std. GT500 engine	<sup>o</sup> optional			
V-8 327 4-bbl.	300 @ 5000 rpm	360 lbs.-ft. @ 3400 rpm	3-speed	4-speed <sup>o</sup>	Turbo-Hydra Matic
V-8 327 <sup>o</sup> 4-bbl.	350 @ 5800 rpm	360 lbs.-ft. @ 3600 rpm	4-speed <sup>o</sup> (close or wide ratio)	4-speed <sup>o</sup> (close or wide ratio)	Turbo-Hydra Matic
V-8 427 <sup>o</sup> 4-bbl.	390 @ 5400 rpm	460 lbs.-ft. @ 3600 rpm	4-speed <sup>o</sup> (close or wide ratio)	4-speed <sup>o</sup> (close or wide ratio)	Turbo-Hydra Matic
V-8 427 <sup>o</sup> 3 2-bbl.	400 @ 5400 rpm	460 lbs.-ft. @ 3600 rpm	4-speed <sup>o</sup> (close or wide ratio)	4-speed <sup>o</sup> (close or wide ratio)	Turbo-Hydra Matic





stretches is improved over '67 by at least 100%. Introduction of wide-pattern tires—7-inch wide wheels—as standard gets most of the credit. Also making big contributions are the reduced height (approx. 2 inches), wider rear track (.7-inch). Terming it a truly stable road car is far from exaggeration.

Manual and power steering units are quick to react. Power can't be had with the 435-hp engine, but we didn't mind. Only 3.4 turns of the 16-inch diameter wheel takes it from lock-to-lock, and only 2.92 are needed with power. Overall ratio on manual is 20.2:1, and 17.6:1 with power. Suspension feedback and/or sloppiness is not a problem here. It just doesn't exist.

Understeer is fairly inherent, but constant adjusting of the wheel isn't required while rounding curves. Once set—it stays. Oversteer is only a problem, or condition, encountered with the rear end braking loose.

Since '65, poor stopping Corvettes haven't been produced. With disc brakes at all 4-corners, they just plant themselves to the ground and come to rest straight and quick. Less than 120 feet from 60 to 0 mph (a distance we repeatedly accomplished) is something to write home about.

The 'Vette's 4-wheel disc brakes remind us of the auto company spokesman who recently defended his company's non-use of them by explaining difficulties in adapting a suitable parking brake to the system. Hmm? Wonder how Mercedes, Porsche, Volvo, Chevrolet, etc. did it? Gee!

#### Comfort, Convenience & Ride

Stetson wearers will find ample space for their headgear—behind the front seat. Rooflines are low, negating hat wearing.

Otherwise, headroom is not a problem. Nor is legroom a limiting factor. We did find that a 6-footer, or thereabouts, develops a tired leg on all but full throttle runs. Moderate gas pedal application causes the driver's knee to bend without having adequate thigh support. A large, softly upholstered roll, à la hot-rodders technique on channeled cars, would do away with the annoying non-support.

The semi-reclining seatbacks are enjoyable. We found ourselves hunching forward at first, but then learned to

settle back, giving us plenty of comfort and also a just-right distance to the wheel.

Ride qualities of all but the biggest engined car are surprising. Bounce and rebound are relatively calm, especially for a sports car. The inside quietness is something we never expected in a 2-placer, though a good many imported sporty cars have this. The flow-through ventilation works, making for windows-up driving in all but the hottest weather.

Difficulty in entry and exit—for the average person—is just something sports car owners should expect. Considering this car is short of four feet in height, we'd have to rate it good.

#### Plus & Minus Features

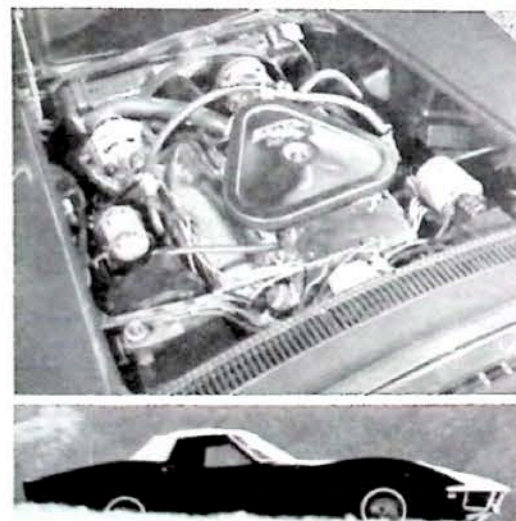
"Rain, Rain, go away." We sang that song for a solid week. The Corvette handles admirably in the wet, but passengers didn't fare too well in our test convertible. The 350-hp car came with the removable hardtop, and oddly enough it leaked, and the soft top didn't. We found the major source of water-fill at the rear corners of the side windows, but weren't able to fix it on our own. A couple of comments on this have drifted in from '68 owners, and though they've cured the ill, it was a nuisance.

The hidden wipers should help prolong blade life, and they undoubtedly benefit appearance. We had a difficult time explaining this to the gas station attendant who gashed his finger on the non-flush fitting door edge corner. Seems something was keeping the cover from going flush to the cowl, and he found out about it the hard way.

The glove compartment is behind the seat, along with the other identical-looking hatches. One holds the jack, and the other—right behind the driver contains the battery. Be careful which one you reach for.

Using the press-type door handles is easy, but a couple of drawbacks were illustrated to us. Ladies are prone to breaking fingernails in the spring-acted door-top grip, and closing the door and locking it GM-style takes some deft hand movement.

Regardless of its few distinct minus points, the Corvette still holds the position of one of the world's all-out "class" vehicles, and justifiably so. Kinda wish we had one.



Raw power is Corvette symbolism, and five different engines are available for '68 in 327- and 427-cu.-in. sizes. Road handling is much improved over '67 models. Suspension got stiffer.



#### PERFORMANCE

	Cobra 428	327	Corvette 427
<b>Accelerator (2 aboard)</b>			
0-30 mph	3.0 secs.	3.2 secs.	2.7 secs.
0-45 mph	4.3 secs.	4.8 secs.	4.0 secs.
0-60 mph	6.5 secs.	7.1 secs.	6.3 secs.
0-75 mph	9.4 secs.	10.0 secs.	8.3 secs.
<b>Passing Speeds</b>			
40-60 mph	2.5 secs. 183.0 ft.	3.1 secs. 227 ft.	2.7 secs. 197 ft.
50-70 mph	3.0 secs. 264 ft.	3.6 secs. 316 ft.	2.9 secs. 255 ft.
<b>Standing Start</b>	14.75 secs.	15.0 secs.	14.1 secs.
<b>Quarter-mile</b>	98 mph	92 mph	103 mph
<b>Speeds in Gears</b>			
1st . . . MPH @ RPM	47 @ 5500	53 @ 5500	66 @ 6500
2nd . . .	79 @ 5500	71 @ 5500	88 @ 6500
3rd . . .	116 @ 5500	92 @ 5500	116 @ 6500
4th . . .		117 @ 5500	160 @ 6500
<b>MPH per 1000 RPM</b>	21.1	21.2	24.7
<b>Stopping Distances</b>			
from 30 mph	39 ft.	27 ft.	29 ft.
from 60 mph	151 ft.	117 ft.	119 ft.
<b>Speedometer Error</b>			
at 60 mph	5% fast	6% fast	none
<b>Mileage Range</b>	9.0-15.0 mpg	10.6-20.0 mpg	7.8-17.5 mpg
<b>Average Mileage</b>	12.8 mpg	15.7 mpg	13.6 mpg

#### TEST CAR SPECIFICATIONS

	OHV V-8 428	OHV V-8 327	OHV V-8 427
<b>Engine</b>	4.13 x 3.984 ins.	4.0 x 3.25 ins.	4.25 x 3.76 ins.
<b>Bore &amp; Stroke</b>	428	327	427
<b>Displacement-cu. in.</b>	360 @ 5400	350 @ 5800	435 @ 5800
<b>HP @ RPM</b>	459 @ 3200	360 @ 3600	460 @ 4000
<b>Torque: lbs.-ft. @ RPM</b>	10.5:1	11.0:1	11.0:1
<b>Compression Ratio</b>	1 4-bbl	1 4-bbl	3 2-bbl
<b>Carburetion</b>	Automatic;	Manual;	Manual;
<b>Transmission</b>	3-speed	4-speed	4-speed
<b>Final Drive Ratio</b>	3.50:1	3.70:1	3.55:1
<b>Steering</b>	Recirculating ball & nut w/power assist	Recirculating ball & nut w/power	Recirculating ball & nut. Manual
<b>Overall Steering Ratio</b>	2.03	17.6:1	20.2:1
<b>Turning Dia. — curb-to-curb</b>	39.4 ft.	39.9 ft.	39.9 ft.
<b>Wheel turns — lock-to-lock</b>	3.6	2.92	3.4
<b>Tires</b>	E70 x 15 hi-speed front disc/rear drum with power assist	F70 x 15	F70 x 15
<b>Brakes</b>	4-wheel disc with integral power	4-wheel disc with integral power	4-wheel disc with integral power
<b>Fuel Capacity</b>	17 gal.	20 gals.	20 gals.
<b>Curb Weight — lbs.</b>	3665	3445	3425
<b>Body Frame Construction</b>	Steel unit	Ladder frame	Ladder frame
<b>Wheelbase — Ins.</b>	108	98	98
<b>Front Track — Ins.</b>	58.1	58.3	58.3
<b>Rear Track — Ins.</b>	58.1	59.0	59.0
<b>Overall Length — Ins.</b>	186.81	182.1	182.1
<b>Width — Ins.</b>	70.9	69.2	69.2
<b>Height — Ins.</b>	51.8	47.8	47.8
<b>Front Suspension</b>	Independent with coil spring	Independent with coil spring	Independent with coil spring
<b>Rear Suspension</b>	Hotchkiss type w/semi-elliptic multi leaf spring	Independent with fixed differential and multi-leaf transverse spring	Independent with fixed differential and multi-leaf transverse spring

#### COMMENTS

	Cobra	Corvette
<b>Handling</b>	Better than most domestic cars—firm with plenty of control—just slightly below that of all-out sports car.	Best of all U.S. cars, and one of the upper echelon of sports "handlers."
<b>Ride</b>	Stiff but not abusive.	Good on all but the big-engined. 435-hp cars are abusive to passengers.
<b>Comfort</b>	Not bad, but seats could stand refinement. Rear seat room is very marginal.	Very good on long trips as well as in-town. Interior access is difficult for all but the very agile.
<b>Quality</b>	Surprising. Vast improvement over '67s.	Needs upgrading, but is progressively getting better.
<b>Performance</b>	Adequate for car's intended use.	Good, and better than its competitor. Has the best potential.
<b>We like</b>	Most of the styling—ease of operation—shoulder harnesses and roll bar.	Style—instrumentation—lamp monitors—4-wheel disc brakes—good tractability.
<b>We don't like</b>	Phony "mag" hubcaps that ruin looks—too light trunk lid and too-open hood louvers—obstructed forward vision—lack of greater distinction from Mustang.	Leaky bodies—front ends that end past line of vision—unreachable left seat-back release—absence of control lighting and good interior illumination.

#### OPTIONS & PRICES

	428 Cobra	427 Corvette
<b>Mfg's Suggested Price</b>	\$4317.39	\$4636.00
<b>Coupe</b>	\$4438.91	\$4320.00
<b>Convertible</b>		
<b>Engine Options</b>		105.35 350 hp 200.15 390 hp 305.50 400 hp 437.00 435 hp
<b>4-Speed Trans.</b>	Standard	184.35
<b>Auto Trans.</b>	50.08	237.00
<b>Limited-Slip Diff.</b>		46.35
<b>Hi-Perf. Tires</b>	Standard	31.30
<b>Special Susp.</b>	Standard	36.90
<b>HD Ignition</b>	N.A.	73.75
<b>Adj. Stear. Col.</b>	65.14	42.15
<b>Power Steering</b>	84.47	94.80
<b>Power Disc Brakes</b>	64.77	42.15
<b>Power Windows</b>	N.A.	57.95
<b>Air Conditioning</b>	356.10	412.90
<b>AM Radio</b>	57.59	N.A.
<b>AM/FM Radio</b>	181.36 (Stereo)	172.75
<b>Fold-Down Rear Seat</b>	64.78	N.A.



# NASCAR GT AND TRANS-AM HEAD INTO '68 SEASON:

*"Baby Grand" Cars Make Debut on NASCAR Circuits  
Trans-Am Now in Third Year — by Bob Myers*



PHOTOS BY DON HUNTER

The creation of a new Grand Touring Championship for sports sedans by the National Association for Stock Car Auto Racing (NASCAR) promises to be a boon for the fast-growing sport of stock car racing, especially in the Southeast where it is king.

For some time, NASCAR President Bill France, Sr., who commands the nation's largest auto racing sanctioning body, has considered establishing the division for the "Baby Grand Nationals" such as Camaros, Mustangs, Cougars, Barracudas, Firebirds, Darts, Javelins and comparable foreign cars. Now the NASCAR boss feels that stock car racing has reached the growth point that such a division and championship will complement the Grand Nationals.

Some 20 GT races are scheduled in 1968 on the South's five superspeedways at Daytona, Charlotte, Atlanta, Darlington, S.C. and Rockingham, N.C. and intermediate tracks. "We plan to schedule at least one event of 250 miles on each of the supertracks and the others on intermediate and small tracks," says France, the man credited

with starting the stock car rage in the South with the building of Daytona International Raceway at Daytona Beach, Fla., in 1959. "We think the new circuit will attract more people into racing and give the fan a new and exciting dimension in the sport. We feel it will be highly successful."

The first GT Championship race, a 250-miler, is scheduled at North Carolina Motor Speedway at Rockingham, March 9. Darlington Raceway has booked a similar event before its Southern 500-mile Grand National the Sunday before Labor Day. Other tracks — large and small — are expected to line up the sports sedans along with the major 1968 events at their speedways.

The GT circuit is entirely new to the Southern racing fan. In the past, nearly all other forms of racing — Indianapolis cars, midgets, formulas, etc. — have been rejected by the Grand National-oriented Southeastern fan to the extent that the body rejects foreign tissue. These forms of racing simply have never caught on and, consequently, have been scheduled on a very limited

basis everywhere save Daytona Speedway. But for many reasons, the sporty cars are expected to be very popular and their presence in the South may well start a national trend.

Economics, the availability of parts, labor costs, time involved in racing and the simplicity of rules all point to the immediate success of GT racing compared with Grand National racing. And, said one well-known stock car builder, "these GT cars are going to be so competitive and so exciting that they may make fans realize there's another kind of racing other than the GN stockers."

The rules, as set forth by NASCAR, will permit a maximum engine displacement of 305 cubic inches, a maximum wheelbase of 112 inches and a minimum weight of 2950 pounds. NASCAR has ruled also that engine displacement may be increased or decreased provided the displacement does not exceed 305 cubic inches. Car builders may destroke from a maximum of 355 cubic inches. A maximum of 2 4-bbl. carburetors with an 1 1/4-inch throttle bore will be allowed. In

keeping with the standards which have resulted in an outstanding safety record in Grand National racing, the use of full-floater rear axles and 22-gallon rubber fuel cells will be mandatory. Differentials will be optional.

Original dimensions of all bodies must remain as manufactured, except for changes which may be necessary to achieve tire clearance. Lowering of body or frame will not be permitted. In the further interest of safety and handling ease, a non-adjustable spoiler, not exceeding 1 1/2 inches in height may be attached to the rear deck lid. "We feel that the rules are a fair combination of competition and safety," said former NASCAR Executive Manager Lin Kuchler, who has been elevated to a vice presidency in the NASCAR chain of command.

A variety of engines are available. Ford has the standard 289, Chrysler the 282, 273 and a 318, General Motors the 283 and the 327. American Motors has a 290.

Economics perhaps is the No. 1 factor that will make GT racing feasible and competitive. For example, the cost of replacing a 427-cu.-in. engine in a Ford GN car is \$1800-\$2000. A complete engine in a Mustang can be replaced for half that much. Chevrolet's engine is even cheaper. The overall cost of building and setting up a GT car ranges from \$4000-\$5000. A GN car's price tag is \$10,000-\$12,000 and at this price, the car won't compete with the factory products which run as high as \$20,000 each.

GT cars weigh some 1000 pounds less than their stock counterpart, a factor which will result in greater tire economy once the circuit gets going. "It is very likely that the GT cars will be able to run the initial race at Rockingham without a tire change," said Firestone's H.A. Wheeler Jr., the company's Southern director of racing based in Charlotte. "Grand National cars in a similar 250-mile race at the 1-mile, paved track normally use some 10-12 tires at a cost of \$50 each. The lighter weight is also so much easier on suspension systems and the cars are even more economical to tow from race-to-race."

The major auto manufacturers currently supporting stock car racing took a wait-and-see attitude about participating when the new circuit was first created.

However, it is expected that Ford, Chrysler, perhaps General Motors and American Motors will go into the GT racing business in one form or another. That is, the companies are very likely to make high-performance parts available and even build machines on order if they do not compete directly with teams as they do in NASCAR's Grand National division. Holman-Moody Co.,

Ford's race-car building outlet in Charlotte and the South, has tentative plans to build Mustangs in sections to be assembled by the purchaser. These parts or sections would carry a \$4000 price tag. But if the company assembled them, the cost would soar to some \$15,000 because of expensive labor involved.

Another possible deterrent to open factory participation is the lack of a clear cut advantage in GT racing. "A factory operation may not be much better than a good solid backyard operation because of the low cost of the machinery and the simplicity of the regulations," said one source.

In fact, the GT circuit offers a new opportunity for the so-called backyard garage and the weekend mechanics and drivers to excel, to compete on an equal basis and to reap some of the glory now reserved for the top GN drivers and mechanics.

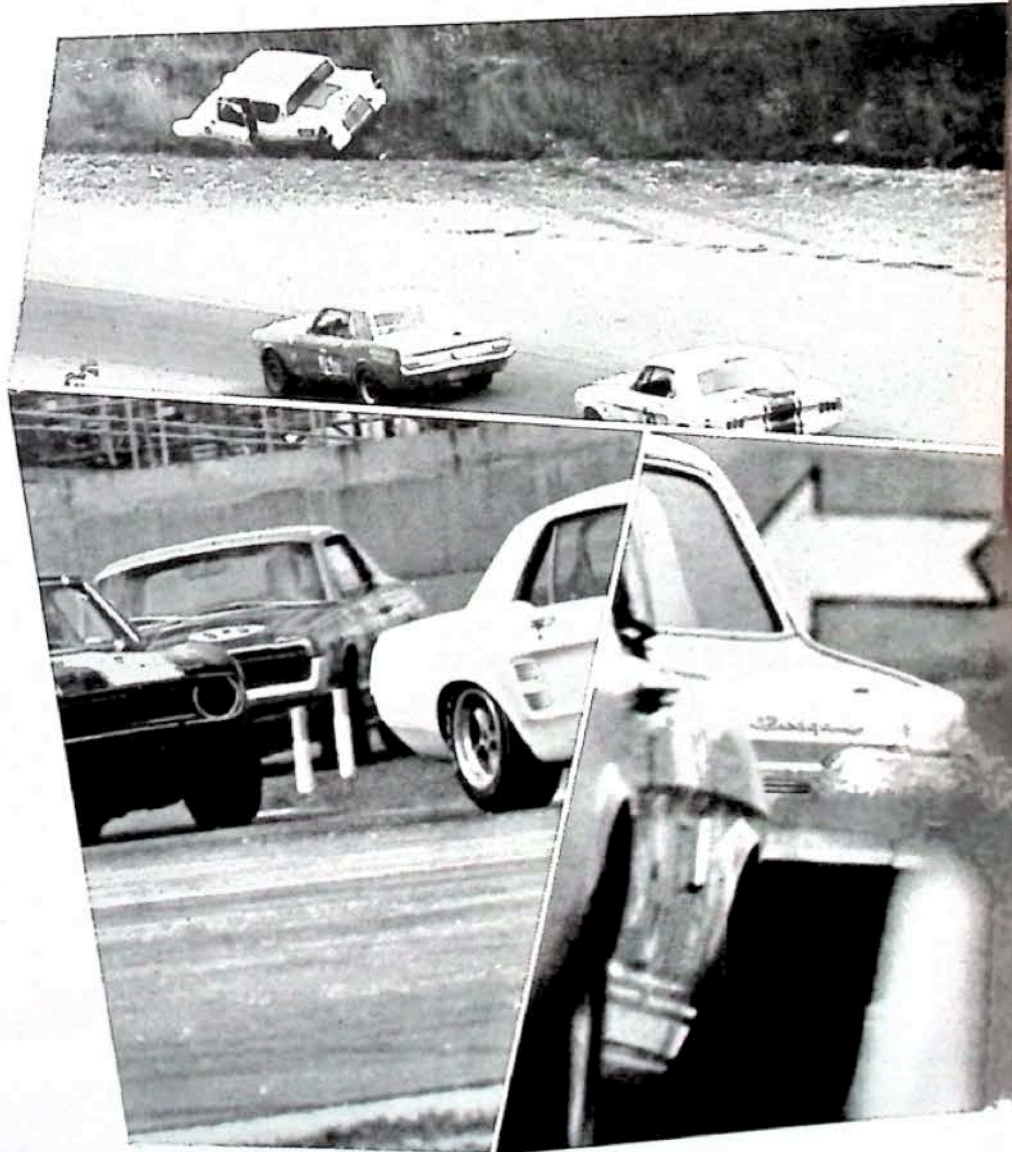
There are about 15,000 race cars in the United States. Some 10,000 of them are stock cars, ranging from old jalopies in the dirt bullrings to the sleek, expensive Grand Nationals.

The remainder of the race cars are sports cars, formula cars, super-modifieds and sprint cars. So there are twice as many stock car racers as there are other types. Stock car racing is found in every section of America today. This evolution has come about since the end of World War II. Where midget and other types of racers were king, stockers have taken over. The reason, of course, is that stock cars were hard to come by during the war.

Now most anyone can acquire a 1950 model machine or later and stick a set of roll bars into it and charge out to the neighborhood track and enter the modified or the rookie features.

This localized racing rage is reflected in the attendance figures. Some 53

*From Daytona Beach, Fla., to Kent, Wash., SCCA's Trans-American Championship sedan races will see bigger purses and attendance in 1968.*





## "BABY GRANDS" continued

million persons paid their way into auto races in the country in 1967. Only 12 major races drew in excess of 50,000 fans. So most of the attendance was at the countless little tracks — to see stock car racing in the rawest or the most skilled and scientific form. The fact that plenty of cars are available at low cost to youthful drivers vividly explains the phenomenal growth of stock car racing over other types.

It is exceedingly difficult for young and talented racing blood to get into the Grand National field and find success because of the costs and time involved, but the GT circuit is expected to offer a definite advantage to drivers and mechanics.

