

Excellence

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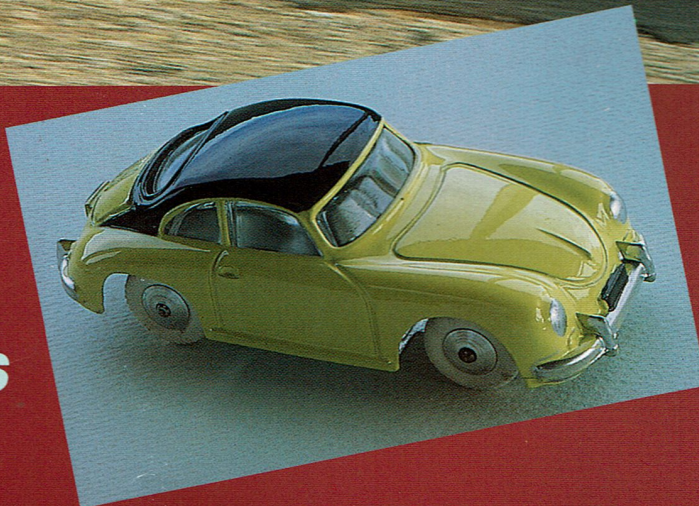
A MAGAZINE ABOUT PORSCHE CARS

**New Feature:
Porsche Market
Report**

**Test Drive:
The Only
Supercup 911
in the U.S.**



**Reissue
of Coveted
Porsche
356 Models**



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A MAGAZINE ABOUT PORSCHE CARS



PHOTO CLAUDIA LYONS

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PHOTO DAVID COLMAN

Give Porsche a reason to focus on going fast, and they will come up with a finished product that will blow your Nomex socks off.

Now no one's going to argue that street Porsches aren't fast, but there's a big difference between street fast and race track fast. Now that I know the difference, I can report that the chasm between fast and faster is wider than a 3.8 Carrera's power band.

In December of 1994, the Bridgestone Tire Company decided to invest in Porsche futures by lining up to buy a 1995 Supercup 911. Since the Supercup match race series is a support program for Formula One, and since Formula One hasn't graced the U.S. in five years, none of Porsche's finest racing cars have made it across the pond. Until now, that is. Bridgestone anted up DM 175,000 for their very own factory built "Porsche 911 Cup 3.8 Model '95." It would be the 26th of 40 such cars to come out of Stuttgart.

If you're inclined to dismiss this limited production race car as nothing but a tarted up "Club Sport" 993, take a close look at the list of changes Porsche has undertaken in the name of racing. The Club is under new management, and the Sport is taken much more seriously these days. The tight focus of this car is mind boggling. With customary thoroughness, the company has modified virtually every aspect of their street car to convert an already potent product into an absolute rocket.

Modifications to the exterior include a rubber sealed (not bonded) windshield, Plexiglas rear and rear side windows, aluminum front hood, and unreinforced doors. Deleted stock items include the aluminum front bumper support, lower engine

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valance, and carbon canister. Inside, a Matter roll cage has been welded in place, a central jacking system is standard, and a pair of Recaro racing seats grace the interior (Bridgestone added the passenger seat). Sabelt 6-point harnesses, a Momo steering wheel with a Supercup logo hub, manual fire bottle, and main power switch complete the nonsense-free cabin. There is no handbrake, and wet weight is a skimpy 2,500 pounds.

In the engine compartment, a special, factory sealed unit displacing 3.746 liters produces 310 hp (@6100

rpm) and 370 Nm of torque (@ 5500 rpm) thanks to flow-optimized inlet horns and a special exhaust system which retains the 3-way catalytic converter but deletes the heater boxes and muffler. An air filter no longer impedes intake, nor does the race motor use an airflow sensor or an idling charging control. A pair of oil coolers supplant the single unit of the street car, and reinforced engine mounts keep the power train from tweaking the chassis under load. Graphite-skirted 102mm pistons increase the displacement of the stock 3.6 liter engine by 200cc. Stroke remains stock, at 76.4mm. Intake valves are 51.5mm in diameter, with a lift of 12.5mm, and exhaust valves are 43.5mm in diameter, with a lift of 11.5mm. A Bosch M2.10.1 Motronic unit controls timing and prevents knock. With its compression ratio of 11.3:1, the engine runs on 98 octane unleaded fuel.

The 6-speed gearbox connected to this engine contains gear ratios modified for racing use as follows:

SUPERCUP	STOCK
1. 41:13 (3.15:1)	(3.82:1)
2. 42:21 (2.00:1)	(2.05:1)
3. 38:25 (1.52:1)	(1.41:1)
4. 40:33 (1.21:1)	(1.12:1)
5. 38:37 (1.02:1)	(0.93:1)
6. 33:38 (0.86:1)	(0.78:1)

These tightly grouped gears transmit torque to the rear wheels through a locking differential which varies in output from 40 to 65 percent. Both the

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BY DAVID COLMAN

clutch disc and the flywheel differ from stock, and reinforced mounting plates attach the transmission to the chassis.

The revised suspension eliminates the inexactitude of rubber from the bushing points by substituting spherical rod ends at each component juncture. The springs of the front axle are stiffer and double helical, the stabilizer bar is adjustable and its mounting points are stiffer than stock.

The strut and tie rod mounts are also stiffened, and the McPherson struts, fitted with Bilstein shock inserts, are height adjustable, with mounting points redesigned to afford double the camber adjustment of the street 911.

