

BUCKLE UP AND DIE. DO SEATBELTS KILL?

ROAD & TRACK

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240 MPH!

Chevy stock car or Porsche Prototype?



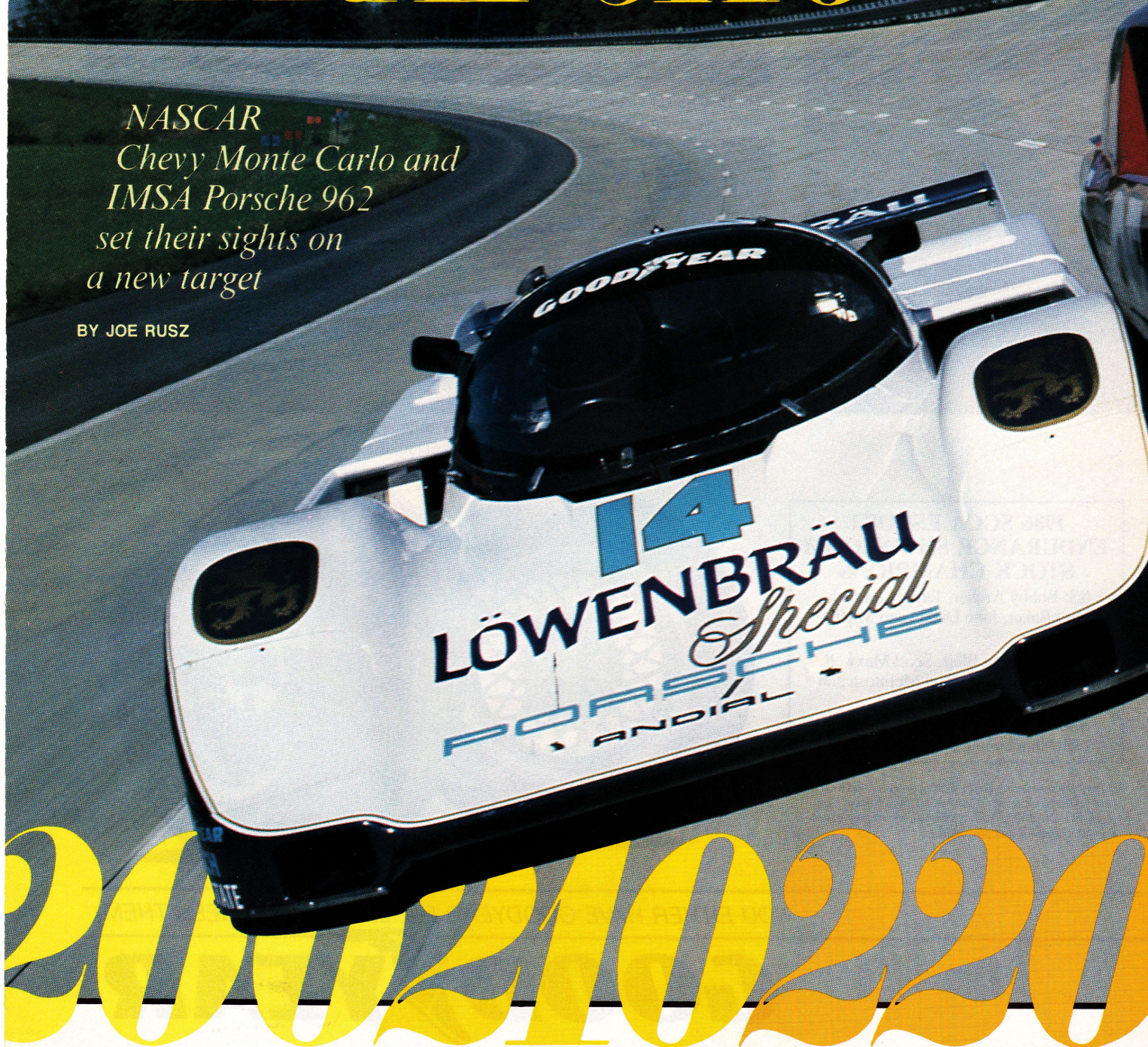
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TOP-SPEED TRAPSHOOT

*NASCAR
Chevy Monte Carlo and
IMSA Porsche 962
set their sights on
a new target*

BY JOE RUSZ





IT BEGINS AS a slight hiss, a minuscule movement of air barely audible over the buzzing of insects and the occasional chirp of a bird. Then as the distant shape draws nearer, the hiss quickly builds to a whoosh and almost immediately becomes a whump. This is the sound of air being brusquely displaced by a racing car traveling more than 200 mph. A Porsche 962, one of the fastest cars on earth. But the fastest? That's what every one of us standing along the Transportation Research Center's front straightaway

that sunny, crisp autumn day wanted to know.