For example, let's say there's a young driver in the Baltimore area who wants to be a professional. He is 25 years old, married, father of two children and has a job which pays \$150 per week. In sportsman and modified races he can run his machine three or four times per

week. Whether he supplements his job with winnings, or breaks even, he still has steady employment. He wants to be a GN pro, but he cannot afford to go out on his own. There's too much of a sacrifice involved.

Moreover, he does not have the experience or the competitive equipment to lock bumpers with the big factory operations on the superspeedways where the big money is. Also, the factories do not send scouts to sportsman and modified tracks looking for talent. And who wants to invest \$30,000-\$40,000 to sponsor a rookie on the GN circuit? The odds of making the big time are huge, indeed.

But this same young driver and his crew can build a Mustang or a Camaro for an outlay of some \$5000 and go racing on the GT circuit without pulling up stakes at home. The backyard mechanics who build the sportsman and modified cars and still tend their garage or service station can find equal opportunity. As one mechanic put it, "You won't have to be a gypsy to race

the GT circuit, so I expect top mechanics to come running out of the woods.

"It is a misconception that mechanics and builders who engage in sportsman and modified racing are inferior to the GN mechanics. There are skilled craftsmen in the lesser ranks who cannot afford to enter the Grand National field for one reason or another — business, family and travel foremost among them."

There are some mechanics and drivers who have no desire to enter the Grand National field. But they are comprised mostly of veterans who are content to pursue racing on the weekends. The GT division will attract these, too, since it's much easier to run a few GT races than it is to make more than 40 Grand National events at those great odds.

From the aforementioned ranks will come drivers and mechanics to the GT circuit to compete against well-established men who compete in both Grand National and sportsman-modified racing. These established

drivers and crewmen are those who have attained enough experience and enough financial solvency in sportsman-modified racing to make a few stops on the major Grand National tracks. The GTs promise to be a boon to this group.

The GT racing will pump new adrenalin into the short track programs, offering an exciting new dimension to these ovals which keep stock car racing alive. NASCAR boss France has been loyal to the small tracks and fair in the treatment of their sanction. The GTs are another means of assuring their continued livelihood.

If race fans throughout the country flock to small tracks to see the older sportsman-modified cars and the riotous rookies perform, then surely they will find the 1966, 1967 and 1968 model sports sedans to their liking.

The "animal cars," as the GTs have been dubbed, are versatile. They're in between the 1800-pound Indy and formula machines and the 4000-pound Grand Nationals or late model sportsman and modifieds. They're light and they are powerful. They'll run with anything on the short dirt and paved tracks.

In fact, nationally-known mechanic and builder Henry (Smokey) Yunick of Daytona Beach predicts that "the GT cars will be as fast as the Grand Nationals everywhere on the Southern supertracks except Daytona Speedway." Yunick is a General Motors truck dealer who has fielded Grand National cars over the years. One of the nation's best-known engine specialists, Yunick is not certain whether he will build Camaros for the GT circuit. But few are refuting his predictions.

The GT division may continue to elevate stock car racing to the forefront as the most popular type of competition in the country. Within the next 10 years, some observers see a merger of hybrid sports cars and championship cars. At present, there's very little competition between the hybrid and the big, heavy stockers. Here's where the GTs come in. Last year's Trans-American Series was the most popular new division of auto racing ever to hit the country.

The day is fast approaching when new tracks will spring up across the land. In NASCAR alone, there are 11 GN races in excess of 400 miles, 18 major stock car races and some 10 under the United States Auto Club banner. If current plans materialize, there'll be some dozen major speedways for stock cars in the nation and perhaps 24 supertrack races each year in the near future.

It is very likely that the big wheel-base cars and the compacts will spread nationwide. Most certainly, the GT cars are on their way, and they could be the lifeblood of the small tracks, which must exist to keep auto racing alive. /MT



## Sports Car Club of America/TRANS-AM

The Sports Car Club of America (SCCA) runs the Trans-American Championship for sedans, a 12-race series that is now in its third year. The championship is for manufacturers in large — and small — engine series produced sedans. Maximum engine size for Trans-Am cars is 5 liters (305 cu. in.) and wheelbase of 116 inches or less.

**A summary of the 1967 season showed new marks in all departments. Some of the highlights:**

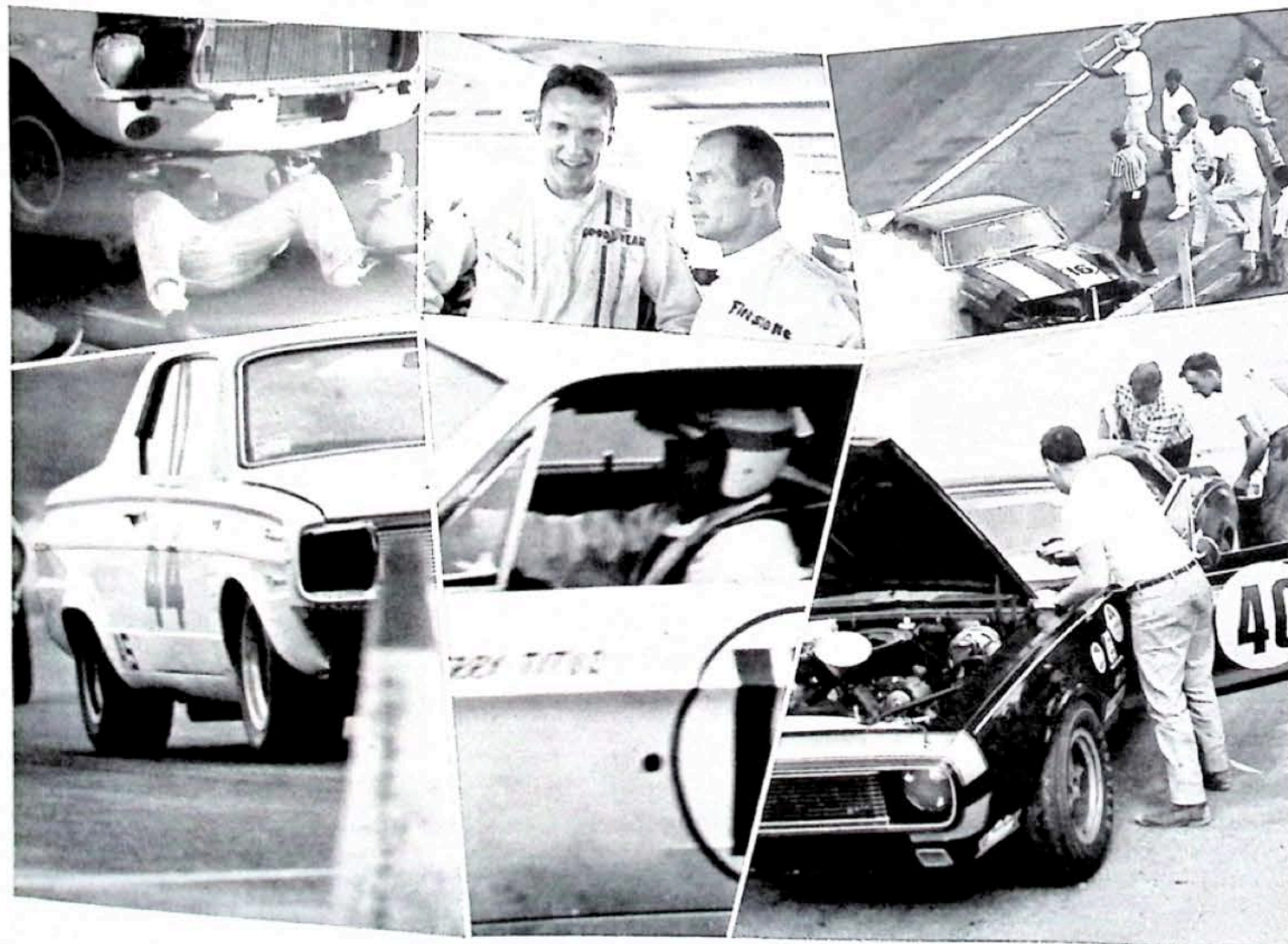
- Ford Division of Ford Motor Co. was a repeat winner in the over-2-liter championship.
- A total of 102,000 paid admissions were recorded for the 12 events.
- Seven events in 1966 attracted 31,000 paid admissions.
- Prize money put up by the event sponsors in 1967 totaled \$67,550.
- A total of \$67,600 in accessory money was posted by American business firms, contingent upon use of product. These awards were committed to SCCA for the entire series by the Firestone and Goodyear tire companies, Champion Spark Plug Co., Quaker State Oil Co., and Shelby American. Union Oil also participated in the series.
- More than 300 drivers, all but a dozen of them Americans, had rides in the 1967 Trans-Am endurance races.
- There were 393 starting cars, 207 of them in the over-2-liter class. The events averaged 33 starting cars.
- Races ranged from 250 to 380 miles and averaged 298 miles in distance and more than 3½ hours in time.
- Trans-Am races, intended to be stamina tests of drivers and cars, proved hard to finish in 1967. Better than four out of every 10 starting cars failed to take the checkered flag.
- A total of 10 auto manufacturers, six of them in the under-2-liter class, scored 1967 championship points. Makes included Ford, Mercury, Chevrolet, Dodge, Porsche, Alfa Romeo, BMC, BMW, English Ford, and Volvo.

**A partial list of Trans-Am races scheduled for 1968 was available at press time. (The first race was run at Daytona Feb. 3 & 4.):**

- Mar. 23 — Sebring 3-hour and 12-hour, Sebring, Fla.
- May 30 — Lime Rock Park, Lime Rock, Conn.
- June 9 — Mid-Ohio S/C Course, Lexington, Ohio.
- July 21 — Mt. Tremblant, St. Jovite, Que., Canada.
- Aug. 4 — Bryar Motorsport Pk., Loudon, N.H.
- Aug. 25 — Continental Divide Raceway, Castle Rock, Colo.
- Sept. 8 — Riverside International Raceway, Riverside, Calif.
- Oct. 6 — Pacific Raceways, Kent, Wash.

Prize money for the Daytona and Sebring Trans-Am races was upped to \$30,000 each for 1968. This move raises the stature of the SCCA manufacturers' championship to run concurrently with the cars competing for the world manufacturers' championships open to sports, sports-prototype and grand touring cars. This year SCCA secured special approval for the Trans-Am sports-sedans to participate in the traditional long-distance races at Daytona and Sebring. This means Mustangs, Cougars, Camaros, Javelins and others are competing with the expected fields of 3-liter sports-prototype and 5-liter sports and GT cars. At Sebring, the under-2-liter cars will run in their own race prior to the 12-hour. Trans-Am purses at the two Florida events are the largest yet offered in this 2-year-old series.

Dan Gurney and Parnelli Jones in Cougars and Jerry Titus aboard a Mustang made news in '67 Trans-Am series. "Baby Grand" cars should be NASCAR hit in '68.





# CONTINENTAL MARK III

Lincoln aims for third-in-a-row in the classic luxury tradition with their latest entry in the ostentatious car market by offering wrinkled leather and a massive grille to out-dazzle the competition.

— By ROBERT IRVIN

Little things mean a lot when you build a luxury automobile like Ford's new Continental Mark III.

Take wrinkled upholstery, for example.

Sure, says Ford stylist Hermann C. Brunn, "the seats have wrinkles. We put them in deliberately because we think they denote comfort and luxury."

But this deliberate "lived in" touch apparently caused the Ford Design Center no end of trouble. "We had quite a time with our manufacturing and quality-control people," Brunn recalled. "They thought the wrinkles shouldn't be there, but we finally convinced them that this was the way we wanted it."

The Mark III, scheduled to go on sale in late March, contains several similar features, all there with the same idea in mind. "We have put things on the Mark III that make it evident this is an expensive car," says Eugene Bordinat, Ford's vice president for design.

The most notable, of course, is the grille which resembles the Rolls-Royce's. But, comments Bordinat, "if the car has a sniff of the Rolls at one-third of the cost we have made a case for it."

In designing the Mark III "we tried to be a little controversial," Bordinat explained. "We did not design to offend anybody . . . but when they see it, people will be divided into two camps. Some will respond to this sort of thing and will decide they have to have it. Others wouldn't touch it with a 10-foot pole. "The buffs may not like it, but people with money will," he added.

Ford officials regard the Mark III design as "a very interesting ploy," particularly for a car that's not built for the mass market. "When you're dealing in the neighborhood of 15,000 units a year, you can afford to be controversial," Bordinat says. "This is far different from designing a Ford where you have to play the middle ground."

"There you try to keep to as small as possible the number of people who will totally reject the design, otherwise you couldn't sell 500,000 of one model."

The Mark III Continental has an even longer hood (six feet total) than its famous predecessor, the Mark II, which was built in 1955-57. And it has the same spare tire bulge in the trunk as the Mark II, a throwback to the original pre-war Continental.

It's all part of Ford's plan to build a luxury car in the old Continental tradition, yet one which can sell in today's market against the Cadillac Eldorado, its only American competitor.

How do you measure luxury? "By the little things," was Bordinat's quick reply. "Not by something spectacular like a bar which drops down in the back seat, but through things like a quiet ride." He feels the car is "as luxurious as the Mark II. It has a darn good paint job, although maybe not 10 coats like the Mark II."

And that brings up another aspect of the Mark III. The car is not overdone for the times, as perhaps the Mark II was. Bordinat said, "A lot went into the Mark II that wasn't necessary. The car was also overpriced (\$10,000) and we probably overstated the hard-to-get theme. It seemed too unattainable. Many people thought you couldn't have one unless your name was Rockefeller."

Thus, the touches you will find in the Mark III are not the ones you will find in a Rolls or the Grand Mercedes.

Not one but two different wood grains are offered—East Indian rosewood or English oak. But it is paneling, that is, simulated wood.

"This is far more durable than actual wood," says Brunn. "And it's much more practical than trying to put real wood in a production vehicle. Some foreign cars do, I know, but we can't handle it in volume . . . and I don't think anyone can tell the difference."

And, adds another Ford man, "No other automobile offers a choice of wood grain accents to meet individual customer preferences."

The standard interior trim is nylon tricot cloth and vinyl. Tricot is "a flat knit material we developed in recent years," Brunn said. "It has a stretch to it . . . it drapes well and is slick to the hand." When first used by Ford on the 1965 LTD, it was nicknamed "panty cloth."

The nylon interior trim is available in a choice of six colors to harmonize with the exterior. Nine color choices are offered in the optional leather upholstery.

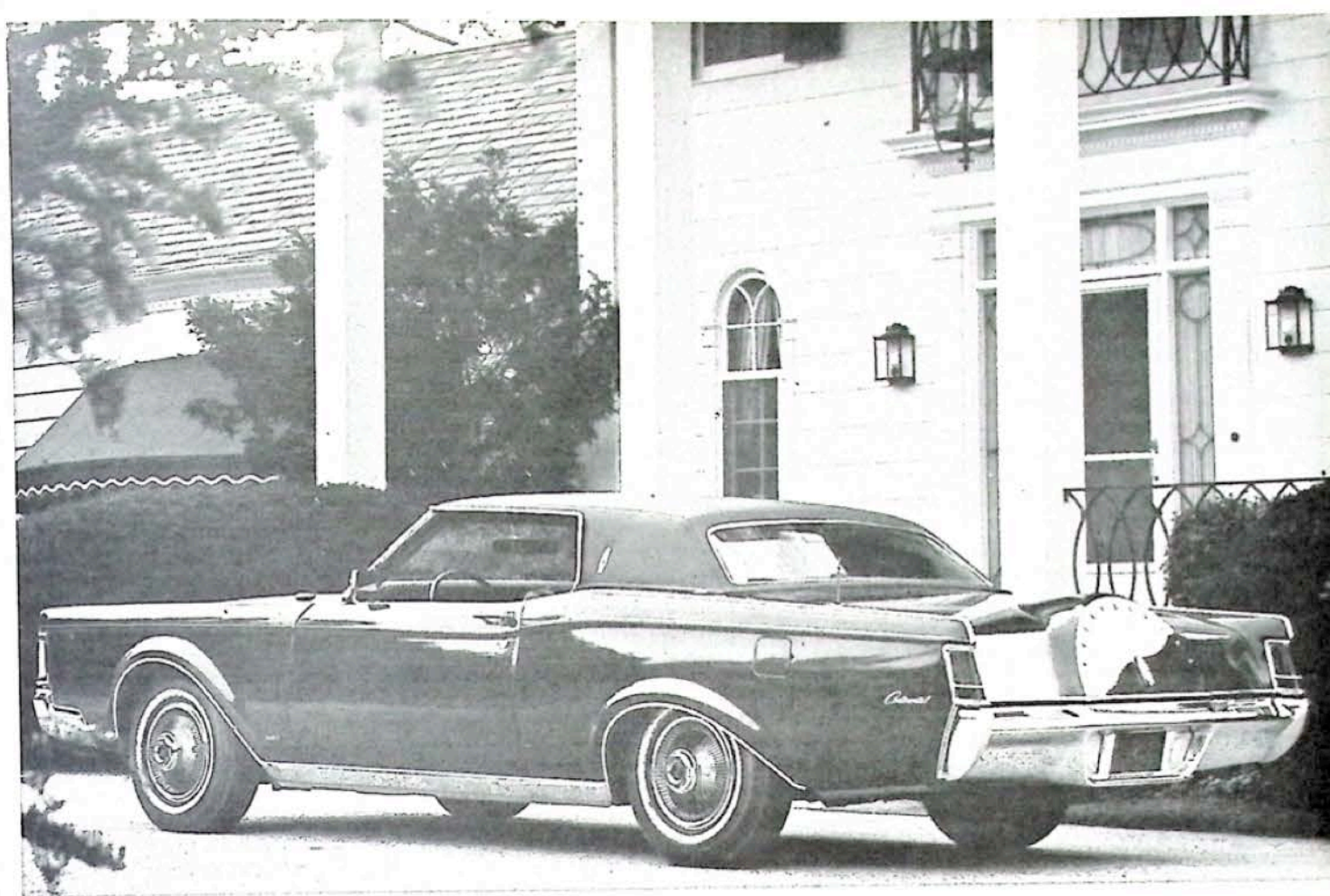
The carpeting is all-nylon cut-pile, for a shaggy looking but luxury effect. The car also has an optional vinyl roof which "looks like high-grade cavalry twill but is more durable and easier to keep looking new," Ford says.

A distinctive feature is a split bench type front seat with 2-way power adjustment making both sides individually adjustable.

"To sum up," says Ford, "literally everything has been designed and engineered to make the Mark III interior the



Mark III has familiar spare tire bulge, trade-mark of earlier Mark I and II. Lines are similar to contemporary Lincoln. Hermann C. Brunn in front seat (above) with optional leather.





## CONTINENTAL MARK III

most comfortable, most completely appointed, most luxurious of all—and to match that by making it the best looking, quietest car it is possible to build.”

How long will the Mark III be built? “Our plans right now are for a minimum run of two to three years,” said E. F. (Gar) Laux, general manager of the Lincoln-Mercury Division. “But the marketplace will really tell.” L-M hopes to sell 15,000 the first full year the car is on sale. “We will be limited the first year only by our ability to produce,” he says.

“We’ll sell to anybody who qualifies and it only takes one thing to qualify—money,” Laux quipped. “But we shouldn’t have any trouble selling this car,” he added seriously.

It will not be advertised as a 1968 or a 1969 Mark III. “There will be no vintage on this car,” Laux said. “Legally, we have to put 1968 on the registration, but we are not calling it that.”

There may be some minor styling changes a year from next fall when the rest of the 1970 models come out, but there will be no drastic modifications, Bordinat says.

Laux says the Mark III, a luxury-personal car built as a 2-door hardtop, “is placed squarely in the center of the three most affluent and fastest growing areas of the market.”

There “doesn’t seem to be any saturation point (for) the surging popularity of personal cars,” Laux continued. “As a high-priced personal-luxury car, the Mark III will be entering a stable, steadily growing market. Right now, Lincoln Continental, Cadillac, Imperial, Eldorado, Thunderbird, Corvette, Riviera and Toronado are selling at an annual rate of about 440,000 units. That represents more than \$2.5 billion in retail business. Any question now about why we brought out the Mark III?”

Why did Cadillac get there first? “We started work in the middle of 1965,” Laux said. “You can’t do everything at once. We chose to build the Mustang and the Cougar first. It was just a matter of timing.”

Dave Ash, the man who shepherded the Mark III project through the Design Center, said “Lee Iacocca had a large part in instigating the project. We didn’t know then that Cadillac was coming out with the Eldorado. We did have some early rumblings of a front-wheel-drive Caddy, but we didn’t know what part of the market it was aimed at.”

But, adds Bordinat, “as it turns out the Mark III is a response to the Eldorado.”

There was never any talk of building a convertible model, says Ash. And, summing up the final product, he says, “I don’t think it’s a man’s or a woman’s car. We didn’t try to give it any specific gender.”

If there is any regret the top executives on the project have it’s in not being able to use a new hood ornament they designed for the car. “We hated to take it off,” said Bordinat. “It was an interesting innovation of the past Lincoln Continental ornament—and, we expected that the thievery rate would have been very high.”

The company’s top brass decided against it because of the safety law. There is no current prohibition against hood ornaments but auto critic Ralph Nader attacked them as being pedestrian hazards and the federal government is expected to formally outlaw them in another year or so. All the American companies have now removed the hood ornaments on their cars anyway.

“But with the spring loading mechanism on the base of our ornament, the only way anybody could have been hurt was if he fell out of a tree and landed on one,” said a Ford man. (In the interests of safety, the points on the Lincoln Continental emblem had been shaved off and the stubby result looked pretty harmless.)

The ornament may yet find its way on to the Mark III, however. Owners can get a paper weight which is really a piece of wood with the Mark III ornament mounted on top.

“We can’t install the ornament at the factory,” one Ford man said. “But you know, it would be very simple for a dealer to take one of those ‘paper weights’ and put it on the hood.”

And the dealers, heeding the call of luxury class distinction, might just do that.

/MT

## CONTINENTAL MARK III

# First Driving Report

The designers’ goal of the ultimate in luxury turns out to be more a state of the mind rather than the state of the art...

— By BILL SANDERS

A car is a car is a car.

Our apologies to Gertrude Stein, but that phrase can readily be applied to the average American passenger car with a certain amount of impunity. They are all different, but not *that* different. When a major manufacturer sets out to build an all new, “luxury-specialty” car it should be safe to assume the result will justify the original concept. Luxury, as defined by Webster, is, “. . . a free indulgence in anything which gratifies the appetites or tastes, anything which pleases the senses, and is also costly . . .” The Continental Mark III, although a finely engineered automobile, doesn’t quite come off with respect to Mr. Webster. Lincoln has built a luxury car . . . without the luxuries.

To be sure, Mark III has all the standard safety features, the standard electrically operated controls on windows and seats and the plush upholstery. But what about unique, unusual options such as a concealed make-up table, shaver, bar, a cigar humidifier, or any number of original electronic gadgets that would give a luxury car that “personal” touch? The personalized features are missing, even as options, and that is a distinct disappointment.

