

CAR and DRIVER

AUGUST 1971/60 CENTS

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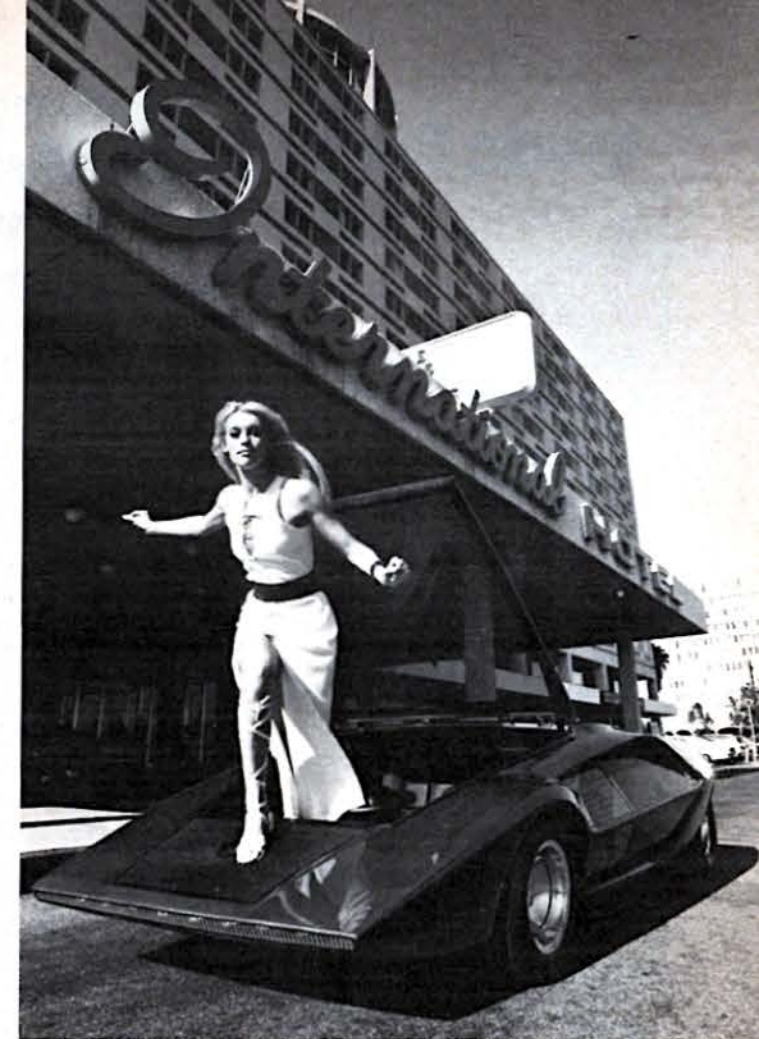
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THIS MONTH'S COVER
Lincoln-Mercury Division, along with some new members of the Ford family, like de Tomaso Automobili, Ghia and Vignale, have a better idea when it comes to "captive imports"—which photographer David Picken captured. For more on the new Pantera, see page 32.



Com'n' Dr. Zarkov, Flash is busy thwarting Ming the Merciless. You can tell me what this is. For the Doctor's answer turn breathlessly to page 60.

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CAR and DRIVER AUGUST 1971 • VOLUME 17 NUMBER 2

AUG.

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Inside Car and Driver

Trying to make a publishing prediction on which way the Indianapolis 500 will go is an annual high-stake bet. One thing you don't do is look around the office and see who is free and simply send him down to Indy for the month of May to see what he can come up with—that technique puts too much trust in luck. The immense size of the Speedway, plus the number of entries, plus the crowds in excess of 300,000, requires that special attention. And those are just the known quantities. In addition the Indy 500 has a habit of never coming off as expected. This year, for example, the odds-on favorite was Mark Donohue, who throughout the month of May had continually kept discouraging everyone else with the seemingly effortless way in which he reeled off new lap records—then Peter Revson came out of the pack to beat Mark to the pole, and everyone by this time knows what happened to the Donohue-Penske car in the race. And as the pressure built up towards raceday wild rumors began to be telegraphed through Gasoline Alley: Would Mario Andretti break with Andy Granatelli and (1) concentrate on Formula One, (2) sign up with John Mecom . . . Was McNamara really suing Granatelli for \$30,000 in back payments on the two cars he had built . . . What were all those Japanese guys doing constantly photographing the McLarens and STP cars? . . . Why was Porsche's Huscke von Hanstein on hand? . . . Why was A.J. Foyt so calm? . . . Would women be allowed in the pits? And then there were the unexpected acts: Bobby Unser spending several days helping Roger McClusky set up his car to qualify; Dick Simon running carburetor tests the night before the 500 out on Indianapolis Raceway Park's dragstrip. All that is the type of information that rarely gets in the race report, but there is other information as well, pertinent information that sometimes, because of the way the story is written, because of space restrictions, because of lack of time, that isn't printed. That's why this year we set up a special task force to trace down the vital statistics on every qualifying car and driver. It's the detailed information that you can't get anywhere else and it required two specially talented experts to acquire it.

Our vital statistics team consisted of six people, and was led by Don Davidson. Davidson, who has the full-time job of Statistician and Historian for USAC—and full-time job it is with USAC sanctioning some 140 different events this season—is uniquely qualified to handle this assignment for *C/D*. As a youngster in England he had been an *aficionado* of Grand Prix racing but somewhere along the line GP cars lost their fascination for him. Don says, "It probably began when the rear engine cars came in and the drivers sort of disappeared. Somehow, they seemed to lose their personality." Indianapolis had always been the classic in Don's view anyway, and he began to read everything he could lay his hands on about the Indy races. He remembers *Floyd Clymer's Indianapolis Yearbook* in particular and found that he could easily commit practically any bit of trivia he read or heard about Indy to memory. A student at the time, Don claims he couldn't remember a thing when it came to school, and recalls his father saying: "All that's fine but where will it get you." Well all that stored-up information about Indianapolis paid off when he came here in 1964 to see his first 500. Somehow he managed to get into the garage area where he soon found the opportunity to talk about Indianapolis. The Indy insiders tried to trip him up but wound up being fascinated by the man who knew everything there was to know about all of it.

That's how it began and the following year, in 1965, Davidson was offered the full-time position he now holds. Don now has his own 30-minute radio show each night during the month of May in Indy, a sort of stump-the-expert program. It all goes to show that sometimes things do work out, and for *CAR and DRIVER* there was no question that Don Davidson was the man for this unique and difficult assignment.

Floyd Clymer

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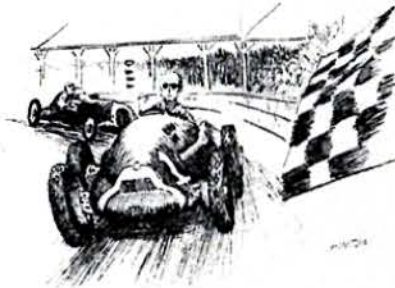
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Out-spark, out-filter, and out-glitter everybody on the block with the new AC Performance Line

AC Performance Spark Plugs deliver more fire power. Here's why: Internal steel gaskets withstand higher operating temperatures. A special nickel-alloy center wire resists corrosion and erosion. And a specially designed insulator helps maintain proper heat range.

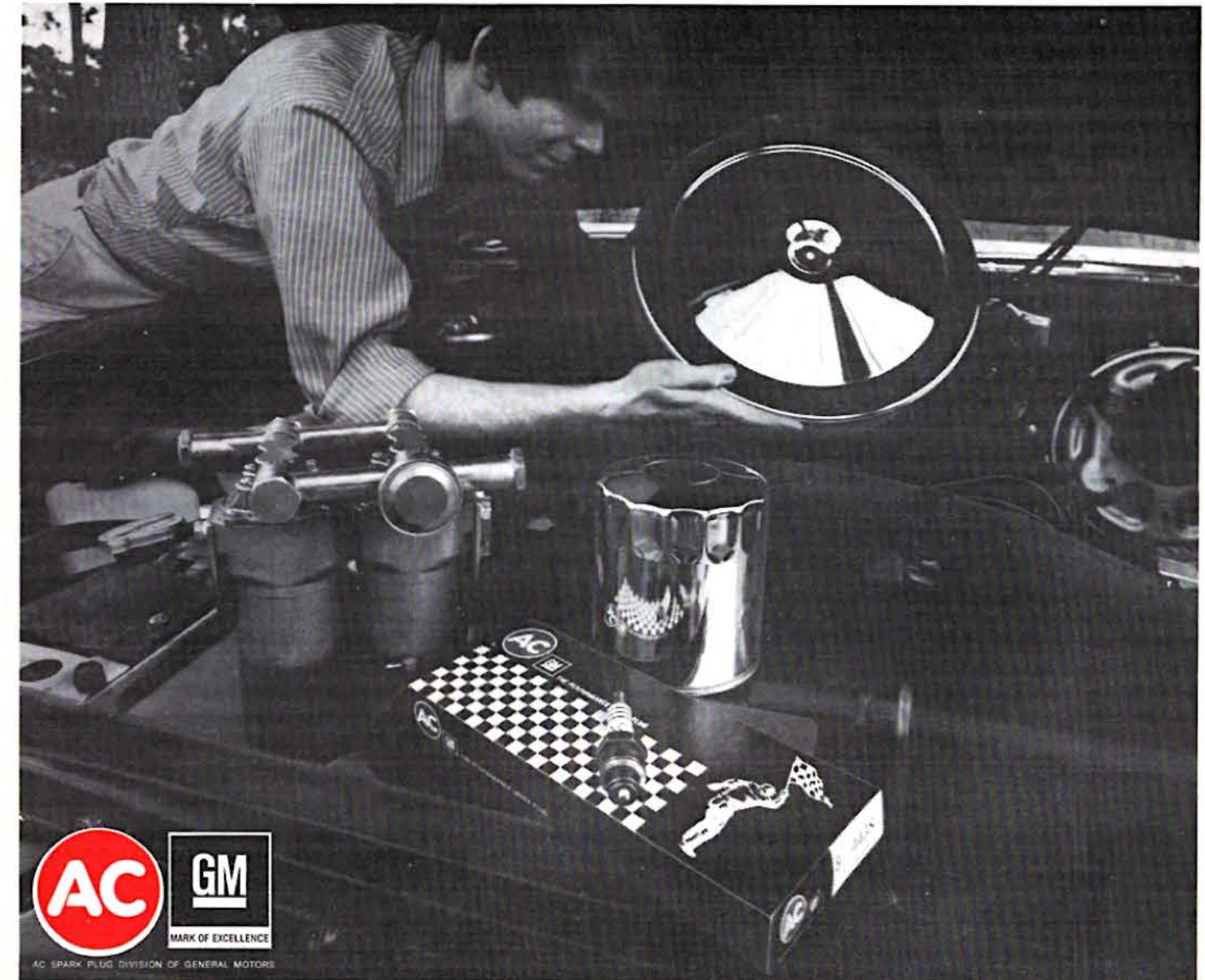
AC Performance Oil Filters have over 20 percent more filtering area than the closest competitive performance oil filter . . . a stronger center tube, thicker baseplate. Pressure-rated at more than five times' normal oil pressure. All AC Performance Oil Filters are finished in glittering chromeplate.

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Filter assembly is open the full circumference, allowing maximum airflow. Your engine is protected by the replaceable air filter element made with AC's specially treated filtering material.

The 12-volt electric fuel pump can be mounted anywhere along your fuel line to deliver up to 75 gph under the most demanding conditions. It features a safety switch that shuts off the fuel pump if oil pressure drops below 2 psi.

Get more fire power, filter power, air power and fuel power from AC. Specify the new AC Performance Line.



● I don't know about you, but I'm beginning to feel a little bit left out. Every time I pick up a newspaper there's a new public opinion poll telling me that 54.5% of my contemporaries' Little League Baseball is a Commie Plot; or that 34.6% of the nation is convinced that J. Edgar Hoover, John Wayne and William Westmoreland are planning a coup d'état; or that 27.4% of the people who watch TV on Saturday morning agree that *The Child Molesters* is one helluva TV show. Now with all those Princeton-cut pollsters in black wing-tip oxfords and rayon ties ringing doorbells and calling up every "nth" name all the time, how come no one has ever asked me what television show I'm watching, or if I "agree," "disagree" or "have no opinion" as to whether separate statehood should be granted to Paramus, New Jersey? Even the census bureau didn't care enough to ask me anything more than my address and the number of people in my family last year. It's getting so that I'm more than a little suspicious that the poll-taking organizations not only employ guys to ask the questions but they also have professional opinion givers on their payrolls. Agreeing or disagreeing or having no opinion. After all, it certainly would cut down on overhead if a poll taker could ring the doorbell or call up some guy and know for certain that he was all primed to shoot back an answer without wasting time asking, "What are you, mac? Some kind of encyclopedia salesman?"

Which leaves an awful lot of us out in the cold. Well, here's your chance to do something about it. The Car and Driver It's Better Than Talking To Myself unofficial poll for educated (we figure you're going to have to read the questions and write in the answers yourselves), affluent (it's going to require an envelope and an eight-cent stamp—if you want to be counted), automobile enthusiasts (why else would you be reading *Car and Driver*?):

1. An enthusiast has more cars to choose from this year than he did in 1967.
 Agree Disagree
 Have no opinion
2. If someone gave you a blank check to buy the "safest car for all driving conditions" from the following list please check off your first choice.
 Checker Marathon
 Cadillac Fleetwood
 Toyota Corona
 Ford LTD
 Ferrari Daytona

3. Would you want your daughter to marry a car dealer?
 Yes No Indifferent
4. The best thing for racing would be to have a czar in control of the entire sport.
 Agree Disagree
 Have no opinion
5. If you agreed with the preceding question, the best person for the job would be:
 Bill France
 Bill Smythe
 Hank Loudenback
 Brock Yates
 Judge Landis
 Judge Crater
 U Thant
 Howard Cossell
 None of the above, my choice is:—

6. The men most responsible for designing what next year's cars will be like are presently employed by:
 The manufacturers
 Civil Service
 Insurance industry
 J. C. Whitney

7. The greatest spectacle in racing is:
 Indianapolis 500
 Daytona 500
 24-Hours of Le Mans
 Grand Prix of Monaco
 Andy Granatelli

8. From an enthusiast's standpoint the cars that point the way for future development on the market today are:
 Detroit-made little cars (Vega, Pinto, Gremlin)
 Sporty cars (Mustang, Camaro, Firebird, Javelin, Challenger, Barracuda)

- Super Coupes (Capri, Opel Rallye, Fiat 124 Coupe, Vega GT)
 - Sport Sedans (BMW 2002, Alfa Berlina, Saab 99)
 - Cars using alternative powerplants (Mazda-Wankel)
9. The National Highway Safety Bureau could become more effective and gain more public and manufacturer support by concentrating its efforts on improved driver training and pre-crash performance standards (braking, evasive maneuverability, etc.) than by its present concentration on post-crash passenger protection.
 Agree Disagree
 Have no opinion

10. The last question is a free-form with only style points being awarded. In fact, it's so free-form that you'll have to supply the questions to fit the answers we supply. In fact, we'll even sweeten the pot by offering our treasured copy of *Automobile Driving Self-Taught* by Thomas H. Russell, ME., LL.B., for the best question.

-
-
-
- _____ ?
 1967 1972 1975
 All of the above
 None of the above

Now that you've completed the first not-necessarily-annual C/D IBTTM survey form, neatly rip out this page and send it to:
 Car and Driver IBTTM Survey
 One Park Avenue
 New York, N.Y. 10016



Editorial

A SPORTS CAR YOU CAN AFFORD WHILE YOU'RE STILL YOUNG ENOUGH TO ENJOY IT.

It's a cruel trick of Fate that most sportscars are too expensive for many of the people who get most out of them—people under 25.

That's why we designed the 850 Spider. It's the lowest priced true sports car you can buy in America. It lists from \$2,294.*

And, for many people, it's the best looking sports car on the market under \$10,000.

Fiat has more experience than any other car maker in the world when it comes to building small high

performance engines.

The red line on the 850 Spider's power unit is all the way up at 6,500 rpm and it enjoys working at those speeds.

And with disc brakes in front and independent suspension all round, you get all the road holding you need to handle the hard driving this car encourages.

It's one of the kinder tricks of Fate that the best sports car under \$3,000 is the one that's furthest under \$3,000.



FIAT

The biggest selling car in Europe.

*Suggested retail price East Coast POE. Local taxes and dealer preparation charges, if any, additional. Prices slightly higher in Midwest, South and West Coast.

Letters

CHOOSING READERS' REPLY

The results of your Eighth Annual Reader's Choice Poll were very interesting but not meaningful. What is represented is a kinky kind of wish book. I'll bet that a dog of a car would make it high on your list if all the reports of this car would be glowing with praise.

Thought: How to pick the Best Super Girl; the Best Compact Girl; the Best All-Around Girl.

Eric M. Halskov
Cranbrook, B.C.

Not a bad idea, Halskov. We could have the Best Project Girl and give her away at the end of the year.—Ed.

I consider this poll to be the biggest joke since Guy Lombardo. Out of 14 categories, six to Chevrolet indicates the type of reader (enthusiast) you now have.

Dean Tinker
Chester Pa.

Only one category surprised me, and that was for the Best All Around Car.

I was appalled that anyone could vote for the 'Vette. It's an excellent sports car but that is all. I hope that next year *C/D's* readers are more careful in their choices.

Chip Rubenstein
Fairfield, Conn.

HAUNTING TYPOS

The new Mazda RX-2 (*C/D*, May) sounds like an exciting little car.

Wish you had gotten into the technical details on the 3.75-foot turning circle as this is certainly a breakthrough of some sort. The same holds true for the 30.5 turns lock-to-lock of the steering.

Such is the price of progress, I suppose.

Raymond W. Smith
Warner Robins, Ga.

If you want to complain, Smith, do it before the spec pages come out.—Ed.

Enjoyed reviewing the very comprehensive test of the Mazda. I assume that the mechanical advantage of a 30.5 turns lock-to-lock steering system results in the remarkable 3.75-foot turning circle.

Paul B. Sweeney, Jr.
Syracuse, N.Y.

Does your proof reader get someone to drive him home or does he attempt it himself?

Paul W. Knowles, Jr.
Houston, Texas

Why the 30.5 turns lock-to-lock?

Jon Ian Merker
Sacramento, Calif.

To turn it around in 3.75 feet.—Ed.

Wind it up to 7000 rpm with 30.5 turns lock-to-lock on the steering wheel and it swallows itself in a 3.75-foot turning circle. Only the Japanese could have done it.

John H. Bagley, Jr.
Modesto, Calif.

What a freaky car. What else does it do? Pick up its fenders and dance around?

Chuck Bloodgood
Windsor, Ontario

IN RE DONOHUE

In response to the Mark Donohue Javelin Viewpoint (*C/D*, May) his ideas are good but who will hear them.

Driver education is particularly bothersome. Would you believe that there are places in North Carolina where an applicant can get a license by passing the written test and does not even have to take a road test of any kind?

James Brooks
Wilkesboro, N.C.

Concerning the Donohue Viewpoint, what do you get when you cross a prostitute with a computer?

Unsigned
Colorado Springs, Colo.

Somebody who won't sign a letter?—Ed.

AND YATES

Brock Yates should know that the reason racing is not as big as it could be is so obvious that it is a surprise he missed it (*C/D*, May). Aside from the outrageous admission prices and rules, rules, rules, it is the lack of identity. Who the hell cares about McLaren's Trans-Ams Can-Ams Flim Flam. I want to see a pair of TR6s or a Morgan or an MG battle it out at Le Mans. Two VWs in a sedan race are a lot more fun than two \$40,000 Ferraris that nobody can ever own or drive.

Jim Gonyeau
Armada, Mich.

Who is left to lead the good fight now that Yates has seen fit to prostitute himself to the GM power structure?

William A. Boger
Garden City, N.Y.

Mark Donohue?—Ed.

Yates' piece on the reorganization of racing was superb. But an editorial in *C/D* is not going to improve the sport. Maybe the readers can generate enough pressure to shake the racing hierarchy from their bickering and fighting.

David J. Denkers, Jr.
Lafayette, Calif.

MATCHRACE

Patrick Bedard's Matchrace (*C/D*, April) was nothing less than sensational. It was well written, accurate, and timely. A welcome addition to the usually long list of road tests found in automotive journals.

Stephen B. Miller
Groveport, Ohio

I am not easily impressed but I must say that Matchrace was truly one of the most moving stories I have ever read in a magazine.

Several of my friends have read the article and they agree it is a masterpiece.

Howard Gutman
Glendale, Calif.

SHEPHERD'S FLOCK

I have just become a regular reader of *Car and Driver* for one main reason: Jean Shepherd's column. I run out to get each month's issue and immediately turn to his latest adventure.

As long as you keep Shepherd's articles coming, I'll be a reader.

Karen Scott
Cedar Knolls, N.J.

Once again you have made publishing history. I was almost fooled by Jean Shepherd's April column but in the end I saw through the camouflage. Jean Shepherd is really John Wayne!

John McMillan
London, England

C/D's SPORTS

Leon Mandel's column (*C/D*, May) ignores the fact that the experiment made by the SCCA regarding the introduction of professional racing has failed.

Seventy percent of our membership is composed of volunteer workers, many of our drivers will always regard a victory kiss from their wives and a loving cup as the true symbols of victory.

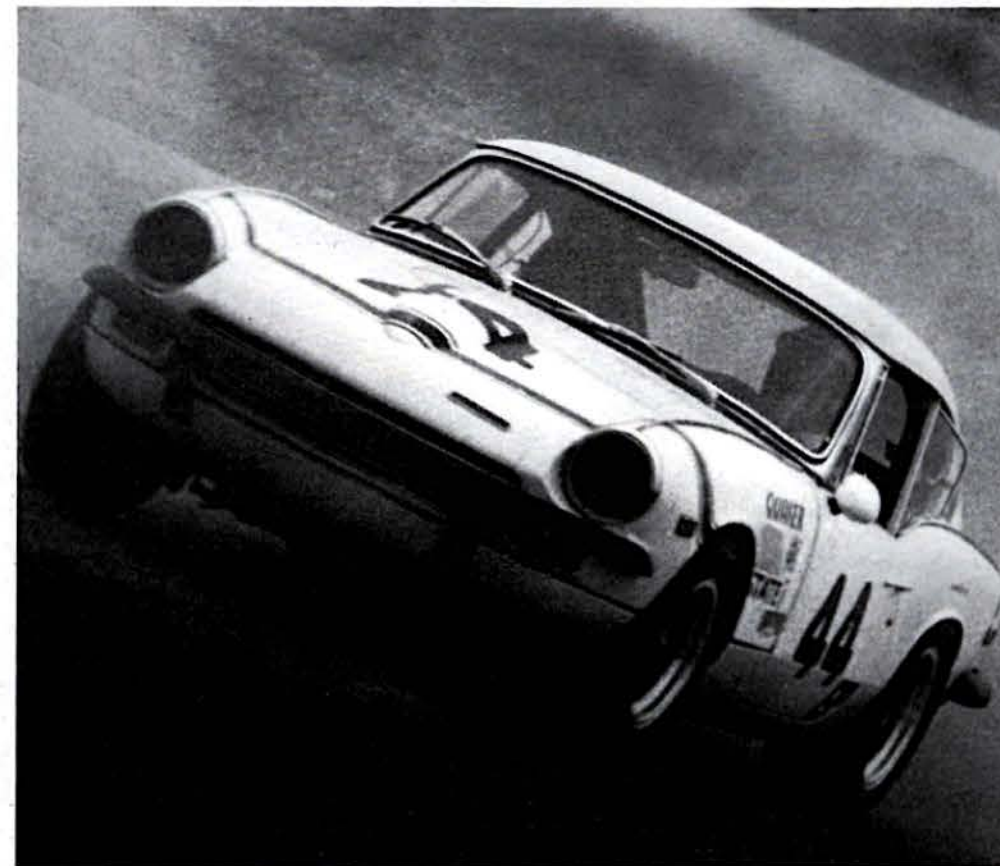
Let's keep the fun in racing.

David Barnwell
New York, N.Y.

I have followed your reports of the club racers/pro racers with somewhat detached and academic interest. So long as I was able to race I bought the package that "pro

CAR and DRIVER

Is oil foaming more of a problem for #44 than for your street machine?



Not if your car has a high compression engine, and you drive it at expressway speeds for long periods. Under conditions like that, your motor oil is facing virtually the same maximum torture as the oil in a fast-moving racing car.

That's why you need the maximum oil: Quaker State Racing Oil. Unlike some oils, Quaker State won't turn to foam because of the churning action of air and blow-by in the crankcase. And it won't thin out or thicken up in fierce engine heat.

Every drop of Quaker State Racing Oil is refined only from 100% Pure Pennsylvania Grade Crude Oil. It's specially refined to resist foaming and high-temperature breakdown. The film strength never quits, so Quaker State gives you maximum protection from wear on bearings, pistons, cam lobes—every moving part.

Give your high compression engine the maximum oil. Quaker State Racing Oil. You can buy Quaker State in more places than any other motor oil in the land.

Quaker State your car to keep it running young.



TUFF PUT-ON



Delta 60 Trans-Am

FEATURING BELTED DYNACOR RAYON

CONSTRUCTION

and Raised White Letters

When you decide to take off those original equipment tires, put on Delta 60 Trans-Am, made with two strong belts of Dynacor high-tensile, super-strength rayon cord. They're tuff! So low and wide, they look like they're movin' even when they're standin' still. Big raised white letters give them a wild and racy look. Dynacor construction gives them long mileage and easy ride. The Delta Trans-Am gives you the muscle to leave the others behind.

Delta
DELTA TIRE CORPORATION • HOUSTON, TEXAS 77024

Delta dealers everywhere in the U.S.A. Check the Yellow Pages for the one nearest you.

racing was necessary to club racing"; that it would lower costs; that it would offer more and better racing.

That is, until this weekend when a lousy regional Formula Vee race was cancelled because the pros used all the track time qualifying for their big race on Sunday.

Ed Gustin
Westminster, Calif.

How come you reduce many interesting stories to news briefs in *Sport*?

Matt Daly
Seattle, Wash.

It's a question of space, better some mention than none at all.—Ed.

BY THE LIGHT OF THE MOON

What the hell is an advertisement for a General Electric stove (*C/D*, May) doing in *Car and Driver*?

Paul T. Bisesti
Longmeadow, Mass.

Offering a viable alternative to Brock Yates.—Ed.

I am not going to be reading *Car and Driver* any more and neither are a lot of my friends because of the language you used in your TR-3 report.

Hall Faulkner
Clinton, Ky.

Gosh all fishooks, Faulkner, what kind of an attitude is that?—Ed.

Wow, is *C/D* getting bad! Over 56 pages of ads in a 114 page magazine. Even an ad for a stove. If you publish this letter don't put some stupid remark under it.

Paul Davis
West Roxbury, Mass.

O.K. Davis, you can share yours with Faulkner.—Ed.

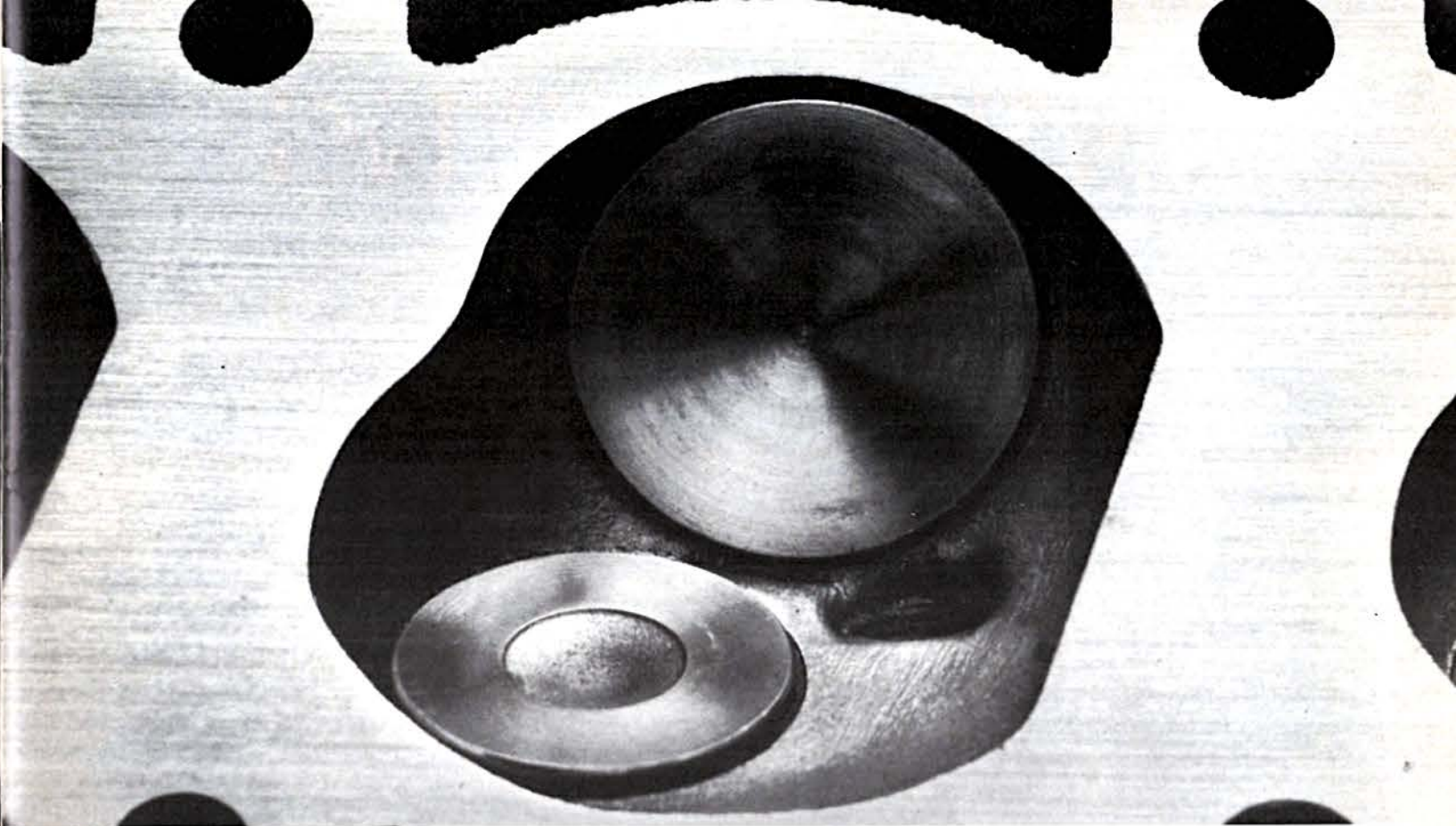
THE OTHER SIDE

One of Brock Yates' most devoted readers just gave me a copy of the article reporting that Professor David Klein and I "take a lethal swipe at the entire realm of speed laws" (*C/D*, January). We did not either state or imply that speed laws are not warranted. We did say that the traditional methods of traffic law enforcement are working least well for those individuals who are the highest risk of crashing.

There are two major reasons for speed regulation. First, speed is a factor in many crashes. Second, in crashes at speeds above 60 mph, the number of fatalities and serious injuries per 100 occupants rises astronomically. And the higher the crash speed, the greater the proportion of fatalities.

Julian A. Waller
Burlington, Vt.

CAR and DRIVER



Our exclusive Dreikugelwirbelwannenbrennraum.

You get it in the new BMW Bavaria.
6 cylinders. 2.8 liters. 130 mph. Under \$5,000. Wundercar!

What is it? Take a little free German lesson:

Drei means three.

Kugel is ball or hemisphere.

Wirbel means swirl.

Wannenbrennraum means combustion chamber.

Put it all together and you have a triple-hemispheric swirl-action combustion chamber. The main reason why the power output of the new BMW Bavaria 2.8 liter engine beats any automobile engine its size.

Our engineers have contoured the new BMW's cylinder heads

this way to produce smoother ignition, more complete combustion and more efficient utilization of fuel. The result is a powerful, quiet-running engine with long, trouble-free life. An engine that hits 130 mph with ease, lets you cruise effortlessly at 120 mph.

And we haven't neglected your comfort, either. The interior of the new BMW Bavaria is roomy, with an understated elegance that makes the car unique as a sports sedan.

Why not go to your nearest BMW dealer and let him show you? Better yet, ask him to let you test-drive BMW's new Bavaria. And if you think our Dreikugelwirbelwannenbrennraum is something, wait till you see our Doppelweikreisbremsanlage.

BMW's are available in nine different four or six-cylinder models. Suggested retail prices range from \$3,015 to \$8,453 P.O.E. New York, U.S. Importer: Hoffman Motors Corporation, 375 Park Avenue, New York, N.Y. 10022, 12541 Beatrice St., Los Angeles, California 90066. Dealers Coast to Coast. Advantageous European Delivery Program. Write for free brochure No. CD-8

BMW
Bavarian Motor Works
in Munich, city of the 1972 Olympics.