We had come to TRC seeking an answer to an oft asked question: How fast do closed-course racing cars really go? What about a Winston Cup Series stock car? Sure, it's a billboard on wheels and, given its size and would-be simplicity (some might say crudeness), it has no right to be as fast as it is. And what about a sports road racer, an aircraft masquerading as an automobile, capable of conquering forces that rule both sky and earth? ▶▶▶

230 240 250



PHOTOS BY RICH CHENET

Top guns: Tim Richmond (left), Al Holbert.

It's easy to see why we zeroed-in on these two types of racing cars. Several of us had even been to Le Mans, that mystical place where for 24 hours cars of legendary heritage thunder by on the Mulsanne. We had seen these cars, Ferraris and Jaguars and Porsches. Especially the Porsches. In the days of the 917s, the late Sixties and early Seventies, it's said these ungainly beasts had reached speeds of 240 mph. Today, with half the displacement but a lot more technology, they are reportedly achieving speeds that are nearly as fast. These must be the fastest cars in the world.

But then, what to think of the stock car? That it has routinely reached much ballyhooed speeds of 200-plus mph were contrivances of the promoters, like the yellow caution flags that seem to appear at crucial times during a Winston Cup Series race? Even those of us who believe in conspiracies can't quite swallow the notion that any group could so convincingly hoodwink millions of people. Especially, racing enthusiasts. No, grudgingly we will admit that Chevy Monte Carlos, Ford Thunderbirds, Olds Delta 88s, Pontiac Grand Prix 2+2s and Buick Le Sabres are fast. But how fast? Faster than Porsches? We were about to find out.

If you are a faithful follower of motor sports, you have undoubtedly heard of Al Holbert and Tim Richmond. Al drives the Löwenbräu-backed Porsche 962 and recently became the 1986 IMSA Camel GT champion for the second year in a row. In doing so he also became IMSA's most successful driver, scoring more wins than any other driver—47 to be exact.

Tim drives the Hendrick Motorsports/Folgers' Coffee Chevy Monte Carlo and has shaken up the Winston Cup Series ranks with his best-ever performance in this hotly contested series. The affable driver has won six out of 23 races and is edging ever so close to points leader Dale Earnhardt in the battle for 1986.

Our having known both drivers for several years made them obvious choices for the shootout that would take place at the Transportation Research Center's high-speed test track near Marysville, Ohio. On TRC's big 7.5-mile oval, the curves are steeply banked, not unlike Daytona and Talladega and the straightaways are 1.88 miles long. Word among those who work at this sprawling complex is that the fastest any car had ever gone here was in the 230-mph range.

Everyone on the Porsche crew seemed to know this when we arrived at the track that morning. The car was being freshened-up, having competed in the Camel GT road race at Watkins Glen a few weeks before. Al had just landed in his Aerostar bringing the rest of the crew and a fresh turbo for old 103. Although the car is one of the earliest 962s built at Weissach, it is still very competitive and won the 1986 Daytona 24 Hours. Except for the usual running changes (a reshaped duct here, a redesigned turbocharging setup there), the Löwenbräu racer is the same as the other

seven 962s competing in the Camel GT. This means, it has an aluminum/Kevlar/carbon fiber monocoque (Porsche's first), upper and lower unequal length A-arm front and rear suspension and a 3160-cc sohc, 2-valve-per cylinder Porsche flat-6 with a single AiResearch turbocharger. Horsepower? About 680 at racing boost, 720 in qualifying trim, says crew chief Kevin Doran. But when you turn the boost up to 1.6 bar (23.2 psi) as Al did for our test, it may be even more, eh Kevin? By the way Germans are attempting to phase out 962 construction, so Holbert's shop has taken to building these cars, which cost a cool \$325,000, turnkey ready (yes, they do start with a key).

The Hendrick Motorsport team had also raced the preceding weekend, in Charlotte, North Carolina, 450 miles away. Pressed for time, they had stuffed Richmond's long-track car into the transporter and driven non-stop to arrive on the morning of our test. Compared with the Holbert bunch, the Southern contingent was really laid-back, and crew chief Harry Hyde and his men busied themselves with their final ministrations including applying gallons of Armor All to the bodywork.