Once you step into the car and drive it, though, Mark III partially justifies its existence; ride and handling are superb. Although the Mark III frame and chassis are similar to those used on the Thunderbird, all Mark III components

have been tailored to the car, and two years of development have given the Mark III superior, fine car handling and ride characteristics. Coil springs have been used all around, but their use has not resulted in a “mushy” ride. A link-type stabilizer bar is added to the front suspension and gives the car a glued-to-the-road feel, even when cornering in tight turns. A 9-inch shorter wheelbase and 5-inch shorter length than the contemporary Continental give the Mark III excellent turning and handling qualities, which in turn gives the impression of driving a much smaller car than the Mark III actually is.

We picked up our car at Ford’s Dearborn test track and put it through some grueling paces on every type of road the average motorist would ever encounter—twisting turns, high-speed straights, even banked turns. Our test car had accumulated 16,000 miles and was well broken in.

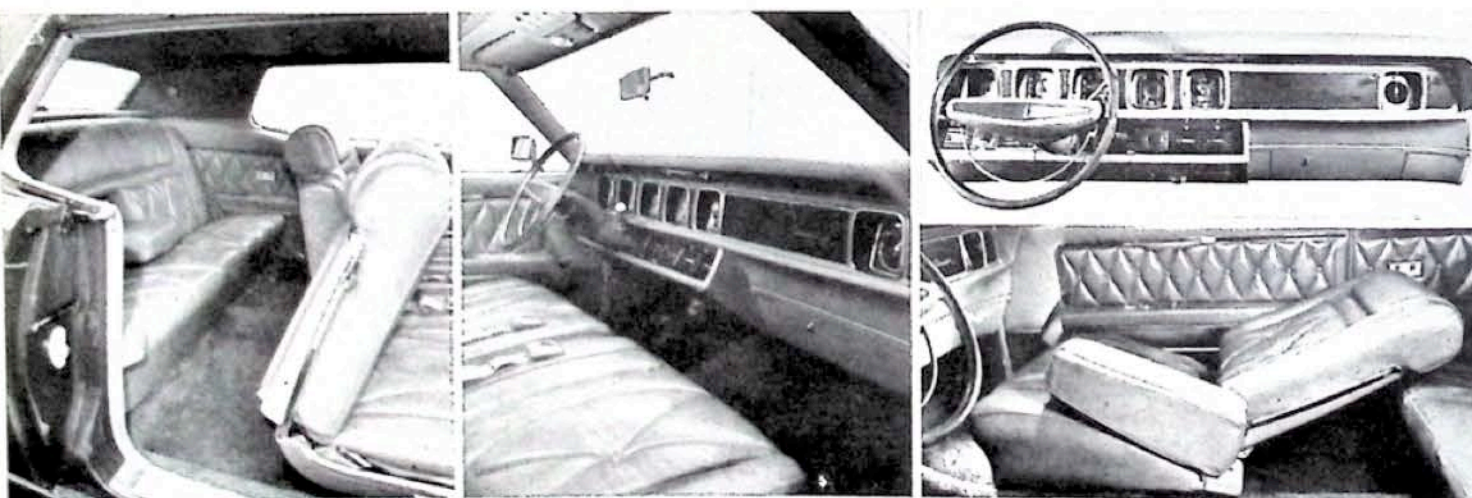
Steering is everything it should be on a car in the Mark III category. The 3.68 turns lock-to-lock and a radius of 42-feet from curb-to-curb allow the car to maneuver in relatively small spaces. Turning around on a narrow test road was accomplished without difficulty, usually an arduous task for cars this size.

How easily, smoothly and quickly the Mark III stopped also came as a distinct surprise. Front vacuum-power-assisted caliper disc brakes are standard, with self-ener-

*It may fall short in luxury appeal, but handling, steering, ride and comfort are all superb in the Mark III. Short wheelbase helps handling and turning.*



(Above Left) Rear entry is difficult. (Above Center) Front seats are luxuriously comfortable. (Above Right) Dash lacks appeal, optional reclining passenger seat is available. (Far Left) Tail light monitor is standard. (Right) Electric window switches on armrest of left door also include electric window and door locks.





## CONTINENTAL MARK III

gizing drums used at the rear. A dual master cylinder serves both front and rear. The front discs give quick, straight-line stops and good pedal modulation provides plenty of control. Our first panic stop brought the car to a halt without any swerve or loss of control, and that was without full pedal pressure. Repeated high-speed stops produced no brake fade. A full pedal brake test at 60 mph stopped the car in 162 feet, a good showing for a 4738-pound heavyweight.

Introduction of the Mark III coincides with the introduction of the new 460-cu.-in. V-8 Continental powerplant. The powertrain has also been tailored specifically to the car, and the resultant engine-transmission combination is a pleasing package. Rated at 365 hp at 4600 rpm, the engine puts out a bullish 500 lbs.-ft. of torque at 2800 rpm. Ford's new IMCO (improved combustion) emission control system is an integral part of the 460. Improved breathing and a new 4-bbl. carburetor which was tailored to the engine in parallel design development begun in May, 1965, have been incorporated in the engine. Good engine design and mounting have resulted in an extremely smooth, quiet idle. It was virtually impossible to tell the engine was running, from inside the car, at idle. Quiet operation is a top-of-the-list requirement for a luxury car, and the Mark III certainly has it. Only one engine is available for the Mark III; no optional choices are listed.

Select-Shift Turbo-Drive automatic transmission is standard on the Mark III and is also the only transmission offered. Shift points and shifting action have been tailored to the car as have all other integral operating components. Select-Shift is actually a dual purpose transmission. Fully automatic upshifting occurs when the control lever is in D (drive) position. However, putting the shift lever in 2nd or 1st locks the transmission in the respective gear, a good feature for hilly and winter driving conditions. A 2.80:1 rear end ratio is standard, but a 3.00:1 ratio can be factory ordered. An "Altitude Compensator" is a built-in transmission feature and assures constant, smooth shifting at any altitude.

Somewhere in the deep, dark recesses of every man's mind, his libido would return to the warm, enfolding comfort of the womb. Slipping behind the wheel of the Mark III almost fulfills the desire.

Although the lack of any remarkable interior innovations is disappointing, the Mark III exudes luxury in a simple, elegant manifestation. Seats are large, plush and deliciously comfortable. Being large, they give the sensation of surrounding you, a relaxing delight of pure physical pleasure. Individual, fold-down center armrests complete the armchair feeling Mark III seats impart. Our test car was equipped with optional, adjustable seatback headrests, but

these must be adjusted up or down manually. Electrical or vacuum operation would have been more suitable to a "luxury" car. Our car also had electrically controlled power seats with 6-way adjustment. One would assume that would be standard on a "luxury" car, but it is an option with the Mark III. An optional reclining back for the front passenger seat is also available.

Reading lights, located in each rear roof pillar are controlled by headlight and door jamb switches, as well as individually by switches in each quarter trim panel. Broad armrests run the length of each door and continue along the quarter panel in the rear compartment. In the rear they contain ash trays and lighters. However, they are several inches wide and protrude in an unsightly way when entering the rear seat compartment. Rear quarter windows retract horizontally into the rear roof pillars instead of dropping vertically into the body side panels.

Although full instrumentation is provided on the dash, the clock is placed directly to the right of the speedometer in the easiest line of sight through the steering wheel, instead of utilizing that location for the fuel gauge. Oil, temperature and alternator gauges are also included in the five square dial pods. The dash is functional and safety padded, but generally uninspired. Ignition is located low in the dash and could be difficult to reach for some. A fold-down vanity mirror is located in the glovebox as well as a remote-control deck release button. That button is a good idea, but Lincoln engineers could have gone one step further and included another electrically controlled button so the deck lid could also be closed from inside.

Other interesting gadgets include a monitoring system, a la T-bird, of two lights which warn the driver when tail and stop lights aren't functioning. This is located on the rear shelf and visible through the rear-view mirror. An automatic headlight dimmer is included and can be regulated for near or far dimming. A good convenience option is the rear window defogger.

Interior quietness has been ballyhooed by the Ford boys for some time, so the Mark III would naturally be expected to rate high in that category. And it does. No running gear or driveline noise reaches the passenger compartment. Wheels, axles, suspension arms, springs and shocks are all rubber mounted. No continuous path through steel is open for noise or vibration to travel. The interior is insulated against noise with 150 pounds of sound-deadening material. Passenger compartment is further insulated with a special aluminum covered fiberglass blanket. Noise is definitely not a factor with this car.

Continental Mark III is a comfortable, quiet, big car, with many commendable features. And, it will probably have a successful sales record (15,000 is the target for 1968). But, something seems to be missing; in short, it just doesn't quite turn you on.

/MT



### PERFORMANCE

#### ACCELERATION

0-30 mph	3.0 secs.
0-45 mph	6.0 secs.
0-60 mph	8.6 secs.
0-75 mph	13.8 secs.

#### STANDING START 1/4-mile

17.4 secs., and 87 mph

#### PASSING SPEEDS

40-60 mph	4.6 secs.; 336.7 ft.
50-70 mph	5.1 secs.; 448.8 ft.

#### SPEEDS IN GEARS @ SHIFT POINTS

1st	52 mph @ 4600 rpm
2nd	84 mph @ 4600 rpm

#### MPH PER 1000 RPM IN HIGH GEAR: 28 mph

#### STOPPING DISTANCE

From 60 mph	162.0 ft.
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### SPECIFICATIONS

ENGINE: V-8 OHV. BORE & STROKE: 4.36 x 3.85 ins. DISPLACEMENT: 460 cu. in. HP: 365 @ 4600 rpm. TORQUE: 500 lbs.-ft. @ 2800 rpm. COMPRESSION RATIO: 10.5:1 max. CARBURETOR: 1 4-bbl. Autolite. TRANSMISSION: Select-Shift Turbo-Drive Automatic. FINAL DRIVE RATIO: 2.80:1. STEERING: Power assist. STEER-

ING GEAR RATIO: 17.0:1. TURNING DIAMETER: 42 ft. curb-to-curb. WHEEL TURNS: 3.68, lock-to-lock. TIRE SIZE: 8.45 x 15. BRAKES: Power front disc/rear drum. FUEL CAPACITY: 24 gallons. CURB WEIGHT: 4738 lbs. BODY/FRAME CONSTRUCTION: Combination body/frame. WHEELBASE: 117.2 ins. FRONT TRACK: 62.0 ins. REAR TRACK: 62.0 ins. OVERALL LENGTH: 216.1 ins. WIDTH: 79.4 ins. HEIGHT: 52.9 ins.

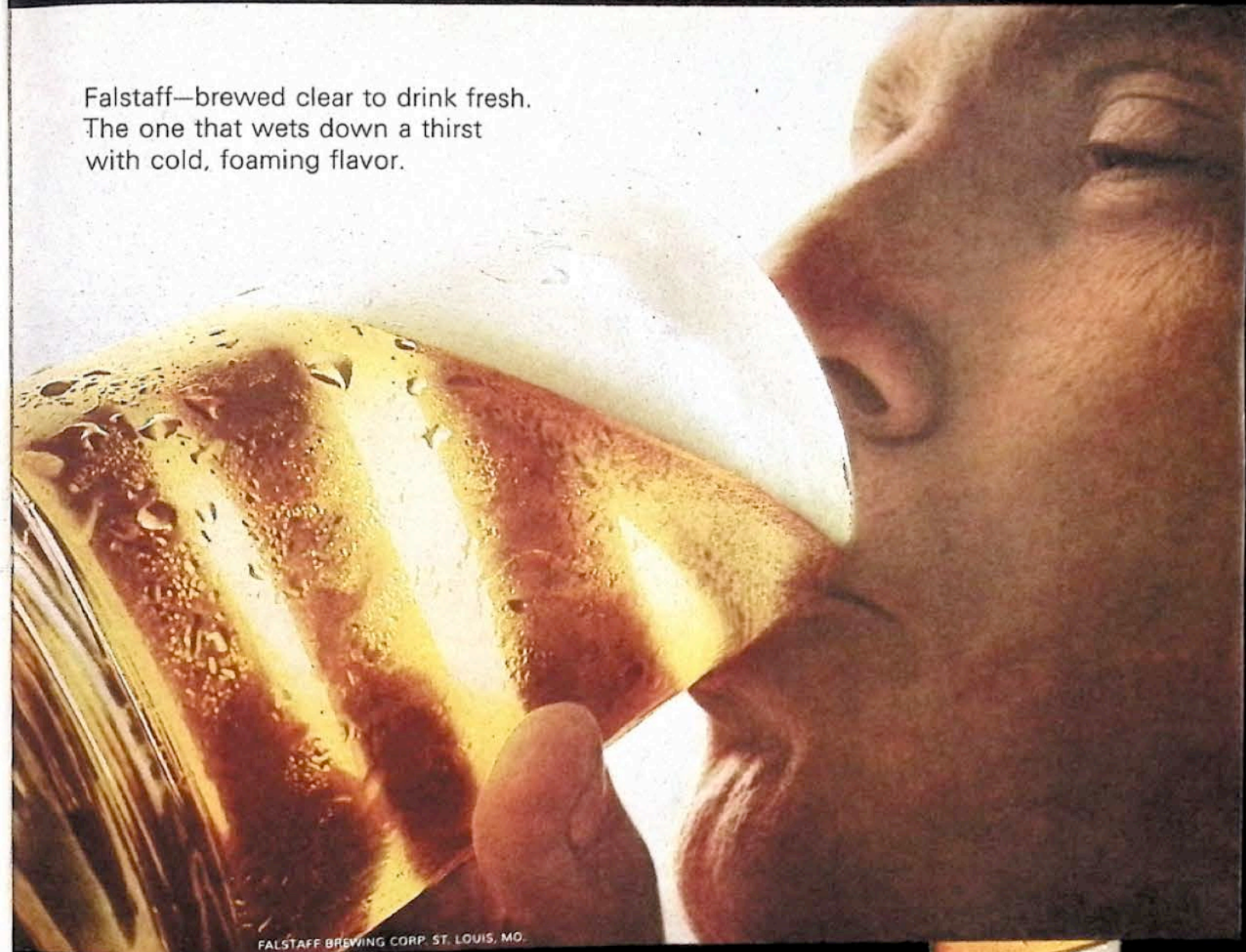
### MARK III OPTIONS

SEATING ITEMS: Leather with vinyl trim; adjustable headrests; 6-way power seats; power recliner (passenger seat). HEATING AND AIR CONDITIONING: Automatic temperature control; air conditioner; rear window defogger. RADIOS AND RELATED EQUIPMENT: AM radio with power antenna; AM/FM stereo radio with power antenna; AM radio/stereo-sonic tape system with power antenna. POWER EQUIPMENT (other than seats): Power door locks. POWERTRAIN: High torque axle (3.00:1); directed power differential; speed control, for 1-speed cruising (control button located on turn indicator lever).

EXTERIOR: Door guards and license plate frame. INTERIOR: Twin front and rear floor mats. VISUAL AIDS: Automatic headlight dimmer; tinted glass. OTHERS: Remote-control deck lid release; tilt steering wheel.

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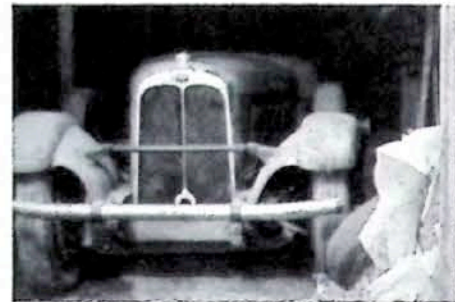


# DUESIE IN THAT BARN?

continued

b) Or if you're out driving through the boondocks, always drop into a local bar or general store and start asking around. Find out which farms have old cars on them, then follow up leads. One farmer will steer you to another, because they all see you as a rich, city-slicker with more money than brains (often the case).

c) If you can afford the time, you



1928 Auburn Speedster

might do what I do when I get a chance. I sometimes rent a horse out in the country, then head down dusty back roads into the most likely looking spots. Farmers don't give people on horseback much thought, whereas they're inclined to be suspicious of people who come snooping around in a car. This way you can peek into sealed barns without fear of being shot at.

d) You have to know where to look, because certain areas have been cleaned out more completely than others. In this country, the regions away from big population centers hold the most promise—such states as Montana and Wyoming plus the untouristed parts of Colorado, Texas, Oregon, Washington, Nevada, and New Mexico. Don't expect much luck on Long Island or upstate New York.

However, the Canadian provinces of British Columbia and Alberta still abound in old cars. Most aren't classics—more along the lines of Model Ts and As and old Studebakers. But they're there, mostly unruined and usually inexpensive.

I've seen plenty of interesting special-interest cars in Mexico, too, although I don't know how hard it would be to import these. Switzerland is another country that teems with all sorts of classics, not only European ones but stately Packards, Cadillacs, Lincolns, etc.

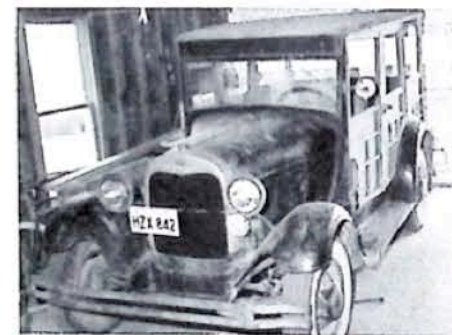
## WHEN YOU FIND IT

Too many farmers nowadays think

they know too much about car collectors. They ask outrageous prices for anything on wheels, not knowing how much their barn-bound relics are really worth. The idea here is to prove to the farmer that the car isn't really all that valuable, and this often takes time. I'm talking now in terms of years, not hours.

I once set out to buy a Model A roadster from a farmer in Texas. He originally asked \$100 for it. He lived a few miles from my home town, so I made a practice of visiting him about every two months for the next year, during which time we became fast friends—quite genuinely. Each time I saw him I'd ask about the roadster, and we'd walk out to his pump house to look it over. Finally, after keeping after him this way, I managed to pick up the car for \$30 cash. Now that's the way to do business.

In another instance, I found a '34 Buick Victoria in a canning-factory warehouse, also in Texas. Not much of a car, but just for the heck of it I asked the warehouse owner how much he wanted for it. To my surprise, he told me that if I could get it started, I could have the Buick free. I did start it, and drove it home that night. It happens, but not often.



1928 Ford Wagon with Briggs body

## DO YOU REALLY WANT IT?

Too many people go into buying an old car before they know what's actually involved in restoring it. You don't restore a car and expect a profit. It just doesn't happen that way. As a rule of thumb, you usually get back about half what you put into anything but a perfectly restored, much-sought-after car.

Take an example. Say you're interested in a special-interest car, a '34 Chrysler Airflow, and you find one for \$300 in passable shape. Let's suppose further that you start restoring it—buy a new set of tires for \$150 (wide whitewalls), have it reupholstered for \$250, have some bodywork and painting done for \$200, plus adding mechanical incidentals, most of the work you supply yourself: brakes relined, new master cylinder, replace the

clutch, do some engine work, recore the radiator, add a few pieces of window glass—all this for, say, \$700. Total investment: \$1600. You don't have a truly restored car; mostly it's rebuilt. Now if you try to resell this car, you'll find you get maybe \$800 at the outside—half your investment.



1936 Cord Beverly Sedan

Or let's suppose you've just bought a Model A Ford in fair running shape, no rust, passable tires—\$200. You want to put this car into perfect shape, the whole treatment. How much would parts alone cost? At least \$2000. At least. And Model A parts are easy to get. Just think about restoring a Stutz or Pierce. You might, though, get \$2200 out of a showroom Model A.

If you want to stay ahead financially, the secret is not to restore the car at all. Leave it the way you bought it. Drive it, tinker with it, put a minimal amount of money into absolute necessities, but don't attempt a partial restoration. And don't go all the way if you can't afford the layout and don't have the know-how. An "85% restored car" might as well be completely un-restored as far as its value goes.

But there's another side to this, of course. Many people, including myself, couldn't care less about getting their investments back out of old cars. I restore cars for the pure fun of it. I've made money on only one old car, although I've had at least 40 over the last 17 years. That one was the '34 Buick I got free.

Anyway, the secret is to find that car in the first place, and I've found that for my own satisfaction, there's just as much fun tracking them down as it is to buy and restore them...or at least tinker with them, which is really about all most of us do.

/MT

# Mercury Cyclone GT. Fast-backed. 4-stacked. Radial-tracked.

The golden girl in our picture ordered her Cyclone GT with a 4-stack Marauder 390 GT V-8. And with optional wide-tread whitewall radials.

Which is a pretty neat way to get around the wild West. Or South. Or East.

You may like something tamer in engines. A 390 2-barrel V-8. Or our basic 302. But in any case you'll still get our special GT performance package. Extra-stiff springs, fore and aft. Heavy-duty shocks. A big D

sway bar. And wide wheel rims for the wide oval tires.

Our GT double side striping is unique. So are the turbine-type wheel covers. And the racer-oriented black-out job in the grille area.

Inside, the Fine Car Touch of our Lincoln Continental designers has worked tailored wonders.

In the clean, elegant, functional lines of the dash. In bucket seat richness, without a bit of fussiness.

Give yourself a whirl in a Mercury Cyclone GT.

The Fine Car Touch inspired by the Continental.



LINCOLN-MERCURY DIVISION





## FUEL INJECTION: ONE ANSWER TO SMOG?

continued

Various different injection systems strike what their designers hope will be a happy medium between direct and constant-flow. They inject in spurts into the ports, either arbitrarily or timed with the intake valve opening. Bosch and Mercedes have taken this direction with all their post-300SL injection engines, including the 220SE, 300SE, 600 and the 230SL and 250SL. A phase of intermittent injection with a 2-plunger pump has been followed by a return to a separate plunger for each cylinder. Porsche has also used these systems for racing but, rather surprisingly, has never used injection on a production model.

Another German intermittent system, the Kugelfischer, was adopted by Peugeot for some 404 models in 1962 and by Lancia for the Flavia in 1965. It has also been tried by Porsche in racing. In the early Fifties in Britain the S.U. company developed a timed port injection system mainly for aircraft. It

had some limited racing success and was promoted in the U.S. by Simmonds Aerocessories but it proved too costly for production use.

One of the most successful injection systems, both at the finish line and on the production line, has been the British Lucas. Around for quite some time, it had its first major break when it was used on the racing Jaguar 6s in 1956. The Mark I Lucas injection, directly derived from the Jaguar setup, is offered today on the production Maserati 6. As a racing-based system, though, it's very costly. It makes the 6 a more expensive engine than Maserati's 4-camshaft, 4-carburetor V-8.