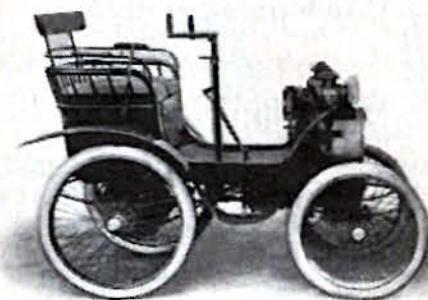
INTRODUCING

the world's largest
producer of front-wheel drive cars.



Our first front-wheel drive car, the Renault 4.

That was over 10 years ago. Today we make over 4500 front-wheel drive cars a day. Nobody else even comes close.



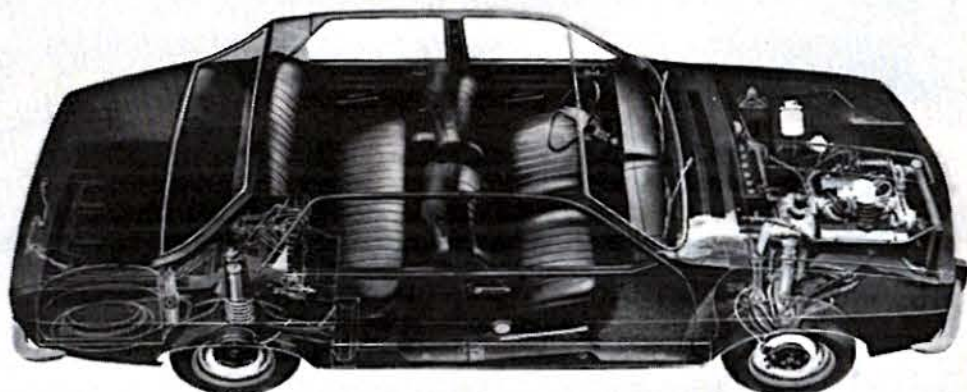
1898. Even we didn't start with front- wheel drive.

This is the rear-wheel drive Voiturette that started it all. Long before the Model T was a gleam in Henry's eye. Since then we have grown into one of the largest automobile companies in the world. We sold over a million cars last year alone. Not counting trucks and tractors.

The singular benefits of front-wheel drive.

If you look at the x-ray drawing you'll see the drive wheels are in front for better

It boils down to this—we produce more FWD than anyone else in the world. So it shouldn't be surprising that we know how to bring you the best that FWD has to offer.



handling with the engine over them for better traction.

With FWD the wheels that make the car go are the same wheels you steer with. With rear-wheel drive, the back wheels only want to push in one direction. Straight ahead. And they would if the front wheels didn't force them to pivot. With FWD there's no disagreement between power and steering. The front wheels call all the shots and the rest of the car follows along obediently.

Putting the engine weight over the front wheels also increases directional stability. More steering control, less problem with cross winds.



The Renault 16— America's first look at our FWD.

We introduced it here a few years ago. After it took "Car of the Year" in Europe. It sells for \$2695*, gets up to 30 mpg, converts from a sedan into a station wagon, and has converted a lot of people over to the terrific handling of front-wheel drive.

INTRODUCING

the new
front-wheel drive Renault 12.



The left-hand page tells you all you need to know about front-wheel drive. Now we'll fill you in on the rest of the Renault 12.

Specifications

Seating: Because of FWD, no driveshaft hump to steal leg room. Because it's 7" longer than Pinto, even more leg room.

Engine: Aluminum. 1565cc. 5 main bearings. Up to 30 mpg. Essentially the same superb engine that powered Renaults to 1st, 2nd and 3rd in the 1971 Monte Carlo Rally.

Steering: Rack and pinion. Brakes: Discs up front. Drums in rear with pressure equalizer to prevent locking. Transmission: All synchro-

mesh, 4 speed.

Trunk: 12.8 cubic feet. (Vega has 8.7, Pinto 5.6) If you need even more trunk, the Renault 12 Station Wagon has up to 58 cubic feet.

Price: \$2195* for the sedan. \$2595* for the station wagon.

Pound for pound, dollar for dollar, we believe this car holds the road better, people better, and has more advanced notions of engineering than you could possibly appreciate without coming in for a test drive.



*Suggested retail price P.O.E. The Renault 12 Sedan is shown with optional custom wheels, and front bumper overrider bar etc. Taxes, freight, dealer delivery charges, or other options on all models shown are additional. For overseas delivery info, see your dealer or write: Renault, Inc., 100 Sylvan Avenue, Englewood Cliffs, N.J. 07632

RENAULT



At roughly the same time ol' Ralph Nader was droning out another criminal negligence indictment for Detroit in front of a senate committee, Moon Trash II was averaging 84 mph across a stretch of Interstate 70 that runs through Licking County, Ohio. Now the AAA lists Licking County, Ohio as an area of "strict enforcement," meaning that only God knows how many law officers are lurking behind the billboards trying to nail speeders. We made it. In fact, Ralph, we made it from sea-to-shining-sea, through places like Licking County, Ohio, and Tucumcari, New Mexico, where they are also heavy into the highway law and order hype—from midtown Manhattan to the Portofino Inn on the Pacific beach in 40 hours and 51 minutes, averaging 70.1 mph for the entire distance—and we made it without the slightest bother.

Our supervan didn't disintegrate from the high sustained speed, we weren't turned into stone by a wrathful God, we didn't leave a litter of innocent motorists in our wake; in fact, we whizzed across the country, non-stop, in 40 hours and 51 minutes with so little effort that in retrospect the time doesn't seem particularly impressive to us, even though it is a decisive, coast-to-coast record for land-based vehicles. Knowing what we know now about routes, and overall long-distance travel strategy, we are convinced the run could be made in 38 hours. In perfect safety. Perfect safety at 85 mph. And Ralph and Senator Phil Hart are down there in Washington about to force-feed us with a no-dent 5-mph bumper at a hundred bucks a copy.

Fellow car freaks, I have reached a reluctant decision. For a number of years we have sat obediently at the feet of our Washington technocrats and listened while

they outlined the new measures that will save us from ourselves. We have tried to convince each other that Douglas Toms is a helluva guy because he once owned an Austin Healey. In return he and his cohorts have differentially referred to us as "car buffs" (I've been called every name imaginable, but that one infuriates me like no other) and have blithely gone ahead with plans to equip all cars with such exquisitely silly gadgets as air bags, speed governors, mudflaps and rear-view periscopes. This new governmental fascination with mechanical absurdity has brought every basement-inventor-Popular Mechanics-crypto-genius scurrying to the Department of Transportation with ideas that even the patent office has rejected. And the DOT has greeted most of them with open arms! By 1975, if all of the nearly 90 safety requirements presently under serious consideration by the DOT are adopted, every car sold in the United States will add at least 500 lbs. net weight and \$1500 in retail cost.

What's more, whether we like it or not, the DOT is infested with lightweights who failed to make it in Detroit and now seem to be gaining their own government-sanctioned retribution against the industry that spurned them. It is some kind of a bad scene, and unless somebody—somebody like us so-called "car buffs," somebody who *cares*—doesn't stop pussyfooting



Yates, Williams, Junior Yates and Smith.

around and take some action we won't be able to climb into bed at night without wearing steel-toed shoes and "buckling up for safety."

Believe me, once the frankenstein machine known as the civil service starts puffing away, nothing, including full-blown revolution, stands in its way. If anything about our government—or the government of any advanced nation for that matter—depresses me, it is the fact that our final destinies are not in the hands of elected

representatives or any politicians who might respond to the pressures of the people, but increasingly in the hands of a smug, isolated, hopelessly bureaucratic civil service which is virtually beyond accountability.

I am inclined to think that is why all national administrations, be they Republican or Democratic, produce such similar results; why Nixon and Johnson, despite divergent political philosophies, make comparable headway in trying to cope with the great issues. All of them must ultimately set their banners in the thick sludge of the great Washington bureaucracy, where movement is governed not by the urgings of the people, not by the dreams and passions of elected leaders, but rather by millions of faceless GS-10s sitting behind government-issue desks in stark offices with pastel-green walls.

Administrations come and administrations go; the body politic sways from liberal to conservative, demonstrators thunder in the streets below, but it doesn't matter. The paper moves in orderly bundles from the in-baskets to the out-baskets carrying with it the fortunes of a nation in the form of a billion regulations which have no definitive sanction or purpose. This bureaucracy unleashed, operating only to maintain itself, and with no awareness or genuine care for national needs or priorities, worries me much more than the yapping terriers on the far-left or the paranoid bloodhounds on the far-right. Until now there was little reason to voice those fears in this magazine, simply because they were not germane to the subject. But now the automobile is becoming the *raison d'être* for a vast and powerful new government bureau-structure and I think it is time we did something about it.

I think about those limp, stubby-winged birdmen of private flying—a boresome residue of those who were once attracted to flying for fun. There is no such thing as flying as an adventure. The idea of jumping into an airplane and zooming into the sky just for the hell of it is gone forever, driven into oblivion by enough regulations to keep anybody with more than a twitch of independence glued to the runway. With today's rats-nest rules Charles Lindbergh wouldn't have had a prayer of getting the Spirit of St. Louis cleared for takeoff. They wouldn't have granted a daredevil like Jimmie Doolittle a license. If somebody tried to build and sell the original Piper Cub today, it would fall short of a myriad of FAA safety requirements. In response, private aviation has distilled its enthusiasts into a pallid collection of airborne clerks. In the skies of America, the drones have replaced the bumblebees.



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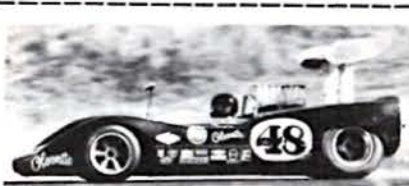


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Sure, I know all about the "crowded skies" and how individual responsibility has become a euphemism for individual conformity. It has often been said that most men will eagerly trade personal freedom for social order, and surely no better example exists than private aviation, where a fascination with rules has turned the "wild blue yonder" into a dead air space. Obviously flight regulations are necessary for the orderly transit of millions of commercial passengers per year, but this almost psychotic fear of individual action within the private flying realm sets an ominous example of what can happen to automobiles when a group of enthusiasts capitulates in the face of government bureaucracy. Believe me, the very same madness can mire the automobile in a state of total stagnation. If this is allowed to take place, the most adventurous and inventive people will be driven elsewhere and the most inspired automobiles will be replaced by mediocre designs.

Last fall I filmed an interview with Rudolf Uhlenhaut, the extraordinary chief engineer for Daimler-Benz, while he was driving a new 3.5-liter Mercedes-Benz V-8 sedan down a Nevada super-highway. The entire interview was done while traveling 125 mph. Uhlenhaut and I were in the front seats, a cameraman and sound technician were in back. It was an effortless

That chance has passed, and now that Ralph Nader—who proudly proclaims that he seldom drives himself—has become the principal spokesman for America's drivers, we, as a group of people who like automobiles, are being pushed to a point where we are beyond the law.

I see little choice but guerrilla warfare. Civil disobedience, if you will. While speed laws, for example, become more oppressive and diabolically controlled with grotesquely expensive but dead-accurate devices like VASCAR, we read quiet newspaper squibs about how Connecticut has given up its 15-year campaign of hard-line tactics against speeders. Why? Because the thing was a failure, a total bust—aside from getting Abraham Ribicoff elected to the Senate (which made it at least good for one man). Now the state officials are talking about limiting the use of radar and unmarked police cars because they *have no effect in reducing accidents.*

That is a sparkle of light on an otherwise dark scene, but overall, the walls are pressing in on the man who understands automobiles. He is, pre-emptively being transformed into a freak, an irresponsible weirdo who sanctions anti-social activities on the highways.

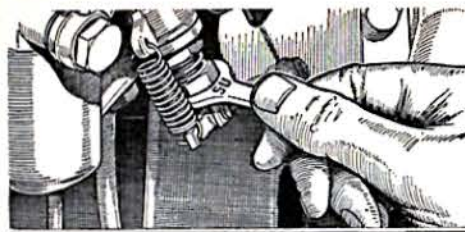
So be it. If we are heading for oblivion, let's go out with a certain measure of style and not capitulate like those sorry feather-



session, an interlude impossible to describe to somebody who does not understand automotive excellence. If the dunderheads in Washington keep up the pressure, the Herr Uhlenhauts and their magnificent machines will disappear. Does anybody know the name of the chief engineer at Checker Motors?

The noose is tightening, my friends, and the time has passed when we can sit around and babble optimistically about how wisdom will intercede in Washington and the bureaucrats will recognize that superlative handling, braking, steering, lighting, etc., coupled with driver competence is the true key to sanity on the highways.

weights in private aviation. Last month I proposed the Cannonball Baker Sea-to-Shining-Sea Memorial Trophy Dash—a cross country, free-style automobile race from New York to Los Angeles. Strange things happened following that announcement. For one, most of my colleagues in the automotive press denounced the event as madness. Ironically others in the automobile industry, in auto racing and in the sports and entertainment world loved the idea. Without commenting on the deeper meaning of this turnabout, let me say that not one staff member of any automotive magazine was willing to take part, although a diverse collection of guys such as



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Robert Redford, Wilt Chamberlain, fellow columnist Jean Shepherd, Fran Tarkenton, a couple of really good film makers, Kim Chapin, the writer, Kirk White, etc., were eager to participate.

Unfortunately the race was formulated on such short notice, owing to my poor organizational abilities, that a number of the key people couldn't get loose from prior obligations. Redford was making a film, Chamberlain was in the NBA playoffs, Shepherd was making his TV series, etc., so it was decided to postpone things until everybody could make the show. The Cannonball Baker will be run—very possibly billed as the Last Race, symbolically, at least—sometime next year. When it takes place it will, hopefully, strike a blow for individual responsibility and freedom on the highways. A radical step to say the least, but at least a step instead of a stumble.

With the full-blown race postponed, I figured it was time to run cross-country anyway, if for no other reason than to make a gesture. Bureaucrats and digit-minds can't understand gestures, which made the enterprise futile to them from the onset, but it somehow seemed appropriate that we at least make the effort to break the New York to Los Angeles record, which, by the way, exists only in unofficial form. In the old days, when Cannonball Baker was running, cross-country records



were pretty well supervised, and the old man made some pretty impressive trips. In 1928 Baker ran a Franklin coupe from LA to New York in 60 hours—alone, over two-lane roads that penetrated the center of every town along the route. The fact that we could only pare 20 hours off that time 40 years later, while enjoying interstate highways over 80% of the way is a testimony to the man's driving skill. Since then a few guys have claimed the record, including Wilt the Stilt, who doesn't seem to have any definitive time in mind, except that he says he's made the trip in less than 40 hours, and Renault PR man Ocee Ritch, who trooped from Los Angeles to

New York several years ago in about 44 hours, not including a three-hour stopover in Albuquerque to take pictures. The more we got into it, the more it became apparent that nobody had set a really firm record in many years. If nothing else we would try to do that.

Since it seemed reasonable that this effort should be unfettered by rules, again, for symbolic rather than practical reasons, I rejected the idea of running alone or with a crew limited to two. If one was trying to make the quickest trip between the coasts, wouldn't one take the optimum number of people? Three drivers seemed right. While one drove, one could act as observer and the third rested, theoretically maintaining a pool of at least one fresh driver at all times. The crew was composed of a long-time partner-in-crime, and former Editor of *Car and Driver*, Steve Smith, plus Jim Williams a new *C/D* staffer and myself. I also took along my 14-year-old son, Brock Jr. just because I thought it might be neat for him to take part in an adventure such as this. When several wondered how dangerous such an endeavor like a cross-country run might be, I countered by mentioning that if I would take my first-born son, my heir, my namesake, I certainly did not consider the enterprise hazardous.

The Dodge Van, labeled "Moon Trash II" was in essentially the same condition as it was tested in the February, 1971 issue of

C/D, except that it had been fitted with powerful Cibie driving lights (mysteriously illegal in many states, despite their incontestable superiority over conventional seal-beams), interior map reading light, air horns, emergency gas container, first aid kit, radar detector, etc. A special 3.23-ton rear axle had been installed to give us better gas mileage and a higher cruising speed. As it turned out, Moon Trash was content at steady speeds of 85-90 mph. Illegal, yes, but safe.

We left 35 East 35th Street, between Madison and Park Avenues, at exactly midnight on the morning of May 3, 1971, with the proper witnesses to record our de-

(Continued on page 21)



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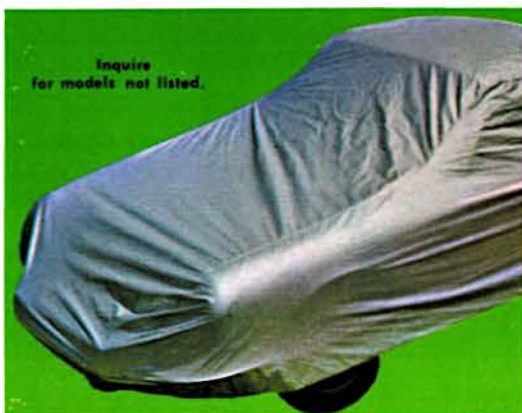


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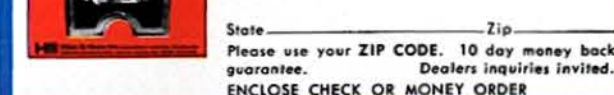
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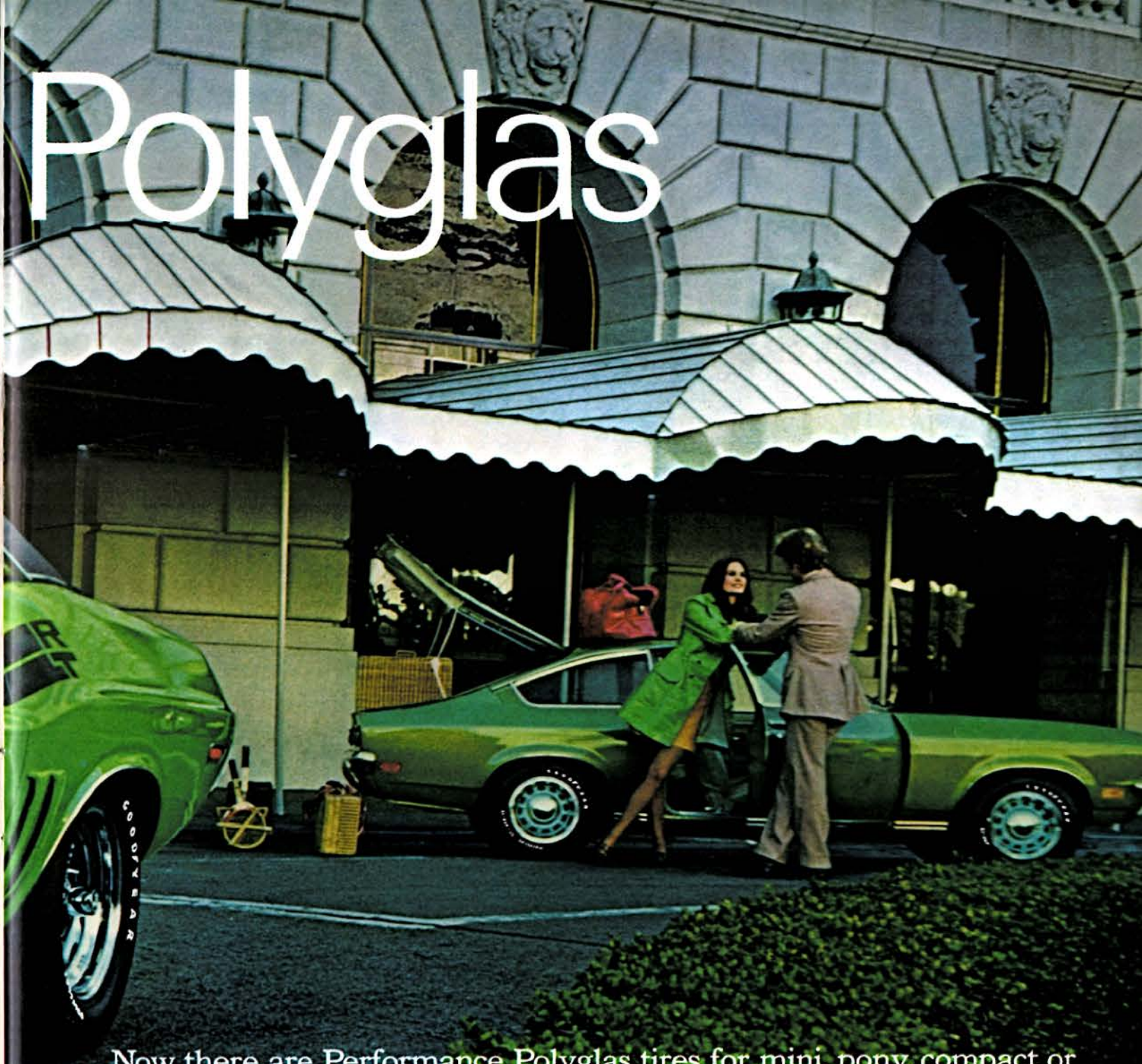
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parture. Our intent was to reach the Portofino Inn at Redondo Beach, California, on the Pacific Ocean, in the quickest possible time. Our arrival would be recorded with the electronic check-in at the Portofino. Smith and I had worked hard on the routes, and after extended arguments, chose the traditional cross-country avenue that follows old Route 40 and Route 66.

It was an uneventful journey. Not one police officer so much as gave us a second glance. We did encounter mileage problems, mainly because of a lark. After getting Moon Trash, I installed an adjustable spoiler on the rear deck, just for the hell of it. It looked nutty. Before we left Smith and I flipped the wing down because it looked kind of hairy in that position and we didn't think it had any influence whatsoever on the performance of the car. Not much it didn't. Yes, aerodynamics fans, that little spoiler, dragging its way through the airstream, took 2 miles per gallon off our fuel consumption (dropping it to 9 mpg) and forced us to make two extra gas stops. What's more, a check on the homeward bound trip from California (that Williams and I made in an effortless 47 hours) indicated the wing in a zero degree plane added 6 mph to the top speed of the van (up to approx. 110 mph). That reduction in gas mileage indirectly led to our only adventure—a stallout at about 90 mph while passing a line of trucks on a section of two-lane in Illinois. Fortunately the lead trucker saw we were in distress and let us cross his bow to reach the shoulder. There we made a Wood Brothers pit stop with our emergency gas and proceeded onward.

We reached the Portofino Inn at 1:51 p.m. Pacific Coast time, on Tuesday, May 5, with an empty tank and feeling as rotten and indecently filthy as we had in our lives. Knowing what we know now about routes and car setups and driving techniques (but we ain't telling) we are sure the trip can be made in 38 hours—without running faster than we did. Of course a machine like a Ferrari Daytona or a 6.3 Mercedes might make the trip cruising at over 130 mph, but I am inclined to think big top speeds are of limited value in an event such as this. In the first place, 100 mph or more will attract the law. Secondly, fuel consumption gets marginal at those velocities and driver fatigue can become a negative factor, after four or five hours.

We are ready for the Cannonball Baker. In fact Smith claims we've got the pole. Anyway, this kind of an event opens up an entire new area of motorsport. Oh God, the anarchistic barbarity of it all! Out there on Uncle Sam's own 31,000 miles of super-highways driving at speeds sometimes beyond the legal limit, in actual conscious violation of our traffic laws. That's the way

it's going to be, car freaks, in the first demonstration that some people are aware enough to handle their own destinies behind the wheel of an automobile. Of course the whole thing is going to raise hell, and the day might come when guys are busting across the nation in disguised ambulances, hearses, official limousines, Greyhound buses, you name it, in some sort of a nut-ball protest that people who like cars, who understand cars, and who know how to keep cars under control are not going to collapse in the face of the self-energizing lunacy of government bureaucracy. The other guys in the automotive press can sit around and recommend letter writing to your congressman, but I've had it. From here on in I am going to use the roads according to my own skills and capabilities, and not in conformity with those of some 49-year-old cradle-to-grave, square-head, bureaucrat who wouldn't know a good automobile if it ran over him.

I hate to take another swipe at the swaying props that are holding up this society. Everywhere somebody is protesting about something; defying the law of the land, while the establishment seems to burrow deeper into their bunkers in defense. But it appears to be the only course. If the movements of automobiles can be monitored and controlled (as with goodies like VASCAR and ORBIS) we are a long way down the road to 1984. Therefore, this mindless government urge to make us safe from ourselves can, in the long haul, lead to an electronic nightmare whereby you couldn't buy five gallons of gas or run half a mile over the speed limit without ringing a gong in the Big Mutha computer in Washington. Remember this, you can write off the Cannonball Baker and all the irresponsible weirdos who might take part in such an event, but let me leave you with a quote from the greatest American observer of them all, in regard to the ancient battle we must wage against authoritarianism. The words were written nearly 150 years ago, by Alex de Tocqueville in his epic work, *Democracy in America*: "The dread of disturbance and the love of well-being insensibly lead democratic nations to increase the functions of central government as the only power which appears to be sufficiently strong, enlightened, and secure to protect them from anarchy. . . . All the particular circumstances which tend to make the state of a democratic community agitated and precarious, enhance the general propensity and lead private persons more and more to sacrifice their rights to their tranquility becomes an indiscriminate passion, and the members of the community are apt to conceive a most inordinate devotion to order."

Long live Cannonball Baker. ●

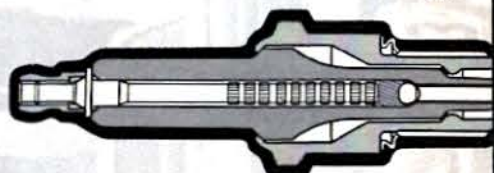
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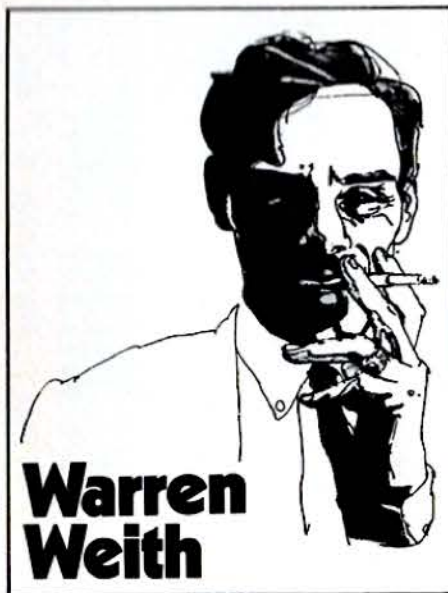
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• Hi gang! Remember last month's episode in which Capt. Klutz demonstrated how anyone without inside knowledge of the automobile business could get his car efficiently repaired at modest cost? Well after leaving the Happy Five-Language Gas Station and Repair Shop (\$44.27) in Brooklyn, Capt. Klutz and his trusty 122S Volvo just about made it over to the Husky Sales and Service Corp. (\$28.92) in Manhattan. There he had the universal joint that the Happy Five-Language Gas Station and Repair Shop had put in, replaced, and put in the right way round. It was there too that Capt. Klutz made a small error in judgment. He forgot to tell the unsmiling chief of operations at the Husky Sales and Service Corp., to also replace the new points and plugs that the Happy Five-Language Gas Station and Repair Shop had just put in.

Now after all that can you blame Capt. Klutz? This whole operation was to find out what the average car owner—without any understanding of the internal combustion engine—had to face while trying to get his car repaired wasn't it?

If this was to be a fair appraisal of motoring as practiced by someone who doesn't write for a car magazine he would have to take his 122S hot from the shops of the Husky Sales and Service Corp., load it with wife, son, and dog and start to drive briskly toward his summer retreat hard by Long Island's Rhinegold Riviera. Briskly that is until the first long, sweeping hill on the Northern State Parkway. It would be then that he'd notice a curious malaise creeping up on his tried and true Volvo.

He at first diagnosed it as hunter's hack. A not uncommon disease that afflicts aging geldings used too often on long hunt meetings. Specifically, it is a problem faced by impecunious riders forced to make do

with one mount. On the next level stretch he didn't go to the whip, thinking to rest the Volvo. It did no good. On the following hill the hack was back. If anything, it was worse. With foot flat to the floor the noble vehicle just about made it to the top. As long as the road was level, and the speed kept under 50, all was well.

Once off the Northern State Parkway and onto the Veterans Highway things seemed easier. The 122S seemed to regain some of its original dogged determination. Still, being a true sportsman, Capt. Klutz would not be guilty of letting a mount founder under him. He stopped at Road Marauders: "Speed tuning is our Business" on the highway. After much deliberation (\$5—more in the nature of a retainer rather than a bill) and the use of many gauges, Capt. Klutz was told that there was nothing wrong with the car and that all Volvos acted that way once in a while.

The car ran like a bird until it reached the outer marshes of the Rhinegold Riviera. Then new symptoms manifested themselves. The car began to spit, and then not quite backfire. At this point Capt. Klutz realized that he was part of a huge game. Ah, those boys at Road Marauders really threw themselves into the spirit of the thing. The next morning Capt. Klutz, still playing the game, took the 122S to Grand Prize Motors. The gentleman there said that it was probably a worn camshaft. This sounded rather serious so Capt. Klutz decided to get a second opinion. He then took the Volvo to Scheisskopff's Garage in Sound Beach. Scheisskopff, in his open and friendly manner said, "You will leave the car and I will repair it." Capt. Klutz and his family got home another way. The following week he received a telephone call. It was an excited Scheisskopff. "Capt. Klutz your car burned up." Suddenly Capt. Klutz was vaulted into the game for advanced players. Scheisskopff said that he had taken the car out on a back road for a test drive and the engine compartment burst into flames. By the time the fire engines got there everything was pretty well shot.

But not to worry, Scheisskopff's business was insured by Nunsuch and Capt. Klutz wouldn't suffer any financial loss. The good Captain had arrived. He was now playing in the world series. And even in this fast company he'd win because as luck would have it the very car that Scheisskopff's policy on his shop covered was in turn covered by Nunsuch. The opposing team had trapped themselves.

With this thought in mind Capt. Klutz planned a master stroke. He'd put a 144 Volvo into play and . . . and he'd insure it with Nunsuch. How's that for a brilliant

move? Confident in his command of the game Capt. Klutz went about his little daily tasks while waiting for Nunsuch to phone in its surrender terms. He waited . . . and waited . . . and waited.

Thinking that Nunsuch—playing as they were from a position of weakness—was waiting for him to make the first move, Capt. Klutz got out all the papers the insurance company had sent him with his policy and prepared to do battle. An attractive blue and white card stated in tasteful sans serif type, "Please count on me as your insurance man." It went on—in somewhat smaller type—to say, "Dear Policyowner: Your insurance papers for the coming year were recently sent to you. If you have any questions about your policy, just call me or return the enclosed card. You'll get down-to-earth no-nonsense answers, always with your best interest in mind. May I help you?" signed, Edward Shallow, Your Nunsuch Agent.

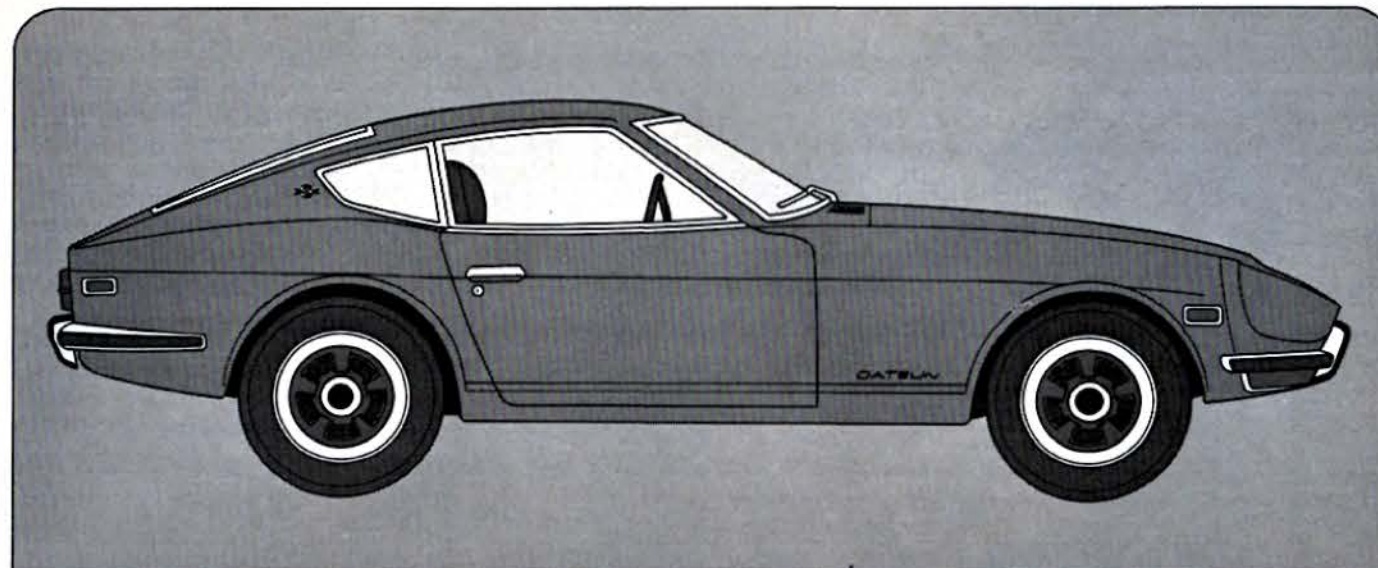
After reading this, Capt. Klutz reached for the phone. A young woman with a pleasant voice informed him that Mr. Shallow had been in an automobile accident—was suffering from whiplash—and would be out of the office for a week or so.