And compared to the Porsche, the Hendrick's Chevy seems unsophisticated. A tubular frame, with a rollcage that could probably protect a driver in a fall from a 10-story building, serves as the nucleus of a car that uses factory steel body panels, upper and lower A-arms and coil springs up front, live axle with coil springs at the rear, and a stock-block 358-cu-in. Chevy V-8 with single Holley 750 carburetor. A sizable number of Winston Cup cars including all nine of those used by Richmond, come from Hutchinson-Pagan, circle-track race car constructors who will provide anything from a bare frame to a complete car. Most major teams buy semifinished cars and complete them in-house. At Hendrick Motor Sports, it's quite a big house because Rick Hendrick's Winston Cup stable includes not only Richmond's Chevy, but also Geoff Bodine's. And as of 1987, Darrell Waltrip's. Each Hendrick driver has several of these \$70,000 cars at his disposal including racers for short tracks, road circuits and superspeedways. Our test car was of the long-track variety and last competed at Talladega where Tim finished 2nd. Like the Porsche racers, the stock car boys don't talk much about horsepower, but Randy Dorton, Richmond's engine builder says that 640 is 'bout right.

Before either car turned a wheel, we laid down some simple ground rules: The cars had to be in reasonable qualifying or racing trim. "Can we use wheel covers?" Harry Hyde asked. No. "Can we tape up ducts and body seams, lower the ride height and change the final drive ratio?" Yes. When Al asked if they could fit the Le Mans longtail and rear underbody apron to the 962, we said yes. Porsche does make these parts, even though they are not used here. Or on any other circuit, except Le Mans, for that matter.

We would have let Holbert use a Le Mans ring and pinion, which is taller than the standard road-racing final drive gear. But none was readily available and as the first of our exclusive periods on the track approached, both crews used what was on hand.

Our first session was reserved for shakedown runs. Both teams had one hour to make final adjustments and to send their drivers out to get the feel of the track. Unlike most race tracks, the high-speed oval at TRC is concrete rather than asphalt, and in a decade of use, numerous dips and bumps have developed, some in crucial areas such as at the exit of one of the turns. Also, the corners, although steeply banked, are different from those at Daytona and Talladega. Their approaches and exits are gradual, so at TRC a driver must ease into the turns instead of just driving into them flat-out as on a superspeedway. Once committed to a lane, he must stay there because the transition from one lane to another is quite distinct. It would be like going from the lower apron to the banking at Daytona.

Not that either driver was too intimidated by the track. Richmond went first, blasting out of our impromptu pits along the front straight as if he had just made a pit stop at Daytona. We could hear the Chevy coming long before it appeared mirage-like at the exit of the turn 4 banking. When it blasted by us, its engine was at full song, and by the time the Monte Carlo reached the

speed traps at the end of the straight, it was doing 225. Not bad for a first effort, it stirred up the previously laconic Hendrick's crew and made the Porsche team more eager than ever to get the 962 on the track.

Holbert left the pits more sedately and eased the 962 out onto the track. Building speed gradually, he coaxed the Porsche up to a best speed of 208 mph. There were problems. "The frequency of their bumps and the frequency of our suspension seem pretty well matched, and we're getting a lot of resonance that's making the car bounce higher and higher," Al reported, and, the Löwenbräu and Folgers crews made further adjustments.

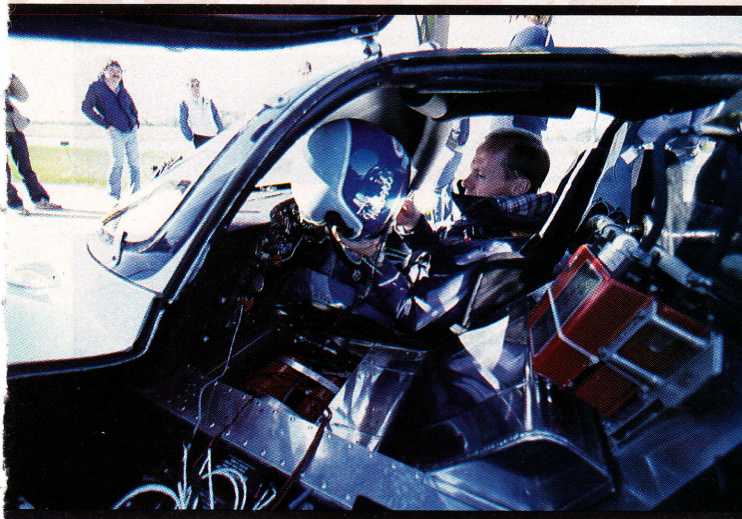
At the Hendrick transporter, Harry and company adjusted ride height and taped various ducts in the Monte Carlo's nose, doing everything possible to smooth the flow of air over the body. In the Holbert Racing work area, suspension settings were altered and the angle of the rear spoiler was reduced so that the winged surface was nearly parallel with the ground.