In '63 Lucas timed port injection came into use on British Grand Prix V-8 engines and it has since been adopted by all the Grand Prix competitors except Honda (which has its own constant-flow system) and by Ferrari and McLaren sports-racing cars. Lucas followed up these triumphs by developing a much simpler version called the Mark II. Unveiled in 1966, the Mark II is standard on all the new Triumph TR5 sport cars except, sad to say, the ones that come to the U.S. Triumph was originally interested in

the injection as a means of meeting the emissions rules, but the loss in performance with the necessary leaning-out of the mixture didn't warrant the use of the expensive equipment. At this stage, anyway, the new TR5 for the U.S. will have a carburetor engine.

Several major attempts were made in the U.S. to develop and market timed port injection systems. From 1959 through 1962 Thompson Ramo Wooldridge worked on a timed plunger-type metering pump, testing it with a Rochester "doghouse" on a Chevrolet engine. Far more extensive was the program of the Marvel-Schebler Division of Borg-Warner, which had perfected a very good timed system in the early Sixties. Still too costly for production, the Marvel-Schebler injection was tested by GM and evidently was impressive enough to cause GM's Rochester Division to get to work on its own extremely effective timed injection.

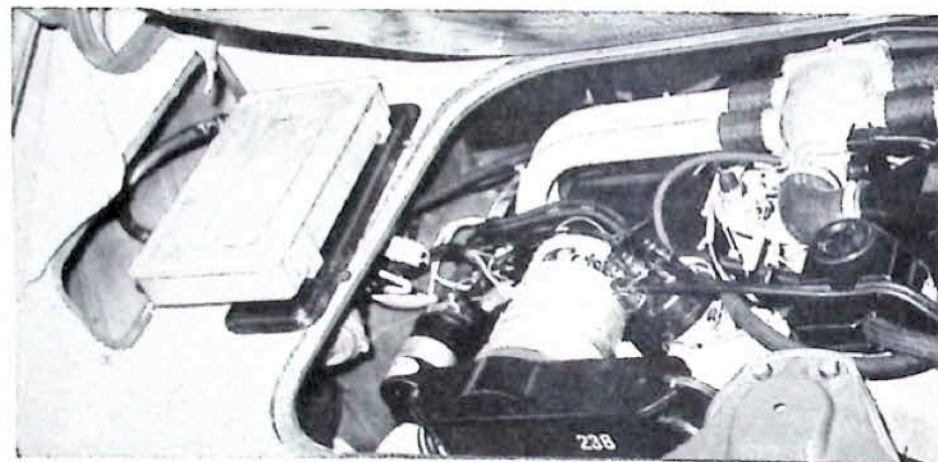
Examination of all these systems from Bosch to Rochester to Lucas shows that they share an admirably ingenious interlinking of hydraulic and mechanical devices to do with great difficulty what a carburetor does simply. Some of them, such as the Tecalemit-Jackson for road cars, require all kinds of diaphragms and nozzles to compensate for varying conditions of acceleration and altitude. "There must be" you think, "an easier way to do accurately what a carburetor does only approximately." That, after all, is the main objective of injection. And if an easier way is found, it might also be cheaper.

There is an entirely different way to do it, the one Volkswagen is using, which had its beginnings in research 15 years ago by Bendix, in the U.S. Bendix called it the "Electrojector." It employed an electric pump to supply fuel under pressure, and used solenoid valves to meter the fuel into the inlet ports in accord with the commands of an electric timer and a "computer," whose transistors and resistors interpreted signals of supply and demand from the engine and driver.

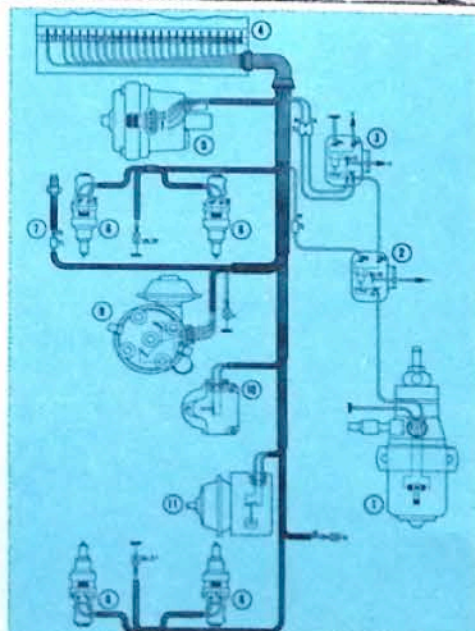
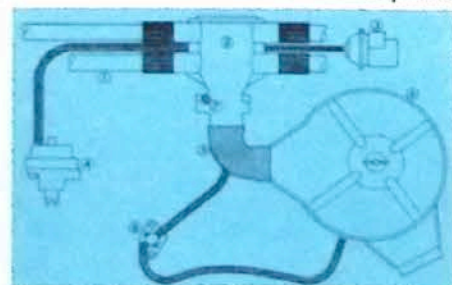
The first Electrojector installation was made on a 1953 Buick, and it performed so impressively that there were plenty of interested customers for the new Bendix product. It was announced in late '56 as an option for the Rambler Rebel, but only some 50 units were delivered to AMC. Chrysler then made it an option for all the 1958 performance models of its divisions obtaining 300-odd units for cars like the 300D Chrysler and DeSoto Adventurer. But the Bendix had some problems, among them injector design and regenerative circuitry which could be disturbed by stray outside interference.

Like Lucas in England, Robert Bosch

continued on page 72



Amazingly effective VW electronic injection relies on control unit to meter fuel under varying operating conditions, resulting in near-perfect combustion, clean exhaust and high economy. Key to diagram at right: (1) electrical fuel pump; (2) pump relay; (3) main relay; (4) control unit (also shown in photo above); (5) pressure sensor; (6) injectors; (7) temperature sensor; (9) distributor with trigger contacts; (10) throttle switch; (11) pressure switch. Below is diagram of air intake supply which is triggered by valve connected to accelerator pedal.



## Announcing: CORONET "SUPER BEE" Scat Pack performance at a new low price.

Run with the Dodge Scat Pack



Beware the hot cammed, four-barreled 383 mill in the light coupe body. Beware the muscled hood, the snick of close coupled four-speed, the surefootedness of Red Lines, Rallye-rated springs and shocks, sway bar and competent eleven-inch drums. Beware the Super Bee. Proof you can't tell a runner by the size of his bankroll. These specifications are published for the uncommon interest:

**POWERPLANT:** Standard: 383 CID V8. Carb: 4-bbl. Compression ratio: 10:1. Special camshaft: Lift (Intake, .450; Exhaust, .465). Duration (Intake, 268°; Exhaust, 284°). Overlap: 46°. Valves, hydraulic (Intake, 2.08 head dia.; Exhaust, 1.74). Intake manifold: Equal length four branch low-restriction type. Exhaust: Dual. Horsepower: 335 at 5200 RPM. Torque: 425 lbs.-ft. at 3400 RPM. 10.2 pounds per horsepower. (Dry.) Air cleaner, unsilenced, both standard and optional V8.

**Optional:** Hemi 426 CID V8. Hemispherical combustion chambers. Carb: dual, 4-bbl. Compression ratio: 10.25:1. Camshaft lift (Intake, .490; Exhaust, .480). Duration (Intake, 284°; Exhaust, 284°). Valves (Intake, 2.25 head dia.; Exhaust, 1.94). Intake manifold: Cast aluminum dual level with heat shield. Exhaust manifold: Special cast-iron low-restriction exhaust headers. Horsepower: 425 at 5000 RPM. Torque: 490 lbs.-ft. at 4000 RPM.

**TRANSMISSION:** Standard: Four-speed full synchromesh manual. Ring block synchromesh. Floor-mounted shift. Gear ratios with std. eng.: 1st, 2.66; 2nd, 1.91; 3rd, 1.39; 4th, 1.00.

**Optional:** TorqueFlite Automatic three-speed. Column-mounted shift. Gear ratios: 1st, 2.45; 2nd, 1.45; 3rd, 1.00.

**SUSPENSION:** Heavy-duty springs and shocks, all four wheels. .94-inch dia. sway bar standard.

**BRAKES:** Heavy-duty standard on all four wheels. 11-inch drums, cast iron. Shoes: 11"x3", front; 11"x2½", rear. Lining area: 234.1 sq. in. Front discs optional. Self-adjusting Bendix type. Swept area, 387.8 sq. in.

**ADDITIONAL OPTIONS:** High-performance axle package consisting of 3.55 axle ratio with Sure Grip. High-capacity radiator, 7-blade slip-drive fan with shroud.

**INSTRUMENTATION AND APPOINTMENTS:** Padded Rallye-type dash standard, matte black, includes circular speedometer, oil and temperature gauges, electric clock. Matching tach optional. Matte black grille, power hood, Red Line wide-tread tires, seat belts, front shoulder belts, carpeting, foam seats, bumblebee striping and special ornamentation standard. Vinyl roof optional.

**RACING JACKET OFFER** Show your stripes right away. Order your special all-nylon, red Scat Pack racing jacket. Comes in sizes for everyone! Men: S-M-L-XL-XXL. Women: S-M-L. Children: 6-8-10-12-14-16. Send \$9.95 for each jacket (check or M.O.) to Hughes-Hatcher-Suffrin, Shelby at State, Detroit, Michigan 48226.

**SPECIAL OFFER** Write: Dodge Scat Pack HQ, Dept. B, PO Box 604, Detroit, Michigan 48221. Send me the Scat Pack decals, lapel badges and catalog of goodies. Here's my quarter.

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
Car Owned: Make \_\_\_\_\_ Model \_\_\_\_\_ Year \_\_\_\_\_



## FUEL INJECTION: ONE ANSWER TO SMOG?

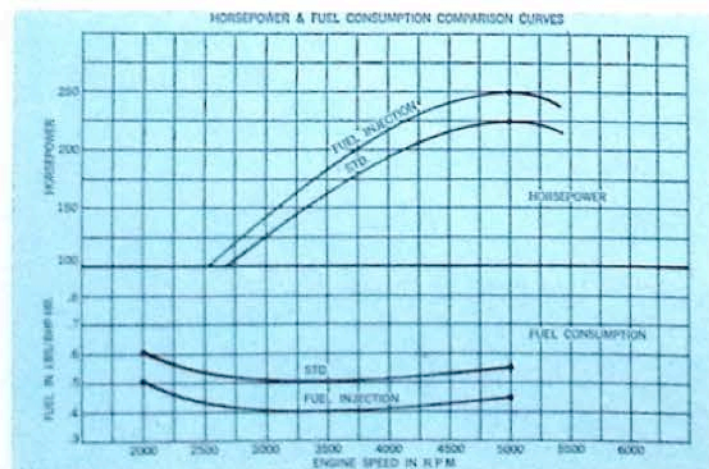
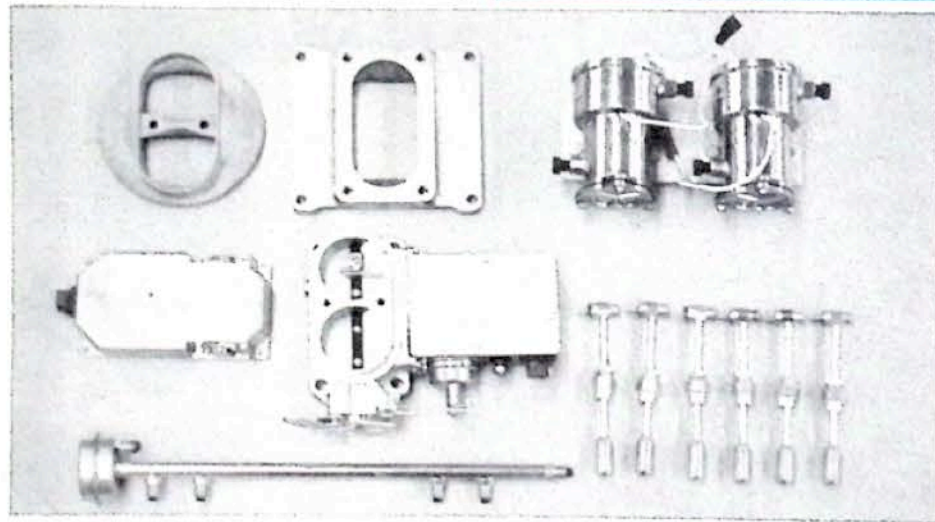
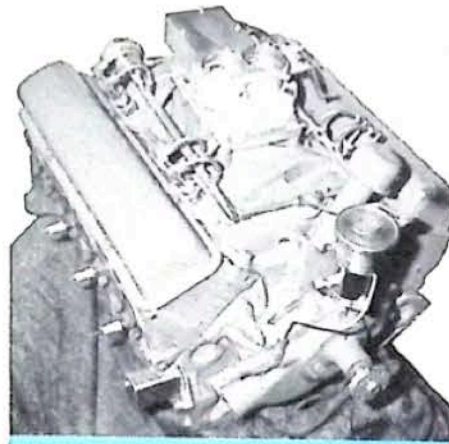
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in Germany has skills in both ignition and injection. Bosch combined these talents to produce its new electronic system for the U.S. export models of the VW 600. In so doing it had to draw heavily on the very comprehensive Bendix f.i. patents, but the details and engineering of the VW system are all Bosch. The German system is not timed but intermittent, firing pairs of injection nozzles simultaneously. It does quite a good job of maintaining the 1600 output, thanks to tuned ram intake pipes, but the VW engineers admit they could have done much better in both power and economy if it had not been for the low-emissions requirement.

The hardware associated with the VW system is extremely complex, really amazingly so for a standard-equipment item. A cigar-box-sized case is needed to house the hundreds of electronic components in the injection "computer," and the electric pump and injector solenoids are anything but simple. Other firms are also working on electronic systems, apparently infringing on the Bendix patents. Among

these are Associate Engineering Limited in Britain, with a system announced late in 1966, and independent French inventor Louis Monpetit, whose solenoid-controlled system was introduced in 1967, following tests on a Peugeot 404.

What would the original Bendix system be like if development on it had continued, constantly improving and simplifying it and bringing it in line with electronic advances in the last 10 years? It would be very good, and it would be just like the system now going into production at Conelec, Inc. at Elmira, New York. For their engineers are former employees of Bendix, in the



Over-the-counter Conelec injector uses stock intake manifold. Parts needed are shown in middle photo. Installation is clean and relatively simple for competent mechanic. Chart (left) illustrates power and economy boost possible at same time with properly set-up fuel injection.

same city, the men who worked on the Electrojector and who believed in the idea so strongly that they had to keep working on it after Bendix decided to conclude its own program.

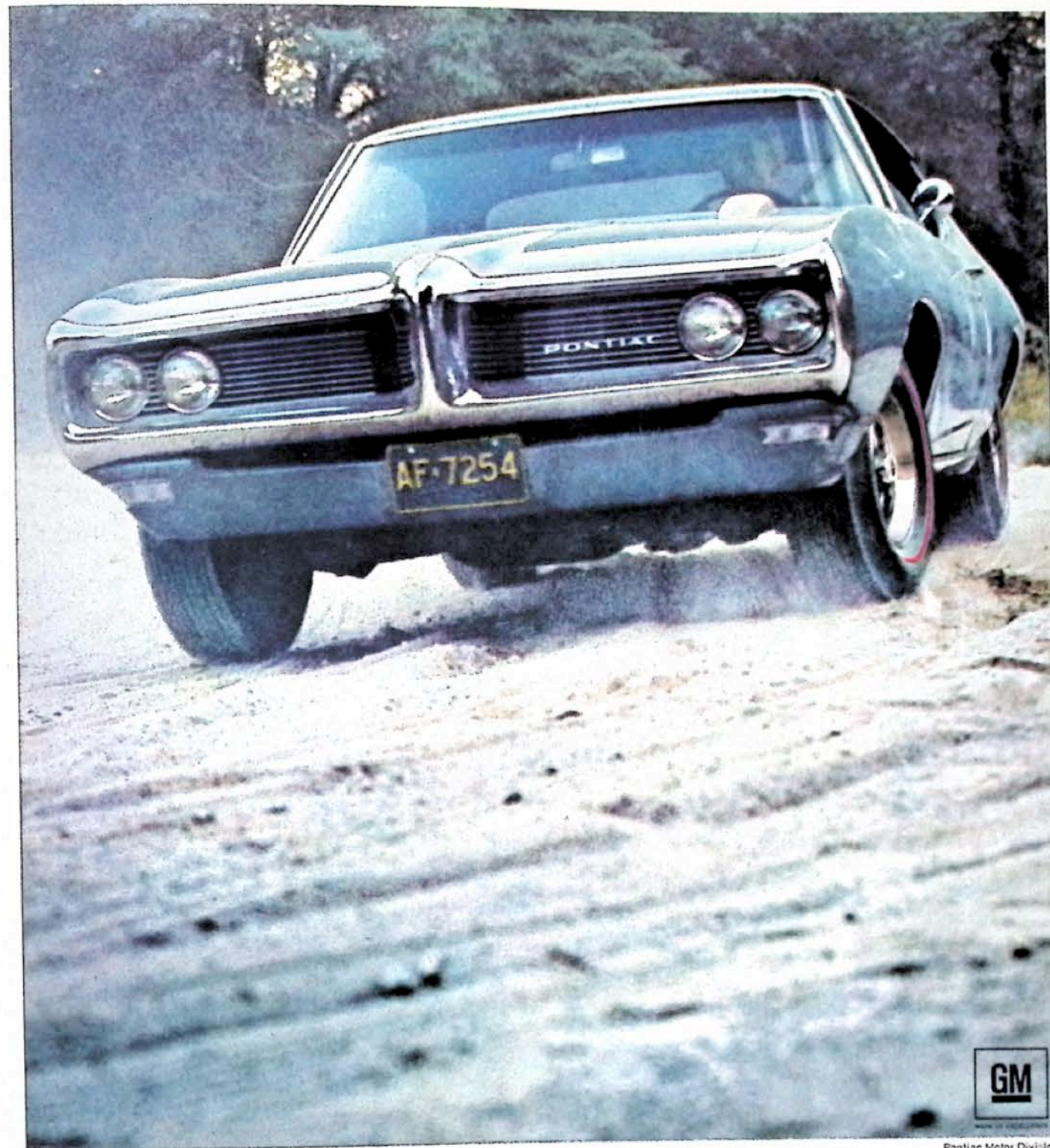
In every way the Conelec system is vastly simplified, compared not only to the Bendix but also to any other wide-range fuel injection system. Instead of a motor-driven rotary fuel pump to supply pressure, it uses a simpler plunger-type pump of its own design and manufacture, also now being marketed as an accessory for carburetor systems. It pumps at a very low pressure by injection standards: 12 to 15 pounds per square inch, just enough to overcome any vapor formation in the fuel lines, and half the pressure of the VW/Bosch system.

Conelec's low operating pressure is made possible by its abandonment of the timed injection principle in favor of longer and more frequent injection pulses. With the new timing, triggered by a pickup from a sleeve around an ignition wire, the fuel has up to five times longer to escape from the solenoid nozzle. Conelec has found that this slower, low-pressure injection provides far better vaporization of the fuel than a fast, high-pressure shot. And good vaporization is essential to emissions reduction.

Conelec's injectors are designed so they can be mounted easily in present intake manifolds. A special throttle body replaces the carburetor, and attached to it are the various sensors of engine and outside conditions. In a separate small box, no bigger than the transistor box of an electronic ignition, is the very simple transistor circuitry. That's the whole system.

Late in 1967, Conelec's injection systems were in pilot production for the first applications in marine engines. Sets were being tested by major auto companies and by government authorities interested in the pollution problem. The system was also being evaluated on 2-stroke engines and rotary power units, both of which it seems to suit very well. Soon they may have a complete kit on the market, not difficult to install, which will give V-8 engines fuel injection for \$275.

On the company's test Mustang the system showed excellent response and has returned improved mileage, with settings for performance rather than a clean exhaust. Tuned for low emissions it also appears, so far, to do a very effective job. That's what counts today with fuel systems. Electronic fuel injection looks like one of the best answers yet, at least according to Volkswagen — and they sold more cars in the U.S. last year than they did in Germany. And with Conelec we have a fine American system under development also, perhaps for your next automobile. /MT



## Our almost Great One.

350 cubic inch H.O. V-8, 320 hp, 380 ft. lb. torque, 4-bbl Quadrajet. All wrapped up in that nifty Tempest Custom captured above. And even after you add things like our

4-speed stick, Hurst shifter and handling package, the price is still right down there in your ball park. As we said, not quite a GTO. But then, what is?

### Pontiac Tempest Custom H.O.

Anxious for 5 color pictures, specs and decals of the Great Wide-Trucks? Don't be. Send 30¢ (50¢ outside U.S.A.) to: '68 Wide-Trucks, P.O. Box 880A, 196 Wide-Track Blvd., Pontiac, Michigan 48059



# the SIMPLEX "SPEED CAR"



The 50-hp Simplex "Speed Car" is as much coveted by collectors as its contemporary, the Mercer "Raceabout." In its heyday, the Simplex cost more than twice as much as the Mercer — about \$6000. The two tanks behind the seats are for gasoline and oil. The oil — 13 gallons of it — is in the smaller of the two tanks.