An interesting play. No doubt meant to divert the Captain from his center field plunge. In just shy of two weeks a Nunsuch man named Mr. Walsh called the Captain and informed him that his car was being repaired at Grand Prize Motors.

A week later a Nunsuch woman named Mrs. Bacala called and said briskly, "We've totaled your car and we're sending you a check for \$200." Taken a little off balance the Captain suggested that \$950 would replace the car. Mrs. Bacala then said impatiently, "You don't understand, we've totaled your car and we're going to pay you \$200 for it." Captain Klutz said yes, she was right he didn't understand, and he wouldn't suffer a \$750 loss for something that wasn't his fault. Whereupon Mrs. Bacala hung up.

Back to Mr. Shallow who had by then returned to duty. He told the Captain to call Art Reamer for a final decision on his case. Mr. Reamer was very surprised to hear from Capt. Klutz. It seems that Mr. Reamer only handled stolen cars. But Mr. Reamer would have a gentleman call who had the power to put everything right. While waiting for this call—which at this writing has not been made—Capt. Klutz began to understand why it was called the gib leagues. Capt. Klutz also understood something else . . . he was hanging up his spikes. That's why he's asking Volvo to please send him a window winder—which he broke—and a door key—which he lost—for his 144. ●

CAR and DRIVER



ONE AND TWO-THIRDS OF A KIND.

On the surface, it wouldn't seem that our virtuous little Sedan and our sexy GT car have much more in common than a nameplate. But underneath the sheet metal, you'd be surprised.

They both have 4-wheel full-independent suspension. It makes for the kind of ride and handling that's a pleasant surprise in a GT car and downright astounding in a Sedan.

They both have disc brakes up front where the action is, combined with big, beefy drums at the rear. When you need to stop in a hurry, they hurry.

They both have slick-shifting four-speed gearboxes as standard equipment, they both have a way with the road...in fact, we could almost call them two of a kind.

Except for the engine. They both have high-performance overhead cam engines that put out nearly one horsepower per cubic inch. But the 240-Z has a 2393 cc. six and the 510 Sedan has two-thirds as much with a 1595 cc. four.

That makes them one and two-thirds of a kind. You don't believe? Then try it. Drive a Datsun...then decide.

DATSUN
PRODUCT OF NISSAN



**Jean
Shepherd**

Fun City

There is no question about it. Good old mankind, an exotic branch of the animal world of which I am indubitably a part, is one of the most adaptable organisms known to science. He ranges freely from the fetid jungles at the equator to the very poles perpetually icebound and forbidding to all but the most hardy of species. He even manages to knock out a few golf balls on the Moon. Let hooded cobras or flying squirrels try that one.

He also—and this is one of the major differences that exists between the lesser primates and the notorious Upright Ape That Thinks—creates, often, his own environment, both good and bad. There is some suspicion in certain theological quarters that for centuries we have misinterpreted a key passage in the Scriptures, the one that goes: "And the Meek shall inherit the earth." It is now felt that the Meek referred to were not the Walter Mittys or the Peace advocates, or even Ralph Nader, but instead the lowly cockroaches. Lowly? It all depends on how you interpret 'lowly.' Like man, the cockroach makes it damn near everywhere he goes, and more than that, makes it big. He has been found in deserted trappers' cabins at 70° below zero, living off, apparently, icicles and polar bear dung, and proliferating at that. Anyone who has spent any time in the tropics knows how well he does there. A lone cockroach was discovered aboard one of the Apollo capsules on a flight to the Moon. He disappeared shortly after discovery, and there is suspicion that now, for the first time, there is life on the Moon.

The chief difference between mankind and the cockroach is that the one continually bitches over his fate while the other stoically plods on, uncomplaining, with

never a glance backward nor a sigh for what might have been.

Thoughts like this are the kind that come easily to me as I struggle my way uptown through the heavy miasma of hydrocarbons and obscenities that hang thickly like a shifting yellow curtain of doom over Sixth Avenue in Fun City. For those of you who are not familiar with this classic urban thoroughfare—known officially as The Avenue Of The Americas, better known to more literate cabdrivers as the Armpit Of Manhattan—it runs due North, theoretically one-way, from somewhere south of Greenwich Village right up the gut of Manhattan, past such cultural centers as Macy's and Gimbel's, encompassing the Porny belt around 42nd Street, and then finally ending in an ungodly traffic snarl at the south end of Central Park.

Driving in midtown New York is a specialty as highly difficult and rarified as, say, lion taming or Japanese Sumo wrestling. It requires a high degree of pugnacity, total selfishness and a complete careless disregard for what is called in other quarters and more civilized sections of our country, the Rights Of Others. The true Manhattan driver never concedes that the 'others' deserve any rights whatsoever, and in fact he rarely admits that there are 'others.' He combines incredible, almost inhuman qualities of stoicism with the ferocity usually associated with the male rhinoceros in rutting season.

For you fortunates who live out there in the Great Outside beyond the Hudson, who believe that magnificent driving is what you see under the auspices of NAS-CAR or at Indy, I can only say that a midday session with a Manhattan hackie through the garment district is well worth the exorbitant price, if for sheer instructional and thrill content alone. I have studied the breed for years and a considerable portion of my life's fortune has been spent keeping their rapacious meters ticking over merrily, each tick moving me closer and closer to the poor house while often taking me away from my destination.

Manhattan cabs are born old. As you struggle into the back seat at, say, 8th Street and 6th Avenue, of the yawning, sagging, stinking hulk which has lurched curbsward in your direction, its glaring toadlike pilot hunched over his greasy steering wheel, a seven-cent cigar clamped in his teeth, you are startled to find that the cab itself often has less than 3000 miles on the speedometer. Four days out of the showroom and already a grizzled veteran of combat. Crashing from pothole to pothole, knee deep in a rich compost of cigarette butts, candy wrappers and drying urine you hurtle northward toward your

lunch date. Around you are thousands of other yellow, barnacle-encrusted wrecks, each driver being a total professional. In all my years of New York cab riding I have yet to find the colorful, philosophical cabdriver that keeps popping up on the late movies. There are no William Bendixes or Lloyd Nolans or Jimmy Cagneys pushing hacks in the big town. If there are, I sure as hell haven't found them.

The nature of the car in the big city itself is something that requires a little explanation. Month after month magnificent, gleaming color ads leap out at you from the pages of *Car and Driver*. To a New Yorker these fantasy images of sparkling sculptured masterpieces are as remote from our daily lives as, say, Oz or Samarkand. It is common for a man to take possession of a new, sleek Firebird on Tuesday and by late Thursday afternoon it has been pounded and battered into a Fiat 850. By the following Wednesday he is driving an ancient Morgan three-wheeler and then, magically, maybe mercifully, the roving mobs of car snatchers have relieved him of what's left and he's back to hailing cabs.

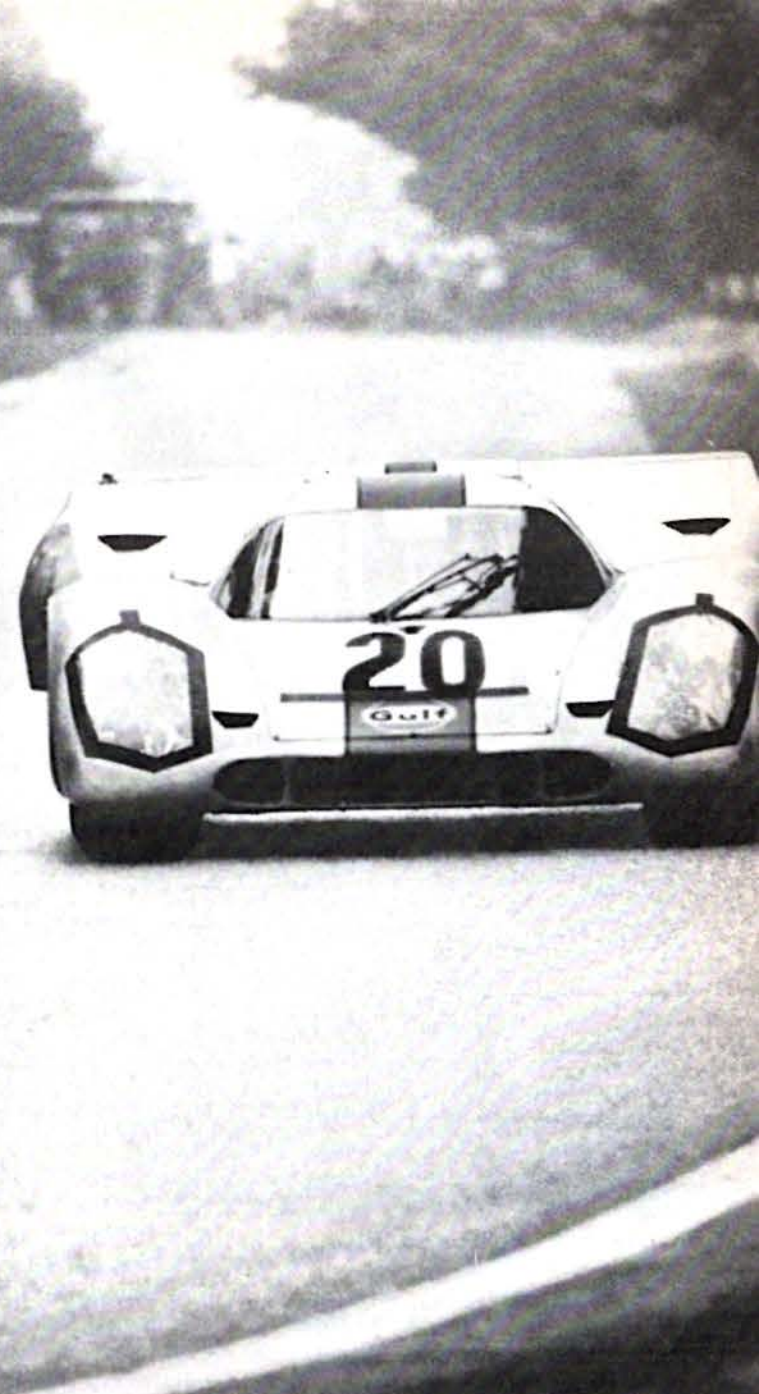
A daily sight along the expressways is the superb team precision of the vultures who can be seen hourly stripping anything that slows down under 10 mph, from a Mark XI heavy tank to a Honda 305. There is some talk in local circles that Car Stripping will eventually become an Olympic team event, at last giving the underprivileged the chance to show their true skills on TV, with Keith Jackson doing the commentary, produced by Boone Arledge for the *Wide Wide World Of Sports*. It has been said, although perhaps apocryphally, that there are certain operators in Brooklyn who can remove a full set of mag wheels from a Corvette proceeding on the Long Island Expressway at 60 mph, or the legal limit, with the driver totally unaware of his loss until he hits Hempstead where the potholes start to peter out. Naturally, this gives rise to a certain jumpiness among us irrational dreamers who persist in attempting to own a car in New York.

Garage space alone is a can of worms that's beyond the comprehension of anyone who has never really lived in Manhattan. It is not uncommon for a car owner to shell out more for a tiny slot of dirty, greasy, rat-infested space grudgingly allotted him by snarling, rapacious thugs than he does for his apartment housing, his beloved and his two precious goldfish. He must contact his 'garage,' actually a sagging red-brick, 200-year-old firetrap manned by venomous dacoits, fully 10 days or more before he wishes to use his battered vehicle. Contacted at last by telephone they answer with a surly grunt, that

CAR and DRIVER



Steve McQueen.



The Porsche 917.

NOW STARRING TOGETHER IN "LeMANS."

Steve McQueen drives a Gulf-Porsche 917 in "Le Mans," the most authentic film ever made about the sport of professional car racing. Cameramen worked for months to develop techniques to capture the danger, excitement, and intensity of car racing. And the film features the world's fastest drivers and 25 of the world's fastest cars.

To salute the film's premiere in your city, a full-color McQueen/Le Mans poster will be available at participating service stations as a gift from Gulf, while they last.

Gulf has always had a great place in professional racing. In fact, so far this year Gulf-Porsche cars have placed first and second at Daytona, Monza, and Spa. See the movie. See Gulf for your poster.



GULF OIL COMPANY—U.S.

is if the local AT&T mob, which currently seems to be in the hands of Doctor No bent on world destruction for his own mad design, allows him to get through at all, after taking upwards of 10 gratuitous dimes from the sufferer. The exchange of pleasantries goes roughly like this:

"YEH?" (accompanied by heavy breathing and a brief period of phlegmy hawking and the sound of copious spitting, probably on someone's Aston Martin).

"Uh . . . excuse me, but I'd like to have my car, sir, if . . ."

"*Fer Crissake, we're BUSY! What the hell!*" (The sound of muffled crashings drowns out conversation momentarily.)

"I have that blue Fiat, the one . . ."

"*Fer Crissake that Fiat's inna Damn basement! Whaddaya expect me to do, goddammit, it's Tuesday!*"

"I know, I'm sorry, sir, but there's nothing I can do about it. I got a call that my mother had a stroke and I have to . . ." (The beseecher is interrupted at this point by unintelligible shouting in the phone. A fight has broken out at the garage. Apparently another car owner has arrived unexpectedly, demanding his machine. Naturally, immediate disciplinary action is being taken by the 'attendants,' who must maintain the upper hand else mob rule would take over. Amid the hullabaloo he hears the familiar voice of his telephone friend.)

"*Hey Heinie, that fat nut wit' da Fiat wants his tin can. When canya give it ta him?*" (There is a burst of offstage laughter accompanied by a smattering of obscenity too ripe for a family magazine.)

"When d'y wannit?"

"Well, I thought . . ."

"We can't get it outa the basement before Friday. Crissake, you guys call up an' want yer car widout no notice or nothin'."

"I'm sorry, sir. I'll be over Friday, sir, I hate to bother you but . . ." (He is drowned out by maniacal squealing of brakes followed by a muffled thud and a tinkling of glass. The line goes dead.)

Chances are 30-1 that when the victim arrives at the garage the following Friday no one on the premises will remember his call or even his face, since he has only been in the clutches of the mob for three years and can't expect recognition, and will be told to come back next Wednesday at the earliest. For this he antes up \$90 a month and is expected never to mention the bashed-in doors, the flattened trunk, the smashed grille or the beer cans he finds in the front seat and the unmistakable evidence that at least three people and a dog have been camping out in his pride and joy while running down the battery listening to the Mets and striking kitchen matches on his knurled walnut instrument panel.

Everywhere else in the country, cars have distinct differences; some are Jaguars, others are Pintos. There are Gremlins and Corvettes. They even have distinctive colors. There are blues, greens, Cardinal reds, and even eggshell whites. To a New Yorker this seems almost something out of the halcyon past, the days of simple pleasures like home-made bread and 4th of July fireworks. By the third day of its life in New York City all these characteristics of the automobile have all but disappeared. The Jersey crud which drifts down inexorably from what used to be the heavens, bearing its deadly load of rare and subtle acids, its exotic poisons and mysterious gases, has obliterated all signs of distinctive coloration. The car becomes a curious mouldy dun color, which is distinctively Manhattan in character as it resembles the mole-like inhabitants' complexions.

Repeated bashings, side-swipings, dinging and general hammerings have formed the machine into its basic non-identifiable lumpish form. The job is completed by the locust swarm of humanoid car levellers who systematically denude every vehicle of its hubcaps, nameplates, badges, antennas and whatever else might have made it vaguely distinctive from its fellows. It is now an urban car; tough, tenacious, and totally anonymous, a fitting companion for the New Yorker himself.

Only the cabdriver, like the ancient seafaring man, commands the rolling seas of New York traffic. He has his own battle code and like most soldiers has a vast disdain for the civilian. Mayors come and mayors go; traffic engineers rise and fall. The New York hackie hates them all. It is a matter of record that no licensed New York cabdriver has uttered so much as a mildly civil remark about an incumbent mayor since the late unlamented James Walker, better known as Jimmy The Slick to his bootlegger friends, passed out in a Checker on 49th Street and upon awakening tipped the driver with a \$20 bill. Legend has it that the hackie, in a clear voice, stated "Now dere's a good Mayor," although this is in dispute.

The cabdrivers' attitude toward civilian drivers goes like this: You've been seated in a cab with meter ticking away steadily for 19 minutes at the corner of 33rd Street and 6th Avenue in a gigantic tangle of unmoving machines.

Cabbie (red neck glowing): "Y'know what they could do to clean up this whole mess? I'll tell ya what they could do if Lindsay wasn't such a crummy crook. I'll tell ya what they could do."

Passenger (rising to the bait): "What could they do?" (Clouds of carbon monoxide swirling around his head and gradually

dissolving his new wash-and-wear suit.)

Cabbie: "You know what they could do? I'll tell ya what they could do if that Lindsay wasn't such a crummy crook. Boy, them stupes what voted for him got what they deserved, an' now the crummy crook wants ta be President!"

Passenger: "What could they do?"

Cabbie: "What could they do about what?" (He glances suspiciously into the rear view mirror.)

Passenger (His eyes beginning to pop slightly due to the fact that the temperature in the sagging Plymouth has risen to the near-200° mark): "You were telling me what they could do about the traffic."

(Ahead, the driver of a giant tractor-trailer rig plastered with ancient VOTE FOR GOLDWATER stickers has commenced a listless fistfight with an unidentified male Caucasian, medium build.) *Cabbie*: "Oh yeah, well if they wasn't so stupid they would ban all civilian cars from d'roads. Kick 'em off. That's what's causin' alla traffic jams. If that pansy Lindsay wasn't such a stupid crook!"

(The Passenger, glancing around at the vast tangled traffic jam, noticing that there is not a single civilian car in sight, nothing but a sea of yellow cabs and red-necked drivers, all demanding the immediate banishment of non-cabs from the road, settles into moody silence, attempting to while away the ticking-off metered hours by scrounging amid the rubble heap on the cab floor, looking for something to read. Noticing a furtive movement under an encrusted pile of cigar butts and bottle caps he suspects there might be some sort of lizard or maybe a rat sharing his ride. He gives up scrounging and sits patiently awaiting the time when the traffic moves again. He has been here before. Unlike J. Alfred Prufrock his life is not measured out in coffee spoons but flag drops and meter ticks. The little white numbers in the grimy glass window mount higher and higher as he squats amid the rubble, sharing with the cockroach the rare ability to adapt to totally alien environments, his lungs operating rhythmically in shallow gasps, extracting what tiny nourishment there is from the putrid atmosphere of his adopted environment. He awakens from his torpor momentarily to continue his listless conversation with the pilot ahead.)

Passenger: "How come you got two plastic Christs on the dashboard?"

Cabbie (relighting the stub of his cigar—out due to lack of oxygen): "The one on the left belongs to the night man."

Passenger: "Oh."

It's no wonder that the beautiful ads in *Car and Driver* read like fantasy fiction to the average New Yorker.



World's most imitated car wax. But never duplicated. Here's why.

If imitation is the sincerest form of flattery, then Classic Car Wax has been flattered many times in the past and is being flattered even more today.

Take a look at the shelves in any car care center. Almost every tin of wax is a one-step cleaner-wax. Many of them are 18-ounce tins. Some have colors and slogans a lot like Classic's. A few even have \$5 price tags. Imitations, all.

The facts are: Classic Car Wax is the first one-step cleaner-wax, first in an 18-ounce tin, first to ask \$5 for a premium amount of a premium product.

So Classic is imitated. But it is never duplicated. For two good reasons: First, the formula is patented. Second, Classic's imitators are unwilling to pay for such high-quality ingredients.

Costly, highest-quality ingredients

Classic contains 27 costly ingredients. Carnauba wax, for instance, is the hardest, shiniest, most durable wax known, but it must be imported from Brazil.

Diatoms—the non-abrasive cleaning and polishing agents in fine tooth-pastes—are used in Classic to produce

a jewel-like finish. They're expensive, but they are the best.

Easiest to apply

The imitators can't come close to Classic's ease of application. You can apply Classic to wet, cold or hot surfaces—even in direct sunlight. You can wax the entire car at once; just rub it on, then dust it off. Most other waxes must be applied in the shade in small patches, then immediately buffed and after-buffed.

Longer lasting beauty and protection
The imitators can't match Classic's beauty and protection. Classic covers your car's paint and chrome with a gleaming protective blanket of carnauba wax so hard you can't scratch it with your fingernails. Even when subjected to the most severe road and weather conditions, this brilliant protection lasts and lasts.

Most economical

The imitators can't equal Classic's economy. A solidly-packed tin of Classic will wax at least six Cadillac-sized cars. This means each wax job costs a little more than 80¢. The smaller the car the lower the cost.

Money-back guarantee

Few imitators are willing to match Classic's money-back guarantee. If Classic doesn't give your car the best wax job it ever had, return the tin and the remaining wax and get your \$5 back.

It's what's inside that counts

Classic's competitors may imitate the size of the tin and put colors and a price similar to Classic's on the outside. But they will find it's not the tin, but what's inside, that counts.

Classic Car Wax: still the unduplicated best. Try it and see.

Classic Products, Ltd. A-8

1101 Avenue "G", Arlington, Texas 76010

Enclosed is \$_____ in check or money order. Please rush _____ tins of Classic Car Wax at \$5 each.

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Address _____

City _____ State _____ Zip _____

____ Sales Representatives Wanted Nationwide _____

Most Indy 500 drivers

If you already own a Sears DieHard, you're in good company.

This year, 19 out of the 33 cars at Indy were started with Sears DieHards. The battery that has a thin, polypropylene case.

That thin case means the DieHard has more room inside than rubber-cased batteries. More room for more power.

So the DieHard has extra starting

started out just like you.

power to start your car when most batteries won't.

The DieHard is sold only at Sears Tire and Auto Centers. Or through the Sears, Roebuck and Co. catalog.



DieHard



Gordon Jennings

● That horny old Highlands bard, Bobby Burns, must have had an awful premonition of America's bureaucracies to come, on the day he wrote that "The best laid plans of mice and men aft gang a-gley." He was wrong only in understanding the case: Once in the hands of any bureaucracy worth its salt, plans do not "aft gang a-gley," they *always* "gang a-gley." No Disraeli, not even a Machiavelli, could arrive at a plan for getting rainwater out of a boot so perfect in every detail that it would not go wrong instants after transmission down to the local, civil service level. And nowhere is the disheartening discrepancy between yesterday's lofty decisions and today's maladroitness more obvious than down at your local, average department of motor vehicles office.

It must have been about a day after word got around that old Gottlieb Daimler had invented the automobile, that some legislator perceived that there might eventually be a number of the damnable, smelly things clattering along the roads and frightening the horses, and he must have then decided—quite correctly too, I hasten to add—that not just every Tom, Dick and Heinrich could be allowed to operate one when and where he pleased.

This legislator must have appreciated that the horseless carriage would be a public menace in the hands of the blind, the psychotic and the mentally deficient, and that government would have to forbid driving by persons in these categories. Probably, too, he anticipated that it might someday even be necessary to require of all prospective drivers a demonstration of basic competence with Daimler's infernal machine before they would be permitted free use of the public thoroughfares.

I am inclined to think that this early leg-

islator, his name and exact thoughts known only to God, was probably right in his assessment of future hazards and in the correct means for dealing with them. But that is only an opinion arrived at in consideration of purest theory, for the scheme has not actually been tried, except in the most tentative, peripheral way. Of course, this is not to say that the plan has not been outlined and adopted for action; it has, again and again, and the details of the plan have been expanded into a most impressive body of law. But it all comes to naught once fed into the bureaucratic hopper, as I observed without feeling much satisfaction (in seeing my fundamental hostility to government justified by concrete example) down at my own local DMV, where I again went through the tiresome business of surrendering my out-of-state license and obtaining new California licenses for automobile and motorcycle operation.

My various travels have led me through this same process in a number of states, and on the whole I would say that California is better than most—even though, strictly speaking, you'd have to view it as a better example of something that never works at all. Having prepared myself with a scan-reading refresher on local-law idiosyncrasies, I went through the rigmarole of written exams, drove around a few blocks in the car, demonstrated that I could swing a figure-eight in the middle of a wide street on the motorcycle without having to balance the bike by paddling with my feet, and was promptly issued both of the appropriate licenses. No problem at all, except that I spent a lot of time standing in DMV lines.

You might suppose that I found the delays irritating. I didn't. The wait provided a fine opportunity to watch the machinery of government in majestic motion, and I learned (relearned, really) a couple of things. First, I noted that California's requirement that drivers over age 65 submit to yearly re-examination becomes a farce at the DMV office. Most of the people working (an imprecise term for such activity as was on display) there are well along in years themselves, and they are a model of kindly solicitude in their dealings with the elderly applicant. One gentleman of advanced years, teetering along just ahead of me in the lineup, was too time-ravaged to walk steadily, his hands were palsied, and while his mind seemed reasonably clear he was just about deaf and his try at the eye chart proved him nearly blind in one eye and unable to see much with the other. No matter, he was of an age with the clerk and the examiner and they issued him another license without submitting him to the indignity of a driving test. I hope that when

my time comes, I'll have sense enough to keep off the freeways, because unless I run across some young whipper-snappers at the DMV who have no respect for age, who see only debility, the state will keep issuing me licenses until it files a death certificate.

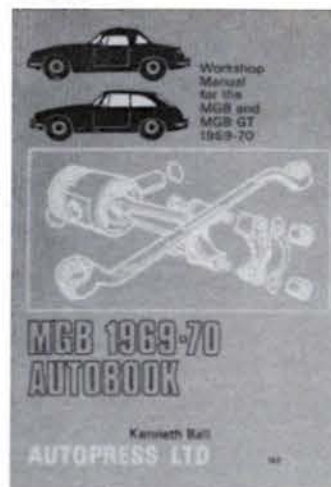
At the other end of the scale were a couple of youthful applicants, who were treated more like supplicants, for their first driver's license. What contrast! These young men were regarded with obvious suspicion and borderline loathing by the DMV oldsters from the moment they walked in the door. They got snappish instructions from the clerks and sour looks from the driving examiner—and although I don't know their fate, I think the examiner was prepared to flunk at least one of them just to polish the end of his red pencil. Clearly, no effort would be spared to make the experience an ordeal.

Looking back over the years, and remembering my own first fire-and-ice DMV baptismal, my heart filled with pity for them and for one mad moment I considered asking the Weathermen and other Rad-Lib factions for a holy crusade against this particular bit of brutality by The System. And then the True Vision was revealed to me: What I was observing, what I had endured so long ago, was actually a puberty rite. As in any other primitive society, we make our boys suffer and sweat before we consider them men.

There is the great truth about the DMV and their licenses: That bit of paper is not simply a document authorizing one to operate a motor vehicle; to him in the fullness of youth it is also, and much more to the point, a kind of *carte de passage* to manhood. Without it, however much he may stubble and muscle, he is seen—and sees himself—still a mere lad. Once he has the thing, he becomes a young man and may then indulge in manly pursuits.

And that's what the hostility down at the DMV office is all about. They're not concerned that the young lout may go out on the highway killing and maiming; they *know* he's going to jump in that car, collect his girlfriend, and then go up on Mulholland Drive and park in the moonlight and do all the despicable things lack of privacy had previously prevented.

So there it is. A barbaric custom, surely, but one present in all societies in some form—and you'd have to say that it's better than having one's nose pierced or one's prepuce hacked away with a bit of jagged clam shell. I think the custom of ordeal by DMV should be retained, just to mark the division between boy and man. I do wish, though, that we could also do something about deciding who is fit to drive a car. ●



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ROAD TEST

deTomaso Pantera

At the "sign of the cat" lurks a mid-engine Pantera

As you skim over the pavement in the Pantera you can't help feeling smug. You hear the engine rumbling along from its station back by your shoulder blades—a mechanical arrangement even novitiate automotive visionaries will recognize as a little piece of tomorrow today. And the looks. Oh wow—like something that just rolled out of the Turin Show. In every lane for blocks you leave a wake of typical American motorists—all suckers for a pretty fender—with their necks wound up like rubber band airplane motors. No doubt about it. The Pantera is the very hottest item in this year's automotive *haute couture*.

Except that it isn't. Not quite. Alejandro de Tomaso and the Ford Motor Company have bent the rules which previously applied to such exotica. Which, in turn, means that we are forced to lay bare the Double Standard which has traditionally held sway in showrooms where Gucci loafers are worn by the janitor. It's something that has always been understood . . . but never talked about . . . like a beatific millionaire uncle who made his fortune franchising bordellos.

The Double Standard in question applies almost exclusively to sports cars priced from \$7000 on up to infinity and has two fundamental axioms. First: Excitement is directly proportional to price—the more you spend, the zoomier the car. Which makes sense. Second: Goodness is inversely proportional to the price—the more you spend, the less likely you are to get a carefully engineered machine, one that is dependable in the way the multitudes demand. Instead, you get hand craftsmanship, which is not the same thing.

You can prove these axioms to yourself. Look at the under-\$10,000 cars—the Mercedes 280 SL, the Porsche 911 and the Jaguar V-12. The prototypes were tested, sometimes for years before the first models rolled off the assembly line. No mistakes

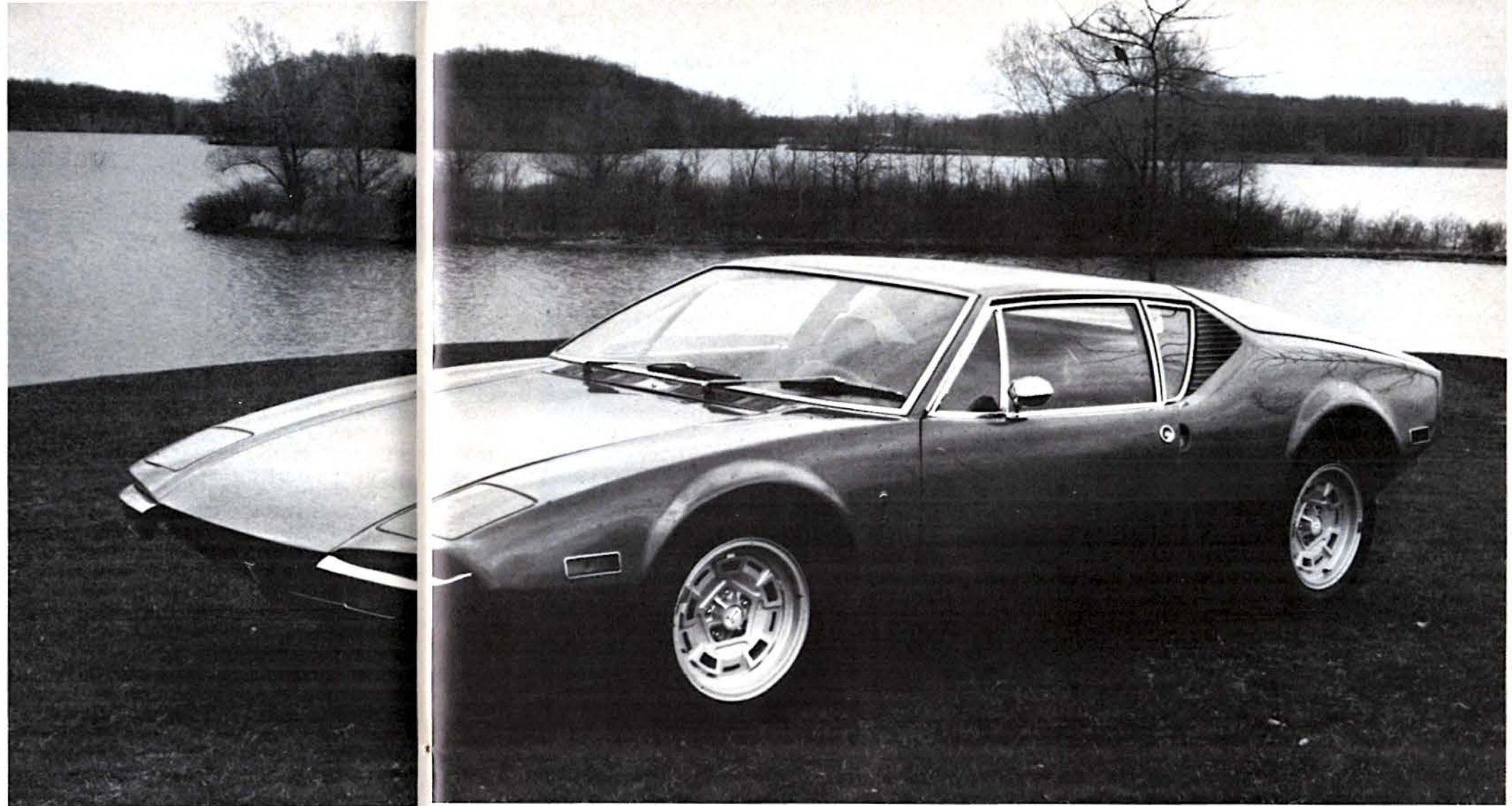
permitted. On the other end of the spectrum, look at a manufacturer like Peter Monteverdi, who may build only a dozen or so of a given model per year and such exclusivity allows him to sell certain models for over \$25,000 each. There is no fleet of test cars circling around a Monteverdi proving ground somewhere high in the Swiss Alps, and don't expect to see each body dipped in a great vat of rust-proofing solution as it comes off the assembly line. In fact, don't even expect to find two cars alike because improvements are made in each succeeding car as the need becomes obvious. In this low volume business the builder just does what seems right at the time—the customers demand style rather than perfection and pay top dollar for it.