This time the Porsche went out first, and from the outset it was decidedly faster than before. Even the sound was different, more

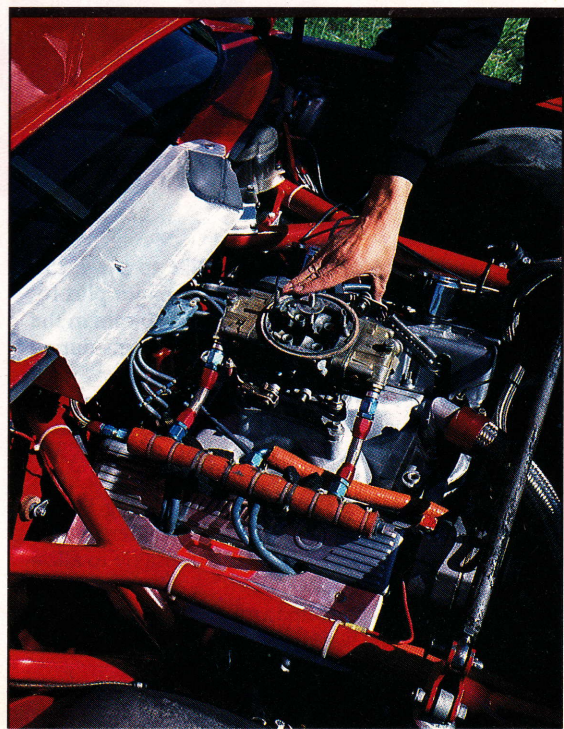
pronounced and concussive. When the radio crackled and the speed was announced, Holbert's men began to whoop and slap each other on the back. This was more like a Porsche should behave, a solid run at 215 mph. Al was pleased; "That's five or six more mph just from taping over the brake duct and enriching the fuel mixture." But after two more runs at 214, he knew there was no more to be gained with this setup. "Maybe if we could get a longer run at it . . ." Holbert mumbled and as the second session drew to a close, a crewman shouted, "Let's do the other tail."