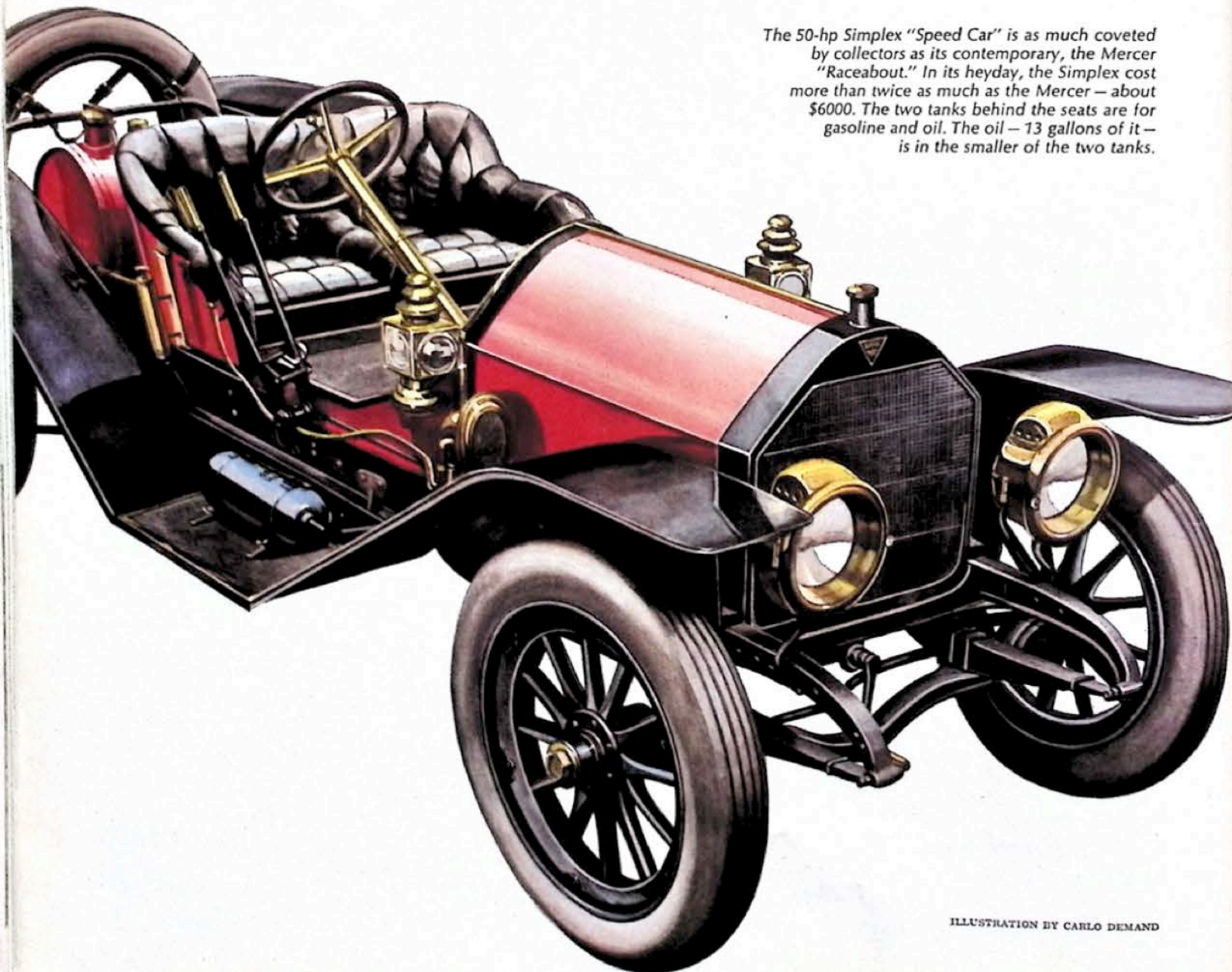


ILLUSTRATION BY CARLO DEMAND

## No Rolls-Roycian refinements to be found with these brutal monsters. BY RALPH STEIN

I can remember, as a youth, going to the Smithsonian Institution in Washington and spending all my time just standing and slaving over the magnificent Simplex "Speed Car" which is still exhibited there. The machine in Carlo Demand's painting is practically identical to that one and also to Henry Austin Clark's similar Simplex. The Smithsonian's car is a 50-hp of 1912 with a Holbrook body. Clark owns an earlier chassis—a 1910—with a replica body built by Ralph Buckley, the noted antique car restorer.

Some years ago Austin Clark let me drive his magnificent machine and I then put down a few notes of what it was like:

"Driving a Simplex Speed Car," I wrote, "is a shattering, though pleasurable, experience. You sit on a little bucket seat set on a bare expanse of chassis holding a wooden steering wheel on the end of a long, long brass stalk. The stalk grows out of that polished mahogany dashboard way down there. On your right are the big brass gear and brake levers. Your passenger (who owns the car and who hides his trepidation at letting you drive it under a polite, albeit, sickly smile) goes out front and pulls up the crank; there is a terrible, earth-shaking roar, and you wish you weren't behind that wheel. The owner climbs in, reaches over and pulls the hand throttle back to idling speed, and advances the spark a little. You release the handbrake, put the gear lever into 1st (with a crunch).

"You very gingerly release that 67-plate clutch, but even so the rear wheels spin and throw gravel (thank God you didn't stall her). You turn the steering wheel to get out of the driveway and it steers quickly but hard (three-quarters of a turn lock-to-lock), remember a shift to 2nd (crunch again), then to 3rd (double-clutch this time and no crunch).

"We're flying now with a howl from the gears and a thrashing sound from the chains. The exhaust is bellowing and so is your passenger, right in your ear: 'Put 'er in high and pull down your goggles so you won't have to drive with your eyes closed like that!' (There is no windscreen.)

"You obey and things quiet down a bit. You sneak a look at the speedometer. Seventy, it says, and the flesh of your cheeks is pulled towards your ears by the gale. Seventy in a 35-mile zone is too much so you step on the brake.

"'Not that,' says the owner. 'Use the handbrake.' Nothing much happens, but that's how 1910 brakes were.

A light, way ahead, turns red and you pull that lever and j-u-u-s-t make it.

"The light changes and this time you can shift fairly quietly. You know about the brakes now, and the steering is lighter the faster you go. The real charm of the car takes hold of you. There's plenty of power underfoot at low engine revs, the steering takes the car where you point it, and you sit there luxuriating in the sheer brutishness of this machine."

Recently I rode with Buckley in another Simplex "50"—not a "Speed Car" (although it was quite as fast, over 80)—but a toy tonneau-bodied machine which he had just restored and which he was testing and retesting. It had all of the brutal charm of Clark's Simplex—but with one big difference. The brakes were much better and when Buckley hauled back on the lever the rear of the car squatted down and we really stopped.

The 50-hp Simplex Speed Car was very like the Simplex racing car of its day. (As you can see, the racing machine in Mr. Demand's illustration merely lacks fenders and lights.) It had a "T" head, 597-cu.-in. 4-cylinder engine whose bore and stroke were both 5 $\frac{3}{4}$  inches (a 90-hp model had the same 5 $\frac{3}{4}$ -inch stroke, a 6 $\frac{1}{2}$ -inch bore!). The "gun iron" cylinders were cast in pairs and the 3-bearing crankshaft was of Krupp's chrome nickel steel imported from Germany. Fine-grained "gun iron" was also used for the pistons which had unbelievably thick rings— $\frac{5}{16}$ -inch. The 4-speed gearbox was combined with the differential in a big aluminum case under the center of the car, as was common on chain-drive machines. Power was transmitted to this box by a saw-steel and bronze clutch with 67 plates—yes 67!

The 50-hp and 90-hp Simplexes of 1909-1912 are the ones we know best, but there were earlier and later members of the Simplex family.

The first ones were built by Smith and Mabley in New York, a fancy automobile emporium which had supplied rich sporting gentry with elegant and expensive Panhards and Mercedes. Such exotic machinery was pretty high-priced even for the then income-taxless millionaires—\$10,000 to \$15,000 or so. In 1904 Smith and Mabley decided to rival these excellent European cars with American-built machines constructed to the same high standards. In this they succeeded, but in the panic year of 1907 they, like many other purveyors of luxury goods, went bust and were bought out by a Mr. Herman Broesel.

Normally when such a sale occurs, quality goes down but Broesel's Simplexes built by his chief engineer, Edward Franquist, were better than ever.

In Simplex' small factory on East 83rd Street, the cars were built to meticulous standards of hand-craftsmanship. Only wheels, tires, electrical parts and a few other small items were bought from outside. Almost everything else—cylinder castings, axles, gas tanks, dashboards—were cast and soldered and sawed out on the spot. Each car was put together by one artisan helped by an apprentice. In 60 hours (a week's work in those days) a good man was expected to turn out a finished car—sans body, naturally.

Then the chassis would have a box clamped to its frame, a tester would get aboard and it would be ferried across the East River into the fastnesses of Queens and Long Island. There on wild and rutted roads it would suffer hundreds of miles of chassis-twisting hard driving. Only then would Franquist give it its final testing. If all was well, it then went to a body shop.

Simplexes were raced from their very earliest Smith and Mabley days. When they built a 75-hp race car for Frank Croker, the son of a Tammany boss, Croker entered the 1904 Vanderbilt Cup, but his heavy mount couldn't meet the 2204-pound weight limit. He had it drilled so full of holes it looked like a colander. During the race, however, the weakened chassis collapsed and let the engine and gearbox drag. It was the only car to leave a triple track in the dust of the road. Croker had a new chassis made for the 1905 Ormond Beach speed runs. This time the car rolled over and killed him.

Later, Simplexes had better luck. In 1909 a Simplex won the 24-hour race at Brighton Beach, N.Y. and the National Stock Chassis Race at Lowell, Mass.

By 1913 the great Simplex days were over. New owners moved the factory to New Brunswick, N.Y. In 1914 Simplex was merged with Crane and a new and excellent marque, the Crane-Simplex, was born.

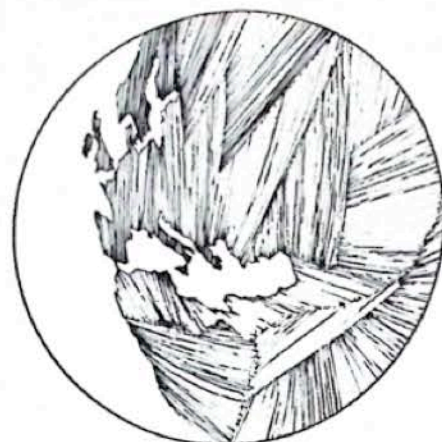
After the war Simplex became part of an outfit called Hare's Motors. Hare went broke and that was the end of Simplex.

Today, Henry Austin Clark owns the name Simplex. I doubt whether Mr. Clark intends building new 1912 Speed Cars. But I hear that he does intend to have cast some of the aluminum parts, like crankcases, which after almost 60 years are beginning to show the cracks and wrinkles of age.



MEANWHILE, BACK AT TURN 6, the BMH pit crew was working overtime, and lo and behold, there will be a '1968 Jaguar after all. Still the irascible gallant of the 'boss' scene, Jaguar '68 has been stuffed, padded, safetyized and desmogged. And, coincidentally, just made it under the wire to pass Big Brother's safety inspection. Devilish old smog emission has been alleviated using a unique combination of carburetion and manifold pre-heating. Two specially-designed Zenith Stromberg's have been fitted, using a new double manifold between inlet and exhaust manifolds to give a pre-heating effect. Two throttles have been added to the carburetors, the second remains closed during low rpm operation. Fuel mixture is channelled through the new double manifold, or conditioning chamber, where it is heated by the exhaust before being fed into the engine. Progressive opening of the second throttle occurs after initial acceleration, to a point where both are fully open and the fuel mixture is fed directly into the engine in the normal way.

Jaguar's new smog control system is reported to greatly reduce emissions at low engine speeds, the problem area when engine is idling or at low throttle. Below 4000 rpm, engine performance is supposedly not affected



## EUROPEAN HOT LINE

by the duplex manifold set-up. Above 4000, power loss is reported to be only 7% and the equivalent road speed at 4000 rpm is 90 mph.

Styling changes which now meet new U.S. safety regulations, include a more comprehensive instrument grouping and more luxurious reclining seats. Adjustable steering wheel is mounted on a collapsible, telescopic steering column. Still powering the roadster, coupe and 2 + 2 coupe is the race-based, time-tested 258.4-cu.-in.,

6-cylinder, dual overhead cam engine that turns out 246 ph at 5000 rpm with 9:1 compression. Four-wheel disc brakes are still standard on all XKE models as well as 4-speed synchromesh gear boxes. An automatic transmission is also available on the 2 + 2 coupe.

Few exterior body style changes have been incorporated (plexiglass headlight covers and knock-off wheel hubs have disappeared for safety's sake), or added (no unnecessary chrome strips).

Although Jag hasn't changed very much this year, physically, its "image" is supposed to. Surveys indicate that the luxury sports car's market should be among "young, affluent men" and that's the way its advertising is going hereafter. We understand there was even talk of a Jaguar Girl, an English version of the Dodge Fever Girl, but she apparently has disappeared in a pile of micro-skirts.

The long-rumored Jag V-type engine is very much alive but must find a home in a companion British Motor Corp. body also. This is one of the key points in last year's merger of Jag and BMC into British Motor Holdings—commonality of mechanical components and manufacturing facilities. Jag's merger into BMH is being accomplished slowly but surely. Parts and service facilities are being integrated

from the top down and it seems likely that, for the foreseeable future, there will be separate Jaguar specialists and a separate Jaguar dealer organization (although there are many Jag-MG dealers already).

So, it appears the magnificent monocoque will undoubtedly continue to be the one to flutter little girls' hearts and get all the oohs and aahs.

Jaguar's 1968 XKE sports car will cost American motorists less than the 1967 models did. The recent British pound devaluation should erase the previously planned increase of 2.5 to 4.5% on the various models. Before devaluation, BMH had calculated that extensive engineering and interior changes to meet new 1968 Federal safety and pollution control requirements, plus a small increase due to higher production costs, would cause prices to increase. Now, however, they plan to import the 1968 Jags without the increases and, actually sell them at lower prices than the 1967 cars. Savings on the various sports cars should range from \$32 on the XKE roadster to \$163 on the 2 + 2 coupe with automatic transmission.

WHEN CHRYSLER CORP. put its own man, Harry E. Chesebrough, into the post of Directeur General of Simca, it was merely following the lead of General Motors and Ford in getting top American know-how into the European operation. Chesebrough was sent to Paris for several reasons. He was put in charge of production, marketing, sales and technical direction of Simca and also has on-the-spot responsibility for Chrysler's British investment in Rootes, makers of the Sunbeam and the Singer.

Simca sales in this country nose-dived in 1967, which was the most successful import year in U.S. history. Chesebrough will attempt to start turning that around with the front-wheel-drive 1300 which comes state-side about July. However, the more important part of his job would seem to be to unify the European production facilities and straighten out the U.S. market offering.

On the first point, insiders say you will see a combined Simca-Rootes product effort with Simca perhaps making the engines and Rootes the basic bodies. There'll still be a separate Simca, Singer and Hillman but the various marques will share engines and bodies à la divisions of General Motors, Ford or Chrysler here.

THE SUNBEAM IMP is no more in the U.S., nor is the Bertone Simca Coupe to be imported. And, the Sunbeam Tiger and Alpine convertibles are now officially classic. A Sunbeam Fastback Coupe should make its American de-

but at the International Auto Show in New York March 30-April 7. It looks like the original Barracuda and will have a 2-carburetor version of the Alpine engine. The Hunter sedan, the Simca 1000 and eventually the 1300 will round out the Chrysler import offering.

Chesebrough is known as a technical man with a healthy respect for styling. He is expected to move quickly to make Simca less austere. Even the Europeans don't go for that anymore.

Incidentally, the dealer organization for Simca-Rootes is going to be expanded with Chrysler dealers being urged to fill marketing and service gaps.

IF YOU'RE GOING TO PURCHASE a car for overseas delivery, it will be incumbent upon you to prove that the car meets the safety and anti-smog regulations if you want to bring it back into this country.

The popular imports like VW, Mercedes-Benz, BMH and Leyland know this and will sell you an American version but any specialty or 1-off that you pick up overseas will not necessarily be so equipped. If you bring in a non-conforming vehicle you must post bond that you will bring it up to safety standards.

These regulations affect vehicles made in Canada, too. The Dept. of Transportation and Bureau of Customs bulletins also cover the following possibilities:

Vehicles and parts made before Dec. 31, 1967 (with proof of the date of manufacture; vehicles not made to conform but which have been altered to meet the standards (with proof); vehicles brought in by foreign tourists and diplomats or for shows, testing or experimental purposes.

The Customs Bureau can sell vehicles or equipment denied U.S. entry provided it does not wind up in

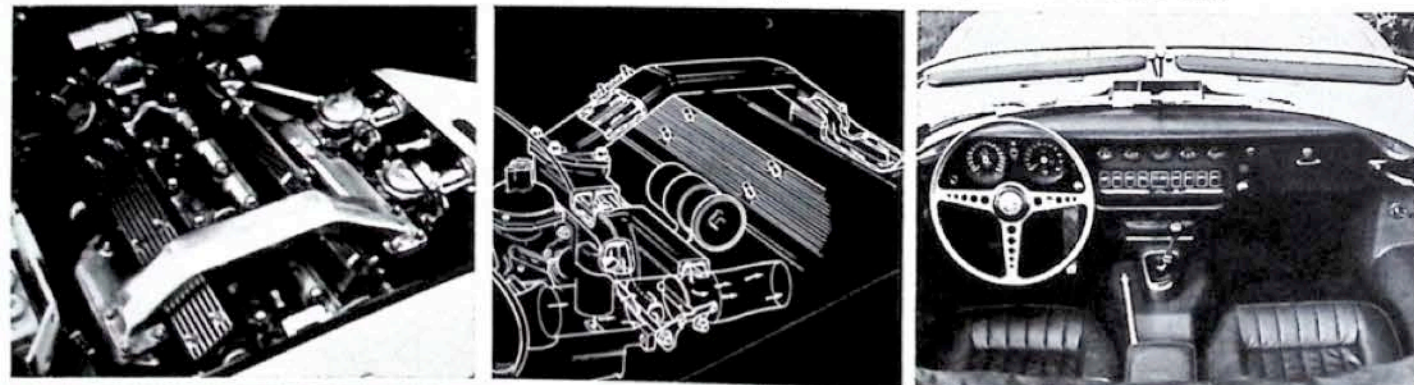
## SUNBEAM ALPINE FASTBACK



Is it a Barracuda? Is it a Marlin? No, but they're grooving on a theme. It's the 1968 offering from Rootes/Chrysler, the Sunbeam Alpine Fastback. Appointments include a walnut-trimmed interior; comfort-contoured, reclining bucket seats; complete, easy-to-read instrumentation; and an adjustable steering wheel. Under the hood they've supplied the fastback with a twin-carburetor, 100 bhp engine. Stopping qualities should be inherently competent for a car this size, with front disc and rear drum brakes. If you're a fastback fan this one should grab you. Look for it on the domestic scene within the next few months.

(Bottom) 1968 Jaguar 2-seat XKE coupe introduces vertical headlights, safety wheel hub caps and restyled cockpit. (Below Left) Neatly polished Duplex Manifold as it appear on uncluttered

engine. (Below Center) Diagram of Duplex Manifold fuel "conditioning" set-up that reduces smog emissions. (Below Right) New cockpit has more safety features for Uncle Sam.





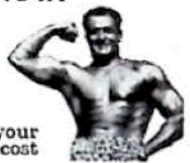
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## EUROPEAN HOT LINE *continued*

the U.S. Racing cars used only on the track are exempt (experimental and testing reasons, you know.)

THE MOST AMUSING BATTLE OF 1968 is going to be for who is No. 2 in car imports. Toyota and Datsun, both with new models in the field for this year, already were waging the war of the car registrations at the end of last year. Each expects to top 100,000 sales which would be the first time ever that three imports—remember VW—hit the six figure mark in the same year.

Rollie Withers, Buick general manager, won't say so out loud but he expects Opel, a 6-model lineup with some of the best power-to-weight ratios in the business, to flirt with that 100,000 mark, too.

Toyota's 2000GT, a \$7000 item, was assembled by a motorcycle manufacturer, Yamaha, but the Japanese firm is pressing talks to acquire still another motorcycle maker. When the smaller Corolla starts coming over here en masse, there may be an interesting side effect. Japanese buyers will get U.S. safety equipment and perhaps anti-smog whether they want it or not. We are told it's cheaper to make them one way, like Japanese home market TV which has English markings.

THE SAAB 99, that company's British-engineered single overhead camshaft larger car, is not slated for production until late this year or, actually, early next year but there are hints it will be somewhat longer before it reaches the U.S. This is not due to modifying it for our safety standards but discussions of where to position it pricewise. The V-4 is selling exceptionally well and this Saab 99 must come in above that but below the Volvo 140 series. Saab-Volvo dealerships are quite common though definitely not the majority. Besides, 140 series Volvos are 10 inches larger, a bit wider, have a longer wheelbase, a bigger engine and a smaller turning circle.

However, the 140 series is in the \$3000 price class. This does not detract from the Saab 99's attractive conception. It may have one of the best braking systems in the world with the handbrake working on separate drums inside the front discs; it is designed with radial tires in mind, 15-inch wheels, too; it has defrosters for side, rear and front windows; its engine is rugged enough and well enough laid out to be enlarged easily.

The touches we like most are the 2-zone heating—rear seat passengers can control heat flow; headlights which change from inside the engine

compartment and a ventilation system which allows control of fresh air flow separate from the heating system.

The Saab 99 body has a drag coefficient of 0.37 and should be eminently resistant to side wind pressure. The engine compartment has a smooth plate underneath it.

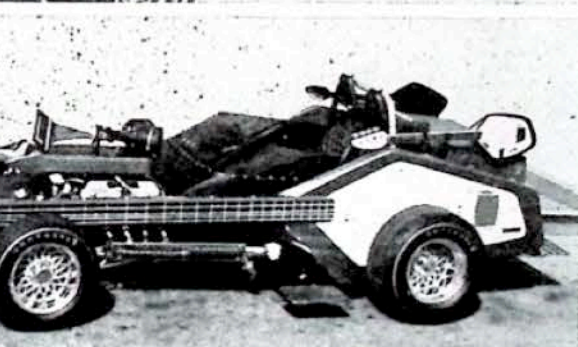
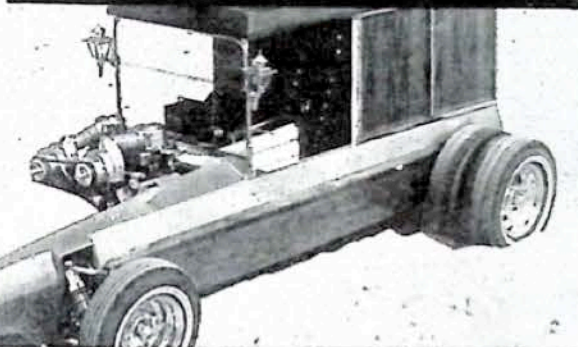
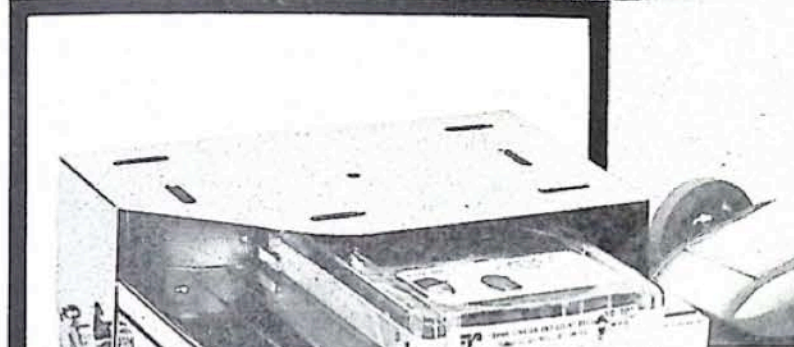
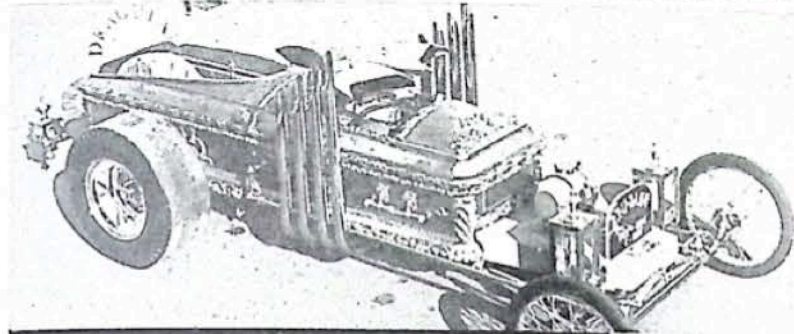
WHAT BRITISH CAR COMPANY do you think has led the profit parade the past two years? Leyland Motors, which makes Triumphs and now Rovers. It did almost four times better than its next nearest competitor, English Ford, two years ago and quite well even figuring in its recent acquisition, Rover Motor Co. Vauxhall is third among the big boys; and we understand Pontiac Motor Division, which did import Vauxhalls for awhile, has the idea under consideration again.