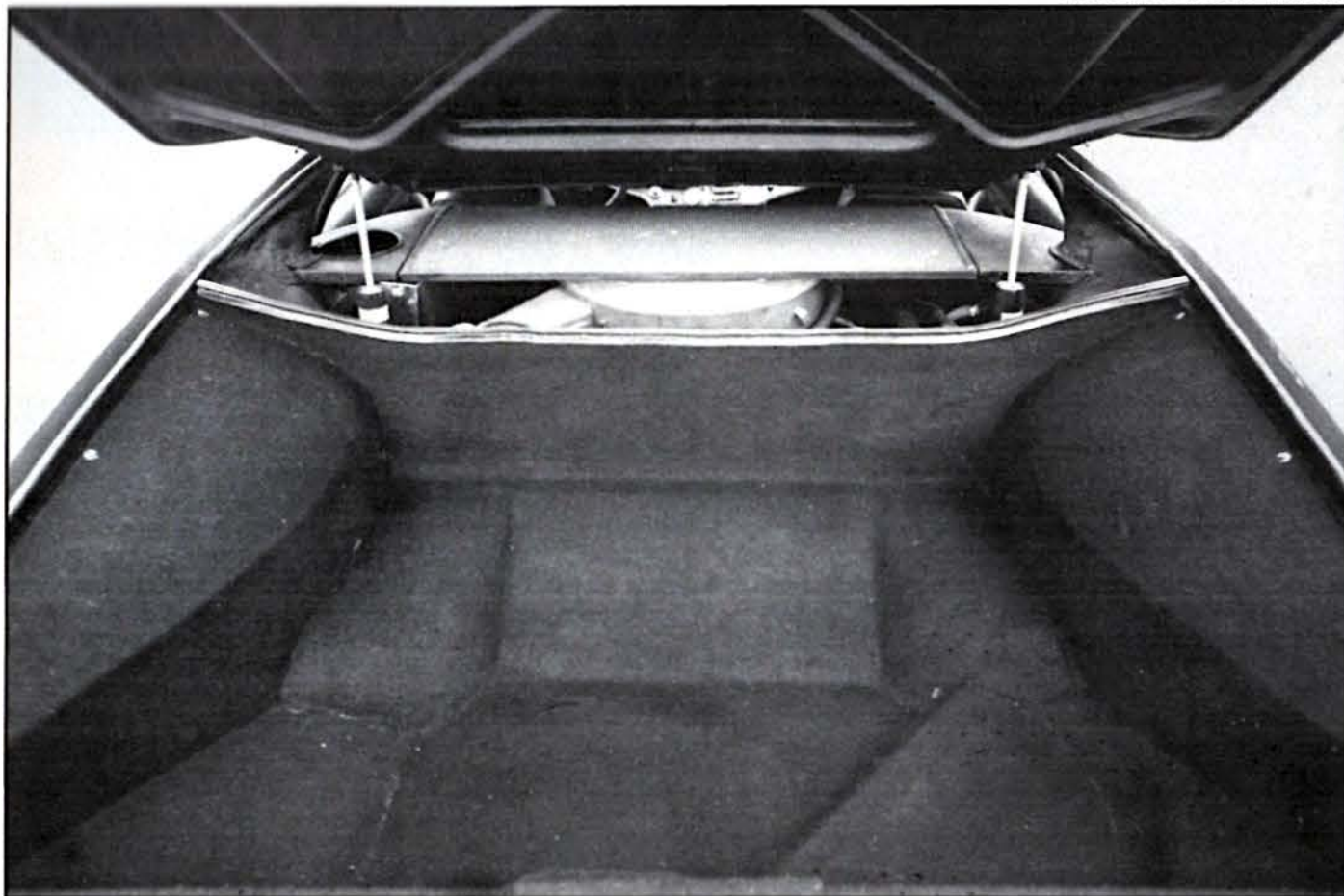
Now there are exceptions to this whole scheme. There are a few \$8000 cars that are shaky propositions from any angle, while in the upper reaches some of the experienced manufacturers—Ferrari for example—build sound automobiles.

How does the Pantera fit in this discussion? Right at the top: It has both the Excitement and the Goodness ratings that, up to now, you had to pay \$25,000 for, and they are folded into a \$10,000 package. Which is one hell of a bargain if that happens to be what you're looking for. That, friends and neighbors, is the Pantera story in a single capsule, from this point on we deal in variations on this theme.

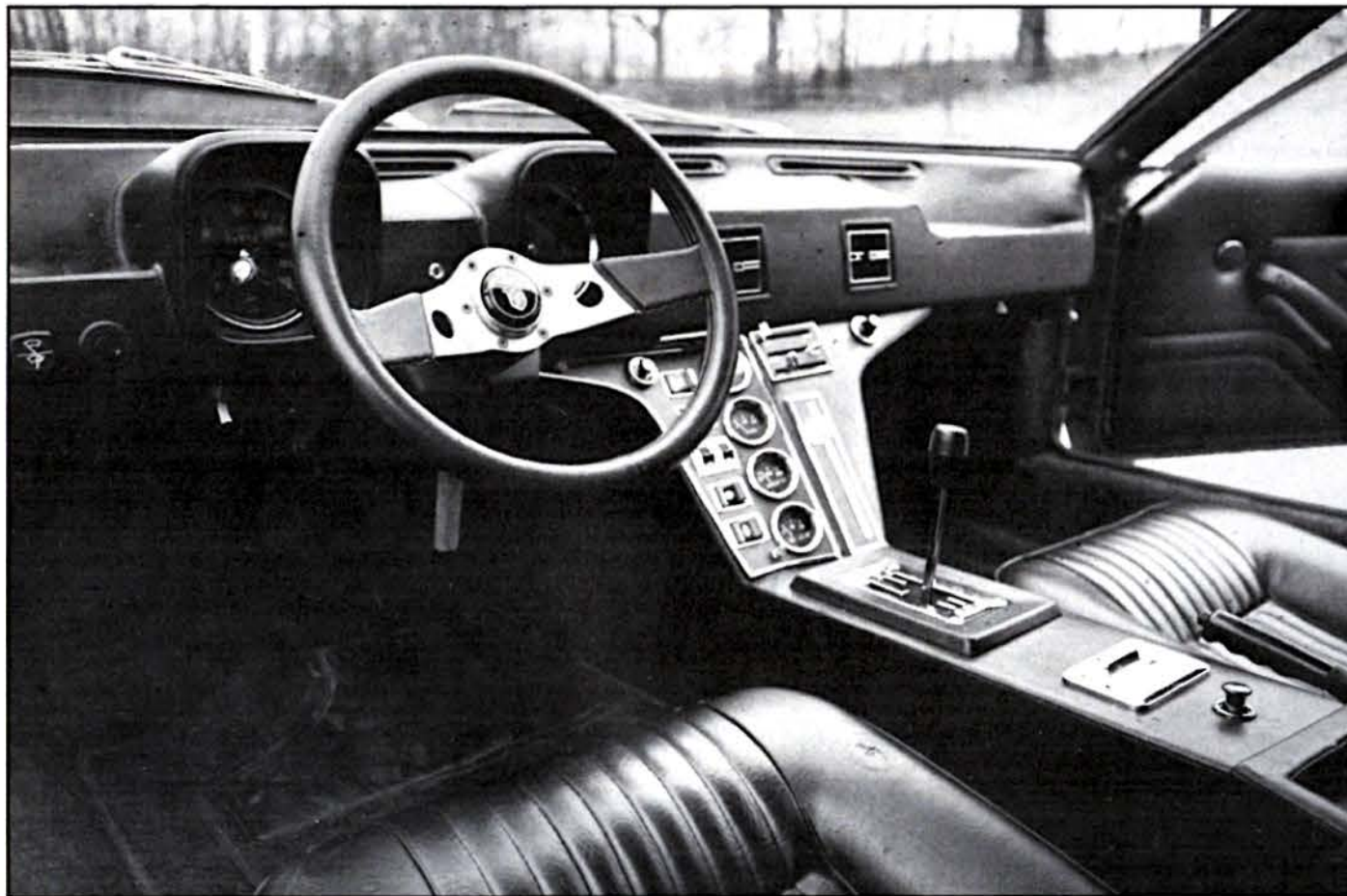
For instance, as you equated a car's Excitement Quotient with exclusivity, the Pantera's EQ will taper off rather more rapidly than if it were, say, a Ferrari. Which goes back to the \$10,000 price—these days, even a thrifty bellhop can scrape up enough front money for a \$10,000 car. And the reason the price is so low is that Lincoln-Mercury intends to sell at least 2500 Panteras the first year and somewhere around 12,000 to 15,000 before it is phased out of production in 1974 (at least for the U.S.).

You might well ask why the Ford Motor





Those folds and mounds mean soft sided luggage (top) and the real-racer interior has everything you need—except for legibility.



Company is involved with this kind of car in the first place. The official company line retorts that a sleek, mid-engine GT car like the Pantera is bound to add excitement to whatever array of workaday family haulers it's tied to and will lure all kinds of prospective car buyers with checkbooks at the ready into dealers' showrooms everywhere.

There is a further company line for the "Why Lincoln-Mercury?" question too. "Lincoln-Mercury is the import division of the Ford Motor Company," spokesmen will declare. . . "And besides, the Pantera is too expensive for the Ford Division—more in line with the price of a Lincoln."

All of that is essentially true except that the shade of meaning needs to be adjusted a few turns. Since he became president of FoMoCo, dedicated Lee Iacocca observers have noted a determination on his part to strengthen the Lincoln-Mercury Division, and the quickest way to do that is to give it some easy cars to sell.

Considering what moves in the showrooms these days, the most obvious save was to shop around for an import. At the touch of a wand, Lincoln-Mercury had the Capri, simultaneously and uncerimoniously the Cortina was yanked from Ford and, POOF, Lincoln-Mercury became, in fact, the import division. That was followed last fall by a Maverick in Comet clothing and now, the Pantera. The question is, will snuggling the Pantera between Continentals and Mk. IIIs in the showroom make any of them look more appetizing?

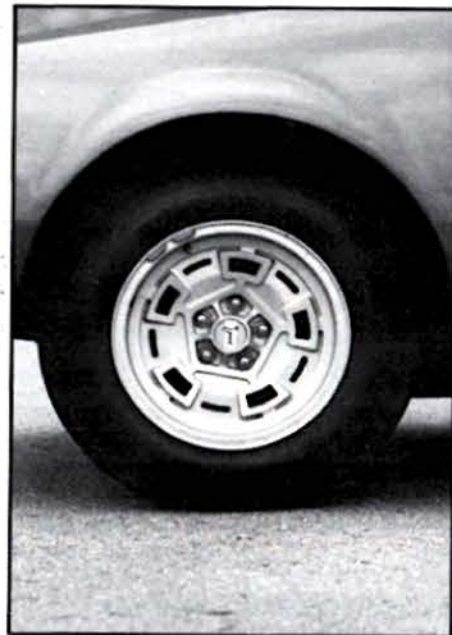
The answer may be academic anyhow. Somebody has to sell the Pantera because the Ford Motor Company owns de Tomaso, the company that builds it. Not all of de Tomaso, but almost—enough so that everybody involved knows who is boss.

Why Ford troubles itself with a property like this is lost in the gulf between the company line and what really goes on behind the boardroom doors. Still it is probably safe to assume that whatever vision stimulated Ford representatives to wave blank checks at Enzo Ferrari 10 years ago hadn't faded from the corporate imagination last fall when the acquisition of de Tomaso was announced. While the stature of an Alejandro de Tomaso is nothing compared to that of an Enzo Ferrari, the corporate name should not be casually disparaged because included under its corporate banner are the two highly respected Italian *carrozzeria* of Ghia and Vignale. With such satellites, de Tomaso easily ranks within the three most influential specialty car body builders in the world—Pininfarina and Bertone being the other two.

Those who would worry about the future of the artistic Italian style of automobile manufacture now that a major Ameri-

can firm has established a beachhead can be mollified somewhat by the statements of Ray Geddes, a Ford executive who has also been positioned as a vice-president of de Tomaso Inc. In the level, dispassionate monotone favored by all upward-mobile decision-makers in Detroit, Geddes explains that there is no master plan to get de Tomaso to start producing Fords with an Italian accent. On the contrary, de Tomaso is an independent subsidiary responsible for showing a profit through its own devices.

There is even a note of benevolence in the parent company's outlook. Since the Pantera is a relatively high volume car, to be built with as much production tooling and as little hand craftsmanship as possible to keep the price down, other low volume cars, one of them the exceedingly hand-



some 4-door sedan that was shown at the New York Auto Show, are being planned to keep Ghia's and Vignale's workforce of skilled sheetmetal artisans intact. While few auto makers can ever be accused of preservationist efforts on any front, Ford's outlook in this instance is commendable from a car enthusiast's point of view.

But will the enthusiasts look so warmly on the Pantera itself? How to judge? For all of the qualities that customers find so reassuring in Lincolns and Mercurys—comfort, ventilation, quality of assembly, noise, bumper protection, ease of maintenance, etc.—the Pantera might just as well be left in its shipping crate. But let's face it. No matter what public utterances are made no one is expecting customers who walk into a showroom looking for a Lincoln to drive out in a Pantera.

So there is little point in judging a Pan-

tera on conventional production car standards. If, on the other hand, you compare it to the world's sparse population of mid-engine GT cars, you find that the Pantera is a meritorious automobile. And if you compare it to de Tomaso's last effort, the Mangusta, you will conclude that it is one of the modern day wonders of the world.

The basic layout of the Pantera is very efficient. Most important, there is enough room in the cockpit for two average size adults. A six-footer has plenty of headroom, his knees won't be aimed into his chin and he can stretch his arms and square his shoulders without feeling like he is in a one-man submarine. All this may seem like a very basic human need but no such convenience was available in the Mangusta. Entry and exit is a simple matter in the Pantera as well, which is probably the only design feature on which de Tomaso consistently has the inside track. Where spelunking experience is required to worm your way in over the high wide sills of a Miura or a GT Mk. III, you just slip into a de Tomaso. The doors are cut low, almost down to floor level, and there is virtually no sill. This is because the Pantera is a unit body car with much of its structure concentrated in a central backbone. And even the backbone is much less intrusive than that of the Mangusta.

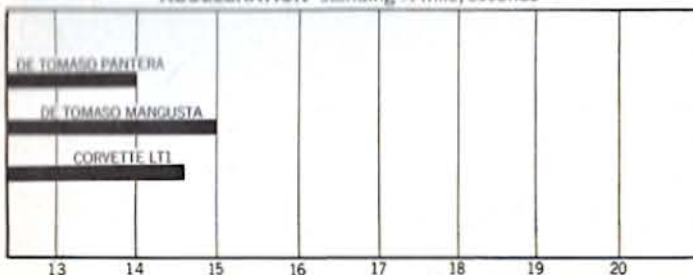
While the Pantera could be classified as roomy for a mid-engine car, it's still uneasy on the anatomy. The seats are strongly bucket-shaped and firm in their padding—but decidedly shaped for someone else. The driving position, too, is something of a trial. The front wheel houses seriously encroach on the passenger compartment so the occupants must sit with their legs skewed toward the centerline of the car—and the driver ends up with no really suitable place for his left leg when he is not pedaling the clutch. As if that weren't quite enough, the steering wheel is just slightly out of reach for anyone with less than simian arms. Despite the unnatural positions mid-engine cars have forced on their drivers, you can still navigate this one with uncommon confidence because you can see out easily.

Considering (you always have to "consider" when you are speaking of cars like this) the mid-engine location and relatively generous interior dimensions, the Pantera is an exceptionally compact car—15 inches shorter and 2 inches narrower than a Corvette. With 5.4 inches of ground clearance there has been no skimping there either. Even luggage space is good.

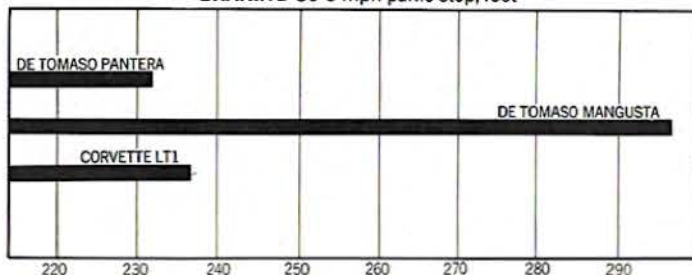
The engine on the other hand, is like an iceberg—you only see one-third of it. The top half of the car, from the cockpit back,

(Specifications overleaf; Text cont. pg. 76)

ACCELERATION standing 1/4 mile, seconds



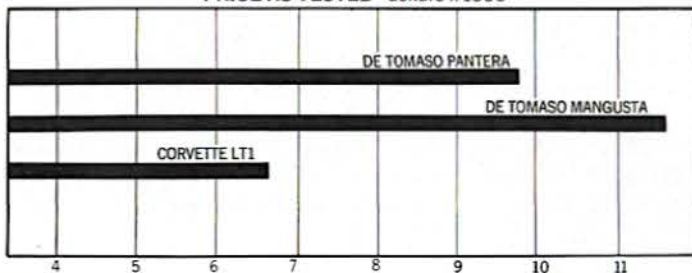
BRAKING 80-0 mph panic stop, feet



FUEL ECONOMY RANGE mpg



PRICE AS TESTED dollars x 1000



De Tomaso Pantera

Importer: De Tomaso of America, Inc.
Post Office Box 1920
Dearborn, Michigan 48121

Vehicle type: Mid-engine, rear-wheel-drive,
2-passenger coupe

Price as tested: \$9,800
(Manufacturer's suggested retail price, including all options listed below, Federal excise tax, dealer preparation and delivery charges, does not include state and local taxes, license or freight charges)

Options on test car: Campagnolo magnesium wheels, \$300; Air conditioner, \$500

ENGINE

Type: V-8, water-cooled, cast iron block and heads, 5 main bearings
Bore x stroke 4.00x3.50 in, 101.6x89.0 mm
Displacement 351 cu in, 5750cc
Compression ratio 11.0 to one
Carburetion 1x4-bbl Autolite
Valve gear Pushrod operated overhead valves, hydraulic lifters
Power (SAE) 310 bhp @ 5400 rpm
Torque (SAE) 380 lb-ft @ 3400 rpm
Specific power output 0.88 bhp/cu in, 53.9 bhp/liter
Max recommended engine speed 5900 rpm

DRIVE TRAIN

Transmission 5-speed, all-synchro
Final drive ratio 4.22-to-one
Gear Ratio Mph/1000 rpm Max. test speed
I 2.23 7.8 42 mph (5400 rpm)
II 1.47 12.6 68 mph (5400 rpm)
III 1.04 17.8 96 mph (5400 rpm)
IV 0.85 21.8 128 mph (5900 rpm)
V 0.71 26.1 130 mph (5000 rpm)

DIMENSIONS AND CAPACITIES

Wheelbase 98.4 in
Track, F/R 57.0/58.0 in
Length 167.0 in
Width 67.0 in
Height 43.4 in
Ground clearance 5.4 in
Curb weight 3123 lbs
Weight distribution, F/R 40.9/59.1 %
Battery capacity 12 volts, 75 amp/hr
Alternator capacity 660 watts
Fuel capacity 20.0 gal
Oil capacity 4.0 qts
Water capacity 23.0 qts

SUSPENSION

F: Ind., unequal length control arms, coil springs, anti-sway bar
R: Ind., unequal length control arms, coil springs, anti-sway bar

STEERING

Type Rack and pinion
Turns lock-to-lock 3.1
Turning circle curb-to-curb 39.0 ft

BRAKES

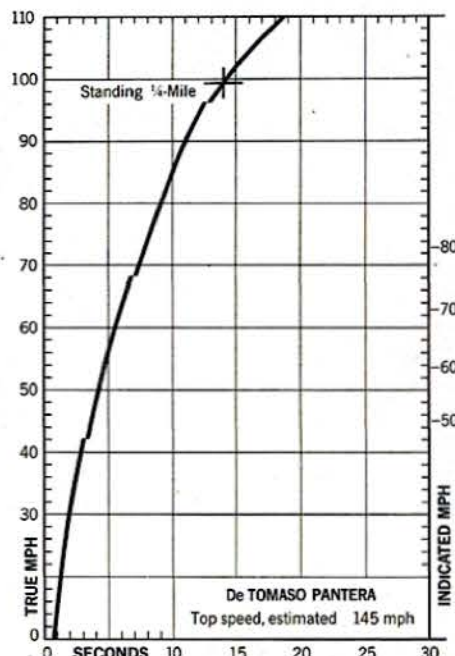
F: 11.1-in dia. solid disc, power assist
R: 11.2-in dia. solid disc, power assist

WHEELS AND TIRES

Wheel size F: 7.0 x 15; R: 8.0 x 15-in
Wheel type Campagnolo cast magnesium, 5-bolt
Tire make and size Michelin X F: 185/70 VR 15;
R: 215/70 VR 15
Tire type Radial ply, tube-type
Test inflation pressures, F/R 34/36 psi

PERFORMANCE

Zero to	Seconds
30 mph	1.7
40 mph	2.7
50 mph	4.1
60 mph	5.5
70 mph	7.2
80 mph	9.1
90 mph	11.2
100 mph	14.1
Standing 1/4-mile	14.0 sec @ 99.4 mph
Top speed (estimated)	145 mph
80-0 mph	232 ft (0.92 G)



Your seat belt was designed to protect you in an accident. Our tires were designed to help keep you out of one.

The odds are about 1 in 5 that some of your car's safety features will be put to a test this year.

Because a sharp curve you didn't know was there suddenly was there.

Or because a "safely parked" car darted into your path.

Or because a road you thought was clear and dry wasn't.

In panic situations, the difference between an accident and a near accident could depend on how well your car handles.

And that depends to a great extent on your tires.

You see, when you take a fast curve or make a sudden, evasive maneuver, a tire is pulled toward the outside by centrifugal force.

To compensate, the sidewall of a tire must be flexible enough to give. So that the tread can stay flat on the road.

But conventional sidewalls are too stiff to give. So the tread actually lifts up a little. With less tire on the road,

there's more of a chance you'll skid. And even if you don't, you can't be guaranteed enough control to get you around trouble.

Not so with Pirelli Cinturato radials. They have flexible sidewalls that give. A result of radial ply construction.

So, under stress, Pirelli radials stay glued to the road. Like the treads of a tank.

Which is why Pirelli's can out-corner, out-maneuver and just plain out-handle conventional bias-ply or bias-belted tires. Especially on wet, slippery roads.

Pirelli Cinturatos come in sizes to fit just about any American or imported car.

And they should be on your car.

With all due respect to seat belts, the best way to avoid injury in an accident is still to avoid having one.



Does Anyone Here Know Larry LoPatin

BY KIM CHAPIN

Racing's isolationists see LoPatin's demise as a mandate for the status quo.

For 30 tumultuous months beginning in February, 1968, Larry LoPatin was the single most controversial figure in American automobile racing. The Detroit businessman, whose previous venture into sports was as prime financial backer for Windsor Raceway, a winter harness track in a Canadian suburb of Detroit, built automobile racing complexes in Michigan and Texas from the ground up; announced plans for a third major speedway in New Jersey; acquired majority control of Atlanta International Speedway and 48% interest in California's Riverside International Speedway, and put all these holdings together under the roof of one company, American Raceways, Inc. Not a small number of wary establishmentarians called him one of the most powerful men in racing, and with obvious good reason.

Then in July of 1970, as suddenly as it had appeared, LoPatin's comet burned up. Four men representing the four Boston-based mutual funds that held \$6 million of ARI notes walked into his office and told him his resignation would be "in the best interests of their clients." According to the new management, the charred remains of the ARI empire included a staggering debt load of \$14.4 million.

Today, one year later, there are no visible scars. LoPatin is now what he has been most of his adult life, a capable and creative real estate executive, and at 45 his most immediate problem is how to wear bifocals without appearing to be drunk. He has plans to convert an abandoned warehouse district of Detroit into a nighttime entertainment center—which the city could surely use, God knows. He still collects *netzukes*, fob-like Japanese miniature art forms, and the dimensions of the house he recently built for himself and his family in suburban Detroit were primarily dictated by the size of his elaborate stereophonic sound system.

Why did LoPatin fail? The answer is important, not so much to LoPatin himself, who has probably been removed from racing forever, but to the entire sport, because there are indications that the reasons for his failure lie in the fact that he approached automobile racing as a *businessman*. "Building a race track," LoPatin often said, "is no different from building a shopping center."

Automobile racing is fond of advertising

itself as "The Sport of the Seventies." It claims to be the second most popular spectator sport in the country, behind horse racing, and cites an annual live attendance figure of anywhere from 40 to 60 million. Last fall a Lou Harris poll showed auto racing to be the favorite sport of 10% of the nation's sports fans, trailing only football, baseball and basketball.

But there are other, ominous signs that indicate automobile racing is not progressing nearly as rapidly as it might. The main reason is that, unlike any other major sport, racing has a fragmented ruling hierarchy composed of three sanctioning bodies—the National Association of Stock Car Auto Racing, the United States Auto Club and the Sports Car Club of America (and the National Hot Rod Association and American Hot Rod Association who, because of the limited interchange between drag racing and road racing drivers, feud principally between themselves)—each of which is almost paranoid in its determination to protest every blade of its own turf against incursions by the other two. Consider the following:

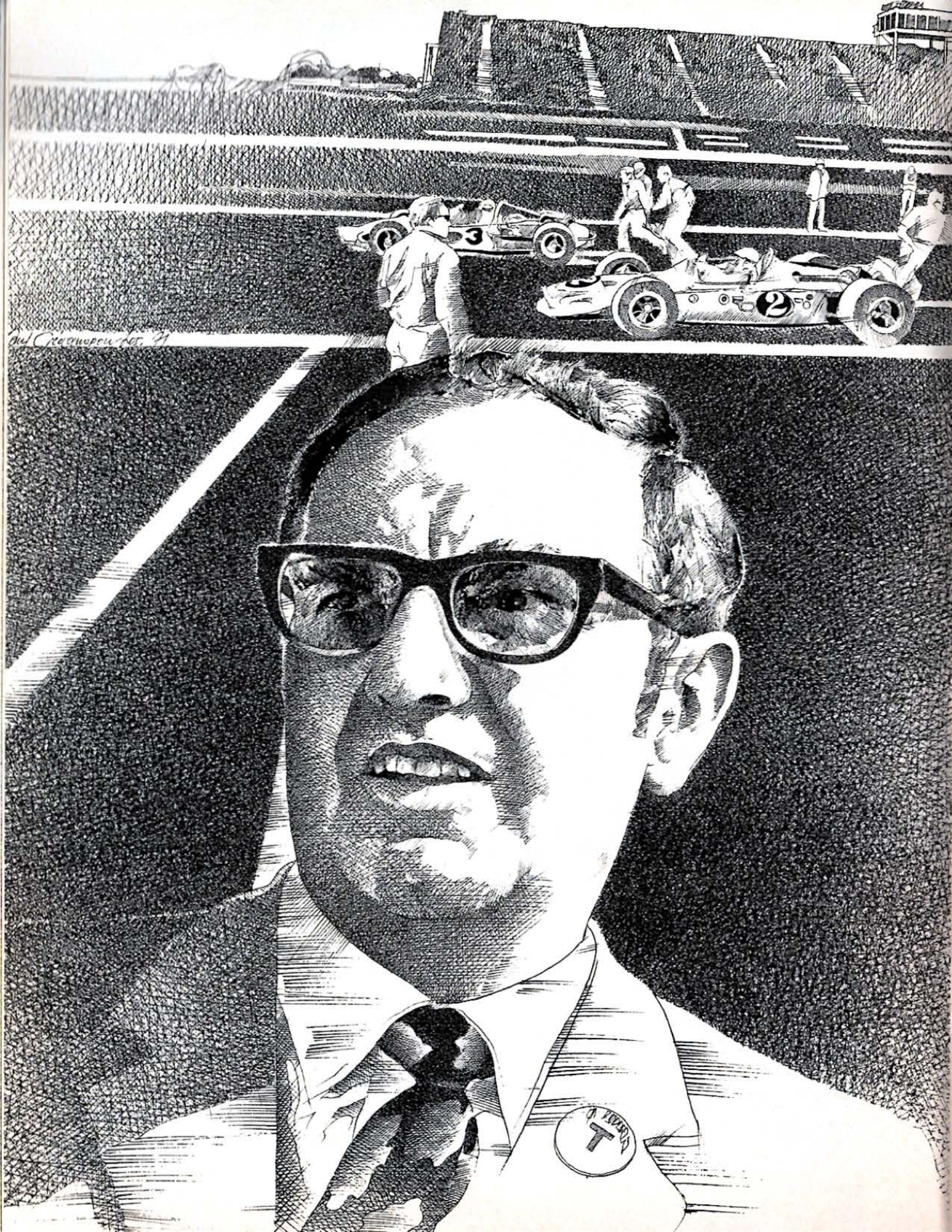
- Driver exchanges are traditionally carried out only with the greatest reluctance, if at all.
- In the spring of 1970 a young, progressive and prominent racing figure removed himself from consideration for the USAC presidency after he took a hard look at its board of governors and decided he could never count on more than 50% support.
- This year the three sanctioning bodies are running a total of 10 more or less first-line racing series. USAC has its Indy-type cars on road courses, on paved ovals and its dirt track series, and will continue to run late-model stock cars. NASCAR is fielding the late-model Grand National as well as the Grand American championship for sporty cars. The SCCA has Formula A and B cars in competition with the USAC road-racing series, its Trans-American circuit is in conflict with NASCAR's Grand American, and its beleaguered Canadian-American Challenge Cup series.
- There are only 52 weekends in a year, and race conflicts are inevitable. For example, last fall's California 500 USAC event was the inaugural race at the lush Ontario Motor Speedway and the promotion alone cost nearly \$1 million. Yet the same weekend the National Hot Rod Association held its national championships in Indian-

apolis and NASCAR put on its Southern 500, still the most prestigious of the Grand National races, in Darlington, South Carolina. Besides competing for space in the nation's sports pages, the two oval races posed a problem for at least two NASCAR drivers, ultimately to the detriment of both races. California lost Donnie Allison, who was the Indianapolis 500 Rookie of the Year the previous May; Darlington lost Lee Roy Yarbrough, NASCAR's top driver in 1969. "If that had been my track," said LoPatin, "I would have made sure a county fair wasn't competing against me." The 1971 season is no different.

• Racing has yet to cash in on a lucrative television contract, the lifeblood of nearly every other major sport. This year ABC, the only network that touches racing, is covering only 11 races live—six USAC and five NASCAR events.

• For every immaculate and picturesque track that has opened in the past two years (Ontario, Donnybrooke, Road Atlanta) an equally impressive facility has closed down (Sears Point, Stardust, and, for a while, Bridgehampton). Although the exact figure is difficult to pinpoint, there are probably no more than a half-dozen major tracks operating solidly in the black.

Added to this is the financial structure of the sport. Nobody, it seems, makes any money directly, and there appears to be absolutely no relationship between cost and return at any level. Last year, for example, Al Unser in his Johnny Lightning Special won the Indy 500 and nine other USAC championship events and total prize monies of nearly \$500,000, the highest one-year take in the history of the sport. Yet the car's owners, Parnelli Jones and Vel Melle-tich, claim their team still finished about \$50,000 in the hole. The operation existed because of the generosity of the Topper Toy Company, which sponsored the car, the Ford Motor Company, which provided the engines, and Firestone, which supplied the tires. The situation is similar for almost every other top car-driver combination. If the automotive companies, the accessory companies and the individual car sponsors didn't believe they got a return, in the form of advertising, on their invested millions, or suddenly couldn't take tax write-offs, there would be very little racing as it is known today—anywhere. Obvious case in point: the Ford withdrawal and Chrysler cutback of last fall, which has certainly put



a crimp in the Grand National circuit. All of this is hardly an indication that racing is "The Sport of the Seventies"; rather, it indicates the sport is several years behind its press releases.

Must this structure change if racing is to grow? LoPatin believed so, especially at the track level. "The industry will succeed only when the tracks are healthy," he said. "There has got to be a relationship between cost and return."

That, essentially, is the key to LoPatin's ultimate goal, and he collided head-on with all three sanctioning bodies in his quest. He was a businessman trying to protect his tracks; they were organizations trying to expand and protect their empires. The first signs of trouble came early.

* * *

LoPatin became interested in auto racing in 1966 when, as an officer of the Windsor Raceway, he sought out something to keep the track occupied during the summer months. The first automobile race he ever saw was that year's 12 Hours of Sebring, and the report he brought back was devastating. "I felt racing was a waste of time and money," he said. "It seemed to cater only to the guy on the track, not the spectator, and that didn't make sense."