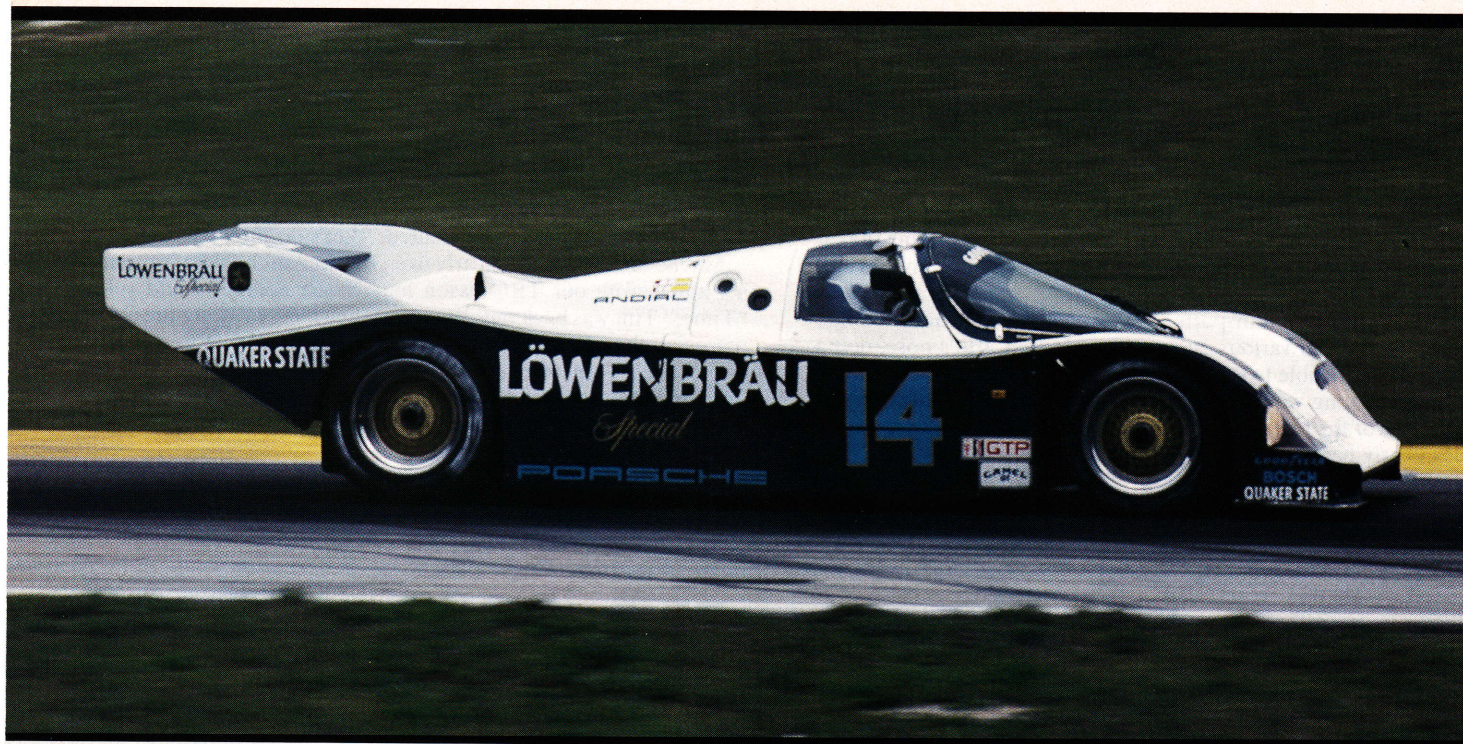
Maybe the session was nearly over, but Richmond wasn't listening and before our TRC liaison man Roger Schroer could yell, "Time," Tim was back out. With the Chevy V-8 marking the car's presence, the Monte Carlo floated into view and just as quickly disappeared. Someone in the Holbert pit said, "Hoooh, hoooh, that's fast," and indeed it was. In what had now become a game of high-speed one-upmanship, Richmond had flat-footed it through the traps at 230 mph.

If there was any speed left in the cars, the teams had only 2½ hours of work time to find it before the next session. The hunt ➡➡➡

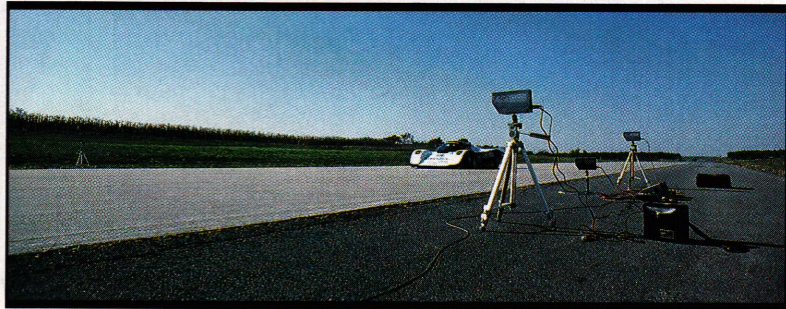


Study in contrasts: Space-capsule-like Porsche interior is chock-full of electronics, including dual Bosch Motronics that control operation of the 962's turbocharged flat-6. Stocker's roomy cockpit is model of simplicity as is the Chevy's carbureted stock block V-8.





Installation of Le Mans tail and undertray enabled Porsche to achieve its best trap speed—227 mph.



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began. Earlier, Richmond had remarked, "I'd like to see a 235 before I leave here today, or 240. That would be a major plus for our sport." Tim said the engine was turning only 7200 rpm in the traps, instead of the 7400 to 7800 rpm it normally turns during qualifying at Talladega. Everyone on the Folger crew knew what to do: Slip in a lower (higher numerical) final drive gear and seal up every possible cooling duct on the car—not merely with racer tape but with pop-riveted aluminum panels, not exactly NASCAR-legal, but what the heck.

In the Holbert Racing pit, the arduous task of fitting the Le Mans tail began. Because this setup also uses a rear undertray, the Porsche's halfshafts must be removed from the transaxle to allow the bellypan to be muscled into place.

When the late afternoon session rolled around, both teams were eager to return to the track. The white-and-blue Löwenbräu racer

swept out of the pits first, gathering speed as it went. When it appeared on the straightaway, the shockwave that accompanied it told us this was going to be a fast run and the clocks proved it: 224 mph. The Porsche crew was whooping it up as Al returned to the pits. Maybe a bit less rear wing angle and . . . ?