FIAT SEES its best chance in the U.S. as a maker of sports machinery. The long awaited Dino convertible and coupe will top the line eventually and incidentally, be the biggest influx of Ferrari designing ever to reach these shores. The car has a Ferrari ohc engine which, though it loses a bit of its punch in the anti-smog version, still is reputed to be quite hot. However, the 7-car lineup for the New York show in April may not include it. September is when Dino lovers will likely see it here. Other than Dino, the Fiat lineup here is the 124 Sedan and wagon, the 850, 850 Spider and the 850 Coupe, 124 Spider roadster and 2 + 2 coupe.

BMW's COOPERATION with Bayer Fabricating in an all-plastic car project is not expected to change that marque to fiberglass bodies any time soon. But the Munich maker of automobiles and motorcycles still is interested enough to cooperate in exhaustive tests at the University of Berlin. The result may be a part steel/part fiberglass car, lighter for better performance and virtually rustproof. But you can buy your 1600 with full knowledge that this isn't going to happen for some years.

SEMPERIT, the Austrian tire maker which recently moved into a new home near New York City, is increasing its radial tire size range for U.S. cars. It is the only maker to offer both steel-belted and cord-belted tires. Semperit is the oldest rubber company in Europe. Incidentally, if you say please, they'll import a rubber boat for you which can accommodate a 36-hp outboard.

IF YOU ARE THE OWNER of a late 1967 or 1968 import with split brake system, take it back to your dealer for



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**EUROPEAN HOT LINE** *continued*

any work unless you are absolutely certain your brake shop is expert and up-to-date on bulletins. On the Volvo system, for instance, the bleeding sequence is critical. If anyone does that wrong, you are not only in for a big bill—you may lose your brakes. Dual circuit brakes, we are told, are more complicated because each firm has its own little variation.

PEUGEOT, which says it is the first company to sell a car to a private party, may be the first company with a collapsible front and rear to conform to the next round of U.S. safety standards. Its engineers are said to have settled on a system of sacrifice parts designed to deform with no effect on the passenger compartment. It involves different kinds of steel.

GHIA OF ITALY has gone American, with some startling results. Newest offering from the master car builder Ghia is "Thor," a 2-door coupe built on an Oldsmobile Toronado chassis. Digging up a little Ingmar Bergman symbolism, Ghia sees Thor as a reincarnation of the thundering Viking god who was admired for his enormous physical strength. That the car can bat in his league remains to be seen. Actually, the car itself is an immaculate concept in body design with sharp, stiletto lines that all seem to fit in the right places. A side profile shows a vast expanse of glass with a continuity and harmonic movement of the front and rear fender lines. A thin-line roof flows symmetrically into the rear deck. Bumper and side parking lights blend into the streamlined hood with concealed headlights. Interior appointments include a dash that has been designed to meet American safety standards. Instruments and gauges are grouped in one central dial to give driver and passengers more room, and because of the complete lack of protrusions, greater safety.

BRITISH MOTORS says it plans to produce automobiles in the Soviet Union. Company officials say they would like to build the 1100 and 1800 models behind the Iron Curtain.

THE AUTOMOBILE is still on a 1-way street as far as Japan is concerned. The Japanese are not about to relax the stiff import penalties on American cars and those of other nations, even though their cars are being sold in increasing numbers in the United States, which has relatively low tariff walls. What is hard to understand is the Japanese claim that they can't liberalize American imports because of the backwardness of Japan's auto industry.

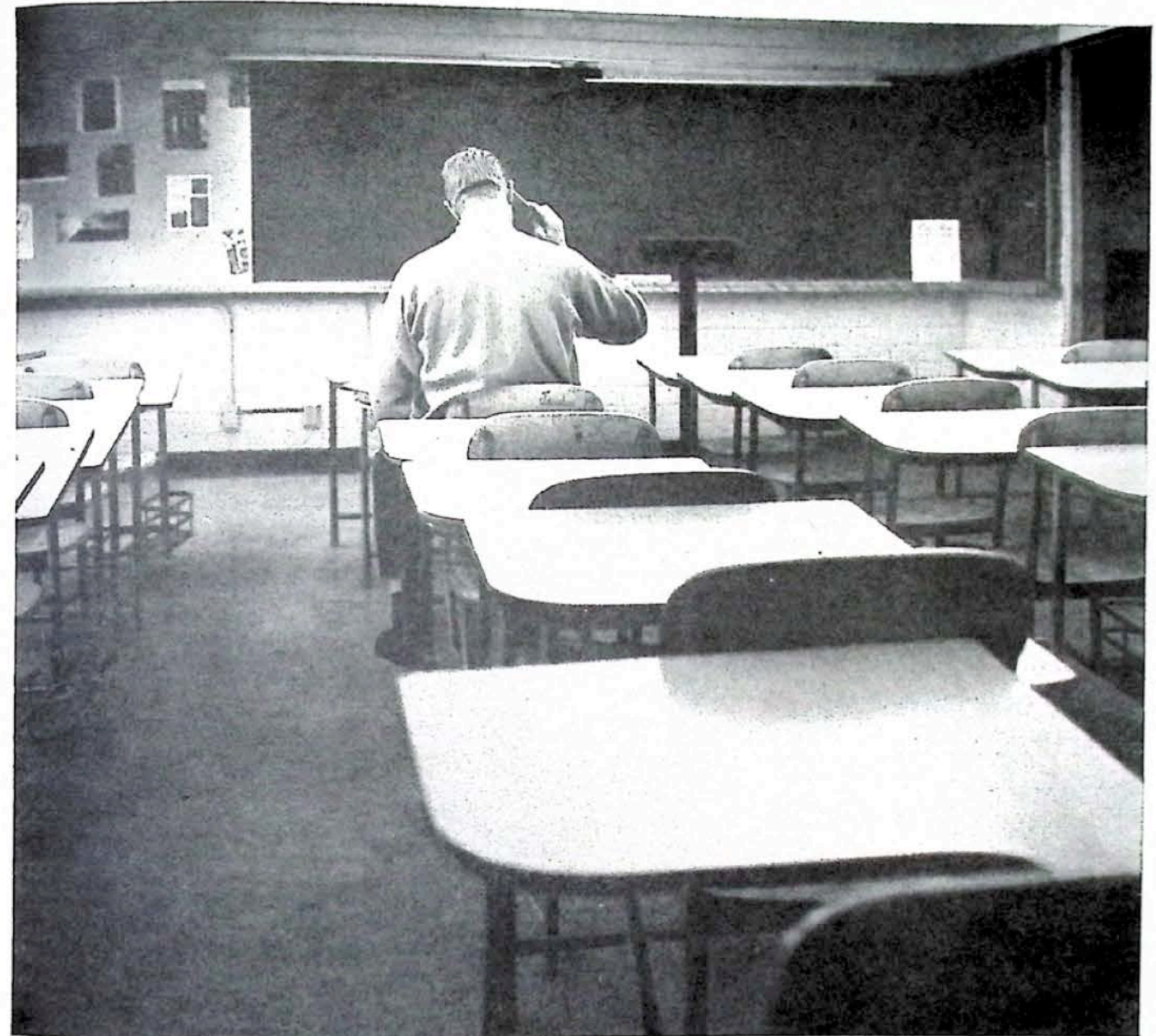
THE BEETLE's getting safer. And Volkswagen can prove it. The firm says an accident study made by Cornell researchers shows an improved level of safety for the Beetle. VW ordered the study after earlier work by Cornell indicated small foreign cars were not as safe as the larger American automobiles. "We asked for more detailed information on the Volkswagen," said Guenter Storbeck, the firm's product planning manager in this country. VW paid \$30,000 for the 2-year study, which involved 700 accidents in which people were killed or injured in Volkswagens. "We wanted to find out if the changes we were making were being reflected in accident statistics," Storbeck said. The firm in recent years improved door latches and also added an auxiliary rear spring because Beetles were ranked higher in rollover accidents than other cars. Storbeck said the study shows that the ejection rate has been drastically reduced and that the trend is down in rollover types of accidents. "But the number of cases studied is still too low for a good comparison so we will probably order another study by Cornell to be made next year," Storbeck said.

IN BRITAIN they have a new idea for do-it-yourself tuneup experts. It's a spark plug with a see-through dome which, by the color of the light within, allows one to adjust the carburetor jets. You insert it into the plug hole and follow a set procedure, watching as the color changes. It is said to work with any 4-cycle carbureted engine.

BRITISH HOT ROD experts are using fiberglass ram tubes on MGB-GTs. They go onto the S.U. carburetors. They also fit these ram pipes to BMWs, Peugeots, Renaults, Simcas, VW 1300s plus Ford Cortinas, some Triumphs and Rovers.

GENERAL MOTORS is very smooth about testing engine concepts and designs. Though the Vauxhall is not now imported to the U.S., the single overhead camshaft 4-cylinder 1.6- and 2-liter engines for their Victor series bear watching. It's the kind of design that can stretch and adapt into 3-, 4-, 5-liter and larger displacement categories. It uses a cogged rubber belt à la Pontiac to drive the ohc but valves are re-designed for easier adjustment. Some engine men claim that if you siamese two of these 4-cylinder engines off a common crank, you get a very efficient ohc V-8. Vauxhall's ohc is installed at a 45-degree angle, like one bank of a Vee-type. Incidentally, the cogged rubber belt also is used in other European cars of ohc configuration. The Fiat 125, considered too expensive to import, is a 90-hp twin cam version of the 124 with its belts shielded. Some BMW

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EUROPEAN HOT LINE *continued*

models use the fiberglass reinforced rubber belts, too. Adding fuel to the story that Pontiac was seriously reconsidering the importation of the Vauxhall is the fact that very late in development the British GM arm abandoned bowl-in-piston design because the part-spherical combustion chamber they now have allows better control of exhaust emissions.

The Vauxhall engine is quite important to Americans for another reason. It has been known for a long time that ohc engine design is far more efficient, giving more power for the same displacement. However, basic engine designs are supposed to last 10, 15 or more years, despite the trumpeting about "new" powerplants which issues forth periodically. If there is all new tooling, an ohc engine may actually be cheaper to produce since it simplifies valve gear and makes gearing more controllable at high revs. Reducing the need to get the complicated valve gear mechanism started (valve gear inertia) contributes greatly to engine efficiency. Moreover, the designer then can evolve opposed valve arrangements (BMW, Porsche) which lend themselves to insertion in minimal space by tipping the engine on its side. Detroit is caught in a battle against rising costs perhaps more desperate than at any time in its recent history because engineering real safety into cars is eventually going to cost much more than adding shoulder harnesses and a bit of padding. The need for efficient engines because of the anti-pollution pressure is equally paramount. If GM can prove out details of a good single ohc design in the relatively smaller Vauxhall Victor production, it will be in a position to make the major switch from current ohv (overhead valve) engines to ohc with much more confidence. When the big switch comes—and everyone is sure it will—Detroit will join Mercedes, Rover, Rootes and virtually all the European manufacturers in offering this type.

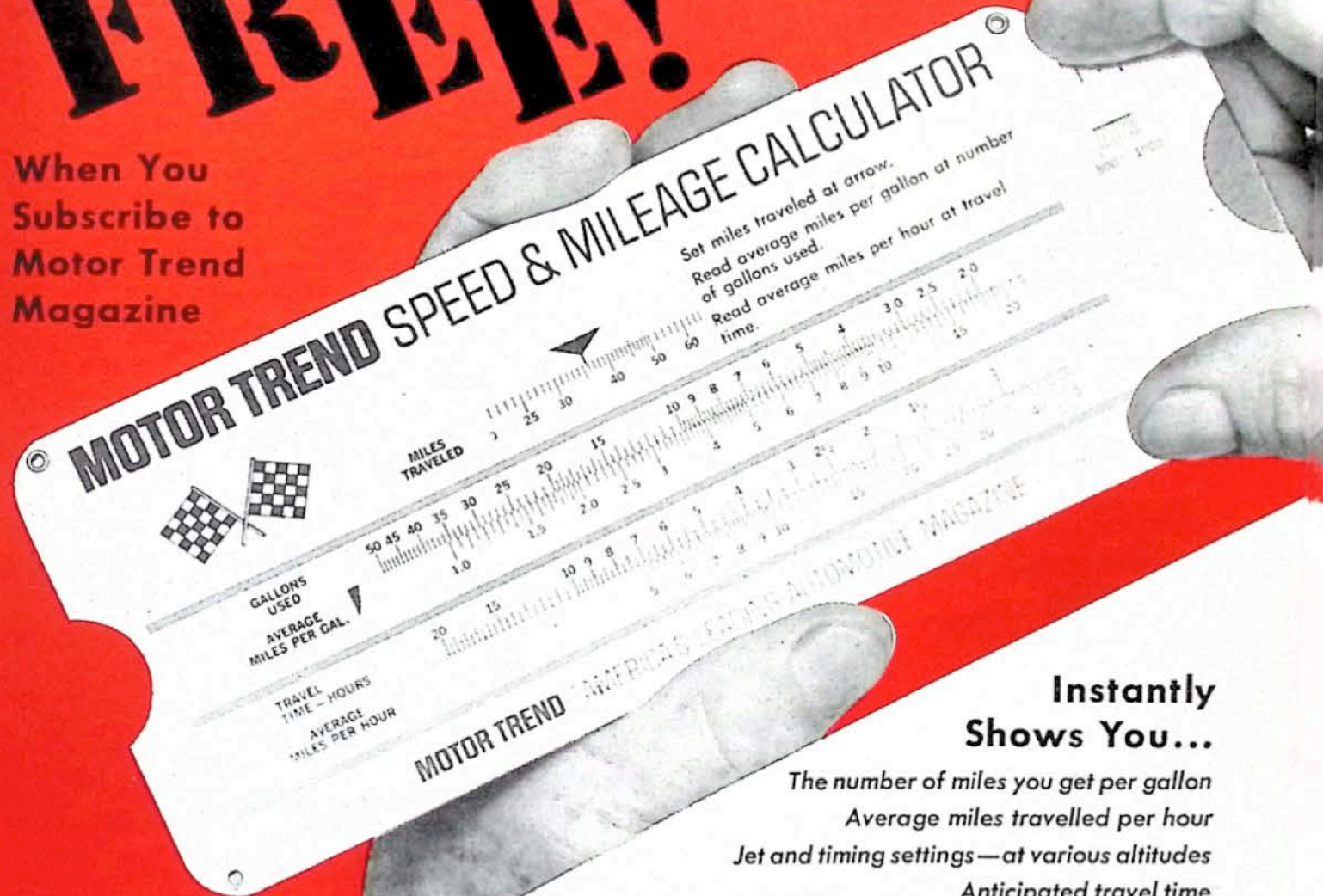
THE JAPANESE have adopted a voluntary auto safety code. All their 1969 models will have seat belts, double safety hood latches, turn indicators, and easy-to-reach control levers. Banned are sharp pointed hub caps and bright plated windshield trim and wipers. The Japanese are already meeting these requirements on 1968 cars shipped to the U.S. under the federal safety standards.

MERCEDES has restyled its 4-cylinder 200 series and the small 6-cylinder 230 series cars. They also have a new rear axle, according to reports. /MT

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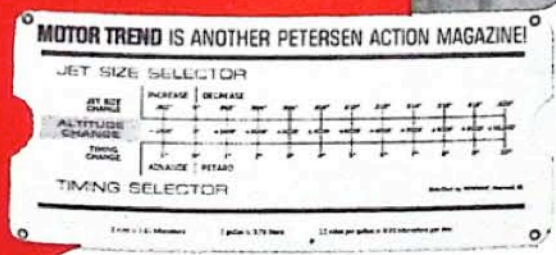
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# Raising standards the right way

Since Mercedes-Benz uses the Targa Florio and a live, head-on, 60-mph collision with a truck as a testing program, they must be building good cars.

Mercedes-Benz plays it smart. They let the multitudes of new cars dilute themselves in profusion of publicity at the beginning of the new car year, until the receptors of all those dizzy spectators are hopelessly dulled by the carnival and the cars are no longer new—after a couple of hours. They even wait until all manners of press have saturated the world with mystique-dissolving analyses of the latest breeds... then they present a really new automobile. That's right... they don't announce it. They present it. They wouldn't think of patronizing their position by joining with other parvenu in the soulless rites of Automotive Autumn. So, by the time the Brussels Show arrived,

*An early model Mercedes 220 was fitted with a camouflage grille for its flat-out secret testing session over the serpentine Sicilian route. A redesigned suspension system now makes this model one of the safest and best-handling sedans ever built—as was proven on the Targa Florio.*

where M-B's new models were introduced, it was four months past the first big bashes.

Mercedes-Benz is a huge, subtle, continual happening in itself, and when they announce that something has, in fact, happened—you had better believe it. By not joining the rites, they're not obligated to pass off some superficiality as a "new model," so, conversely, something "new" means something "New," and, according to Teutonic tradition, it's more useful than anything.

"Medium Range" Mercedes—200 (diesel or gasoline), 220, 230 and 250s—have entirely new bodies that are, as incredible as it may seem to those caught up in the American way of "bigness means best," 8.5 inches shorter than the previous 250 models. Now, the 250 is classified as a member of the Medium Range... a fortunate classification in which the 250 engine, combined with the smaller body, yields a very potent package indeed.

These models have kept the traditional conservative but smart Mercedes look and can be distinguished from the Upper Range by a flatter, wider front, broader grille, different headlights and bumpers. And with both the fact and appearance of compactness, they will force American manufacturers into making a more conscientious effort in their "compact" market.

Even five years ago, U.S. safety standards could have been laughed at by Mercedes-Benz, and now, after the obvious attention given to interior and mechanical design, it is one of the very few cars in the world that is really safe. Instrument panels give on impact and all controls or switches are made of flexible material. An energy-absorbing impact damper is mounted under the steering wheel and the steering column is telescopic, to give in two directions in case of impact. The central passenger compartment is extremely rigid and strong while the front and rear body sections are designed to collapse progressively in case of a crash, thus absorbing some of the shock.

While wringing out one of the new Mercedes in Sicily

on the Targa Florio circuit, I exited a fast corner to find a truck coming toward me in the middle of the road. It was impossible to avoid crashing into him at 60 mph. It was a vicious crash... Mercedes engineers estimated the impulse at the time of impact to be 50 Gs. I suffered only cuts and bruises. All the safety features Mercedes-Benz has considered important for many years, had actually worked.

Mercedes realizes that more safety can be imparted through the suspension than any other single system in the automobile, and with substantial attention to this area, they have improved the new Medium Range performance considerably. The front is independent with double wishbones and coil springs, while the rear is a much improved version of their traditional swing axle which has been improved by a new type of control arm for better wheel guidance, and by resting the axle supports on rubber pads. The drive is taken to the wheel from the differential by double-jointed shafts. All this insures that wheel camber changes only slightly when springs are fully compressed.

When Mercedes slips a large engine into a car that has been designed in its entirety for fine balance, they have a few compunctions. That's conscience. That's also sophistication. The 250 has always been—and still is—one of the safest and best cars of its type in the world. However, it doesn't handle quite as good as the 220, so all is not well in the hearts of M-B engineers. Of course, it handles many fold better than nearly all competitors in its class, but as far as those engineers are concerned, that's not good enough.

The 250 body is identical to the 220's, but the powerplant is a 2.5-liter ohc giving 146 hp at 5600 rpm. However, the extra 176 pounds more than the 220 engine produce heavy understeer under hard driving at the Targa Florio.

The automatic transmission permits the selection of each gear, and for proper control, this is necessary. There are two locations available—on the steering column or on the floor. The one I had was on the floor and was quick and facile to manipulate, though at times, particularly when negotiating steep hills, there was too much delay in gear changes. For the 250 on mountainous roads, the automatic transmission might not be the best arrangement for optimum performance. Often I found myself at the rpm red line in 2nd gear (48 mph), and then catching 3rd only to discover that the engine wouldn't pull it in that gear. There is no such delay with the manual box.

Top speed for the 250 SE is good for 108 mph, with 0 to 60 available in just under 13 seconds.

All models use 4-wheel disc brakes that give excellent performance under all conditions. Even when charging down Sicilian hills, there was no fading. There has been a modification in the braking system that does, however, induce a slight problem to the uninitiated. A new brake booster for all models cuts the pedal pressure from 6 kilos to 2 kilos, a substantial amount that requires careful modulation of one's toe in order to avoid locking the wheels under enthusiastic driving.

The most impressive new addition for M-B's new era is the 280 SE—essentially the previous 250 body with a 2.8-liter, fuel injection, 7-main-bearing engine. Although the engine has only 35 hp more than the 250, it produces 35 lbs.-ft. more torque—193 lbs.-ft. total—at almost the same number of revs, making the car a much more versatile unit for the complex conditions existing on today's roads.

In spite of its comparatively heavy weight of 3270 pounds dry, the 280 SE is a fast car, capable of quickly reaching its maximum speed of 118 mph, and accelerating from 0 to 60 in 10 seconds.

The interior is very quiet, with luxuriously appointed, wide, comfortable, separate seats in front, and a ride that's

surprisingly soft for a Mercedes, yet one that seems to be no handicap to its traditional road handling on normal roads.

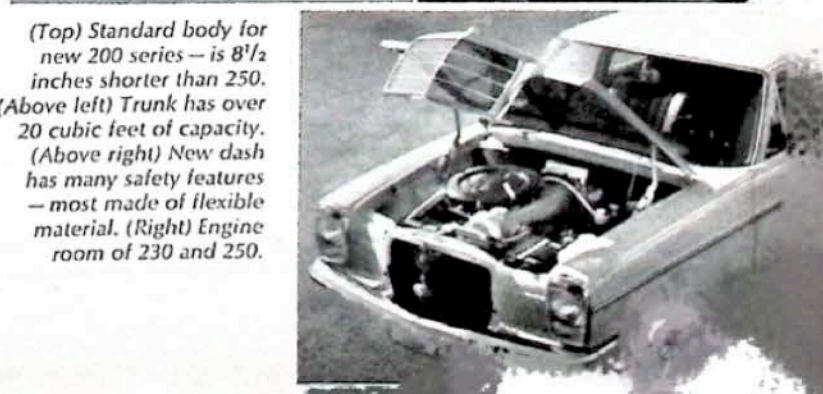
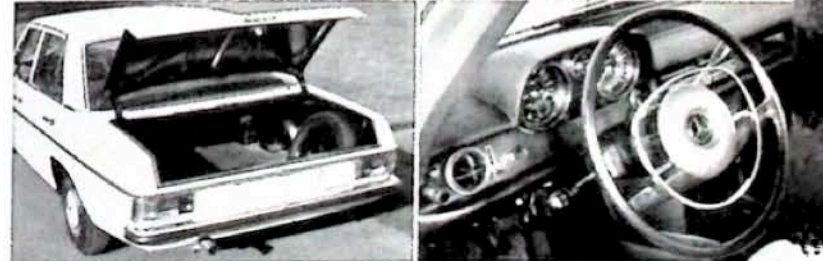
Of course, on the tormented Targa Florio roads, plenty of throttle and late braking action produced wheel-lock, and the older type swing axle reacted strongly with such excessive camber that they would lose adhesion. Of course, to be perfectly fair, one must realize that these conditions are only encountered on Targa-type roads, the severity of which is virtually never found elsewhere.