The next month, however, he had better luck at a USAC sprint car race at a dirt track in Eldora, Ohio. Not knowing any better, he and a business associate, George Kawamoto, parked in the infield next to a turn, and had a ball. "We were like little kids," LoPatin remembered. "All the USAC hot dogs—Andretti and Rutherford and drivers like that—were there, and when those cars came sliding around the turns they just covered us with mud."

LoPatin recommended that the Windsor Raceway seriously consider auto racing as an off-season venture, but the project never materialized, mainly because the only ways to get to Windsor from metropolitan Detroit were over the Ambassador Bridge and through the Detroit-Windsor Tunnel and the traffic jams would have been monumental.

So LoPatin resigned from Windsor and went looking for a suitable race site in the Irish Hills area of Southern Michigan, where he had attended camp as a child. During the second half of 1967, when his Michigan track was still in its land-acquisition stage, LoPatin contacted USAC's competition director, Henry Banks, and asked for a race date for the following autumn. Banks turned him down.

Then one morning LoPatin picked up a paper and learned that Harry Wismer, one of the founders of the American Football League, also had plans for a race track, near Kalamazoo, Michigan, and further,

that Banks had given Wismer a USAC date. LoPatin was not happy. "I did what I had hoped Banks would have done with me," he said. "I checked Wismer out, and if you went beyond Wismer himself, you found everything was pure mush. Although we hadn't made an announcement, we had a corporation, we had already put \$150,000 into the thing, and we were working on re-zoning, land options and the like. We were substantially ahead of Wismer."

LoPatin asked to meet Banks again. At Chicago's O'Hare Field LoPatin offered to put up \$5000 bond if Banks would give him a date. Banks accepted and in February, 1968, LoPatin formally announced the impending construction of the Michigan

**After
LoPatin
lost a
stack of
million-dollar
chips
no one
is fighting
for his
place at the
table**

International Speedway. It would be a 2-mile, low-banked oval with a road course.

(Somewhat later, Bill France, the president of NASCAR, told LoPatin, "There's somebody in my office every day who wants a date and says he's building a track. Hell, there was some damn Chinaman down here to see me recently." The "damn Chinaman" was LoPatin's partner, Kawamoto, who is of Japanese descent.)

The first race, a 250-miler, was held October 13, 1968 and was a howling success. An announced crowd of 54,000 provided the largest gross for a single event in Michigan sports history to that time, \$530,000,

and the net profit was a cool \$94,000. "I wondered where I'd been all my life," LoPatin said.

The next day LoPatin convened the MIS board of directors and immediately decided to go national. The bulk of the original capitalization of the Michigan track was done through a joint stock and debenture offering that netted MIS \$2.7 million. Added to that was \$600,000 in cash, of which LoPatin's \$173,000 was the largest single portion. Now LoPatin changed the name of the corporation to American Raceways, Inc., borrowed \$6 million from some mutual funds (the ones which would eventually force his resignation), and within a year had done the following:

- Built Texas International, almost a carbon copy of MIS, by setting up a separate corporation in which ARI bought a controlling 56% interest for \$1.2 million.
- Gained control of Atlanta International through the purchase of 19% of the common stock at a cost of \$400,000 and by assuming the track's \$900,000 first mortgage. Through conversion of the mortgage, ARI could gain direct control of a majority of the common.
- Bought 48% of Riverside for \$1.25 million and assumed a \$1 million first mortgage, also convertible.
- Bought land for the proposed Eastern International Speedway near Camden, New Jersey for \$1.2 million.
- Spent an additional \$1.6 million for improvements at Atlanta and Riverside.

Shortly after that first race, LoPatin also signed a unique contract with NASCAR which guaranteed each of the two new tracks, Michigan and Texas, two Grand National races a year for a period of 10 years. The contract for each track cost ARI \$100,000, payable immediately, plus an annual \$25,000 fee for the duration of the contract. In addition, ARI would have to pay the usual sanctioning fee of just over \$10,000 per race.

It was Banks's turn to be livid. When he gave LoPatin the race date at their O'Hare Field meeting, Banks had assumed MIS would run USAC stock car events exclusively.

"At the time I talked to Banks," LoPatin said, "I didn't know the difference between NASCAR and USAC stocks. I thought a stock car race was a stock car race." Chalk that one up to naivete.

"I can see how Banks could have thought I meant Michigan would race only USAC stocks," LoPatin said, "but that certainly was not my intention. The NASCAR contract was a good business deal."

But it also guaranteed that Michigan (and Texas) would be without a USAC show of any kind in 1969, despite the fact



Discover this new and better way to quiet a noisy engine, improve compression and reduce smoke.

Give it the multi-protection of GUMOUT's new PTA Hi-Performance Oil Treatment.

Add a can of PTA to your oil. It'll do things for your car that no other oil additive can match . . . like increasing film strength, retarding sludge formation, and protecting against corrosion.

PTA is great for newer cars. It makes oil cling to the surfaces of

pistons, sleeves, rings and bearings. They suffer less wear since they're never dry, even at start-up. And that, naturally, means easier starting, a quieter engine, longer engine life.

PTA is even more of a blessing for older cars. It reduces blow-by, oil burning and smoking, so common in worn engines. Gives better compression and better mileage.

Actually gives your car more power immediately!

PTA pays its way in any car—old or new. And that's worth discovering.

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Cleveland, Ohio 44104

Larry LoPatin

that the prize money for the inaugural race, \$75,000, was the highest of any Championship Trail race that year except the Indy 500. "I thought the USAC car owners would tar and feather Banks for not having another Michigan race," LoPatin said. It took nearly a year of negotiations with Bill Smythe, the new USAC president, and Bill Taylor, USAC's stock car director (Banks had since retired as competition director) before Michigan and Texas were given 1970 dates. The Michigan date, a doubleheader event consisting of separate 200-mile races for championship cars and stock cars, was a success; the Texas doubleheader was cancelled by ARI's new management after LoPatin was eased out.

Nineteen sixty-nine was a turbulent year for LoPatin. On paper, everything looked fine. Five tracks, argued LoPatin logically, could be operated more cheaply under one roof than they could be separately. Overhead would be lower, and items like promotion, advertising and ticket sales could be consolidated and easily coordinated. Finally, the tracks would each pay a yearly \$75,000 management fee to ARI as well as slowly work off their various debt loads.

By the end of 1969, however, it was obvious that financial storm clouds were building, and in some cases it had already rained, literally and figuratively. The first event at Texas was the final Can-Am race of the 1969 season, but despite the presence of Jim Hall's Chaparral, Texas fans didn't know from a Group Seven car. As LoPatin put it, "They thought Can-Am was a singing group." ARI took a bath. Four weeks later, TIR held the Texas 500, the final Grand National event of the year, but a 6-inch rain the week of the race held a potential 45,000 crowd to just under 23,000 and ARI took another financial bath. LoPatin's fall races had also collided with the official Texas religion—football. That same year three of the four Michigan events were also plagued by rain.

The 1969 balance sheet for the Michigan and Texas tracks, plus expenses related to the proposed Eastern track, showed a net loss of \$1.2 million.

On January 12, 1970, ARI executive vice-president Les Share sent a letter to Jim Kaser, then SCCA's director of professional racing. It said two things. First, "... that ARI should concentrate its efforts in the 1970 season on the types of races which would provide a reasonable return on the investment, time, and effort involved." Second, "... that we would not be interested in conducting a Canadian-

American Challenge Cup race at either Michigan International Speedway or Texas International Speedway this season."

For a racing empire with a less than solid financial outlook, it seemed a remarkable document. But in 1969 ARI had held three SCCA professional events at the new tracks, a Trans-Am at Michigan and one Can-Am each at Michigan and Texas. Despite snow showers on race day, the Trans-Am drew a crowd of 21,000 and was a success. Together, according to ARI figures, the Can-Ams lost well over \$25,000.

LoPatin obviously wanted to ditch the Can-Ams and keep his Trans-Am. However, LoPatin said, Kaser refused to answer his letters or return phone calls made by ARI officials, and in 1970 the two tracks did not have any major SCCA dates.

Despite his burgeoning financial problems, which did not really become apparent until near the end of the year, LoPatin still emerged as a rather awesome spectre on the racing scene. Almost overnight he had gone from being "Larry Who?" to an entrepreneur of potentially immense power. After all, five major race tracks in five different major marketing areas can—or should—pack a lot of wallop. Rumors fol-

LoPatin and France both wanted the same thing—the deciding factor was that France already had it

lowed him wherever he went. One said he would take the money and run. A continuing series of stories had LoPatin buying every racing facility in the country, including the Indianapolis Motor Speedway. To this there was a semblance of truth. Practically every major track in North America, excepting Daytona, Indy, Watkins Glen and Road America, approached LoPatin about the possibility of his taking over.

LoPatin seriously considered only one other track, though, the Hanford Motor Speedway near Sacramento, California, which would have been run as a subsidiary of Riverside. Although the deal never materialized, the episode only emphasized LoPatin's theoretically strong position, a position which put him in direct conflict with the person who really was, and still is, a power-broker of racing—NASCAR's lord of the Southern mansion, Bill France.

In many ways their run-ins were unfortunate, because LoPatin admired France tremendously. "He's like an old-line

Southern politician," LoPatin said. "He's played Solomon down there for years, and he's a great administrator; he had to be to hold Chrysler and Ford in line and maintain good relations with General Motors at the same time. It's a miracle." France is, after all, very nearly what LoPatin tried to become. He owns race tracks and he runs his sanctioning body with near-dictatorial powers. Which is fine for NASCAR, but often clouds the overall racing picture.

At first the conflicts were small. Each year recently until 1971 NASCAR had agreed to use a particular make of car as the pace car for most major NASCAR tracks. LoPatin, with five tracks of his own, worked out a similar arrangement—and lowered the price tag on France's deal. LoPatin also sought advertising for a five-track ARI souvenir program, which infringed on the universal NASCAR program.

Whenever he could, LoPatin also aligned himself strongly with the Big Three automobile companies and the major accessory firms. He proposed national tie-ins with manufacturers and advertisers and often cited the fact that ARI had tracks in five different market areas while NASCAR ran the great majority of its races in just one section of the country. "In the beginning," LoPatin said, "Detroit created NASCAR, but in recent years Detroit had to go along with France because, as the gambler said, it was the only game in town. I didn't believe the car companies would let France push them around the way he did."

The majority of NASCAR Grand National races are still run on small (under 1-mile) Southern tracks, which to LoPatin seemed ridiculous. "Somebody like Lee Iacocca [the president of Ford] was not primarily a racing enthusiast," LoPatin said. "He was a merchant. Why didn't he say, 'This is Mickey Mouse. We're going to run our factory teams in 16 races in the proper marketing areas—period. No more bull rings.'" By implication, ARI would have gotten a big hunk of the action.

Finally, in September of 1969 the Professional Drivers Association, whose membership at the time included all of the factory-backed NASCAR drivers, struck the Talladega Motor Speedway, which France owns, claiming that no tires had been developed strong enough to take the 195-mph average speeds. LoPatin did not directly take sides, but he did suggest that the way to avoid such problems would be for racing to appoint a commissioner with

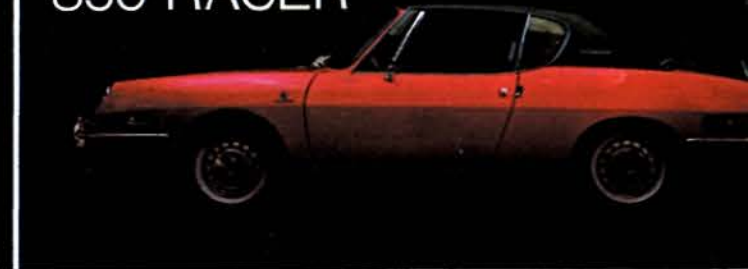
(Continued on page 74)

CAR and DRIVER

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850 RACER



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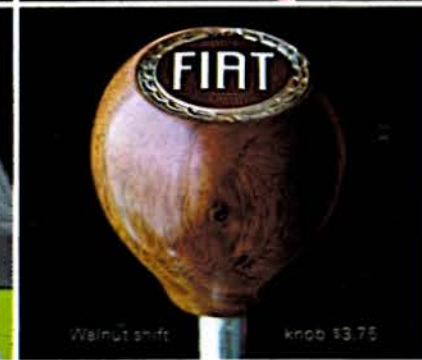
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VEGA GT. PERFORMANCE THAT GOES BEYOND A QUARTER OF A MILE.

When you hear the word performance in a car ad, you're usually prepared for images of big engines and tremendous power.

In those terms, the Vega GT is probably not the world's best performance car.

But, let's not be hasty.

Power isn't everything.

If all the roads in this country were straight, a car that's strictly power might be a pretty good idea.

But, as you've undoubtedly noticed, they aren't. So it helps to have a car that can really handle. We'd like to suggest Vega. Because Vega's a fantastic little car to drive, even in its simplest form. It's low to the ground. It has a wide stance. It has coil springs at each wheel. It has tight, precise steering. It has front disc brakes. And it has a pair of what just might be the most comfortable bucket seats in the business.

Of course, we're well aware that to some of you out there, fantastic just isn't enough.

For you, the Vega GT. First off, it includes the bigger version of our engine (more on that a little later). Plus front and rear ride stabilizers, to make it handle even better than it already does. Plus special—and quite good looking—13 x 6 mag-styled wheels with A70 x 13 bias belted ply white lettered tires, and wheel trim rings. Plus a spiffy soft vinyl-covered 4-spoke steering wheel.

And there are some things to read: tach, clock, ammeter, temperature gauge.

And some things to look at: wood-grain accents on instrument cluster, black grille, special GT nameplates.

And, to wrap it up, more.

Not that it's powerless.

While power hasn't been the main subject of our little discussion, we don't want you to get the impression that the Vega GT doesn't have an engine.

Nothing could be further from the truth. In fact, our engine is the most advanced engine

we've ever put into production. For openers, the block is made of aluminum. So it's light for its size. Or, inversely, so it's powerful for its weight. (Also, our light engine gives Vega a more even weight distribution. Which helps the stability on the road.)

Our GT engine is our 110-horsepower (93 SAE net) version. It has a two-barrel carburetor. And while it won't exactly roar, it'll take you where you want to go. Without straining.

Another nice thing about our engine is that it has an overhead cam. Which means among other things that there are one third fewer moving parts in the valve train.

Fewer parts, less trouble. And less wear. Now that's a pretty big statement. But we're confident that this engine will be around to back it up. Because we tested it for over 6,000,000 miles. And that's like going around the world 240 times.

So, if you're planning on taking a long trip, don't worry.

A matching set.

Now that we've almost got you talked into a Vega GT, we're going to make it a little more difficult for you.

You have to decide *which* Vega GT. First, there's the Hatchback Coupe. A natural. It looks like a sports car just sitting there.

But why, you may ask, a GT wagon? Well, once you take a good look at it and actually get inside and drive it, you'll know why. Our little Kammback Wagon has been aerodynamically designed to look great, and to handle even better than it looks.

So while we don't mind somebody putting a few groceries in the back end once in a while, it's pretty obvious that our wagon is a lot more than just a little station wagon.

One more thing. Our little wagon is available in red. But you'll have to finish the pun.

What they're saying.

For you avid readers of Vega ads, this is a brief review. The rest of you, take notes.

Motor Trend: "For the money, no other American car can deliver more." (Motor Trend also made Vega its Car of the Year. And needless to say, we're glad.)

Car and Driver: "Technically, the Vega has the most impressive list of credentials of any American small car." (In Car and Driver's Readers' Choice Poll, Vega won in the Best Economy Sedan category. By an amazingly wide margin.)

Road & Track: "The best-handling passenger car ever built in America."

Road Test: "The Vega is innovative without being complex."

Be prepared for a quiz.

The moral.

Try as we might, no ad will ever sell you a Vega GT. Only a test drive can do that.

So we urge you to get on down to your friendly neighborhood Chevrolet dealer. And, oh yes, don't just take it down a straight road. Find some curves, some hills, some corners.

After all, that's what we built it for.



Buckle your seat and shoulder belts. It's an idea you can live with.



Dr. Diesel, what have they done to your engine?

BY BRUCE McCALL

After three quarters of a century it's time somebody checked

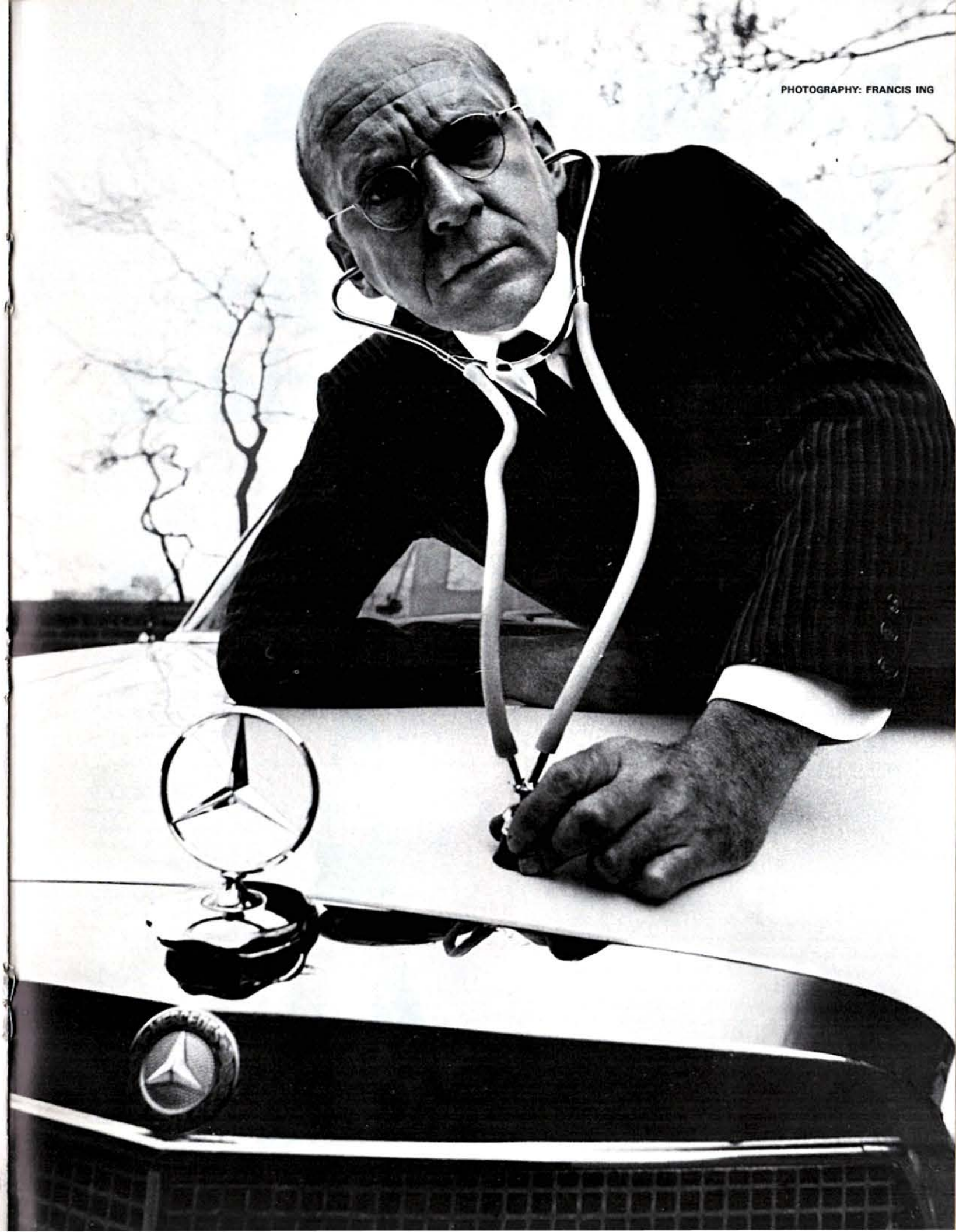
The Diesel engine is a noble beast, a willing mechanical drayhorse that 75 years ago slipped the skids under the Age of Steam and has been doing most of mankind's powered dirtywork ever since, stolidly thumping away out of sight in factories and freight trains and ships' bellies and other places nice engines don't go, first choice of zeppelin and submarine and tank designers; but as for its application to cars—a Diesel engine in a car?—well, really. Would you want your mistress to mate with a drayhorse? True, every continent on earth except North America teems with Diesel cars. But that can be put down to pitiful economic necessity and the retarded advent in those benighted regions of Rocket-fire 440 Turbo-Flash V-8s. The lack of Diesel cars on America's highways and byways is just one more proof of this nation's exalted living standard. You don't see many outdoor johns here either. Americans know about Diesels. The Diesel-powered automobile flows down the road at the velocity of melting lard, accelerates like fog, and lays down noxious thunderheads of smoke in its wake. It doesn't take an Uncle Tom McCahill to know that driving one is like driving a 1937 Studebaker loaded with 10,000 pounds of sandbags over railroad ties during a poison gas attack while hand grenades go off under the hood—and all for a miserable few bucks saved on fuel and upkeep. It's no deal. Like Russian *haute couture* and the manifesto of the Greenback Party, the Diesel is—to put it kindly—out of phase with American tastes. So there are few takers. Such takers as there are, we all know, are cut from the same cloth—or in their case from the same mangled bolt ends. They've probably seen flying saucers. They can tell you just how the Big Interests killed off the Fish carburetor, not to mention the Tucker Torpedo. The archetypal Diesel owner will endure any physical or psychological torture so long as it lets him feel he's outfoxing the automotive robber barons at their own game. His warped value system puts a higher premium on saving 23.47 cents on a tank of fuel than in making it up a hill in any-

thing less than an afternoon. His automotive life's goal isn't to own a Lamborghini, it's to break the magic penny-per-mile operating cost barrier.

How bizarre, how pathetic, how un-American. It follows that in voting for America's automotive sweetheart, the only Diesel-powered car available in this country today would vie with Wartburg for dead last. And that Diesel sales per annum here would trickle along in the dozens.

Only, that's not quite how it turns out to be. The only Diesel car sold in the U.S. today is the Mercedes-Benz 220D Sedan and today as for the past decade, M-B tells us, the Diesel model rolls up about 20% of the German firm's total American sales. That's 5000 Diesels per year, bub, at a per unit price of \$5419 f.o.b. Fort Lee, New Jersey—not enough to send Lee Iacocca scrambling into another crash program perhaps, but a shade more cars at a loftier price level than any lunatic fringe can support. What is the charm of Dr. Diesel's weirdmobile, that better than 50,000 Americans over the past 10 years have plunked down Cadillac-style money for the privilege of putting up with it? Mercedes-Benz of North America handed us the keys to a new 220D and told us to find out first hand—and at leisure. Like a homely girl, goes the apologia, the Diesel's appeal stems from sturdy virtues often overlooked on brief acquaintance. You have to live with it a while, get used to that wall eye and those bow legs, before the pure gold underneath can shine through—before you *understand*. Live with the 220D we did, for 21 days and 8972 miles to be exact, all the way from New York, New York to Los Angeles, California, and back again.

Discovering that the Diesel doesn't *look* like a Diesel set the tone for an acquaintanceship that was to provide lots of surprises amounting almost to letdowns. Shouldn't a nutball car carry the equivalent of a leper's bell to warn the unwary? Doesn't the village idiot usually dress, well, kind of funny? Mercedes-Benz wraps its eccentric stepson in the same neat, no-nonsense suit



PHOTOGRAPHY: FRANCIS ING

For Billy Mills, the first few thousand miles were the hardest.

Billy Mills brought home a gold medal from the 1964 Olympics in Japan. He won the tough 10,000 meter run. But the really tough part was getting the money to get him and his teammates over to Tokyo.

It takes a lot of money to field a winning Olympic team. And there's an easy way for you to help

raise that money: buy Bank of America Travelers Cheques.

Because, every time you buy Bank of America Travelers Cheques, part of the proceeds from the sale go to the U.S. Olympic Committee.

So by asking for our travelers cheques at your bank, you help equip and train our athletes. Help them get to the Olympics. Help them win when they get there.

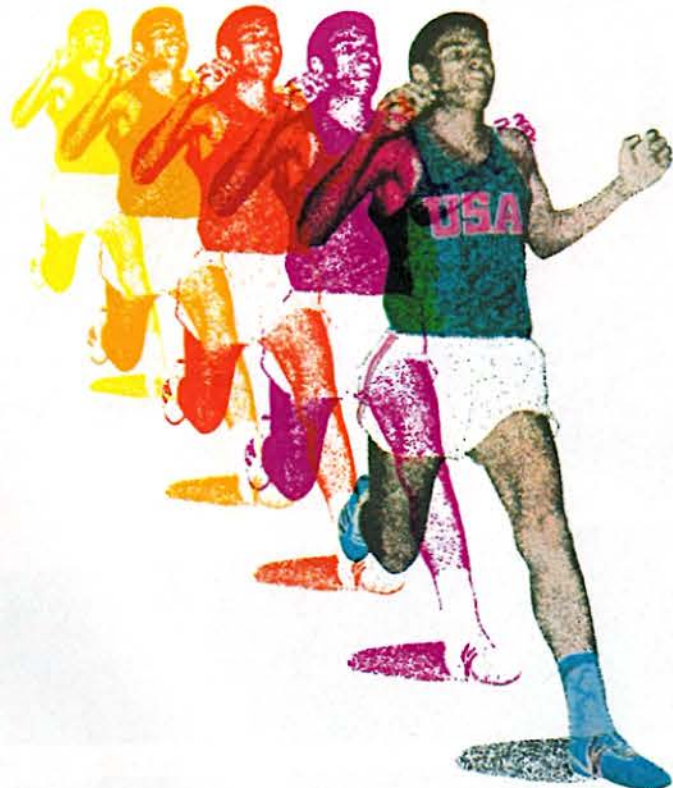
And it doesn't cost you anything extra.

We think everybody should

back our Olympic team. And if you buy that, you'll buy Bank of America Travelers Cheques. They're sold at leading banks everywhere.



They don't cost any more. They just do a lot more.



BANK OF AMERICA NT&SA • MEMBER F. D. I. C.

Shouldn't a nutball car carry the equivalent of a leper's bell?

used for half a dozen other models, the newish (1968) "small" 108.3-in. wheelbase sedan body shell, and with typical Stuttgart disdain for cosmetics gives it no special appearance touches other than the word DIESEL on the trunk lid.

The Diesel starting ritual involves switching the ignition on, yanking a little knob about halfway out of the dashboard, then holding it there while a glow plug heats up enough to initiate the start-up bang in the engine. That takes maybe 20 seconds and is signaled by the glowing of an indicator lamp under the instrument cowl. Then you yank the knob all the way out and the Diesel's mechanical earthquake is unleashed. Wrong again; the Diesel doesn't even *sound* like a Diesel. At idle the cacophony is on about the level of somebody popping corn in the next room, a gentle clickety-clack. Instead of intensifying under harder throttle it starts fading.

By the time the speedometer needle shows 30 you're no longer in a Diesel at all as far as your ears are concerned, just grooving along in a normal Mercedes-Benz; i.e., every working component evidently so tightly locked into the same mechanical rhythm that a uniform dull hum is the nearest the car can get to making noise. Aha, but the vibration! Those mighty combustion explosions that rip through a Diesel's engine block several times per second must surely make themselves felt if not heard? Pulsing tremors, shudders, little jitters in the steering wheel and running gear? Another letdown. Regardless of engine speed, the whole car feels as numb as if some giant hypodermic had just given it a shot of novocain. Mercedes-Benz has done a brilliant job of taming the Diesel's cruder tendencies, we grudgingly admitted; so much for all those nifty putdowns we'd been saving up. How can you write "Feels like the boiler room of a Spanish-American War pocket cruiser" about something that refuses to cooperate with one crummy tremble? Okay. But cursory study of the spec sheet indicated that not even those demon Mercedes-Benz engineers could allay the horrible reckoning when 65 horsepower with a 4350 rpm redline, dragging 3200 lbs. of automobile around, tried coping with the American driving milieu. Brush off your hyperboles, boys, here comes a sitting duck.

Actually, the Diesel's low-end performance suggested something more in the wallaby line. In the face of what feels like a millstone for a flywheel and terminal asthma in the engine's aspiration system, you can do little more between takeoff and that distant, misty summit known as Cruising Speed than sit back and wonder if it's really possible that the minute hand on the clock can be moving faster than the neighboring speedometer needle. The engine is doing its civilized Mercedes-Benz version of an angry thrash, you're trying to divine a power peak in an acceleration curve as flat as Soldiers Field in order to effect gear changes that don't seem to make any difference anyway; and meanwhile the kid behind you on the Schwinn definitely appears to be gaining. Praying is the secret. You pray nothing will happen to rob you of the momentum so painfully built up—no obstacles in your lane, no sudden slowdown by the car ahead, and please please God, no red lights. On freeway entrance ramps not even prayer helps. It's you wearing lead sneakers and here come the bulls of Pamplona.

Things brighten over 30 mph. Note the foregoing and then grapple with this: It is possible to drive a Diesel fast. Simply run her up to 80 mph; faithful beast that she is, she'll stay there as long as you will, and both parties will feel supremely comfortable doing it. "Fast" is of course a relative term, but in the U.S.A., 80 mph is fast enough and staying at this rate means you pass about 92% of all other vehicles on the road and do what you never

dreamed Diesel driving would ever involve: keep an eye constantly peeled for the fuzz. High average speeds turn out to be a Diesel forte no less than a forte of all other Mercedes-Benz cars. There you are with an engine that sometimes feels like it can't match the torque curve of a pocket watch, and yet somehow that puny 65 horsepower is enough to outrun far more powerful and pretentious cars. Endearing, that's what it is, and fine engineering the only plausible explanation. Not just fine engineering here and there but the total package, the way every function in the car relates to every other—the *harmony*, in a word. Brakes, steering, visibility, driver comfort, ride, roadholding; a chain with no weak links, no gaping flaw or idiot irritation to sabotage your confidence and start that right foot easing off the throttle. A sense of utter physical and psychic security does more to maintain swift average speeds than this world dreams of—a lousy 65-hp or not.

Dr. Diesel's little brainchild deserves its due in all this. It's no louder at 80 mph than it was at 30 and so phlegmatic that the temperature needle doesn't budge from dawn to dusk at that speed; and for all the attention it demands, you begin to think you could just as easily weld the engine compartment shut and forget it. But there is no denying that this Diesel has lucked into a beautiful home and derives much of its charm from those surroundings.

The foregoing paean to the 220D's high speed capabilities becomes null and void on hills. The legend for once proves true. It swoons, it staggers, it does a devastating imitation of having just been caught from behind by a giant lasso, and if the hill is in the mountains and you're above 3000 feet it does so to the accompaniment of an unnerving plume of black exhaust smoke and an even more unnerving pocketa-pocketa knock. The smoke and knock are transitory phenomena and quite harmless, and you eventually do get up the hill. But it's an exercise in frustration on a par with tunneling through Mt. Everest with a spoon.*

Top speed of the 220D is modestly pegged by its makers at 84 mph. This turned out to be too modest. Our car, tight and new as it was, attained 85 mph once while descending a hill in New Mexico. We felt that with a bit more loosening up and another nice long downhill run, 86 mph was by no means out of the question.

Our 8972 miles offered sufficient chance to prove or disprove the claim that diesel fuel is hard to find. It disproved it. The little red "reserve" light never got a chance to come on.

Running those 8972 miles as near to a relentless 80 mph as possible, the 220D drank 396 gallons of fuel—22 miles per gallon—at a cost of \$132.80. Add \$3 for 3 quarts of oil and that's a 1.3-cent cost-per-mile fuel figure. So even at 80 mph the Diesel is cheap to run. Whether such economy offsets that feeble low-end performance depends on subjective factors like who's using it, where, for what, and how long he plans to keep it; the latter being crucial since much of the Diesel's economy case rests on long-term savings in fuel and upkeep. But at the very least, Dr. Diesel's drayhorse impressed us as an infinitely more rational proposition than most Americans imagine and in its own understated way something of an engineering *tour de force*. Rest easy, Dr. Diesel; your engine couldn't be in better hands. ●

*—Every cloud has its silver lining; in the 220D's case it's the fact that the smoke cloud rolling out behind contains so few ecological uglies that the M-B Diesel, as is, can already pass California's 1975 anti-pollution exhaust emission requirements with unburned hydrocarbons to spare.



SONETT III: Our ideas are meant to be driven.

Sonett is SAAB's exciting new idea in sports cars. It's a superb automobile that'll keep you out on the road long after other cars bore you. That's because Sonett is totally unique. It has features that can't be found together on any other sports car in the world.

Features like front wheel drive. Front wheel drive that pulls you around curves as smoothly as if you were roaring down some straightaway. (And you're going to do a lot of roaring in this well built Swede.) In all kinds of weather, Sonett's front wheel drive, with its V-4 engine up front where the power is, gives you the kind of handling and traction, that'll spoil you for any other car you drive.

And nobody else has Sonett's dual diagonal braking system. With each circuit connected diagonally to a front and rear wheel, you'll stop on a straight line, even if one circuit should happen to fail.