This time it would be all or nothing. Spellbound, we watched the 962 fly by, trailing its distinctive turbocharged exhaust note. All of us stared at the 2-way radio; "227," came the message. Al made a few more runs, hoping to wring more speed out of his car. But with the engine gasping for breath or with possible detonation setting in, the car slowed.

With the sun casting long shadows over the rolling Ohio countryside, Folgers' Chevrolet blasted out of the pits. All ears listened intently as the stocker circled the big oval and eyes strained to see it appear coming off the turn 4 banking. Unlike the Porsche, the

SPECIFICATIONS

	Hendrick Motorsports Chevrolet Monte Carlo	Holbert Racing Porsche 962
Price.....	est \$70,000	est \$325,000
Curb weight, lb.....	3700	2070
Weight dist (with driver), f/r, %.....	52/48	na
Wheelbase, in.....	110.0	104.0
Track, front/rear.....	59.0/59.0	65.0/61.0
Length.....	198.0	188.0
Width.....	72.0	78.0
Height.....	50.5	41.0
Fuel capacity, U.S. gal.....	22.0	31.7
Layout.....	front engine/rwd	mid engine/rwd
Engine type.....	V-8	turbo flat-6
Valve drive/no. per cylinder.....	ohv/2-valve	sohc/2-valve
Bore x stroke, mm.....	102.4 x 88.9	95.0 x 74.4
Displacement, cc.....	5868	3160
Compression ratio.....	13.2:1	7.8:1
Bhp @ rpm, SAE net.....	640 @ 7500	720 @ 7800
Torque @ rpm, lb-ft.....	500 @ 6000	530 @ 5700
Fuel delivery.....	one Holley 4V carb	Bosch Motronic
Transmission.....	4-sp M	5-sp M
Gear ratios, :1.....	2.65/1.53/1.39/1.00	2.00/1.30/1.04/ 0.63/0.61
Final drive ratio, :1.....	2.76	4.63
Steering type.....	recirculating ball, power assist	rack & pinion
Brake system, f/r.....	12.0-in. vented discs/ 12.0-in. vented discs	13.0-in. vented discs/ 13.0-in. vented discs
Wheels, f/r.....	steel; 15 x 10½ f & r	modular alloy; 16 x 13/16 x 15
Tires, f/r.....	Goodyear Eagle; 8.00 x 8.2 x 15 f & r	Goodyear Eagle; 24.5 x 12.5 x 16/ 27.5 x 14.5 x 16
Suspension, f/r.....	upper and lower A-arms, coil springs, tube shocks, anti-roll bar/live axle on trailing arms, Panhard rod, coil springs, tube shocks	unequal-length A-arms, coil springs, tube shocks, anti-roll bar/upper rocking A-arms, lower A- arms, coil springs, tube shocks; anti- roll bar



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Chevy announced its presence in a grand manner long before it became a recognizable shape. Then it was gone just as quickly as it had appeared. An anxious silence was broken by the radio transmission from the traps: "240."

Richmond had driven back into the pits and pulled off his helmet and balaclava amidst much back-slapping and congratulations. He had surprised even himself with the speed he had achieved. "I looked out the side and saw you guys standing right there and all of a sudden you were *phew!* And I said to myself, 'Holy Jeez, I'm goin' fast.'" Quite true.

So we had an answer to our question and if, like us, you're wondering how it's possible for a mid-size Detroit sedan to beat a very special Porsche, here's a key word to consider: aero. Although the Monte Carlo may look like an oversize brick, it's a very streamlined brick. The Chevy's body is relatively narrow, frontal area is

smaller than it might appear, and the C_x is probably around 0.30, less in qualifying trim. By contrast, the Porsche is fairly wide and has a number of necessary ducts that disturb airflow. But most importantly, it relies on downforce that actually hurts top speed. At TRC the 962 was trying to stay glued to the pavement (Holbert said it followed every irregularity in the surface), rather than just to glide smoothly over it.

Can both cars go faster? Yes. Harry Hyde said he had a few more tricks to try (lowering the ride height, for example), worth maybe 3 or 4 mph. And Holbert could always get that Le Mans ring and pinion and maybe try a different engine computer chip. In a rematch, would the Winston Cup racer still beat the GTP? Could be. Or is there some other closed-circuit racing car out there that's faster? These are new questions to ponder. Perhaps we would even learn the answers on another sunny day in Ohio. 