A major difference between the 250 and 280 is evident when both are fitted with automatic transmissions. While steep grades have a tendency to be a bit too much for the 250, the 280's extra power and torque gives swift and efficient performance under all conditions. Gear changes are very fast, and any sports-minded driver will find it desirable.

On the manual box, the gears are well spaced, with 1st going to 30 mph, 2nd to 55, 3rd to 90 and 4th to 118, a speed 3 mph quicker than the car fitted with the automatic box.

With their 1968, or whatever, models, Mercedes has taken another step ahead of other cars in safety and excellence. They have also increased their scope of coverage for a wider market. Their new Medium Range can even be considered as a successful engineering achievement, and there are now cars for every taste in the complete line of Mercedes models.

Examining all models from the 200 to the 600, one finds a large gap between the 300 SEL and the 600. Yet, I cannot help but feel that Mercedes will soon fill this gap. In fact, I would not be a bit surprised to see them introduce, next Spring, a super 300 SEL fitted with a V-8 ohc with more than 4.5 liters of displacement. This engine, which should give at least 250 hp, would surely make it the fastest production car in Europe. — Bernard Cahier



(Top) Standard body for new 200 series—is 8½ inches shorter than 250. (Above left) Trunk has over 20 cubic feet of capacity. (Above right) New dash has many safety features—most made of flexible material. (Right) Engine room of 230 and 250.



# Safety First- and Always

Was Mr. Nader  
the first to consider the  
subject of safety?  
Read on and see...

By Michael Lamm

In days long before auto safety became a national passion, various car manufacturers and enterprising inventors came up with all sorts of safety gadgets—some of them far beyond GSA standards.

Take, for instance, the pedestrian scoop conceived in the early 1920s and mounted on a 1922 Hudson. *Popular Mechanics* that year ran a photo of the device, explaining how it could sweep up an errant child and cradle him tenderly just ahead of the radiator, saving him from being crushed under the car's wheels. A similar item around that era, looking for all purposes like a cowcatcher, was made from a steel pipe frame strung with what looked like chicken wire. It pushed people out of the way if the car hit them, probably into the path of another car.

Some early safety items made more sense. The L-29 Cord had a collapsible steering column by virtue of its ending belt at the lower end of the column then ran down to the steering box on the frame. This indirect method of steering let the entire column slide forward if the driver's chest pushed against it in a crash.

In 1906, the ill-fated Compound had a so-called deadman's switch. This consisted of a lever at the driver's elbow. The pressure of his erect posture held this lever in an "on" position when driving. But if the driver were to fall asleep at the wheel or suffer a coronary, he automatically released the lever and turned off the switch, whereupon the Compound's power brakes would lock the rear wheels. Must have given slouchy drivers absolute hell.

Automotive seat belts weren't thought of for safety until William B. Stout proposed them (but didn't install them in his radical cars) in the mid-

1930s. Rather, it was up to Preston Tucker to seriously consider safety belts for his 1948 fiasco which, if it had been built completely to his wishes, would have included lap belts as standard equipment. As it was, even the 50 or so prototypes Tucker produced didn't have them, because his sales department felt seat belts implied the cars would be dangerous.

In the good old days, drivers were continually plagued by hills—not only getting up them but also by tending to slide down backwards when forced to stop on the grade. Hillholders of various types were born of necessity. The earliest was merely a sprag—a hefty steel bar attached to the car's rear and hinged on a horizontal bracket. Normally, this rod rode upright. But if the car started rolling back down a hill, the driver pulled a cable which released the sprag, the outer end of the rod fell to the ground and propped the car to keep it from rolling farther. Then, once the car got going forward

again, the driver released the cable and the rod went back to its erect position.

A little later, someone thought of a more sophisticated hillholding system. This incorporated a ratchet on the brake pedal. The driver engaged the ratchet after pushing down the brake on a hill. When he was ready to move forward again, he gave the brake pedal a mighty kick and the ratchet let go. Such a system was used by Thomas and many others. Studebaker eventually refined hillholders in the 1930s to work off the transmission, and Stude continued this option through the 1950s.

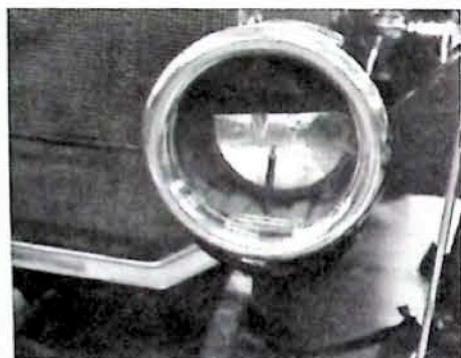
Along with hillholders came restarters, because engines quit most often on the slope of a steep street. When an engine died in traffic, the car became a definite road hazard. The idea was to get it moving again as quickly as possible. The 1914 Chalmers had a restarter system (electric) that got the engine running again as soon as it died

—automatically and without anyone touching anything. Many other makes offered similar restarters.

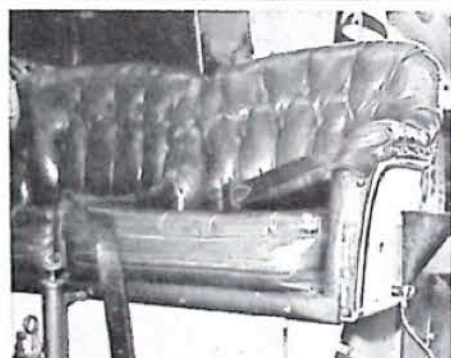
Multiple and convex mirrors, remote-control outside mirrors, windshield washers, turn indicators, adjustable foot pedals, headrests... all these have been with us for at least 40 years. Then, too, there have been all kinds of farther-out safety items like outrigger wheels to keep cars from tipping over on tight corners, bumpers on foot-long coils to absorb impact, etc., etc., etc., which somehow never made the grade.

But the historical lesson to be learned is that 1968 brings nothing really new to the automotive safety scene—it's just the first time so much has been put so thickly into so many cars.

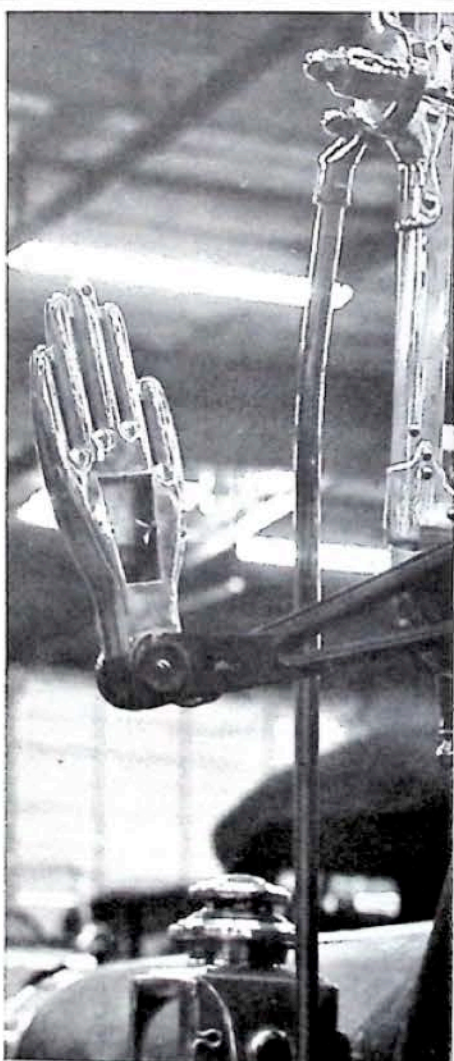
The author wishes to thank Harrah's Automobile Collection, Reno, Nev., for their cooperation in preparing this article. Photos were taken at Harrah's.



To dim the beam on these acetylene headlights, you opened the front and clipped in a semi-circular piece of green celluloid.



The earliest application of the seat belt was simple leather. It was used to hold a sleeping riding mechanic in his car.



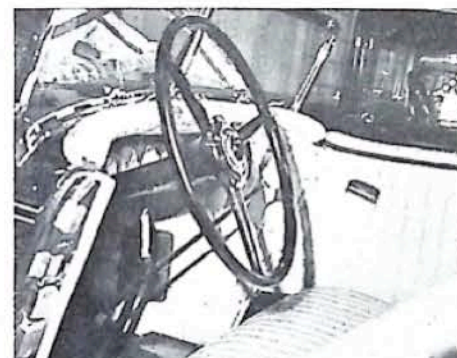
In the 'Teens when cars went from right- to left-hand steering this mechanical hand was introduced. It preceded our turn signal.



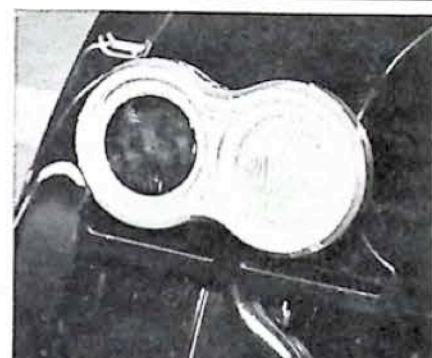
Because tire punctures were more than a nuisance in 1912, many motorists installed these steel-studded leather tire boots.



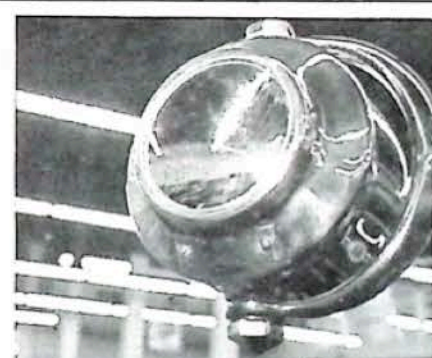
This side light antedates the GSA by 46 years. Serves dual purpose of illuminating running board and acts as a side light.



Padding was everywhere in this '31 Chrysler Imperial roadster—dash to doorsills, instrument panel and also door handles.



This combination stop/backup light was standard on '22 Wills Saint Claire. Backup was automatic when transmission in reverse.



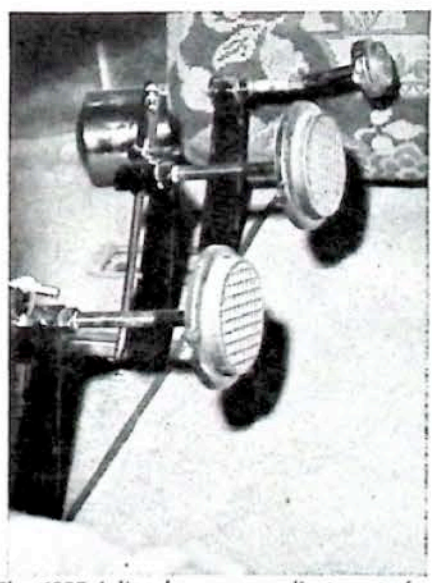
An early acetylene spotlight with a convex outside rear-view mirror built in. Nothing flimsy about this mount.



This '48 Tucker prototype has padded dash, pop-out windshield, breakaway mirror, knobless dash, "crash compartment."



The 1948 Tucker had a central headlight that turned with the wheels, illuminated around corners, similar to '30 Caddy.



The 1925 Julian has screw adjustments for accelerator, brake and clutch. Great for today's various sized drivers.



## How It Feels to Ride in a Turbine Race Car

So you race in G production and really go huh? Buddy-boy, let me tell you something... there's a new way to fly.

We had been invited to Palm Springs by the Howmet Corp., a New York based metallurgical company, to see their new turbine racing car. The desert sun was warm as we left the hotel and headed for the test track. Passing the guarded track entrance, our car negotiated a small rise and there it was, squatting in the middle of the road like a hungry shark waiting to strike. Somehow, the gleaming white race car looked out of place sitting alone in the rocky confines of a desert. Our cortege of cars parked and we went over for a closer look.

At first glance, the car doesn't look too much different from the usual piston engine sports prototype. Body and chassis were built by Bob McKee, who has a reputation for putting together some mighty successful sports cars. Chassis is of conventional tubular space frame construction. Suspension consists of coil-shock units and unequal A-arms in front, and reverse lower A-arms, single top links and parallel trailing arms in the rear. Steering is rack and pinion with two turns from lock-to-lock. Four-wheel disc brakes are used, and the body shell is aluminum. Weight is 1430 pounds.

It's only when you look under the rear deck lid that you begin to get the idea of what it's all about. Nestled behind the driver's compartment is the Continental Red Seal Turbine that provides the "Go." The engine is surprisingly small after looking at so many big bore V-8s, but don't let it fool you. Actual engine rpm is in the 60,000 range, which is reduced to 6700 at the driveline. At 6700 rpm it is rated at 330 hp with 650 lbs.-ft. of torque. The

engine actually puts out more than 900 hp, but uses 600 to run itself. Transmission is a simple 1-speed forward, dog-clutch type drive. Reverse is activated with an electrical drive mechanism.

After a thorough inspection of the car and a brief orientation, Ray Heppenstall, Howmet's Project Engineer, decided it was about time to appease our appetites and let us hear and see the little brute in action. Putting on his helmet, he proceeded to get in, making it look as simple as getting in the family sedan. He suggested we stand away from the exhaust tubes in the rear when he started it, just in case. After we moved back a safe distance, he kicked it over.

The Howmet sports car won't blaze any new trails in body configuration or design because, like piston engine cars, it must conform to FIA road racing rules governing Group 6 prototype vehicles. These rules call for certain minimum interior dimensions so the car could be used on the road if that were the maker's intentions. Howmet

certainly must have used the very minimum dimensions, seating was so cramped you couldn't have slipped from your bucket seat if you'd wanted to. Of course, only one seat is used for racing.

Turbine cars must conform to similar limitations with regard to engine size also. Starting this year, prototype competition cars must adhere to a 3-liter engine displacement limit. The Howmet car is equal to slightly less than 3 liters (183 cubic inches) under the FIA turbine/piston engine displacement formula.

When the engine had screamed to a high pitch and warmed enough for operation, Heppenstall had the cockpit gull-wing doors closed and moved off, slowly at first, for a few preliminary runs around the course. Picking up speed, he pushed it hard into the corners. The car handled beautifully, screaming like some prehistoric bird-ruptile through every turn.

Warm-up laps over, he pulled in. Now it was our turn. Off and running. Getting into the car was an anatomical achievement in contortionism. Knowing where each hand, foot and leg were to be placed was as exacting as any scientific formula. Once the barrier of the wide shelf, tube frame had been mastered, we slid into our narrow, bucket seat with a sigh. Getting two 6-foot, 200-pounders into that machine is an odyssey in itself. But the fun was just beginning. Fasten the seat belt. Close the gull-wing door. Sealed in.

Howmet's press release reads: "The interior of the driver compartment is insulated with sound deadening material and even the interior lining is of sound-absorbent fabric. When the vehicle is traveling at speeds of 50 mph and over, the sound the driver hears will be that of intake air and exhaust gasses." Not until after the ride did Heppenstall explain that interior lining would be added later, before actual racing began. Thanks.

One of the problems with turbine engines is acceleration lag caused by the high rpm peak. So, the object for good race performance is maintenance of high rpm at all times. Heppenstall solved the problem by installing a waste-gate system that diverts the gasses from the turbine blades when idling. The waste-gate thus maintains constant high rpms and gives fast acceleration from stall to peak speeds.

He solved the problem magnificently. We felt the G-forces taking over, pushing us into the tight bucket seat as he put his foot into it and plowed into the first turn. About 20 gauges mounted on a pod in front of the passenger all came to life. It was impossible to watch the road and all the dials, so we compromised by watching only the tach that was read-

ing 1600 rpm. 1600 rpm! How fast are we going? Ray! (lean closer) Ray! He signaled. The engine was really pulling in the air and screaming now. Forget it. Don't try to talk at 60,000 rpm over that noise. Or was it 1600. (He explained later that on a turbine engine, without a crankshaft, rpm is a relative thing. The tach is used as an indicator of speed and could be set at any number on the dial when used in conjunction with a pre-determined speed. The tach reading 1600 was only a temporary installation for a test.)

Out of turn one, we pisted it down the straight toward the hairpin. Noise level was not necessarily bad in the decibel category, but the high-pitched frequency of the discordant whine was much more piercing than the sound of a piston engine.

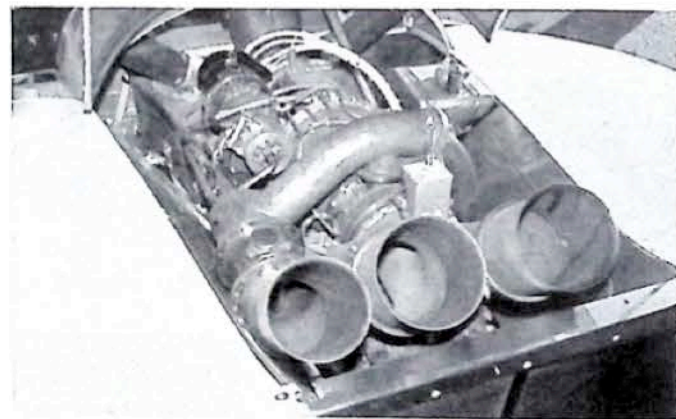
We seemed to be going relatively slow. That's what we thought until we started into the hairpin. We were pushed hard to the right against the door shelf and felt the seat belt bite in. The car rode and handled so smoothly it was deceiving. With no transmission it's just accelerator, brake, accelerator. He put it into the corner and let up on the accelerator. An effect similar to compression braking in a piston engine was immediately felt. The little car went through the turn like slicing warm butter. The

car felt as if it weighed 4500 pounds and was hooked to a cable under the asphalt. Half way through the turn he stepped on it and that quick response, G-force acceleration again. (After the ride he told us we were topping about 100 mph in the straight. Our mouth dropped open. It had seemed more like 50 until we hit that hairpin. He also said he was only using about 100 of the 330 hp, so it's interesting to speculate what a full-bore run around Le Mans would be like).

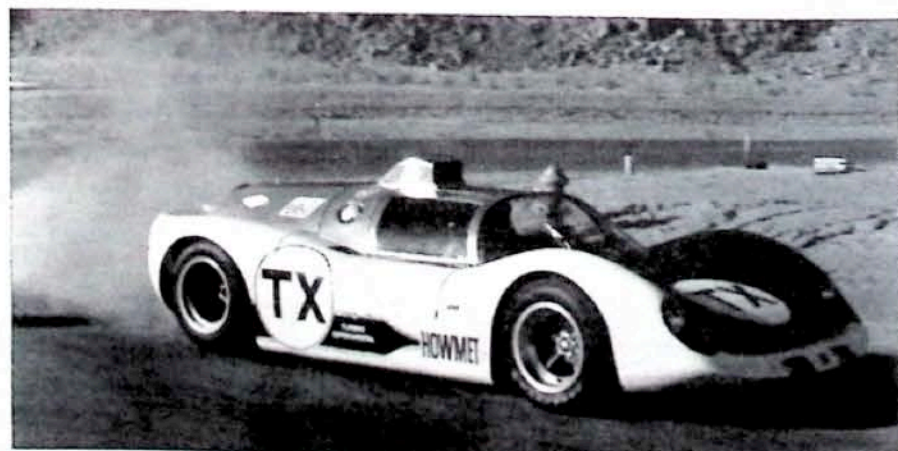
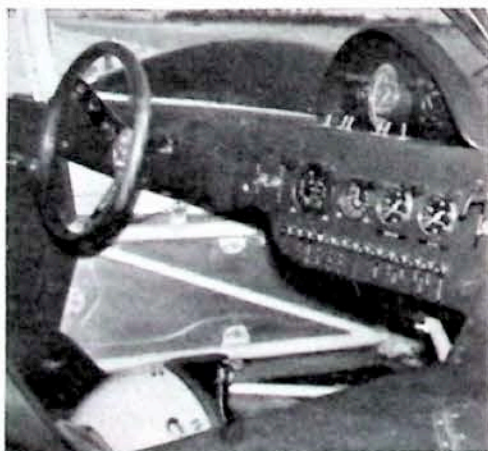
Out of the hairpin it was a line through the esses, the same cornering experience through turn one, and back down the straight. With each lap the car became more familiar and we were able to judge movements and driver and car reactions more easily. Then, just as we were getting in the groove, our laps were finished. Our ride was over.

We reined in. The 4-wheel discs pulled us down to a nice, even stop in front of our party. Pull up the door, unfasten the seat belt, go through the contortions again, and, back on solid ground. Next. Another hardy soul finally folded up correctly and slid inside.

With the high-pitched whine of the turbine rising to a shrill crescendo and reverberating off the immutable desert cliffs, they were off. *continued*



(Left) Getting in and out requires quadridextrous versatility. (Above) Turbine is small in comparison with big V-8, but really puts out the torque. (Below) Car handles superbly in all situations with no hesitancy. (Below left) Dash looks like instrument panel on 707; cockpit is crowded with two.



## Eight New Records at Bonneville

(Below) On Oct. 30, 1967, Fred Larsen, driving the Larsen-Cummins, Cal Custom Special, set eight new records in class "D" streamliner at Bonneville, Utah. Shown left to right are, Don Cummins, Joe Petrali of USAC, and Fred Larsen. The new records were achieved in only two runs.

Larsen broke records set by Frank Lockhart in 1928 in a Stutz Special, Rudolph Carraciola in 1939 in a Mercedes, and Donald Healey in 1954 in an Austin-Healey 100-S — records never previously touched. (Right) Relatively small displacement Chevrolet engine — 183 cu. in. — screamed to the tune of 275.994 mph during its run.





# Jerry Titus checks his oil every 4 seconds.



You probably check it only when you stop for gas. Jerry Titus seldom takes his eye off the oil pressure gauge. And it pays off. Like at Continental Divide, Mid-Ohio and Crow's Landing where he recorded victories in his Trans Am Races.

The oil he checks so carefully must be the world's finest. It's completely dependable. It's Quaker State Motor Oil, refined from 100% Pure Pennsylvania Grade Crude Oil, the world's choicest. It's the very same oil you can buy at your favorite dealer. In your car you won't have to check it nearly as often—because it's still the same dependable Quaker State Motor Oil.

Quaker State your car to keep it running young.