There's also a lot of great ideas on the outside. Extensive wind tunnel tests have resulted in a design that cuts wind resistance to a minimum. You can knife through wind knowing that the Sonett is incredibly stable at extremely high speeds. And with a drag factor of 0.31, the lowest of any car in its class, you'll be getting fabulous gas mileage at those speeds.

Any way you look at it, Sonett is one of the toughest cars around. Take, for instance, the fiberglass body that covers the most rigid lightweight chassis on any sports car. Its semi-monocoque steel construction includes roll-over protection bars in the windshield pillars and built-in roll bars behind the seats. When you're barreling along the highway it's nice to know your car is strong enough to take it. But then what else would you expect from a company that's

making some of the most advanced jet aircraft today?

But the Sonett III has got a lot of other nice things that are easy to take. Like a 4-speed shift on the floor, molded fiberglass bucket seats, retractable head lights, full instrumentation, and a leather covered steering wheel. And if you want a little more than everyone else, we can give you air conditioning, aluminum wheels, and leather upholstery.

The best idea we had was Sonett's price. It's a lot less than you'd expect for a car that has so much going for it. But like all good ideas, Sonett III isn't mass produced. It's a limited edition sports car for people who are looking for new ideas.

SAAB

The well-built Swede



Al Unser managed to take the laurels for the second time in a row... thanks to Donohue and Bignotti

INDY YEARBOOK 1971

For twenty-nine-and-a-half days in May it was a virtual certainty that Mark Donohue, driving the McLaren M16-Offy prepared by Roger Penske, would be the winner of the 55th renewal of the "Greatest Spectacle in Racing." Everything was going right. Donohue was making his third attempt to win the Memorial Day classic on the narrow (60 ft. in turns, 50 ft. on straights), 2.5-mile rectangle and, traditionally, drivers do their best in the third attempt. Early in practice Donohue had shattered Joe Leonard's track record of 171.559 (set in a turbine in 1968) by 6 mph with a lap of 177.087 mph. Then right before qualifying he turned a 179 and a 180.9. If for some reason Donohue did not do it, Peter Revson and Denis Hulme were there in the other aerodynamically clean McLarens (Revson on the pole next to Donohue, Hulme in the second row). But sure things have a way of not working out at Indy. For 66 laps Donohue was in command, setting fastest lap of the race at 174.962. Then he lost top gear. (Hulme had already spun on the fourth lap while Revson had lost confidence in his car's handling.) The race then became a contest between Indy regulars—the Unser brothers, Lloyd Ruby, and Joe Leonard, with mechanical failures and wild crashes allowing Al Unser's Colt-Ford to give him his second consecutive win at a record average speed of 157.735 mph, despite 48 laps running under caution lights. On the next eight pages you can see in detail how every car fared.



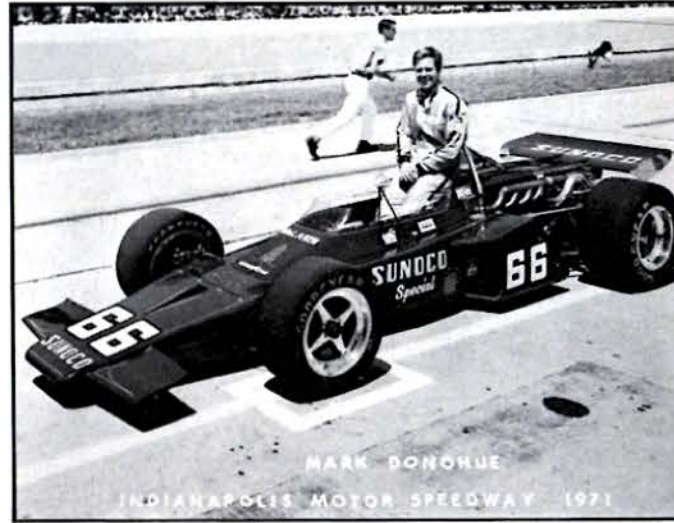
PETE BIRO

Car No.: 1 **Driver:** Al Unser (Johnny Lightning 500 Spl.)
Qual. Speed: 174.622 **Day:** 1 **Start:** 5th **Finish:** 1st
Entrant: Vel's Parnelli Jones Ford **Chief Mechanic:** George Bignotti
Engine: Ford Turbo **Plugs:** Autolite **Tires:** Firestone
Front size: 4.75-12.50-15 (20) **Rear size:** 5.25-17.00-15 (20)
Chassis: '71 P.J. Colt **Design based on:** Lola **Engineering features:** Fuel capacity increased for '71, Aerodynamics improved **Driver's previous finishes:** 9th '65; 12th '66; 2nd '67; 26th '68; 1st '70 **History of car (Year, driver, qual. speed, start, finish, etc.):** New Car **Money won:** \$238,454 **Laps completed:** 200 (led race for 103 laps, 67-72, 83-87, 95-98, 111-115, 118-200). **Time:** 3:10:11.56 (157.735 mph)



PETER REVSON
INDIANAPOLIS MOTOR SPEEDWAY 1971

Car No.: 86 **Driver:** Peter Revson (McLaren Spl.)
Qual. Speed: 178.696 **Day:** 1 **Start:** 1st **Finish:** 2nd
Entrant: McLaren Cars, Ltd. **Chief Mechanic:** Hywel Absalom
Engine: Offenhauser Turbo **Plugs:** Champion
Tires: Goodyear **Front size:** 10.40-15 **Rear size:** 15.70 X 15
Chassis: '71 McLaren **Design based on:** McLaren orig. semi-monoc.
Engineering features: Radiators (2)—on side of car; RR suspension designed to transfer weight to LR in a turn; turbocharger mounted upside down to give lower profile; location of wing (an integral part of the body) is behind the rear wheels. **Driver's previous finishes:** 5th '69; 22nd '70 **History of car (Year, driver, qual.speed, start, finish, etc.):** New Car **Money won:** \$103,198 **Laps completed:** 200 **Time:** 3:10:34.44 (157.419 mph).



MARK DONOHUE
INDIANAPOLIS MOTOR SPEEDWAY 1971

Car No.: 66 **Driver:** Mark Donohue (Sunoco Spl. McLaren)
Qual. Speed: 177.087 **Day:** 1 **Start:** 2nd **Finish:** 25th
Entrant: U.S. Racing, Inc. (R. Penske) **Chief Mechanic:** K. Kainhofer
Engine: Offenhauser Turbo **Plugs:** Champion
Tires: Goodyear **Front size:** 10.40 x 15 **Rear size:** 15.70 x 15
Chassis: '71 McLaren **Design based on:** Car was prototype 1971 McLaren refined by Roger Penske Organization. **Engineering features:** (Same as car No. 86) **Driver's previous finishes:** 7th '69; 2nd '70 **History of car (Year, driver, qual.speed, start, finish, etc.):** New Car **Money won:** \$23,697 **Laps completed:** 66 (high gear in transmission failed); led laps 1-50, 65 & 66, total of 52 laps. Took fastest lap of race, 174.962 mph. Car damaged in Mosley-Unser wreck.



BOBBY UNSER
INDIANAPOLIS MOTOR SPEEDWAY 1971

Car No.: 2 **Driver:** Bobby Unser (Olsonite Eagle)
Qual. Speed: 175.816 **Day:** 1 **Start:** 3rd **Finish:** 12th
Entrant: All American Racers, Inc. **Chief Mechanic:** Wayne Leary
Engine: Offenhauser Turbo **Plugs:** Champion
Tires: Goodyear **Front size:** 10.41 x 15 **Rear size:** 15.70 x 15
Chassis: 1971 Eagle **Design based on:** Monocoque **Engineering features:** Front spoilers located behind front wheels. **Driver's previous finishes:** 33rd '63; 32nd '64; 19th '65; 8th '66; 9th '67; 1st '68; 3rd '69; 11th '70. **History of car (Year, driver, qual.speed, start, finish, etc.):** New car **Money won:** \$24,842 **Laps completed:** 164 (out, wreck—avoiding Mike Mosley); led laps 53-64, 102-110; total 21.



DENIS HULME
INDIANAPOLIS MOTOR SPEEDWAY 1971

Car No.: 85 **Driver:** Denis Hulme (McLaren Spl.)
Qual. Speed: 174.910 **Day:** 1 **Start:** 4th **Finish:** 17th
Entrant: McLaren Cars, Ltd. **Chief Mechanic:** Eamon Fullalove
Engine: Offenhauser Turbo **Plugs:** Champion
Tires: Goodyear **Front size:** 10.40 x 15 **Rear size:** 15.70 x 15
Chassis: '71 McLaren **Design based on:** (Identical with car No. 86)
Engineering Features: (Identical with car No. 86); **Driver's previous finishes:** 4th '67; 4th '68; 18th '69 **History of car (Year, driver, qual., speed, start, finish, etc.):** New Car **Money won:** \$17,887 **Laps completed:** 137 (dropped valve); spun on lap 4.



A. J. FOYT INDIANAPOLIS MOTOR SPEEDWAY 1971

Car No.: 9 **Driver:** A. J. Foyt, Jr. (I.T.T. Thompson Spl.)
Qual. Speed: 174.317 **Day:** 1 **Start:** 6th **Finish:** 3rd
Entrant: Thompson Ind. Detroit Racing **Chief Mechanic:** A. J. Foyt Sr.
Engine: Ford Turbo **Plugs:** Autolite
Tires: Goodyear **Front size:** 10.40 x 15 **Rear size:** 15.70 x 15
Chassis: Coyote **Design based on:** Frontal area reduced using a McLaren type wing **Engineering features:** Location of oil cooler; turbo manifold **Driver's previous finishes:** 16th '58; 10th '59; 25th '60; 1st '61; 23rd '62*; 3rd '63; 1st '64; 15th '65; 26th '66; 1st '67; 20th '68; 8th '69; 10th '70 **History of car (Year, driver, qual.speed, start, finish, etc.):** New Car **Money won:** \$64,759 **Laps completed:** 200 **Time:** 3:12:13.37 (156.069 mph)

*Relief for Elmer George and Paul Russo-17th



LLOYD RUBY
INDIANAPOLIS MOTOR SPEEDWAY 1971

Car No.: 12 **Driver:** Lloyd Ruby (Utah Stars Spl.)
Qual. Speed: 173.821 **Day:** 1 **Start:** 7th **Finish:** 11th
Entrant: Gene White Racing **Chief Mechanic:** Dave Laycock
Engine: Ford Turbo **Plugs:** Autolite **Tires:** Firestone
Front size: 4.75-12.50-15 (154) **Rear size:** 6.25-17.00-15 (20)
Chassis: 1970 Laycock Mongoose **Design based on:** Brabham **Engineering features:** Utilize full wedge design. Unique front spoilers **Driver's previous finishes:** 7th '60; 8th '61; 8th '62; 19th '63; 3rd '64; 11th '65; 11th '66; 33rd '67*; 5th '68; 20th '69; 27th '70 **History of car (Year, driver, qual.speed, start, finish, etc.):** 1970 Lloyd Ruby backup car **Money won:** \$21,866 **Laps completed:** 174 (fire and gear-box failure); led laps 99-101, total 3.

*Also 26th as relief for George Snider



JOE LEONARD
INDIANAPOLIS MOTOR SPEEDWAY 1971

Car No.: 15 **Driver:** Joe Leonard (Samsonite Spl.)
Qual. Speed: 172.761 **Day:** 1 **Start:** 8th **Finish:** 19th
Entrant: Vel's Parnelli Jones Ford **Chief Mechanic:** George Bignotti
Engine: Ford Turbo **Plugs:** Autolite **Tires:** Firestone
Front size: 4.75-12.50-15 (20) **Rear size:** 6.25-17.00-15 (20)
Chassis: '71 P.J. Colt **Design based on:** Lola **Engineering features:** Fuel capacity increased. Aerodynamics improved **Driver's previous finishes:** 29th '65; 9th '66; 3rd '67; 12th '68; 6th '69; 24th '70 **History of car (Year, driver, qual.speed, start, finish, etc.):** New Car **Money won:** \$19,906 **Laps completed:** 123 (turbocharger failure); led laps 51-52, 73-82; 88-94, 116-117; total 21.



MARIO ANDRETTI
INDIANAPOLIS MOTOR SPEEDWAY 1971

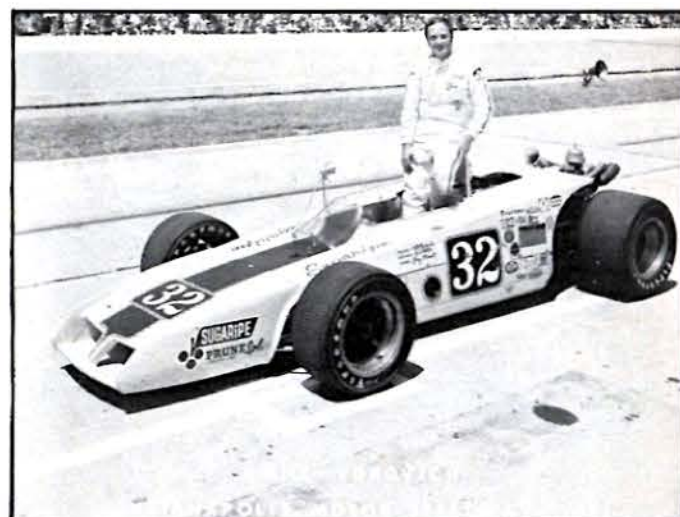
Car No.: 5 **Driver:** Mario Andretti (STP Oil Treatment Spl.)
Qual. Speed: 172.622 **Day:** 1 **Start:** 9th **Finish:** 30th
Entrant: STP Corporation **Chief Mechanic:** Jim McGee
Engine: Ford Turbo **Plugs:** Autolite **Tires:** Firestone
Front size: 4.75-12.50-15 (20) **Rear size:** 6.25-17.00-15 (20)
Chassis: '71 McNamara **Design based on:** Body offset to left, side wings short and progressive **Engineering features:** Oil cooler radiator location inboard rear brakes **Driver's previous finishes:** 3rd '65; 18th '66; 30th '67; 33rd '68*; 1st '69; 6th '70 **History of car (Year, driver, qual.speed, start, finish, etc.):** New Car **Money won:** \$13,245 **Laps completed:** 11 (wrecked avoiding Krisloff-Johncock-Kenyon as car was being called in for check by USAC officials).

*Relieved Larry Dickson for 28th

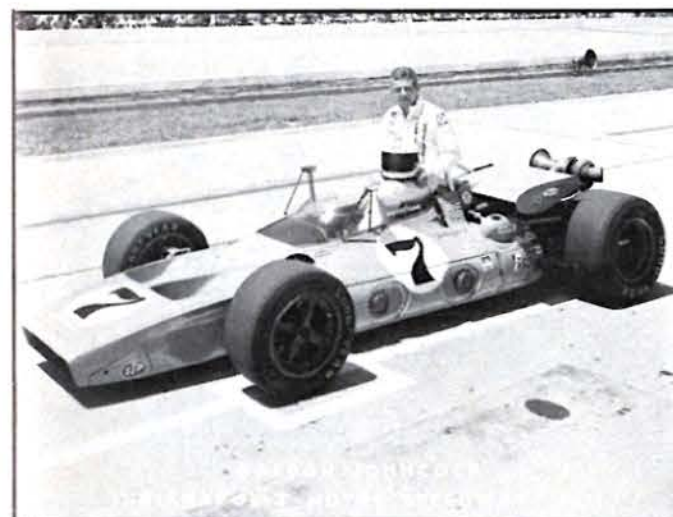
The 1971 Indianapolis 500



Car No.: 42 **Driver:** Jim Malloy (Olsonite Eagle)
Qual. Speed: 171.838 **Day:** 1 **Start:** 10th **Finish:** 4th
Entrant: All American Racers, Inc. **Chief Mechanic:** Rouem Haffenden
Engine: Offenhauser Turbo **Plugs:** Champion
Tires: Goodyear **Front size:** 10.40 x 15 **Rear size:** 15.70 x 15
Chassis: Eagle **Design based on:** Monocoque **Engineering features:** Front spoilers located behind front wheels **Driver's previous finishes:** 22nd '68; 11th '69; 33rd '70 **History of car (Year, driver, qual.speed, start, finish etc.):** 1970 Dan Gurney's back up car — never on track **Money won:** \$38,669 **Laps completed:** 200 **Time:** 3:14:04.65 (154.577 mph)



Car No.: 32 **Driver:** Billy Vukovich (Sugarrripe Prune Spl.)
Qual. Speed: 171.674 **Day:** 1 **Start:** 11th **Finish:** 5th
Entrant: Jerry O'Connell **Chief Mechanic:** Jud Phillips
Engine: Offenhauser Turbo **Plugs:** Champion **Tires:** Firestone
Front size: 4.75-12.50-15 (20) **Rear size:** 6.25-17.00-15 (20)
Chassis: Brabham **Design based on:** Brabham **Engineering features:** Full wedge shape body designed by Tom Smith for 1971 **Driver's previous finishes:** 7th '68; 32nd '69; 23rd '70 **History of car (Year, driver, qual.speed, start, finish, etc.):** 1968 Ronnie Duman-162.338 26-6 (lap 199 flagged); 1969 Sonny Ates-166.968 14-17 (lap 146 turbocharger failure); 1970 Sonny Ates-crashed in practice. **Money won:** \$32,447 **Laps completed:** 200 **Time:** 3:14:05.77 (154.563 mph)



Car No.: 7 **Driver:** Gordon Johncock (Vollstedt Spl.)
Qual. Speed: 171.388 **Day:** 1 **Start:** 12th **Finish:** 29th
Entrant: Vollstedt Enterprises **Chief Mechanic:** Harold Sperb
Engine: Offenhauser Turbo **Plugs:** Champion
Tires: Goodyear **Front size:** 10.40 x 15 **Rear size:** 15.70 x 15
Chassis: '70 McLaren **Design based on:** McLaren **Engineering features:** Still basically a 1970 McLaren **Driver's previous finishes:** 5th '65; 4th '66; 12th '67; 27th '68; 19th '69; 28th '70. **History of car (Year, driver, qual.speed, start, finish, etc.):** 1970 Carl Williams 166.590 19-9 (lap 197 flagged) **Money won:** \$13,458 **Laps completed:** 11 (wrecked, avoiding Krisiloff-Kenyon)



Car No.: 16 **Driver:** Gary Bettenhausen (Thermo King Spl.)
Qual. Speed: 171.233 **Day:** 1 **Start:** 13th **Finish:** 10th
Entrant: Don Gerhardt **Chief Mechanic:** Phil Casey
Engine: Offenhauser Turbo **Plugs:** Champion
Tires: Goodyear **Front size:** 10.40 x 15 **Rear size:** 15.70 x 15
Chassis: '70 Gerhardt **Design based on:** Gerhardt **Engineering features:** Full wedge shape for 1971 **Driver's previous finishes:** 24th '68; 26th '69; 26th '70 **History of car (Year, driver, qual.speed, start, finish, etc.):** 1970 Gary Bettenhausen 166.451 20-26 (lap 55 dropped valve) **Money won:** \$24,419 **Laps completed:** 178 (running at finish; Bettenhausen had stopped in turn 4 to aid Mosley, then continued)



Car No.: 21 **Driver:** Cale Yarborough (Gene White Firestone)
Qual. Speed: 170.770 **Day:** 1 **Start:** 14th **Finish:** 16th
Entrant: Gene White Racing, Inc. **Chief Mechanic:** Dave Laycock
Engine: Ford Turbo **Plugs:** Autolite **Tires:** Firestone
Front size: 4.75-12.50-15 (154) **Rear size:** 6.25-17.00-15 (20)
Chassis: '70 Laycock Mongoose **Design based on:** Brabham **Engineering features:** (See car No. 12) **Driver's previous finishes:** 28th '66; 17th '67 **History of car (Year, driver, qual.speed, start, finish, etc.):** 1970 Lloyd Ruby 168.895 25-27 (lap 54 ring and pinion) **Money won:** \$17,370 **Laps completed:** 140 (broken stud, oil leak, cam cover; car black flagged several times)



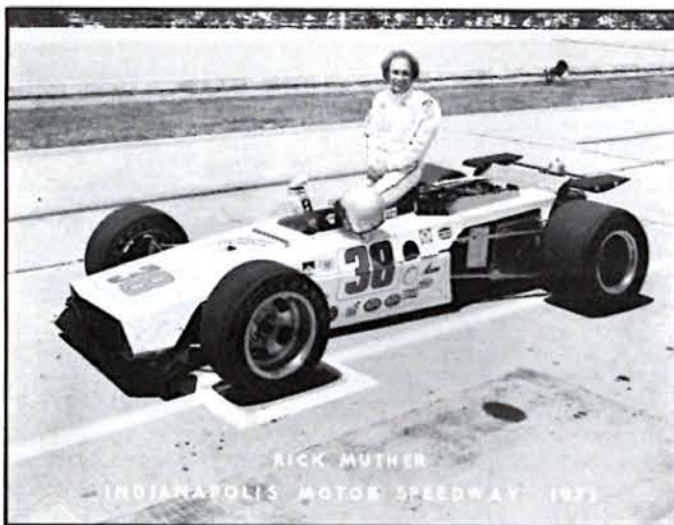
Car No.: 95 **Driver:** Bentley Warren (Classic Wax Spl.)
Qual. Speed: 169.627 **Day:** 1 **Start:** 15th **Finish:** 23rd
Entrant: Vatis Enterprises, Inc. **Chief Mechanic:** Bill Finley
Engine: Offenhauser Turbo **Plugs:** Champion **Tires:** Firestone
Front size: 4.75-12.50-15 (154) **Rear size:** 5.30-17.00-15 (154)
Chassis: '66 Eagle **Design based on:** Monocoque **Engineering features:** More pronounced wedge than original Eagle **Driver's previous finishes:** passed test 1970 **History of car (Year, driver, qual.speed, start, finish, etc.):** 1966 Dan Gurney 160.499 19-27 (wrecked at start); 1967 Jochen Rindt 163.051 32-24 (lap 108 mechanical); 1968-69 not entered; 1970 Sam Posey two attempts to qualify 1 blew engine 2 wrecked NE turn **Money won:** \$14,486 **Laps completed:** 76 (broken gearbox, car later damaged in Mosley crash)



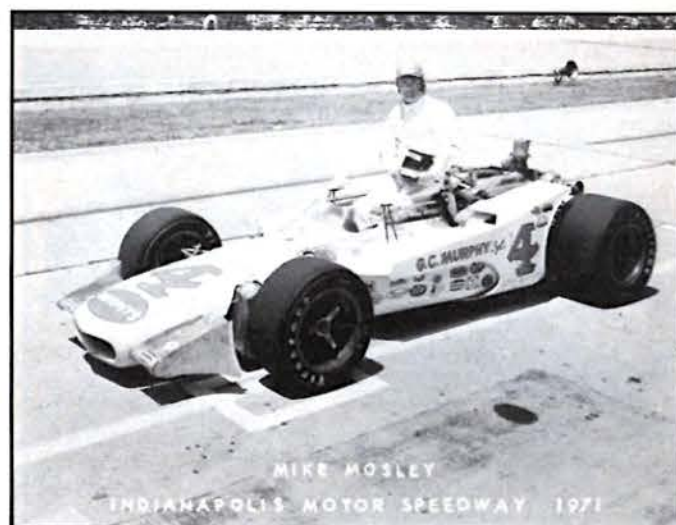
Car No.: 68 **Driver:** David Hobbs (Penske High Perf. Products Spl.)
Qual. Speed: 169.571 **Day:** 1 **Start:** 16th **Finish:** 20th
Entrant: U.S. Racing, Inc. **Chief Mechanic:** Karl Kainhofer
Engine: Ford Turbo **Plugs:** Champion
Tires: Goodyear **Front size:** 10.40 x 15 **Rear size:** 15.70 x 15
Chassis: Lola **Design based on:** Lola **Engineering features:** radiator and radiator ducting changed for 1971 **Driver's previous finishes:** passed test '71 **History of car (Year, driver, qual.speed, start, finish, etc.):** 1970 Mark Donohue 168.911 5-2 (200 laps at 155.317 mph) **Money won:** \$16,009 **Laps completed:** 107 (gearbox failure and wreck)



Car No.: 58 **Driver:** Bud Tingelstad (Sugarrripe Prune Spl.)
Qual. Speed: 170.156 **Day:** 2 **Start:** 17th **Finish:** 7th
Entrant: Jerry O'Connell **Chief Mechanic:** Tom Smith
Engine: Offenhauser Turbo **Plugs:** Champion **Tires:** Firestone
Front size: 4.75-12.50-15 (154) **Rear size:** 6.25-17.00-15 (20)
Chassis: Brabham **Design based on:** Brabham **Engineering features:** Full wedge body redesigned by Tom Smith for 1971 **Driver's previous finishes:** 9th '60; 15th '62; 28th '63; 6th '64; 16th '65; 21st '66; 14th '67; 16 '68; 15th '69 **History of car (Year, driver, qual.speed, start, finish, etc.):** 1968 Bruce Walkup 160.514 bumped by Larry Dickson; 1969 entered but never on track; 1970 Bill Vukovich 165.753 30-23 (lap 78 clutch) **Money won:** \$28,206 **Laps completed:** 198 (running)



Car No.: 38 **Driver:** Rick Muther (Arkansaw Aviation Spl.)
Qual. Speed: 169.972 **Day:** 2 **Start:** 18th **Finish:** 21st
Entrant: Two Jacks, Inc. **Chief Mechanic:** Howard Millican
Engine: Offenhauser Turbo **Plugs:** Champion **Tires:** Goodyear
Front size: 4.75-12.50-15 (154) **Rear size:** 5.30-17.00-15 (154)
Chassis: Brawner Hawk **Design based on:** Brabham Engineering **features:** Has very unique full wedge body design increased front spoiler area **Driver's previous finishes:** 8th '70 **History of car (Year, driver, qual.speed, start, finish, etc.):** 1965 Mario Andretti 158.849 4-3 200 laps 149.121 mph; 1966 Mario Andretti 165.899 1-18 (lap 27 dropped valve); 1967 Mario Andretti back up car; 1968 not entered; 1969 Jimmy McElreath 168.224 7-28 (lap 24 blew engine); 1970 Rick Muther 165.654 15-8 (lap 197 flagged) **Money won:** \$16,190 **Laps completed:** 85 (wrecked at same time as Hobbs)



Car No.: 4 **Driver:** Mike Mosley (G.C. Murphy Spl.)
Qual. Speed: 169.579 **Day:** 2 **Start:** 19th **Finish:** 13th
Entrant: Leader Cards, Inc. **Chief Mechanic:** A.J. Watson
Engine: Ford Turbo **Plugs:** Autolite **Tires:** Goodyear
Front size: 4.75-12.50-15 (20) **Rear size:** 6.25-17.00-15 (20)
Chassis: 1968 Eagle **Design based on:** Monocoque principle **Engineering features:** Modified body with open wedge shape **Driver's previous finishes:** 8th '68; 13th '69; 21st '70 **History of car (Year, driver, qual.speed, start, finish, etc.):** This car was used after the 1968 Indianapolis 500 to replace the car Bobby Unser won with at Indianapolis. It had never been entered at Indianapolis until 1971. **Money won:** \$20,345 **Laps completed:** 159 (wrecked in turn 4)



Car No.: 84 **Driver:** Donnie Allison (Purolator Spl.)
Qual. Speed: 171.903 **Day:** 3 **Start:** 20th **Finish:** 6th
Entrant: A.J. Foyt Jr. and J.H. Greer **Chief Mechanic:** A.J. Foyt Sr.
Engine: Ford Turbo **Plugs:** Autolite
Tires: Goodyear **Front size:** 10.40 x 15 **Rear size:** 15.70 x 15
Chassis: '71 Coyote **Engineering features:** Same as No. 9 but without full side aerodynamics **Driver's previous finishes:** 4th '70 **History of car (Year, driver, qual.speed, start, finish, etc.):** New Car **Money won:** \$30,092 **Laps completed:** 199 (running)



Car No.: 80 **Driver:** George Snider (G.C. Murphy Spl.)
Qual. Speed: 171.600 **Day:** 3 **Start:** 21st **Finish:** 33rd
Entrant: Leader Cards, Inc. **Chief Mechanic:** A.J. Watson
Engine: Ford Turbo **Plugs:** Autolite **Tires:** Firestone
Front size: 4.75-12.50-15 (20) **Rear size:** 6.25-17.00-15 (20)
Chassis: 1968 Eagle **Design based on:** Monocoque principle **Engineering features:** Modified rear suspension—open wedge bodywork **Driver's previous finishes:** 21st '65; 19th '66; 26th '67*; 31st '68; 16th '69; 20th '70 **History of car (Year, driver, qual.speed, start, finish, etc.):** 1968 Bobby Unser 169.507 3-1 (200 laps at 152.882 mph); 1969 not at track; 1970 Mike Mosley 166.651 12-21 (lap 96 cracked block) **Money won:** \$13,974 **Laps completed:** 6 (stalled on front straight)
 *Relieved by Lloyd Ruby



Car No.: 6 **Driver:** Roger McCluskey (Sprite Spl.)
Qual. Speed: 171.241 **Day:** 3 **Start:** 22nd **Finish:** 9th
Entrant: Lindsey Hopkins **Chief Mechanic:** Don Kenyon
Engine: Ford Turbo **Plugs:** Champion
Tires: Goodyear **Front size:** 10.40 x 15 **Rear size:** 15.70 x 15
Chassis: Kuzma-Kenyon **Engineering features:** Re-located oil tank—wedge type design **Driver's previous finishes:** 27th '61; 16th '62; 15th '63; 30th '65; 13th '66; 19th '67; 29th '68; 14th '69; 25th '70* **History of car (Year, driver, qual.speed, start, finish, etc.):** 1970 back up car not run **Money won:** \$22,980 **Laps completed:** 188 (running)
 *Also relieved Mel Kenyon for 16th



Car No.: 22 **Driver:** Wally Dallenbach (Sprite Spl.)
Qual. Speed: 171.160 **Day:** 3 **Start:** 23rd **Finish:** 24th
Entrant: Lindsey Hopkins **Chief Mechanic:** Duane Glasgow
Engine: Offenhauser-Turbo **Plugs:** Champion
Tires: Goodyear **Front size:** 10.40 x 15 **Rear size:** 15.70 x 15
Chassis: Kuzma-Kenyon **Design based on:** Eagle **Engineering features:** Re-located oil tank—wedge type design **Driver's previous finishes:** 29th '67; 17th '68; 21st '69; 17th '70 **History of car (Year, driver, qual.speed, start, finish, etc.):** New Car **Money won:** \$14,602 **Laps completed:** 69 (dropped valve)



Car No.: 18 **Driver:** Johnny Rutherford (Patrick Petroleum Spl.)
Qual. Speed: 171.151 **Day:** 3 **Start:** 24th **Finish:** 18th
Entrant: Michner Petroleum, Inc. **Chief Mechanic:** Mike Devin
Engine: Offenhauser Turbo **Plugs:** Champion
Tires: Goodyear **Front size:** 10.40 x 15 **Rear size:** 15.70 x 15
Chassis: 1967 Eagle **Engineering features:** Wedge type body **Driver's previous finishes:** 29th '63; 27th '64; 31st '65; 25th '67; 18th '68; 29th '69; 18th '70 **History of car (Year, driver, qual.speed, start, finish, etc.):** 1967 Jerry Grant bumped; 1968 Jerry Titus too slow; 1969 Johnny Rutherford 166.628 17-29 (lap 24 hole in oil tank); 1970 Johnny Rutherford 170.213 2-18 (lap 135 broken header) **Money won:** \$16,682 **Laps completed:** 128 (running, had moved from 24th to 7th before ignition problems)



Car No.: 98 **Driver:** Sam Sessions (Wynn's Kwik Kool Spl.)
Qual. Speed: 170.358 **Day:** 3 **Start:** 25th **Finish:** 27th
Entrant: Agajanian-Faas Racers, Inc. **Chief Mechanic:** Leonard Faas Sr.
Engine: Ford Turbo **Plugs:** Champion **Tires:** Firestone
Front size: 4.75-12.50 x 15 (20) **Rear size:** 6.25-17.00 x 15 (20)
Chassis: '70 P.J. Colt **Design based on:** Lola **Driver's previous finishes:** 9th '68; 12th '69; 12th '70 **History of car (Year, driver, qual.speed, start, finish, etc.):** 1968 Al Unser wrecked in practice; 1969 Bud Tingelstad 166.597 18-15 (lap 155 valve failure); 1970 not entered **Money won:** \$13,721 **Laps completed:** 43 (broken valve)

The 1971 Indianapolis 500



Car No.: 45 Driver: Larry Dickson (Spirit of Indianapolis Spl.)
Qual. Speed: 170.285 **Day:** 3 **Start:** 26th **Finish:** 28th
Entrant: Grant King Racers, Inc. **Chief Mechanic:** Grant King
Engine: Offenhauser Turbo **Plugs:** Champion **Tires:** Firestone
Front size: 4.75-12.50 x 15 (20) **Rear size:** 6.25-17.00 x 15 (20)
Chassis: King **Engineering features:** Semi monocoque partial tube frame **Driver's previous finishes:** 32nd '66; 15th '67; 28th '68*; 9th '69 **History of car (Year, driver, qual.speed, start, finish, etc.):** New Car **Money won:** \$13,600 **Laps completed:** 33 (engine failure)
 *Relieved by Mario Andretti



Car No.: 20 Driver: Steve Krisiloff (STP Gasoline Treatment Spl.)
Qual. Speed: 169.835 **Day:** 3 **Start:** 27th **Finish:** 31st
Entrant: STP Corp. **Chief Mechanic:** Vince Granatelli
Engine: Ford Turbo **Plugs:** Autolite **Tires:** Firestone
Front size: 4.75-12.40 x 15 (154) **Rear size:** 5.30-17.00 x 15 (154)
Chassis: McNamara **Engineering features:** Early version car No. 5 with front spoiler mounts still in place **Driver's previous finishes:** Rookie (passed test 1970) **History of car (Year, driver, qual.speed, start, finish, etc.):** New Car **Money won:** \$13,260 **Laps completed:** 10 (oil leak; wrecked in third turn on lap 10)



Car No.: 43 Driver: Denny Zimmerman (Fiore Racing Enterprises Spl.)
Qual. Speed: 169.755 **Day:** 3 **Start:** 28th **Finish:** 8th
Entrant: Fiore Racing Ent. (F.J. Fiore) **Chief Mechanic:** J. Wadsworth
Engine: Offenhauser Turbo **Plugs:** Champion **Tires:** Firestone
Front size: 4.75-12.50 x 15 (154) **Rear size:** 5.30-17.00 x 15 (154)
Chassis: Vollstedt **Design based on:** Lotus **Driver's previous finishes:** Rookie (passed test 1969) **History of car (Year, driver, qual.speed, start, finish, etc.):** 1966 Billy Foster 159.490 12-24 (wrecked); 1967 Lucien Bianchi 162.484 bumped; 1968 Jim Malloy 165.032 14-22 (lap 64 engine trouble); 1969 Jim Malloy 167.092 13-11 (lap 165 flagged); 1970 not entered **Money won:** \$26,658 **Laps completed:** 189 (running). **ROOKIE-OF-THE-YEAR.**



Car No.: 41 Driver: George Follmer (Spirit of Indianapolis Spl.)
Qual. Speed: 169.205 **Day:** 3 **Start:** 29th **Finish:** 15th
Entrant: Grant King Racers, Inc. **Chief Mechanic:** Grant King
Engine: Offenhauser Turbo **Plugs:** Champion **Tires:** Firestone
Front size: 4.75-12.50 x 15 (20) **Rear size:** 6.25-17.00 x 15 (20)
Chassis: Grant King **Engineering features:** Semi monocoque-partial tube frame **Driver's previous finishes:** 27th '69; 31st '70 **History of car (Year, driver, qual.speed, start, finish, etc.):** 1970 Art Pollard 168.595 6-30 (lap 28 broken piston) **Money won:** \$18,281 **Laps completed:** 147 (broken piston)



Car No.: 23 Driver: Mel Kenyon (Sprite Spl.)
Qual. Speed: 170.205 **Day:** 4 **Start:** 30th **Finish:** 32nd
Entrant: Lindsey Hopkins **Chief Mechanic:** Don Kenyon
Engine: Ford Turbo **Plugs:** Champion
Tires: Goodyear **Front size:** 10.40 x 15 **Rear size:** 15.70 x 15
Chassis: Kuzma-Kenyon **Engineering features:** Re-located oil tank-wedge type design **Driver's previous finishes:** 5th '66; 16th '67; 3rd '68; 4th '69; 16th '70* **History of car (Year, driver, qual.speed, start, finish, etc.):** New Car **Money won:** \$14,153 **Laps completed:** 10 (wrecked in Krisiloff crash)
 *Relieved by Roger McCluskey



Car No.: 64 Driver: Art Pollard (Gilmore Racing Team)
Qual. Speed: 169.500 **Day:** 4 **Start:** 31st **Finish:** 26th
Entrant: Gilmore Champ. Racing, Inc. **Chief Mechanic:** C. Brawner
Engine: Ford Turbo **Charged Plugs:** Autolite
Tires: Goodyear **Front size:** 10.40 x 15 **Rear size:** 15.70 x 15
Chassis: Brawner Scorpion **Design based on:** Brawner Hawk (Brabham) **Driver's previous finishes:** 8th '67; 13th '68; 31st '69; 30th '70 **History of car (Year, driver, qual.speed, start, finish, etc.):** 1970 Roger McCluskey 169.213 4-25 (lap 62 Split crankcase weld) **Money won:** \$14,770 **Laps completed:** 45 (dropped valve)



Car No.: 99 Driver: Bob Harkey (Joe Hunt Magneto Spl.)
Qual. Speed: 169.197 **Day:** 4 **Start:** 32nd **Finish:** 22nd
Entrant: Joe Hunt **Chief Mechanic:** Joe Hunt
Engine: Offenhauser Turbo **Plugs:** Champion **Tires:** Firestone
Front size: 4.75-12.50 x 15 (154) **Rear size:** 5.30-17.00 x 15 (154)
Chassis: Gerhardt **Engineering features:** Modified wedge bodywork **Driver's previous finishes:** 8th '64 **History of car (Year, driver, qual.-speed, start, finish, etc.):** 1969 Mel Kenyon 165.426 24-4 (200 laps at 152.177); 1970 Denny Zimmerman, too slow **Money won:** \$15,399 **Laps completed:** 77 (rear end failure)



Car No.: 44 Driver: Dick Simon (Travelodge Sleeper)
 *Qualified by John Mahler 1971 Rookie for 27th position. Moved to 33rd when substituted by Dick Simon
Qual. Speed: 170.164 **Day:** 3 **Start:** 33rd* **Finish:** 14th
Entrant: Dick Simon, Ltd. **Chief Mechanic:** Fred Sewall & Wally Peat
Engine: Ford Turbo **Plugs:** Champion **Tires:** Firestone
Front size: 4.75-12.50 x 15 (154) **Rear size:** 5.30-17.00 x 15 (154)
Chassis: Vollstedt **Engineering features:** Modified wedge bodywork **Driver's previous finishes:** 14th '70 **History of car (Year, driver, qual.-speed, start, finish, etc.):** 1967 Bobby Johns incomplete attempt; 1968 Bobby Johns no attempt; 1969 Jerry Grant incomplete attempt; 1970 Dick Simon 165.548 31-14 (lap 168-running). **Money won:** \$18,870 **Laps Completed:** 151 (running at finish)

INDIANAPOLIS MOTOR SPEEDWAY OFFICIAL PHOTOS



Omigod! Thirty-three inches tall? That's almost a foot shorter than a Lotus Europa . . . Hell, the inseam of my shirt is 33 inches. . . . You mean that if I put my palm flat on the floor and mark off where my armpit is *that's* how tall it is? Why it's the lowest car ever made.—by D.O. Cozzi

Car? Waddyamean "car"? Where do you get off calling a luminescent motorized, three-dimensional billboard a car?

The only rejoinder has to be that you call it a car because it definitely isn't a baseball bat. Nor for that matter is it even a sheetmetal encased Go-Kart. No matter how you debate it, in the end the inevitable conclusion is that the Bertone Stratos, stretching itself upward on its fully inflated tires so that its roofline is almost level with your crotch, is a car.

And if you're particularly susceptible to fantasizing you can squint hard—and maybe even wipe one or two prejudicial folds off your cerebrum—and you can almost see the Bertone Stratos as an automobile. A golden dart flashing its way past the door handles of Camaros, nipping by a pseudo-racer towering above you in his Fiat 850 Spider, accelerating under toll barriers in a grand protest against taxation. You can see it all now.

And it's all possible, take our word for it, we've done it. The Bertone Stratos, despite its vision of the future styling, exists right now as a drivable, if not roadworthy, automobile. It will do almost all the things a real automobile will, although in a manner that no automobile ever would admit

to in most cases. Which nevertheless is saying a mouthful for the hothouse plant variety of devices known as "styling studies" in European automotive lexicon and as "show cars" on the domestic flash and filigree circuit. Ninety-one out of every hundred of these can't move an inch under its own power, or stop or turn. In fact if the door opens to provide a perch for near naked buttocks, that is considered a major accomplishment. A logical question at this point would be to ask what *is* the point of these styling studies which to the casual viewer *are* cars—what with the wheels, and seats and steering gear. Naturally someone is ready to step forward with a plausible reason for its existence.

In the case of the Stratos and similar styling studies that emerge from Bertone's Turin shops for the start of every European Autoshow season, they find justification as movable display cases for the most avant garde thinking currently going on in the *Carrozzeria*. In the words of a Bertone spokesman, "We seek to attract customers [customers in this case being car makers not the bucks-up gigolos or 68-year-old oil barons out shopping for trinkets to give 'private secretaries'] with these studies. They are intended to be an expression of the kind of research that keeps our styling

The Stratos:

Driving a billboard.

PHOTOGRAPHY: GENE BUTERA





The Stratos

The Bertone Stratos is a golden dream, flashing its way beneath the door handles of Camaros, nipping by Fiat 850 Spiders towering two feet above it, and—if you have the nerve—you can really do it.

center constantly on the alert for new solutions . . . and also in training to fully exploit the application of these new solutions in cars we, or our customers, will produce in the near or distant future."

Noble ideas, of course—based in realism. Plainly stated, the styling studies seduce through artistic truth and beauty (light on the first, heavy on the second).

And the Stratos is a beautiful car to look at and as such has accomplished its stated purpose. It has focused public, and more importantly, customer attention on the house of Bertone, a company that builds about 100 car bodies a day for Fiat, Alfa Romeo and Lamborghini. And if success is determined by column inches in newspapers it is the most successful of the current crop of similar devices. Still the Stratos is something more than a full-scale realization of an idea—it is a car with four wheels, (plus a styrofoam facsimile of a wheel snuggled down behind the driver's seat), an engine, working suspension, and all the other mechanical accoutrements necessary to propel an 1870-lb. object along.

But before we could evaluate just how well the Stratos carried out that assignment, a member of Bertone's styling staff was assigned to give us the artist's own evaluation of his latest creation lest we miss some of the more subtle sales points and our techno-man desire to evaluate the Stratos as a mere car. He was young (the median age of Bertone's styling staff is just 27), dressed in a conservative suit—very much a businessman/stylist.

"Firstly, we wanted to make the lowest, smallest two-seat automobile ever built—you see, the seating position is actually lower than that of a Lotus 25 Formula One car. And consequently the wedge shape comes from wrapping sheetmetal around the occupants and mechanical parts just as tightly as possible."

Yes that was apparent as we warily circled the Stratos staring downward at all times, and taking just a little over three paces to travel from full-width front light panel, past the nearly flat windshield to the expanded metal rear grille. Even we could see it represented a different school of the design art from something like, say, an Eldorado . . . something more akin to the armorer's art of the Middle Ages.

" . . . After the shape was defined, Signor Gandini [Marcello Gandini, 32-year-old Chief Stylist] did the final details, the sculpting on the sides, etc." Ah yes, the detailing. In practical terms the detailing is almost more important than the entity. Full-width headlights, sequential taillights, centrally mounted engines, hideaway head-

(Continued on page 78)

CAR and DRIVER



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What you can't see in the photograph above, is that Abarth has no power-stealing diaphragms, no baffles to restrict exhaust flow, and no double-circuit flow paths. Abarth is constructed of 16-gauge steel, seam welded throughout, and has dual wall construction with a Fiberglas core that transforms exhaust noise into a deep, pleasant tone.

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How do you like your new car, Fred?

Fred Schwartz worked nights in a machine shop to buy a new Pontiac Firebird Formula 400, with all the high-performance options. As soon as he got it, he started "improving" it. With

things like "mag wheels," "zoom" gears, traction bars and a wild cam.

Two weeks after he got the car he went "halves" with a friend on a whole case of Champion Spark Plugs.

"All the big pros race with Champions," said Fred. And zoomed off into the sunset.



Toledo, Ohio 43601

20 million people have switched to Champion Spark Plugs. This has been one of them.

Preview: Volkswagen K-70

NSU wanted to make a competitor for VW's 411 and Audi—so, it seems, did VW.

What's all *this*? A water-cooled front-engine, front-wheel-drive Volkswagen? And it's called the VW K-70. Note that. It is a sign of the times that it is being called a "VW" in preference to Audi—the division already selling front-engine, front-wheel-drive sedans—or even NSU.

Originally the K-70 was slated to sell *against* VW veteran performers like the Beetle and 1600s and even the not-so-veteran 411 (*C/D*, April). It was to have

made its world premier at the Geneva Auto Show of 1969, with the name NSU in front of the K-70 and the usual badges proclaiming that fact clipped onto the radiator grille and the rear deck lid. A few weeks before the opening of that show, however, the corporate entity NSU disappeared into the maw of the Volkswagen empire, and to give stylists and product planning people at Wolfsburg the time they required to switch nameplates, increase the cylinder bores one millimeter, and make some other modifications, the K-70's presentation was

set back a year and a half (and because of production capabilities it may be an equal length of time before it is fed into the international market).

What we have here, then, is an NSU with a Volkswagen nameplate, and there has been no attempt to hide the facts; the K-70 acts, sounds, and feels like an NSU rather than any past or present Volkswagen. In fact, if you are looking for similarities, it acts more like an Audi than a Volkswagen—a kind of rustic Audi to be sure, but an Audi nonetheless. Which isn't



K-70

(Continued)

too surprising as the general mechanical layout is almost a carbon copy of the Audi 60/100. Both have longitudinal mounted four-cylinder, water-cooled engines driving the front wheels through clutches and transmissions of similar concept, although the final drive of the NSU—ah, *Volkswagen*—K-70 is moved forward eight inches or so which puts it under the rear two cylinders of the engine. And the K-70 has an inclined trailing arm rear suspension in place of the Audi's rigid rear axle. But if the two cars are basically sisters in engineering concepts the Audi's styling and standard of finish establish it, at least visually, in another—more expensive—market segment. Still the K-70 is the best looking VW ever offered.

In Switzerland, a prime export test market, the K-70 was put on sale at \$3100. At that price it landed on the high side of the price spread for cars in its displacement class, and almost midway between the VW 411E and the Audi 100—if the same pricing structure holds true when the car is brought into the U.S. marketplace it would mean the K-70 would have a sticker price close to \$3400.

No matter what its current nameplate indicates, the K-70 betrays its original design goal of being a lower rung on NSU's Ro80 scale. Because of durability problems

associated with its Wankel engine the attractively styled Ro80 has not been exported to the U.S. as yet. (Perhaps now, with VW holding no allegiance to the Wankel, an Ro80 sans rotary engine is a prospect for the future.)

Like many of the recently introduced European "medium" sedans, the K-70 delivers a lot of impressive dimensions and interior space for the money. It's a roomy car inside, following the "lots of hip and shoulder room" formula. Enclosing all this volume and four passengers in a steel cocoon has resulted in a vehicle with impressive expanses of glass and glossy, almost flat, sheet metal surfaces. Therefore, while its dimensions are virtually identical to the Audi 100 (wheelbase: 106.0 vs. 105.3; length: 175.0 vs. 182.6; width: 67.0 vs. 68.1; height: 57.0 vs. 56.1) it has a more utilitarian look.

Styling the interior trim was an exercise in establishing that the car is a Volkswagen first and a German car second. Plasticized fiberboard is the foremost material used—again the effect is that of putting the car right in there a cut above the 411. Instrument visibility and placement of the important controls is good with an impressive, Audi-like instrument pod (including tachometer) confronting the driver. External visibility is equally good from the K-70, thanks to upright seats, low beltline and expansive window area.

Mechanically is where the NSU parentage comes on strongest. The rocker cover, on the chain drive, single overhead cam 1605cc engine and its spring clip attachments seem to be the same parts that every postwar NSU incorporated; while the exposed clutch shaft, driving the transmission, is a direct carry-over of motorcycle inspiration from the Prinz and the 1200. The crankshaft, with its eight counterweights, is typically NSU too. From it the power (88 or 105 hp depending primarily

on compression ratio—either 8-to-one or 9.5) flows rearward and then down through a Porsche synchronized four-speed transmission, it is then transferred forward again to the ring and pinion gears and differential which live in their own hermetic world in a separate case in the engine oil pan—an expensive (probably 20% more expensive than the Audi drivetrain) and complicated layout that increases the height of the engine—taking the rest of the car with it.

The four wheel independent suspension has McPherson struts at the front with cast steel hub carriers and stamped control arms. To accommodate the outboard universal joints, the strut centerline is offset from the pivot centerline which requires an eccentric, canted spring seat to keep the spring force from binding the suspension into a semirigid unit. At the rear, the inclined swinging arms are fabricated from welded tubing (as on previous NSUs) and they pivot from a single tube isolated from

(Continued on page 88)

VW K-70

Price as tested: \$3115

ENGINE

Type Four-in-line, cast iron block, aluminum head, 5 main bearings
 Bore x stroke 3.23 x 2.99 in
 Displacement 98.0 cu in
 Compression ratio 9.5 to one
 Carburetion 1 x 2-bbl Solex
 Power (SAE) 105 bhp @ 5200 rpm
 Torque (SAE) 110 lbs-ft @ 4500 rpm

DRIVE TRAIN

Final drive ratio 4.63 to one
 Transmission 4-speed, all-synchro

DIMENSIONS AND CAPACITIES

Wheelbase 106.0 in
 Track F: 55.0 in, R: 56.5 in
 Length 175.0 in
 Width 67.0 in
 Height 57.0 in
 Curb weight 2305 lbs
 Weight distribution, F/R 59.5/40.5%
 Fuel capacity 14.0 gal
 Oil capacity 4.0 qts
 Water capacity 8.0 qts

SUSPENSION

F: Ind., MacPherson strut, coil springs, anti-sway bar
 R: Ind., Semi-trailing arm, coil spring, anti-sway bar

STEERING

Type Rack and pinion
 Turns lock-to-lock 3.25
 Turning circle 36.0 ft.

BRAKES

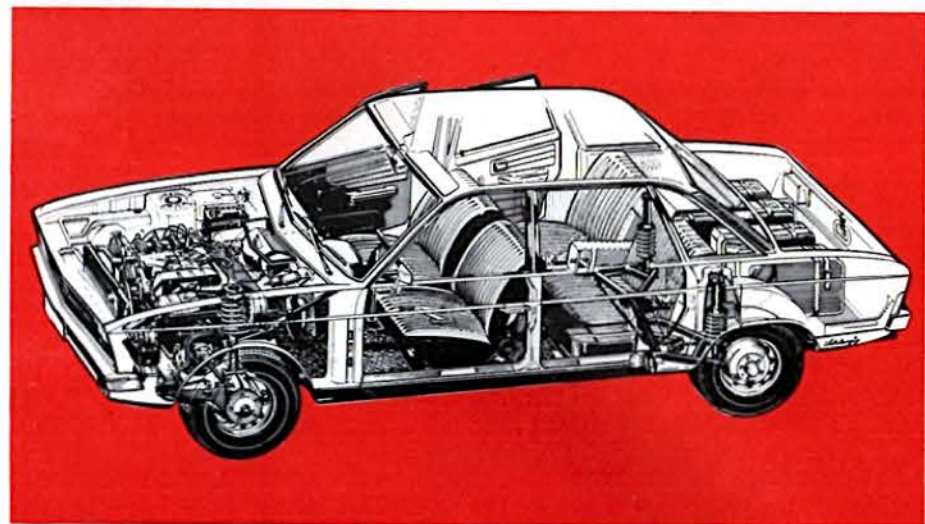
F: 10.0-in dia. solid disc, power assist
 R: 10.0-in dia. cast iron drum, power assist

WHEELS AND TIRES

Wheel size 14 x 4.5-in
 Tire size 165 SR 14
 Test inflation pressures F: 22.5psi, R: 22.5psi

PERFORMANCE

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40 mph	6.8
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60 mph	13.9
70 mph	19.1
Top Speed	100 mph



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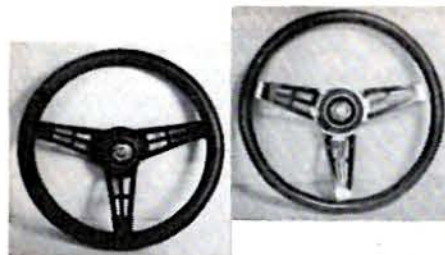


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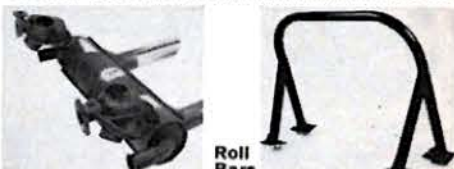
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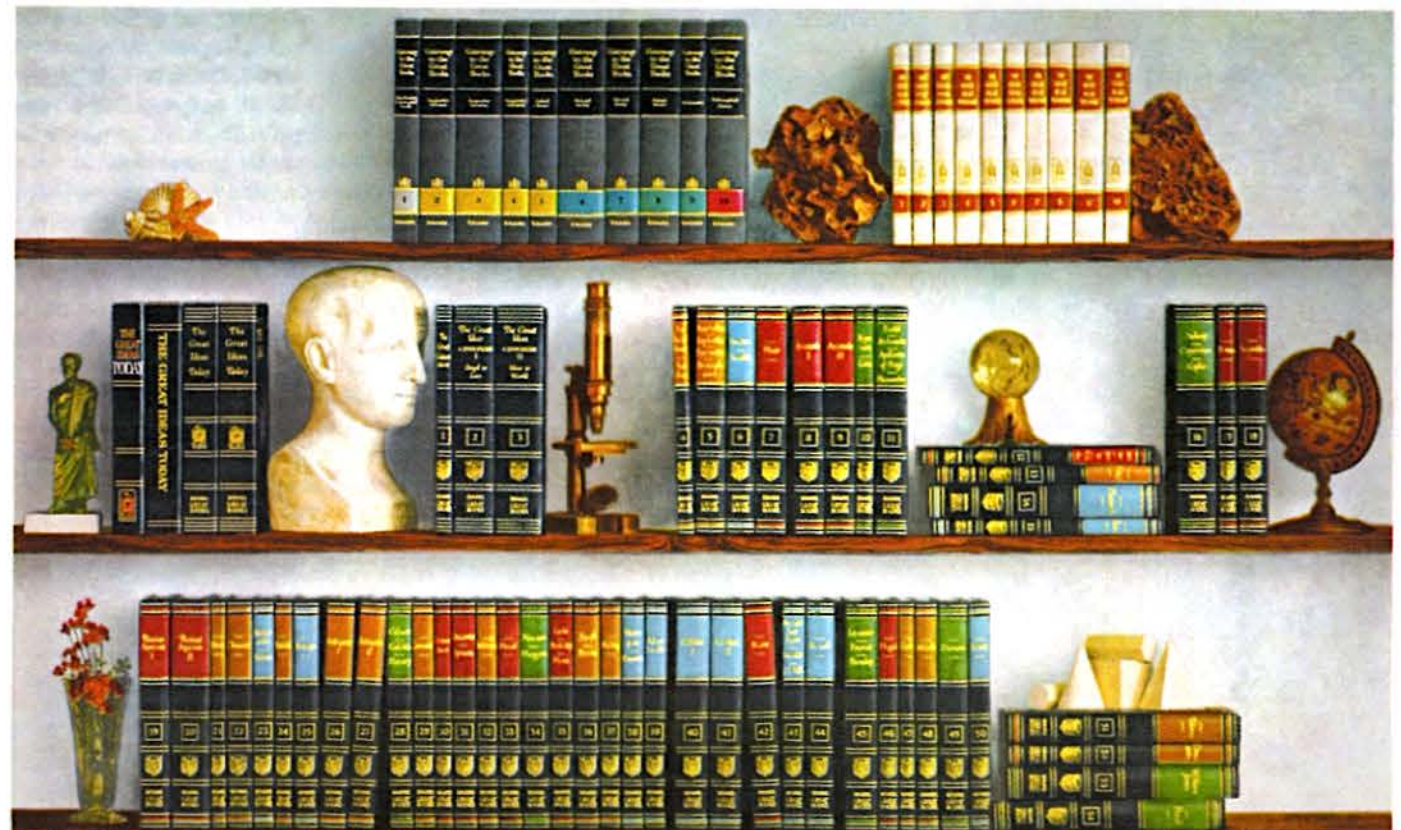
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Does Maryland Really Exist?

For a period of six months, from June 30, 1970 through January 1, 1971, the State of Maryland was without a Motor Vehicle Code. The legislature, with matters of great import to ponder, somehow allowed the Code's expiration to pass by unnoticed. A convicted traffic violator took his case to the Court of Appeals (the highest in the state) to have his \$10 fine reversed, a decision which would invalidate all traffic convictions handed down during that six month period. No luck. The court ruled that the "intent of the legislature" was to keep the traffic laws continuous. Furthermore, the Court maintained that "to rule that the Article did not exist for this six month period would be to place the State in a condition of paper insolvency." It seems that when the Court's ontological veracity is in question, strict constructionism is tossed out the window.

Gerrymandering the Market

There's a fortune waiting for anyone who can sort through the seemingly contradictory trends of this year's auto market and come up with some sort of sure-fire plan for the future. Consider these facts: In the domestic market, where a "soft" economy was guaranteed to make the first year's sales of the small cars like Vega, Pinto and Gremlin a numerical success, things have worked out well with over 200,000 cars being sold in the first four months of the year despite a strike at Chevrolet and a strike in England which hampered Pinto production. But, at the same time intermediate car production (next step up on the economic ladder) was drastically down, while full-size sedans—particularly the luxury versions—were doing nearly as well as the small cars. Meanwhile the imported car sector continued to set new all-time records and gnaw away at the domestic market. Eighteen months ago Detroit was worried that the imports would capture 10% of the U.S. market, by the end of this April the ante had been upped to 15% as the imports scored a one month shock by accounting for 16.7% of the market. Still solace could be taken as two of the top ten imports were actually sold by Detroit—Opel (Buick), Capri (Mercury), while Plymouth's English-made Cricket was ranked 11th. And perennial leader Volks-

wagen, while selling more cars than ever, has seen profits drop and made price increases; and elsewhere a predicted reevaluation of the Japanese yen and the unionization of Japan's auto workers could cause higher prices for the second (Toyota) and third (Datsun) leading imports. Then, just to confuse the picture even more, a survey by Ward's Automotive Reports revealed that the median age of new car buyers had been edging upward (to 43 years as opposed to 39 years in 1970) which is a 180° turnabout from what the demographic experts had been predicting—however the median age for Vega-Pinto-Gremlin buyers was 29.

The result of all this confusion is that 1971 seems to be headed for an all-time record year although no one is stepping forward to explain why. Maybe a luxury-oriented economy car aimed for the Geritry generation is the only answer.

Up Periscope

Hindsight may be easier than foresight in philosophical terms, but the National Highway Safety Administration has its own ideas about backward vision. The Administration has proposed a revised rule-making that would expand upon present rearview mirror requirements. Effective January 1, 1974, all passenger cars must have wide-angle rear vision systems that cover a 53° to 62° horizontal field. By comparison, present inside mirrors deliver a 20° horizontal field. The above requirements can be met with combinations of plain and convex mirrors on either side of the vehicle. But the best is saved for January 1976. As of that date, DOT standards require an 82° to 90° field of view upon a single image display within the vehicle. Read: periscope. It seems that we'll all be driving in Cornell Aeronautics' Laboratory Submarines after all.



More Stripes

Following on the heels of such illustrious automotive concepts as the Gremlin and the Demon Sizzler, the Ford Pinto has gained its own zoomy stripes, with the Autosport Products' Group II Customizing Kit. Available from your local Ford dealer, the Group II Kit is typical of its genre—"performance-inspired." It gives you racing stripes, an interior console package, a muffler that makes a lot of noise, and special wide wheels. The wheels make sense, but these adolescent sales' gimmicks grow increasingly tiresome.

CAR and DRIVER

Give Me a Ruble's Worth, Comrade

The Soviet Union is discovering some of the joys—and the horrors—of the fruits of an affluent society. The huge Fiat plant built on the Volga is now producing some 10,000 Ziguli automobiles a month, a rate that will increase to 50,000 per month in another year or two. Unlike the other indigenous Soviet makes, the Volga and the Moskvitch, the Ziguli output is slated only for private purchases. It is here that some problems arise—the Soviet Union has no comprehensive system of dealers and service stations. The government is working on a crash program to set up facilities, yet their goals are far from adequate. For example, the Ukraine, with a population of 50 million, will have only 36 service stations by the end of 1973. The car itself is a small five passenger sedan based on the Fiat 124. It sells for 5500 rubles (\$6000), or roughly three years' salary for the average Soviet worker. Hedging against the obvious deficiency of repair facilities, the government is offering complete engineering and servicing charts for about \$13. The manual is sure to become a Moscow best-seller. Outside of the USSR the Fiat-Ziguli sells for \$1800—well under the list price of the Fiat 124. The reason is an announced goal for the Russian auto industry to sell 1.2 million cars by 1975—obviously not necessarily to Russians.

Dual-Fuel

The General Services Administration, the federal government's multi-billion dollar business arm, has released a report on its emissions control research. The GSA operates more than 54,000 vehicles in motor pools across the nation, and has been conducting a program using compressed natural gas in its fleet cars in Los Angeles. Briefly, the modifications to the cars consist of a variable venturi carburetor and compressed gas supply, as well as a switch-over mechanism to enable the vehicle to run on its normal gasoline supply when necessary.

After a year in operation, the cars showed encouraging results. Hydrocarbons have been reduced by 82%, carbon monoxide by 87%, and oxides on nitrogen by 53%—these figures comfortably meet the strict standards set for 1975. The GSA also reaped an unexpected benefit. The conversion to the dual-fuel system showed substantial savings in fuel consumption and vehicle maintenance costs when spread over fleet operation—a juicy incentive to private enterprise that figures not to go unnoticed.

AUGUST 1971



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DE TOMASO PANTERA

(Continued from page 35)

tilts up and the trunk floor is removable so that you can reach the trans-axle and rear of the engine without too much difficulty. But if something on the front half of the engine needs attention, like ignition timing or accessory drive belts, the bulkhead between the engine and the cockpit has to be removed. In the early production cars, the mesh grille below the back window has to be unbolted just to reach the dipstick which is a colossal design flaw. Filling the gas tank, located on the left side of the engine just behind the driver has to be done with the rear lid up and isn't much easier.

The engine is a 351 Cleveland V-8 with a 4-bbl. carburetor. It is the same 11.0-to-one option offered last year in Mustangs and Torinos but with a 10-hp higher rating (310 hp @ 5400 rpm), apparently due to the short-branch tubing headers. Each exhaust pipe feeds into a 2-outlet muffler that produces a rumble very much in keeping with the Pantera's appearance.

Power from the engine flows directly into a 5-speed ZF trans-axle which has a 4.22-to-one final ratio. That figure is a little misleading, however, because both fourth and fifth gears are overdrive ratios so that top gear overall works out to 2.97-to-one. In reality, the ZF gearbox is a stop-gap measure (and, at more than twice the cost of an engine, an expensive one) until an Italian-made trans-axle can be put into production. ZF production volume is low (60 per month), much less than de Tomaso's capability for Panteras, so car production is being held up accordingly.

Perhaps the only case that can be made for buying an early Pantera is the transmission. The ZF is a known quantity so you will be assured of a device that works—although you may be debating that question after your first drive. The chrome maze around the shift lever leaves no doubt as to where to move the handle but it does nothing about the hang-ups which await you when you try.

In fact, with some help in the shifting department, the Pantera would be pretty tough on a dragstrip. It's not too heavy—3123 lbs.—and 59.1% of that weight is concentrated on the rear wheels so that even with radial ply tires it launches itself with gusto. Hampered by an engine that went soft at 5400 rpm (redline is 5900) the test car still cleared Detroit Dragway in 14.0 seconds at 99.4 mph.

Unlike the Mangusta, the Pantera stops as well as it goes. Disc brakes are used all around (ventilated ones are scheduled for future production but they are solid for now). Power assist is standard equipment.

In the brake test, the car stopped from 80 mph at .92G (232 feet) and did so three times in succession without fade. Directional stability is exemplary as well but there is room for improvement in brake modulation. Braking force is more proportional to pedal travel than it is to pedal pressure—a situation racing car engineers take great pains to avoid.

Racing car engineers would not approve of the Pantera's handling either. Nor will enthusiastic street drivers for that matter. It has a bad habit of oversteering abruptly when you lift off the throttle in a turn. An inexperienced driver can find himself in the hedges without ever knowing what he did wrong. And he is easily caught off guard because the Pantera's normal posture is a healthy understeer. A good driver can work up to impressively high cornering speeds but everyone else should beware. Perhaps the efforts involved will discourage the less determined. With the steering wheel so far away and the extreme caster (6°) working against you, the business of cornering requires abundant muscle.

Handling is routine, over-the-road driving situations are infinitely more satisfying, primarily due to the excellent straight line feel of the steering. You can drive around ants on the freeway at 80 mph. A rack and

pinion gear with zero play is used and it operates in rare harmony with the high caster front suspension.