MOTORSPORTS continued

## McLaren repeat?

Although Bruce McLaren said he intends to strengthen his operation toward a repeat triumph in the Canadian-American Challenge Cup sports car series this year, the question arises: will his attention on formula racing curtail this movement? The New Zealand-born driver-builder had the opportunity to concentrate on last year's successful Can-Am campaign because BRM failed to deliver engines for his Formula 1 team. With world champion Denny Hulme jumping from the Jack Brabham camp to McLaren's side, it would appear winning a world manufacturers' title has more appeal for Bruce... even more than the \$99,000 his Group 7 crew picked up from last year's domination. McLaren, his designer Robin Herd and other key members charted the Can-Am series well in '67. Their intensive efforts were reasons why Jim Hall, Dan Gurney, Mark Donohue-Roger Penske and others found themselves deficient. By summer of '67, the McLaren group had 2000 test laps completed, an extraordinary preparation for any new model race car. McLaren said, "We'd be a second and a half slower if we hadn't had time last summer to test."

## Luck be a lady

John Surtees' victory at Las Vegas Stardust International Raceway in the Can-Am wind-up last year was befitting of the land of chance. The Englishman drove a year old car, a Lola-Chevrolet, which had been reacquired because a prospective buyer's check bounced. And, he completed the 210 miles first because previous leader Mark Donohue was coasting home with a gas-starved engine. Naturally, Surtees had to admit his luck was much better on the track than at the gaming tables. Everyone agreed.

## Foyt plans big year

Super-Tex, A. J. Foyt, who proved to a host of Doubting Thomases that he wasn't over-the-hill, has signed under a familiar banner for 1968. Bill Ansted Jr., and S. D. Murphy, thoroughly convinced that Foyt's troubled 1966 was just one of those nightmarish things, announced the signing of the 1967 USAC champion to drive for Ansted-Thompson for the seventh consecutive season. Since Foyt and Ansted-Thompson teamed up in '62, the Houston hotshot has won three national titles and the Indy 500-miler twice. Last May, Foyt became the fourth man ever to win the 4-cornered Indy speedorama three times. Ol' A.J. was asked after Riverside's Rex Mays 300 if he intended another intensive campaign in '68. He was hesitant in his reply. But Foyt is like the popular girl at the ball whose dance book was filled with signatures. All he needs is the roar of an engine—any engine—and the call of a promoter and he'll hop into anything that rolls. Already a 5-time champion and collector of the amazing total of 20,155 points, he still has higher goals to reach.

## USAC expands calendar

USAC to race in the rain? You bet!—at least on the road courses. The calendar has become so crowded there isn't enough room for rain dates. This year's Champion-

ship Trail schedule, which begins March 17 at Hanford, Calif., shows 23 events. Stardust Raceway and Denver's Continental Divide have been added to the ambitious slate. These two courses increase to six the number of road events. Coincidentally, only five dirt track races remain on the schedule. They are Nazareth, Pa., Springfield and Duquoin, Ill., Indianapolis Fairgrounds and Sacramento. Effective June 1 USAC will also go to wider wheel rims; probably 14 inches at the rear. Up to now the limit has been 9 1/2-inch rear rims, which is one reason why the championship cars were so much slower than both the Formula 1 cars and the Can-Am cars at Mosport last fall. The wider wheels and tires are available now but they won't be permitted until June because all the testing for the Indy 500 has been completed on the basis of 9 1/2-inch rims.

## New FIA affiliate

The Canadian Automobile Sport Club, the governing body for motorsports north of the border has been granted direct affiliation with the FIA, the world governing body, in Paris. The direct affiliation is in recognition of the fact that Canada is now the 11th country with a regular Formula 1 GP race for the world drivers' championship. Up to now Canada, like most British Commonwealth countries, has been represented at the FIA by the Royal Automobile Club of England.

## The Eagle flies

Dan Gurney may have only one Eagle in contention in '68 to be driven, of course, by himself. If the money becomes available there will be a second car, with Lodovico Scarfiotti as its possible driver.

## 4-wheel-drive GP car for Ford

Ford of Britain is working on a 4-wheel-drive Grand Prix car. Cosworth Engineering, which helped British Ford develop a Formula 1 V-8 for the 1967 season, will work on the 4WD project. The prototype will not be completed before the end of the year and thus couldn't compete before the 1969 season.

## Auto Racing March Calendar of Events

Feb. 24-25	Daytona 500 (NASCAR), Daytona, Fla.
Mar. 3	Weaverville Fireball 300 (NASCAR), Weaverville, N.C.
Mar. 10	Rockingham-Carolina 500 (NASCAR), Rockingham, N.C.
Mar. 17	Bristol Southeastern 500 (NASCAR), Bristol, Tenn.
Mar. 17	USAC Championship 150-mile, Hanford, Calif.
Mar. 23	Sebring 12-Hour (FIA-SCCA), Sebring, Fla.
Mar. 24	Richmond 250 (NASCAR), Richmond, Va.
Mar. 31	USAC Championship, Stardust 200-mile, Las Vegas, Nev.
Mar. 31	Atlanta 500 (NASCAR), Atlanta, Ga.
Mar. 31	U.S. Road Racing Championship (SCCA), Mexico City, Mexico

(Dates listed are tentative at press time. Check dates locally before event.) /MT

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# Q & A

early bird

**Q** In my garage sits my 1955 Thunderbird — about done for except for the 292 engine, which I plan to rebuild this winter. Do you have any performance tips that might help this sick bird from being last at the light? Also, could you tell me where I could purchase a soft top for this car? Dwight F. Hahnefeld Drayton Plains, Mich.

**A** The dwindling numbers of Whooping Cranes were brought to national attention, resulting in succor to this species. And although no California Condor has applied for it, it looks like help is on the way for them, too. The public is probably pretty apathetic about good ol' Eodinopteryx, but some of our Early Thunderbird-fancying readers can give you good advice. (Mr. Hahnefeld's street address is: 2370 Briggs.) Meanwhile, you might consider an engine/transmission swap. Just about all medium and small Ford V-8s built since 1955 will go into your 'Bird without undue trouble, and the latest automatics are far better mousetraps than the '55 vintage. Also, peruse some of the big mail order catalogs such as those of J. C. Whitney and Honest Charley. You'll find a surprising amount of stuff in these for your car.

stud service

**Q** I am going to buy some snow tires with studs on them. Do the studs wear off on asphalt roads, and is there any way to replace them? Jan Isaac Schiller Park, Ill.

**A** Yes, they do wear but not very rapidly, and yes, they can be replaced. For that matter they can be installed in tires that never had them originally. It may take a little inquiring around to find a tire shop equipped to do this, though.

de-horning air cleaners

**Q** Why is it that air cleaners on late model cars have such restricted openings? It is the popular custom around here to saw 6-8 inches off the extended, tapered horn, thereby enlarging the opening and supposedly increasing gas mileage. Will this actually give better mileage, and could any harm possibly result, provided that the filter is not disturbed? Philip A. Sanford Toledo, Ohio

**A** Constantly overlooked is the fact that air cleaners are designed to act as silencers, too. This is why the tapered horn. Furthermore, these horns will flow a lot more air than their appearance would indicate. Also, when you remember that, in normal operation, part throttle only is used most of the time, never demanding large air flows, the design makes more sense. However, when it comes to drag racing where the throttle is wide open most of the time, some restriction does occur. A .1- to .2-second decrease in e.t. is fairly typical when both cleaner and filter are removed. In most cases at least, we wouldn't expect to find any measurable difference in gas mileage after trimming the intake horn.



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ANTIQUe and CLASSIC Autos. Pre 1939, large size conv. preferred. Will pay for information leading to purchase. Literature and parts wanted. Samuel Sherman, 88-08 32nd Ave., E. Elmhurst, N.Y. 11369.

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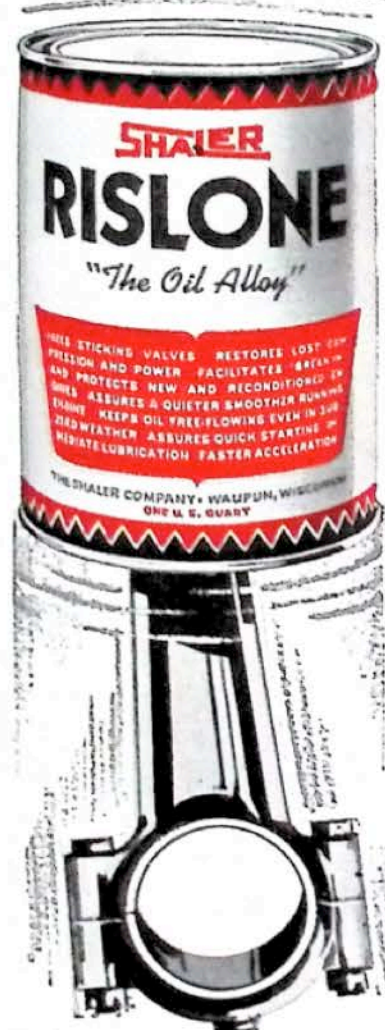
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## ABOUT INSURANCE

an EDITORIAL

Just when a few inhabitants of those inscrutable swamps of the car insurance biz get sick enough of insomnia to start cleaning house by themselves, the real villains crawl out and you discover that all those years of faithful crusading against an evil force have been virtually wasted.

The fact that the auto industry is fraught with inequities is old hat. Everyone knows the chop logic, blind prejudice and statistical naivete they use to determine our respective fates, is enough to destroy all faith in Man as a rational animal. But, even though we all suffer because of this, all we can say is that the insurance biz is "dumb," in the same way that organization men, expediency, and statistics themselves are "dumb." As long as the nomenclature experts don't humanize terms — as long as we are in the proper "classification" or "category" on their charts, as long as they don't have to recognize us as separate, mutually exclusive individual beings — they can approach the whole bag as though there are no ethics involved... no right, no wrong, and they can go right ahead and play all the clever little legal games they want and never make it seem right or wrong, according to the charts.

Unfortunately the ethic doesn't enter until after you're clobbered, and then, no matter how they cut it — charts, numbers, statistics — it all boils down to a right and a wrong for individuals, you and the guy that clobbered you. At a time like this, nobody who is really involved likes to play clever little games. Nor can anyone afford to. Ex-

actly, bad PR brought about by ineptitude among the companies while settling claims, and numerous fly-by-nights that fold and disappear as soon as the premium is collected, have stuck a shifty stigma to the whole business, with the result that several honorable firms have manifested a sincere attempt to sweep away the miasma left by their evil kin.

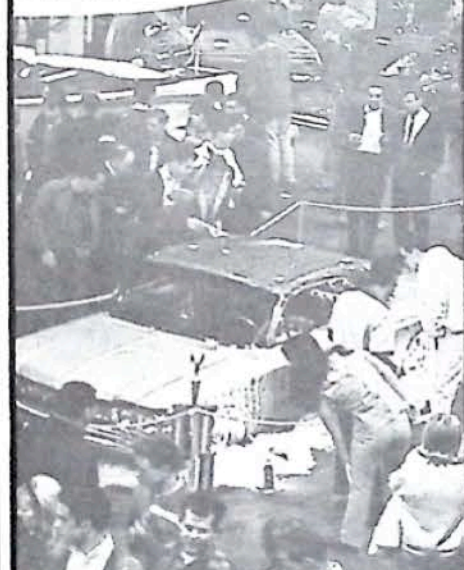
For instance, as ineffective as it is, a code of ethics has now been adopted by the auto insurance industry. In another gesture, several firms are now selling employee group auto insurance, which offers the attendant advantages of lower premiums, fast settlements and potential collective bargaining powers of the insured(s) if slow claims settlements by the insurer become a chronic problem.

Late in 1967, the National Association of Independent Insurers compiled a 38-page policy statement that sounds much like a compendium of moral

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codes, filled with all sorts of fine intentions, three of which are: give each applicant "individual consideration," provide insurance for every person who holds a driver's license, and support the enactment of laws regulating cancellation.

Perhaps the most extensively accepted of all reforms is the non-cancellation clause that has become an amazingly popular policy move lately. In fact, Allstate now has a 5-year non-cancellation guarantee that is lifted only by non-payment of premiums or loss of driver's license.

So, several pécadillos are being removed from auto insurance, but the most painful problem of the entire system still remains: litigation.

In 1966, 20% of the total claims payments went to lawyers. To complicate matters, our present "liability" or fault system is so time-consuming that costs in time absent from work, and medical expenses, can render nearly anyone — right or wrong — penurious before a decision can be made. There are ethics here... plain, simple, basic ethics... and they're all wrong.

Recently, an apparent solution under the name of Basic Protection Insurance was proposed by Robert E. Keeton of Harvard and Jeffrey O'Connell of the University of Illinois, both law professors. B.P.I.'s principal advantage is that it provides immediate coverage for those involved, regardless of "fault." The plan is substantiated by a similar program that has been operating for 20 years in Saskatchewan. Under the Saskatchewan Plan, an owner must purchase "basic insurance" from the Province along with his car license. In case of an accident, every expense is covered (within the usual limits), but most important, they are covered immediately, regardless of "negligence."

Of course, even without investigating the system fully, one can arrive at several legitimate prima-facie disadvantages of B.P.I. The most vociferous attack is that it nullifies the natural deterrent of "fault" — a concept that forces responsibility onto a driver. Therefore, opponents of the plan claim that knowledge by a driver that he won't be blamed for causing an accident would unleash all sorts of destructive impulses.

That argument might find support among the Society for the Prevention of Horseless Carriages in America, but it doesn't quite do it for sensible, valid, intelligent discussion. Anyone who is either suicidal or rich enough to go around bashing up his car simply because he won't be blamed, certainly isn't going to be stopped by a law in the first place. Secondly, "basic protection" does not eliminate fault. As it says, it's basic protection. If you feel

you deserve more from the other guy, go ahead and sue. If your damages are higher than those covered in the basic program, every code in the world would insist that you receive that retribution. In fact, the Saskatchewan government strongly recommends that you extend your full coverage with another policy beyond that.

Of course, it's socialistic, and we've seen too much of that in every phase of modern civilization to encourage more of it.

That's the beauty of B.P.I. — and the one that removes all previously valid attacks from the scene. It's a system that can be adopted with a few improved variations, by any independent agency, thus preventing government intervention. Again, liability would still be retained because a victim could sue for damages exceeding B.P.I.'s maximum payment, but up to a certain amount — say \$10,000 or \$20,000 — all injured parties are paid as expenses accrue. In essence, it solves the basic and most costly problem of court delays. Another very important advantage, and one that would attract most interested parties, is that the elimination of court costs enables the company carrying basic protection coverage, to lower premium costs considerably.

But there's a major obstacle in their way — a parasitic obstacle that has been nurtured by the agencies' misfortunes; namely, the only element in accident cases that stands to gain a dime... the personal injury trial lawyer. Protected by the euphemism of "professional," this glib-tongued middleman can manipulate your virtues, your time and your life, interminably, tallying hour after hour of all this debate to the welfare of — not you or the innocent victim — but himself.

Under our present system, he can feed off the pain of others and have nothing to lose; which seems to suggest that the lobby of lawyers that helped kill B.P.I. in the Massachusetts senate last year after it had been accepted by the house, might be at least a little bit significant.

The present insurance system simply does not work. It's archaic, and if you trust it to treat you equitably in a polemical case, you are consigning yourself to years of poverty, even if you win. New programs are absolutely necessary in order to keep the entire system from disappearing in chaos, and for that reason, selfish interests that prevent improvement must have our contention, and the new programs, our attention.

If the present state of auto insurance grows any worse, no number of forces — good or evil — will resist the grip of Big Daddy. And when that comes, as is already being threatened, our freedom of choice will be gone. /MT



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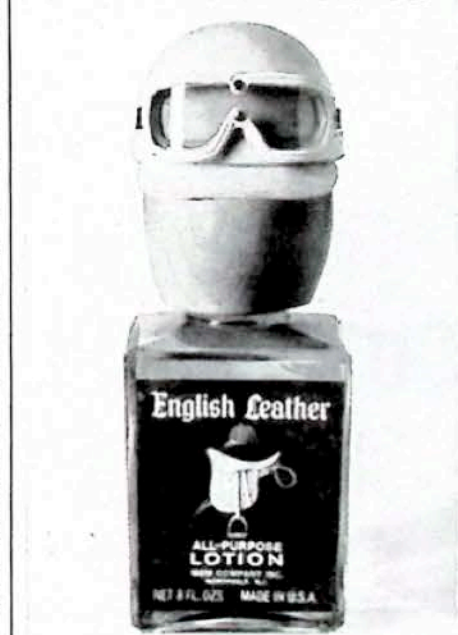
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A new street and trail bike is the Bronco, with double-tube cradle frame, telescopic forks, swing-arm rear suspension and heavy-duty brakes. Engine is 50cc Garelli 2-stroke turning out 5 hp with 4-speed trans and will do 55 mph. \$299 from P.A.T. Corp., Dept. MT, 1233 W. 15th St., Long Beach, Calif. 90813.

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**JUSTICE FOR ALL** "I was very disappointed with the material written on the supercars in the December issue of MT. I can surely tell by reading the articles, the man who wrote them doesn't give a hoot for Chrysler Corp. In every article on a Ford or GM product, the language is easily understood. But, when you run across one written on Dodge or Plymouth, you either need a dictionary or a larger vocabulary than I've got to understand what the author is trying to say! For instance, 'eunuch,' 'torpor,' 'atavistic' and 'eclat.' Another thing is the description of emblems on two different cars. Wouldn't you agree it is a little one-sided? On page 38 in the Coronet article you state, 'plastered on various facades of the car is the huge R/T emblem...big and red.' On page 36 regarding Oldsmobile you write, '4-4-2s are easily spotted by their low stance and big emblems.' As you can probably tell, I do give a hoot for the Chrysler Corp. I received a notice that my subscription was about to run out. If too many more articles such as these appear, it won't be hard to forget about renewing it!"

Edwin B. Koehler, Ainsworth, Iowa

*We applaud your abnegation with not being too captious with us, Edwin. You are an astucious observer, but our specious perspicacity, while trenchant wasn't intended as an obloquy or traduction of Chrysler. We feel no more obduracy about Dodge or Plymouth than any other car, in fact their styling wins our complete exculpation, we just don't want to be sycophants.* The Editors.

**ANOTHER CHARGER OWNER** "After reading the December MT I have doubts about the integrity, quality and consistency of your reporting. These result from the remarks in your Charger test, which are unnecessarily derogatory to the 66/67 Chargers. This is difficult to comprehend because when the fastback Charger was first introduced you carried an enthusiastic report on the car, and the fastback Charger was one of your candidates for 1967 Car of the Year. Also, after running down the lines of the fastback Charger, in the same issue, you compliment the Ford Torino GT fastback on its 'good looking roofline.' I happen to own one of those '66 Dodge "shipping crates" and am rather fond of it. Now, I have no quarrel with you over your enthusiasm for the '68 Charger. However, I don't think it is distinctive or unique anymore. I don't remember you ever levying such sarcastic criticism at any other car. I'm sure this won't be the only letter you'll receive on this subject. I will eagerly await your comments on this letter."

Wm. F. Druckenbrod, Rockville, Md.

*Well, you see Bill, we parked our Charger down at Herbert Hoover Elementary School and these kids started playing on it and we just didn't have the heart to...well, you know.* The Editors.

**SUPER LARK** "Your supercar issue was great! Keep up the good work. However,

in your history of supercars you failed to mention the great Studebaker Super Larks of '63 and '64. Those cars turned in equal or better times than many of the '68s. Studebaker certainly deserves some mention for their valiant efforts and 'real' supercars."

Louis Van Anne, Phoenix, Ariz.

*Come on, Louis, bet you put everybody on.* The Editors.

**DODGE MINI DRESS IS BACK** "In the analysis of the hundreds of letters received from all over the world as a result of your Motor Trend story (MT, Sept., '67, Interchange), all inquiries liked the dress and wanted additional information where they could be purchased. Your readers and those writing in, included all branches of military personnel; housewives; managers of electronic corporations; department stores;



college fraternities and several television shows. The latest request received is from Germany with an interested person wanting to be the European distributor. Letters have been posted from virtually every state in the United States, as well as San Juan and Australia."

Jack McFarland,  
Dodge Div, Chrysler Corp.  
Beverly Hills, Calif.

*If you still don't have a "New Dimension" dress, contact Chick Saffell, Sport Service Corp., 2518 West Burbank Blvd., Burbank, Calif. Mail order prices are: Dress, \$3.75; Terry Skimmer; \$7.75; Scoop Flair, \$9.75; Acrylan A-Line, \$10.75; and Turtle Flair, \$11.75. Include 25c for handling.* The Editors.

**PORSCHE ALONE** "Our letter refers to your Jan., 1968, issue. The feature titled 'European Hot Line,' page 60 states that 'Porsche,

now owned by VW, has...' According to recent articles, Porsche KG has been favored with a research and development contract from Volkswagen A.G. The contractual relationships do not indicate that Porsche KG has been bought by VW. In fact, it might demonstrate VW's confidence in Porsche. We must state that all available information indicates no change in the position of Porsche KG. It remains independent."

O. Erich Filius, Executive Vice President  
Porsche of America Corp., Teaneck, N.J.

*Pardon us if our red face is showing. We misinterpreted the research and development agreement. Porsche still carries its own banner.* The Editors.

**CLEAN AIR ALLY** "Congratulations on your 'Ford's New Clean Machine.' (MT, Dec., '67.) Motor Trend recognizes that the fight for clean air is not all bad. Repeatedly we have emphasized that clean exhaust means a better engine and better efficiency, and like Dennis Shattuck, in his article, I agree. The '66s and '67s were an interim measure, necessitated by our unique needs for clean air. Now you see, repeatedly, throughout the auto industry, application of improved engineering technique and know-how. This has resulted in over half a million gallons of gasoline being used in California's vehicles rather than being put out into the air we breathe. Motor Trend has not only put forth the facts, but has enthusiastically supported the principles of clean air through engineering."

Eric P. Grant, Air Resources Board  
Los Angeles, Calif.

*Hopefully, great technological strides will continue to be made in engine emission control, and in the development of cleaner burning gasoline from the Oil Industry.* The Editors.

**WHERE'S THE CALENDAR?** "Wish to express my sincere thanks and appreciation for winning a place in your May/June '67 contest and receiving a case of MacMillan Oil. I regret you don't list coming racing events, only results. We don't have any large tracks here except the fair grounds at Trenton, N.J., and Langhorne, Pa. We would plan to ride to Charlotte, Atlanta, Darlington, or Daytona if we knew the racing dates in advance."

Geo. Hoffman, Palisades Park, N.J.

*See this issue, page 90 for racing calendar.* The Editors.

**PRICE IS RIGHT** "In the December Motor Trend you have a comparison chart for the supercars. I have a question. Is the price stated the base price with standard equipment or the price as equipped and tested with performance options?"

Roland Pidnezz, San Francisco, Calif.

*If you look closely at the chart, you'll find the price listed is the base retail price and option prices are listed below, where available.* The Editors.

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