Unfortunately, there are aspects of the Pantera that are as bad as the steering is good. A few of them are the result of bad engineering or perhaps just a lack of it. Excessive engine noise, mostly exhaust, in the cockpit at cruising speeds and dismal ventilation fall into this category. But the most conspicuous shortcomings are the result of pure and simple bad judgment. The cavalier disregard shown for bumper protection is a prime example. The Pantera can never be parallel parked in any metropolitan area. Its nose will be knocked in if it does. A \$25,000 car would be different. People who buy \$25,000 cars rarely drive them. They have a whole fleet of other cars, at least one for every conceivable occasion. But the people who buy \$10,000 cars can be expected to use them as transportation as well as for caprice and should be able to park them without posting a guard.

As you drive you have to look at another example of bad judgment—the instrument panel. Only two gauges, the speedometer and the tach, are on the dash (the others are on the console), and both are blocked by the steering wheel. Not just a little bite off the edges of each, either. No

sir, the wheel obscures substantial portions of both. It makes you wonder who is minding the store and what other less obvious mistakes have been built in.

One of the more apparent is ventilation. And the problem is more serious than you might suspect. The cockpit in this type of car becomes exceptionally warm in the daytime because the enormous sloping windshield allows the sun's rays pretty much free access to the occupant's entire body, as well as serving as a giant hot plate. The Pantera's ventilation system is simply not adequate. Even the optional air conditioner will not have enough capacity for summer days.

Which takes us back to the Decreasing Goodness with Rising Price theorem. Air conditioners work just fine in \$5000 cars—it's the \$10,000 and up models that you have to worry about. The same applies to quality of assembly. Unlike the molded vinyl in a Lincoln, the sewn covering on the Pantera instrument panel pulls and wrinkles and looks very much like what you'd find on a home-made car—or a \$25,000 sports car.

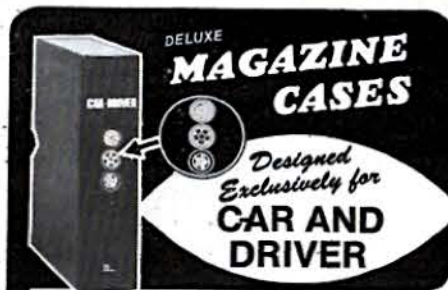
So the Pantera confronts the affluent car nut with a whole new dilemma—a \$25,000 car for only ten grand. You have to wonder whether the Ford Motor Company knows what it is getting itself into. ●

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THE STRATOS: DRIVING A BILLBOARD

(Continued from page 62)

lights—these are what really interest customers because this is practical information: How does Bertone deal with the design problems incumbent on a mid-engine placement? Is there a new way to integrate the round, flat planes of headlights into a sweeping styling concept? How can you handle hidden windshield wipers on a small car with a large windshield area?

"You will notice the car has operating windshield wipers," our guide says with pride. "Making them function on a windshield of the Stratos' size and inclination and then disappear, taxed our design resources to the limit." . . . An account executive opening his presentation portfolio.

What about aerodynamics? Wedge-shaped race cars have been around for a decade. Has the Stratos benefited from adapting the idea? We are informed that a one-fifth scale model of the car was run in a test tunnel and it was found that the drag was "very low." But because of lack of instrumentation, no studies have been done to evaluate lift. "We have no idea what happens there. In fact the car has never been driven over 50 mph and it would be appreciated if you observed that limit."

Which was a clue that it was time for the actual test to commence. But we discovered that before you get to the road you have to get into the car, and in this case just getting in was easily half the work of getting there. Taking your seat requires strength, ability, practice—and trousers. The entire windshield of the car pivots upward, which is fine, but then you must bound over the wide expanse of sheetmetal surrounding the driver's compartment and watch your head on the final approach pattern. Once inside there's just enough room to make yourself comfortable in one or another of the Apollo-type couch-seats. In fact, you have a tough time convincing yourself that you're not in a space capsule because, if you're in the driver's seat, you have what looks like a scale model of Sat-

urn confronting you. It turns out that this object is, rather, the steering wheel. Surprisingly the swing-away wheel (which requires 4.5 turns to move the rack and pinion steering gear lock-to-lock) and pedal controls are all readily accessible to a driver of average proportions—even though you feel like you're lying on your back in a glass coffin once the immense windshield is lowered into place.

It is time to go. You reach down and turn the key and suddenly there is a DC-3 warming up inside the tiny car with you. In actual fact it is simply a 130-hp 1600cc V-4 engine borrowed from a Lancia Fulvia HF ("We chose this engine because it is the shortest 4-cylinder engine in its displacement range"). The only modification had been to install a pair of short length megaphone exhaust pipes—and because the engine and transaxle are only inches behind your head you can pick out the sound of almost every spinning piece of metal along with the exhaust roar.

The first 10 feet of a trip in the Stratos are easily the most difficult. Immediately, the car's principle defect is pointed out as you tentatively move into traffic. You simply can't see out of the car—something that is a major defect in a car so low that it is doubtful many drivers can see you. Turn to the left and instead of a window there is a sheetmetal panel (the side window you later notice is down there nestled against your left forearm). Looking 90° to the right yields much the same result. There is a periscope for observing what might be ready to swallow you up from the rear but its view panel is approximately 10 inches from your eyes and the refocusing required makes it almost unusable. If you try to circumvent this problem by twisting your head around to peer through the glass panel behind the luggage locker you will be rewarded with a glorious vista of carburetors, airhorns, and a lot of wires—but not much else. Even looking straight ahead



The Stratos (arrow) in traffic.

you discover that because the windshield tapers inward as it goes forward over your feet, your field of vision is about 45°.

So, feeling like a human cannonball just before the match and fuse come together, you move out anyhow and are rewarded for your bravery by the absence of any noises of expensive sheetmetal being bent into a new shape. And if you think you're menaced by other cars on the road there is ample evidence that they view you as equally curious and sinister. Cars lurch from lane to lane; drivers are visibly shaken by your passage. Shaken, then curious, as they begin reconnaissance runs, vying with one another to tower over the Stratos in Fiat 600s and 124s. Buzzing your flanks like so many fighter planes investigating an enemy prototype. And as they career back and forth you are making constant corrections just to hold your own path. You are discovering that "the lowest McPherson suspension ever made" (the spring is located alongside the tire rather than above it) may be a laudable achievement but getting the system to work properly should be the next logical priority. Suspension travel has been limited to something like two inches, and that, along with the wide, stiff racing tires (4.75/8.50 tires on 7.5 x 12-inch wheels in front and 5.90/8.50 on 9 x 13-inch tires in the rear) and wild amounts of bump steer cause drastic changes of direction from straightline travel, even at 35 mph. Actually the rear suspension, which is a Lancia front suspension with the pitman and idler arms from the steering system ball-jointed to their respective drag links and welded solidly to the chassis, improves ride quality.

But if driving the Stratos pointed out its faults as an automobile, there is compensation in terms of the reaction it elicits. Pull out of traffic to get some respite and immediately congregations of small boys gather around, soon to be followed by their more wordly elders who eventually must give in to curiosity. Perhaps if a *raison d'être* for this whole exercise must be found it would be the overweight citizen who weaved by uncertainly in his Ro80, eyeballs and apex seals bulged and stretched to their limits. A few hundred yards ahead we could see gray clouds of tire smoke as he screeched the car to a stop. Some frantic motion and then he leapt out to strafe us with a burst from the lens turret of a Bolex 16. That alone justifies its existence in the mind of its builders. Only pity the day when some bright Bertone marketing man decides that sales calls on customers should be made in the Stratos. That would be the death knell for all such devices of this type and outrageous as they may be they serve a purpose that cannot be duplicated when pure practicality is included in the design formula. ●



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Sport

Like it or not, integration is here

If the nay-sayers don't watch out, automobile racing is going to be successful while they have their nays turned.

The big problem, as properly defined by the negativists, is fragmentation. There are as many divisions within the sport as there are paying customers. And all this leads to confusion and phony statistics and god knows what else.

The sanctioning bodies aren't getting together (as they should) and there are no signs on the horizon that there will be a diminution in classes of cars running, one of the sore points to the integrationists.

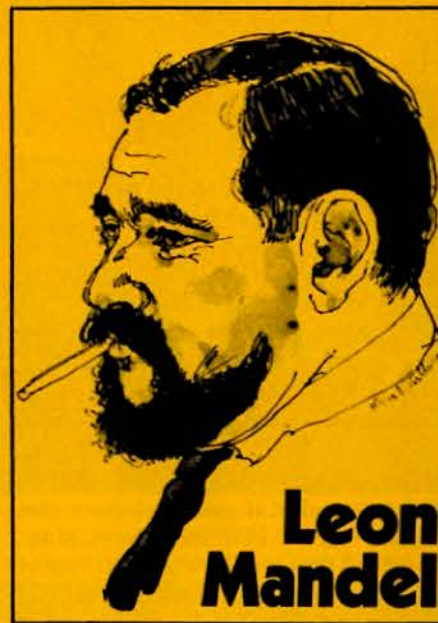
But something is happening which is going to change all this—in the long run. It is *de facto* integration of the sport at the highest level. Not by the nabobs, that would be too much to ask, but by the foot soldiers, the drivers. Look at A.J. Foyt in NASCAR, Parnelli Jones in the Trans-Am, Jackie Stewart in the Can-Am, Mark Donohue, Peter Revson, Lee Roy Yarborough and Cale Yarborough in USAC; they have all switched rather than fought and the switch is on elsewhere, too.

What this means is that the paying customer, who goes to watch the drivers anyhow, will shuffle over and pay his money to see A.J. no matter what he drives, or Donohue too, for that matter. And the kinds of cars being driven will matter less and less as more and more switching goes on. Eventually the drivers will realize that they make up the show and they will be extremely intolerant of restrictions that do not allow them to cross lines.

All this is going on while the promoters squabble and within the Automobile Competitions Committee of the U.S. there is about as much sanity as in the Balkans at the turn of the century.

Attendance figures are up again for motor racing (up about a million and a half to over 42,000,000—for whatever *that* statistic is worth), so somebody is doing something right and, again, it's most likely the drivers who have contributed the lion's

AUGUST 1971



share. The point is that they can be counted on to go where the money and the exposure is, and sooner or later that means an end to artificial barriers. All this is more than mere tokenism, it is far broader based than that and more power to it.

The SCCA has made a wise move in changing their qualifying methods to those more in keeping with their competitors' practices. One car per mile out at a time can stir a lot of interest if the P.A. announcer builds it properly. The old system, everybody out at once, was confusing to the spectator and the traffic made it difficult at times for the driver. Now it will be much easier on the timers and scorers who have no simple job to do in any case.

There are those who disagree: According to them the system makes for a boring afternoon and for some reason they are against making life simple for those who are responsible for determining accurate times on qualifying cars. According to the critics, the answer is a simple one: Just pay the timers and scorers \$50 a day and there

will be no problems. It is difficult to imagine why the \$50 would make things any easier except that the argument goes: You would be getting the cream of the crop if you paid your money and took your choice of those available. But timers and scorers, like all race workers, are where you find them and the quality of their work is the same if they are paid or unpaid.

If qualifying for Indianapolis can be made interesting enough to draw 250,000 people, then the same formula should work with sporty cars.

NASCAR's Grand American series is not exactly going to name drivers. As of the middle of May the top two drivers were Jimmy Capps and Bobby Fleming with Tiny Lund in third and Buck Baker in fourth. Top money winner, with \$3,495, was Wayne Andrews, running sixth. . . .

There is some delayed news of the development of a French F/1 engine and car. It's said to be a 1500cc flat-12 supercharged engine surrounded by some kind of French chassis. Ex Matra F/3 driver J.P. Jassaud is the driver involved but the developers are most certainly going to have a gas mileage problem. . . . Most disheartening rumor of the month is that Porsche will discontinue all racing activities with prototype and sports cars at the end of this season. Supposedly, development work on the 16-cylinder was halted in the spring and accordingly—and contrary to early reports—Porsche will not be competing in the Can-Am this year and it is highly unlikely that they will be in it next year. . . .

Colin Chapman will not enter the Lotus at Monza in the Italian GP as there are indictments pending against him concerning the death of Jochen Rindt last year. The basis of the complaint is mechanical failure and Chapman's ultimate responsibility for it. Chapman, recalling the problems facing Jim Clark after the death of Von Trips, will almost certainly stay out of Italy for some time. . . .

Lime Rock Donohue Wins Rain Date

It was one of those days when even the other guy's girl friend looked bad. No one escaped the rain. It came horizontally at times, borne on a blustery wind, and it spared no one. The day was clearly unfit for racing but the Schaefer Trans-Am at Lime Rock, Connecticut, the first of the 1971 season, could not more be delayed than the U.S. Mail. Too many people wanted to get it over with as quickly as possible.

Certainly Mark Donohue and Parnelli Jones seemed to have that in mind. Even before the starter waved the green they were thundering full bore down the 2800-foot main straight of the tight 1.53-mile circuit, leaving the rest of the pack shrouded in a long column of spray. Donohue had earned the pole the day before at 92.72 mph (a new record) and was not prepared to exchange it for second position before the first turn. Then, at the very last second, Donohue appeared to pull his punch—he braked harder than necessary and let Jones go ahead into the hook-shaped first turn. What followed was surely designed to demoralize the Mustang driver. While the crowd was still trying to digest Donohue's opening gambit he casually drove by Jones on the inside and opened up a length of daylight before emerging from the other side of the turn. That was the beginning of the end.

All of the rumors that had been filtering through the pits since morning practice were now confirmed—Goodyear had the rain tire and, considering the weather, Firestone had nothing. Which meant that Jones had nothing. He tried though—perhaps too hard. At the end of the first lap Donohue had 100 yards on him and Jones' heels were being nibbled by Peter Revson

and Tony Adamowicz in the two Goodyear-equipped chrome yellow ARA Javelins (last year's Penske cars updated to 1971 specs).

What followed was inevitable. In the back of the course a few nudges were exchanged. Adamowicz survived with little more than bruises but Jones suffered a right-rear-fender-into-the-tire injury which required a pit stop for surgery. And then another pit stop for more surgery. On the fifth lap he called it quits and drove the pumpkin-colored 1970 Bud Moore Mustang behind the pit wall. Which left Donohue in the jewel-like Penske Javelin, the two ARA Javelins a discreet distance behind—and nobody else.

Those who braved the rain and were fortunate enough to have a view of the esses whiled away the time watching Jerry Thompson's attempts to buoy his ex-Bud Moore Mustang up out of the swamp. He slid off the track on the fourth lap and spent the next 54 trying to get it out of a watery hole. He finally made it and went on to finish 18th—the last spot.

At this point all those who could put aside their miseries and concentrate on the race began to notice that the silver gray 1964 Pontiac Tempest which had started dead last on the grid—without even a qualifying time to recommend it—was no longer last. Those in the know would have dismissed the seven-year-old Tempest at first glance as being one of those aberrations that occasionally appear, except that Bob Tullius—known more for winning races than his humor on the track—was listed as the driver. By the end of 10 laps it had moved up from 31st to 10th. It could pass anywhere. By lap 37 Tullius was third.

(Continued on page 86)



PHOTOGRAPHY: RICHARD GEORGE



CAR and DRIVER



Mark Donohue had no problems, leading or winning. It was an easy beginning for Javelin and Goodyear.

Mrs. Adams' 1964 Tempest wasn't worth selling, so it became a race car; ran second behind Donohue; finished seventh.



AUGUST 1971

NASCAR gets untracked

All it took was a few warm days in May to rekindle the flame and restore a bit of the old spunk in stock car racing . . . a special little slice of spring to pump some chest-swelling pride back into an oft-unjustly maligned brother. It was refreshing.

Southern-style stock car racing (is there any other kind?) began tailspinning like a drunk kamakazi last year, and a winter doldrum, nurtured by a ho-hum press, didn't paint too bright an outlook for '71. The "in" crowd of drivers and writers found it easier to bitch about carburetor plates and loss of factory money than to build competitive race cars and locate sponsors. It was a heavy picture.

It took three weeks and two races to set the course straight. First the fender banger stuff at the Rebel 400 at Darlington's legendary 1.366-mile oval. Then Talladega's sprawling 2.66-mile speedway for R. J. Reynold's baptism with the Winston 500.

The Allison, Donnie and Bobby, and David Pearson took over during the early stages of the Rebel 400 while a series of mishaps chipped away at the field in typical Darlington fashion. First Pete Hamilton, then Charlie Glotzbach, Richard Petty (uninjured in a spectacular crash), Pearson, Bobby Issac, and Fred Lorenzen fell out while Donnie Allison in the Wood Brothers' Mercury maintained control, valiantly holding off a determined bid by Buddy Baker in the factory Dodge. When the engine let loose in Allison's car 10 laps from the finish, all Baker had to do was pray. Second-place finishing Dick Brooks was almost four laps behind, fighting off pesky Dave Marcis.

Two weeks later Bill France and the down-home folks from Winston were determined to turn the first annual Winston 500 into something special. Governor George Wallace's new bride, a pert 32-year-old former Cypress Gardens water skier, signed up to drive the pace car. Mystery Greek millionaire Chris Vallo commissioned Ray Nichols to field a new Pontiac. Holman-Moody signed up Bobby Allison and ex-H-M pilot Pearson promptly snared the Vallo GTO.

Alabama fans turned out 60,000 strong



PAL PARKER, JR.

Leading until his engine blew in the Rebel 400, Donnie Allison won the Winston 500 instead.

WINSTON 500 Talladega, Alabama, 2.66-mile pvd.			REBEL 400 Darlington, South Carolina, 1.366-mile pvd.		
1. D. Allison	'69 Mercury	188 laps	1. B. Baker	'71 Dodge	293 laps
2. B. Allison	'69 Mercury	188 laps	2. R. Brooks	'70 Dodge	286 laps
3. B. Baker	'71 Dodge	188 laps	3. D. Marcis	'69 Dodge	286 laps
4. P. Hamilton	'71 Plymouth	187 laps	4. D. Allison	'71 Mercury	283 laps
5. F. Lorenzen	'71 Plymouth	187 laps	5. J. Vandiver	'70 Dodge	276 laps
6. J. Vandiver	'69 Dodge	186 laps	6. G.C. Spencer	'69 Plymouth	268 laps
Average speed:	147.419 mph		Average Speed:	130.678 mph	
Fastest Qualifier:	D. Allison, 185.869 mph (51.52 sec.)		Fastest Qualifier:	D. Allison, 149.826 mph (32.822 sec.)	

for the 500-miler and watched the Allison, Baker, and high-riding Marcis, subbing for a sick Bobby Isaac in the Kirk Dodge, lock horns in one of the damndest 480-mile dog fights ever. The quartet was running within one second of each other when the engine in the Marcis Dodge finally quit and threw him into a fiery slide seven laps from the finish, bringing out the seventh caution flag of the day.

The green came back out one lap to go

and exhausted spectators had to stand up for the umpteenth time to watch Donnie (on the 42nd lead change) out-drag brother Bobby and Baker to the line . . . all within 4/10ths of a second of each other in the closest NASCAR Grand National finish in history.

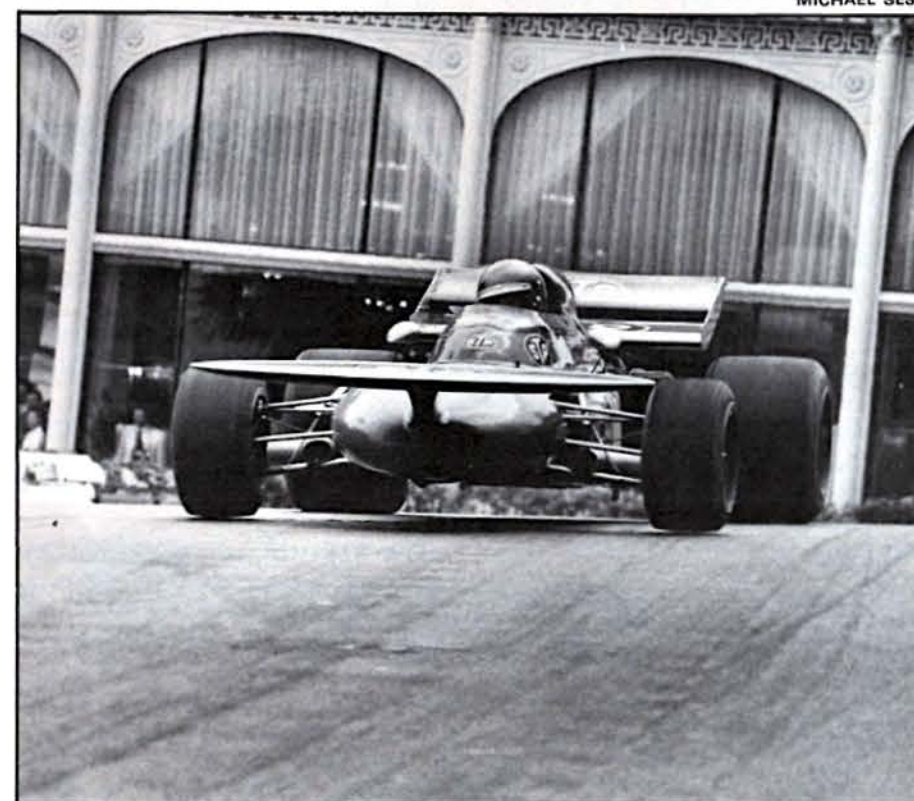
"Hell, I'm just glad I got to race in the middle of something that exciting," Baker said. "I think all four of us oughta get first-place money."

Stewart keeps spoiling "Ferrari's Year"

By the time the Monaco Grand Prix was 10 laps old, it looked like any other Formula One race—out in front and going away from the rest of the field at about half a second per lap was Jackie Stewart in his blue Elf Tyrrell. About five seconds behind him were Jo Siffert's BRM and Jacky Ickx's Ferrari in one of those classic Monte Carlo situations where it takes more than a better car and driver to get by a good combination, for the tiny 1.9-mile circuit doesn't provide many feet of straight pavement where passing is possible.

Another such situation had developed a dozen seconds behind the leader where Pedro Rodriguez (BRM) led Ronnie Peterson (STP March-Ford), Denny Hulme (McLaren-Ford) and Jean-Pierre Beltoise (Matra) in a crazy conga weaving from one side of the road to the other. Time and again the hammerhead front wing of the March came menacing along side the BRM and Rodriguez retaliated with a defensive flick of the wrist and pointed the BRM into the next corner on his line. But by the 14th lap the pressure was telling and Rodriguez made the tiniest of errors, but just big enough to send a wheel thumping into a curb with sufficient force to tweak the rim and let air escape from its tubeless race tire.

The freedom was like a tonic for Peterson and in just over one lap he put five seconds between himself and Hulme and suddenly Ickx and Siffert were again less than 10 seconds away. The young Swede was attacking the circuit with all the verve in the world and using every bit of power from his Cosworth-Ford. He would have the March sliding out of fast and slow corners alike, then swinging on just a bit of opposite lock at the last instant, but in time enough to keep the STP red machine from sliding into a guardrail, or wall, or curb. His consistency and accuracy were remarkable despite the brio of his performance and his deficit diminished rapidly; straight past Ickx he went as he braked for a hairpin on the 30th lap and now ahead lay the greatest balker of them all, Jo Siffert. Even he failed to hold the young Swede for more than a lap and so with 31



MICHAEL SESIT

A splendid race by Peterson (STP March) took him through the ranks to finish second behind Stewart.

of the 80 laps completed, Ronnie Peterson was in second place and 16 seconds behind Stewart. A lap later the margin was down to 15 seconds and it looked as if Stewart had a race on his hands. But the interval went back to 17 seconds, stayed there for a few laps, then on the 38th Stewart put on a demoralizing spurt which saw him take half a second off the record set by the late Jochen Rindt on the last lap of the 1970

race. Thereafter the gap gradually stretched to around half a minute.

The weather didn't even change. It had taken the life out of two of the qualifying sessions and taken a disconsolate Mario Andretti out of the race. The rain ruined the first session but Mario was out early for the second and followed fellow Ferrari driver Ickx round the partly damp track till both were lapping inside 1:29s. Then a fuel pump driveshaft failed and Mario was sidelined as Stewart won pole, and 16 others ran faster than Mario. The third session was again on a damp track and Mario had fallen victim to the splendid American tradition of no invited entries—everybody must qualify.

Ferrari got some consolation when Ickx inherited third place as Siffert's engine blew in front of the pits, but with it came the knowledge that what was supposed to be a Ferrari year was fast becoming another Ford one, or really a Stewart one.

MONACO GRAND PRIX 80 laps, 1.9-mile circuit		
1. J. Stewart	Tyrrell-Ford	80 laps
2. R. Peterson	STP March-Ford	80 laps
3. J. Ickx	Ferrari	80 laps
4. D. Hulme	McLaren-Ford	80 laps
5. E. Fittipaldi	Lotus-Ford	79 laps
6. R. Stommelen	Surtees-Ford	79 laps
Average Speed:	83.3 mph	
Fastest Qualifier:	J. Stewart, 1:23.2	
Fastest Lap:	Stewart 1:22.2 (85.4 mph)	

(Continued from page 83)

The savable spectators—those who could be revived from their numb, water-logged state—were becoming aware of the real race. Not for first place—Donohue's margin could already be counted in laps—but certainly for second. The Tempest, with its long tail and flat flanks, was unstoppable, passing on the inside, the outside, all the while closing the gap on Revson's second-place Javelin. It was only a matter of time until that distance was cut to zero—the Tempest out-deeped the Javelin into the Hook and drove away. What none of the spectators realized during all of this was that the Tempest is actually Herb Adams' wife's car—which explains everything. Adams is a Pontiac engineer, rare in his ability to produce simple solutions to complex problems with his own two hands. About a year ago he decided to make a racer out of his wife's old car because she wanted a new one and it wasn't worth enough to bother selling. According to Adams, a car is a car. "I don't think making a race car out of a '64 Tempest is any funnier than making one out of a Javelin." As it circulated around in second place, no one at Lime Rock thought so either.

Then, six laps short of the end, just as all those who always root for underdogs were beginning to swell with satisfaction, the Tempest limped into the pits, smoking from the exhaust pipe. The crowd sagged. The silver hood went up, water was added to the radiator, and Tullius was back on the track. But it was not to be. A head gasket had failed and Tullius brought it in for good one lap later. For the soaked spectators, the race was really over this time. And the nine-man crew which shares the Tempest's expenses got soaked too. SCCA pays on the basis of finishers, not laps completed. Tullius had racked up enough laps to finish seventh—\$1400 worth—but he was listed as the highest non-finisher and received \$150. It was the best show for the least money that the Trans-Am has ever played—even with the rain.

LIME ROCK TRANS-AM
131 laps, 1.53-mile road circuit

1. M. Donohue	'71 Javelin	132 laps
2. T. Delorenzo	'70 Mustang	126 laps
3. W. Agor	'69 Camaro	126 laps
4. P. Gregg	'70 Mustang	125 laps
5. M. Robbins	'70 Camaro	125 laps
6. P. Nichter	'68 Camaro	124 laps

Average speed: 75.63 mph
Fastest qualifier: Mark Donohue, 92.72 mph

Other Winners Happenings

THE STP-BRAWNER HAWK which carried Mario Andretti to his Indy win and third USAC championship, retired to stud after being almost completely demolished by Steve Krisiloff at Trenton. The car will be repaired and put on the show circuit.

SEMON E. "BUNKIE" KNUDSEN, ex-Ford boss now head of White Motor and newly appointed to the car classification committee of ACCUS.

DATSUN 240Zs winners of the East African Safari Rally with a first, a second, and a seventh. Winning team was Edgar Hermann and Hans Schuller who won last year in a Datsun sedan.

UNIVERSAL OIL PRODUCTS which will sponsor the Peter Bryant, Don Nichols Can-Am car with Jackie Oliver driving to prove a Can-Am entry can be competitive on lead-free gasoline.

THE CHRISTAMORE AID SOCIETY, a group of active ladies in Indianapolis, will sponsor the SCCA nationals at IRP, Oct. 2-3.

BOB STROUD and STEVE DAILEY named stock car supervisor, and midjet division supervisor, respectively, by USAC.

Representative F. EDWARD HERBERT, Chairman of the House Armed Service Committee, who succeeds the late L. Mendel Rivers as Honorary Chairman for NASCAR's "Medal of Honor" Firecracker 400. Don't expect to see much about this on CBS network stations.

CHEVROLET for continuing to be the most visible non-racing manufacturer in the country by having a Camaro picked as the pace car for USAC's Pocono 500.

ACCUS (Automobile Competition Committee for the U.S.) for valiantly trying not to be the least visible race organization in the U.S. by initiating the ACCUS Cup to be given to the top points winner in Formula One races held in North America.

THE OFFY ENGINE which powered the first three qualifiers for this year's Indy 500. This despite having been written off by experts as "too old" every year for the past 25.

BROCK YATES, originator, organizer, chief registrar and publicity officer and winning team captain in the inaugural Cannonball Baker Sea-to-Shining-Sea Memorial Trophy Dash. His entry took first overall, first-in-class, as well as finishing last overall.

FIA World Championship
August 1 Nurburgring, Germany
August 15 Osterreichring, Austria

FIA Manufacturers' Championship
July 24 Watkins Glen, N.Y.

SCCA Can-Am Cup Series
July 25 Watkins Glen, N.Y.
August 22 Lexington, Ohio
August 29 Elkhart Lake, Wisc.

SCCA Trans-Am Series
August 1 St. Jovite, Canada
August 15 Watkins Glen, N.Y.

SCCA Continental 500 Championship
August 1 Edmonton, Canada
August 15 Donnybrooke, Minn.

USAC Championship Trail
August 8 Parkersburg, W. Va.
August 15 Milwaukee, Wisc.

NASCAR Grand National
August 1 Atlanta, Ga.
August 15 Irish Hills, Mich.
August 22 Talladega, Ala.

Occasional last-minute cancellations make it advisable to confirm with sanctioning bodies before making plans to attend events listed above. The addresses of major race sanctioning organizations are as follows:

American Hot Rod Association
1820 West 91st Place
Kansas City, Mo. 64114

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FIA
8 Place de la Concorde
Paris, France

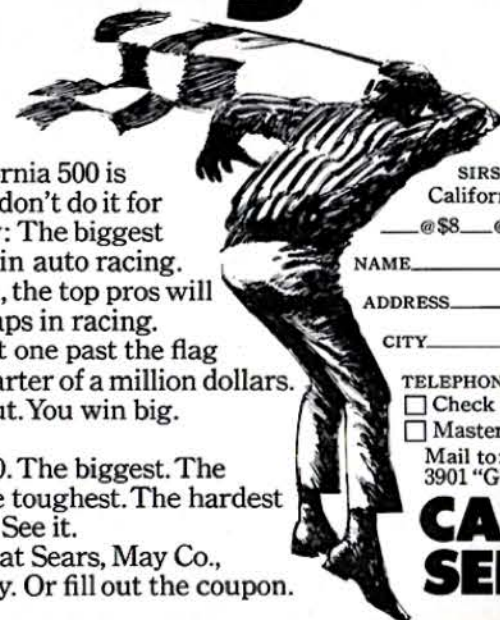
NASCAR
P.O. Bin K
Daytona Beach, Fla. 32015

National Hot Rod Association
3418 West First Street
Los Angeles, Calif. 90004

Sports Car Club of America
Box 791
Westport, Conn. 06880

United States Auto Club
4910 West 16th Street
Speedway, Ind. 46224

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VOLKSWAGEN K-70

(Continued from page 66)

the body by three rubber bushings. The rack and pinion steering has a swingaway collapsible column, and of course the body/chassis is of unit design.

In its construction, the K-70 demonstrates a systems approach in defining the basic specification, and competence in carrying it out through the development and manufacturing phases.

As an automobile in motion, the K-70 performs its chores with an efficient servility that will endear it to the transportation module customers. In this respect it resembles a 411 much more strongly than an Audi, or an NSU for that matter, both of which have distinctly identifiable automotive personalities.

Driving the car as it was intended elicits adequate performance from all the relative functions and controls. The K-70 will whip through America's prime measure of automotive excellence, the quarter-mile, in the mid-18-second range. The car stays on the road as well as the average transportation module should and felt friendly even at the 95 mph it managed to develop on a straightaway near the Geneva airport. Crosswind stability was very good, and the front-wheel-drive effects were imperceptible. Braking performance was adequate, if not exceptional, although lack of anti-dive in the front suspension caused some nose dip. Clutch, accelerator and brake pedal efforts were all very low, as was the steering effort.

The suspension systems, on the other hand, were both thumpy and somewhat harsh. There are some isolation problems that have yet to be resolved on the K-70, but even more than mounting point compliance it seemed that the center of the problem was in the seat. Tuning the seat cushions a little bit by softening them would probably do more than the modest sum it would cost to eliminate the tactile sensations of suspension hardness. But if the seats were unyielding, the upholstery was fantastic. The weave of the covering material takes a bite on your clothes like a Velcro fastener, and although the seats are relatively flat, there is just no need to seek lateral support when wheeling the car through turns.

The VW K-70 leaves one with the impression of having driven a reasonable car. An impression that would have been surprising had it debuted on the market as an NSU but is expected when one realizes the market parameters—somewhere in the niche between the VW 411 and Audi 100—that were imposed when VW took control.

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