Height-adjustable rear Bilstein shocks anchor to the chassis with harder bushings than normal. Uprated double helical coil-over springs stiffen

the ride. The rear suspension bridge bolts to the chassis with harder bushings. The mounting points have been changed to allow for a wider range of camber and toe-in settings. The stabilizer bar and linkage are stiffer than stock, and the bar is adjustable to tailor handling.

The Supercup Carrera relies largely on stock 993 brake technology, using the latest ABS 5 system from Bosch. The front ABS sensors are heat-shielded, as are the wires to the sensors on each wheel. The race program substitutes Pagid pads for the stock items. Front wheels are 8.5" x 18" (offset 52mm) while rear wheels are 10" x 18" (offset 61mm). Speedline 3-piece rims are specified as original equipment, but Bridgestone has fitted 3-piece BBS centerlock racing wheels of the

same size on their Carrera. The centerlock nut requires 490 Nm of torque to tighten. Instructions for this procedure read as follows: "Caution: Torque the central screw without bending it. Support the torque wrench on the outside!"

The BBS wheels weigh half as much as the Speedlines (10 pounds less a corner), and are easier to resupply in the event of an accident. Mike Van Sicklen, Consumer Marketing Specialist for Bridgestone, and paterfamilias of the project, admits that the heavier Speedline wheels are probably better suited to the curb bashing antics of the drivers in the Supercar Series. While the Supercup cars race on Pirelli slicks, Bridgestone has supplied their test sled with the latest Potenza S-02 tires, identical in size to the original equipment Potenzas Porsche fits on the 1996 Turbo (225/40ZR18 Front — 285/30ZR18 Rear).

Porsche has made a number of improvements to the Supercup model since 1994. These upgrades include a new fixed rear wing, lipped front spoiler, sculpted side rails, plastic rear window, and revamped gearbox support. The front hub carriers are new, as are the subframe mounts for the rear axle. A second oil filter has been added, oil supply to the cams is different, and the gear ratios for 5th and 6th are now closer than before. Finally, a new support for the gear linkage has been added to the tunnel.

When Porsche #WPOZ ZZ 99Z SS39 088, the only 1995 Supercup

■ **The only sunny day in a week at Willow Springs graced our test day visit.**



PHOTO CLAUDIA LYONS

911 bound for the U.S., arrived here in March, the car was perilously close to missing its planned debut — the S-02 introduction Bridgestone had scheduled for its dealers at Road Atlanta. The 911 arrived at the Cincinnati, Ohio Port of Entry at 5:30 PM on a Friday afternoon. It was due in Georgia the following Monday morning. Rohr Racing in Cincinnati, who had contracted with Bridgestone to care for and prepare the Carrera, immediately set to doing a nuts and bolts check of the entire car. Graphic Concepts of Detroit, Michigan flew down to Cincinnati to apply the spectacular graphics package which Steve Nowicki of Gruppe B Image had masterminded with input from Mike Van Sicklen.

PHOTO CLAUDIA LYONS



■ **The five position adjustable rear wing is set at maximum downforce angle.**

In order to compensate for the change from race to street rubber, Rohr Crew Chief Brad Kettler backed off the factory recommended front camber setting from 4 degrees negative to 2 degrees negative. At the rear, Kettler changed the factory's 3.40 degree negative camber setting to 1.5 degrees negative. He performed the suspension calibration with a half-tank of fuel (weighing 30kg) on board, and a weight of 75kg (165 lbs) in the driver's seat to compensate for the lack of a driver. Supercup 911s do not carry a fuel cell in place of the stock gas tank.

Kettler also added that second Recaro race seat to the interior and supplied it with a matching Sabelt 6-point harness. He appended a Nascar-style window net to the driver's window, since Porsche race regulations do not require this safety measure. Graphic Concepts worked through the night applying the intricate 3M vinyl graphics to the hood, roof and sides of the car. The hood and roof stripes replicate the Variable Radius Groove (VRG) tread design that trademarks the Potenza S-02. The flamboyant side striping conveys an impression of fluid motion, in keeping with the tire's anti-hydroplane mission statement.

Entrusted to the capable hands of Hurley Haywood and David Murry, the Supercup 911 arrived on time for its appointed debut at Road Atlanta, much to the relief of Van Sicklen, who says of Rohr and Graphic Concepts, "those guys are my heroes for making that happen so fast." The Porsche demonstrated to dealers and the press alike just how fast a 911 can be made to go without resorting to tur-

bocharging. Hurley Haywood noted his top speed that day was 6,500 rpm in 6th gear at the dip on the back straight, which translates to 165 mph. Since then, the only Supercup 911 in America has been making the rounds of PCA race events, as well as the Parade in Portland, where David Murry provided thrill rides for attendees at Portland International Raceway. And thanks to a lot of elbow grease from caretaker Andy York, the Supercup car also won its class at the Parade concours. It made such a lasting impression on John Reuther of Chicago that he ordered one of the last of the 40 1995 Supercup cars for himself.

Recently, Bridgestone obligingly trucked their Carrera to Willow Springs, in Rosamond, California, where I was able to evaluate the latest race technology from Germany and

tire technology from Japan. I came away from a half-day, 50-lap session on the long track at Willow Springs astounded at what a superb turnkey race car Porsche builds for its sporting customers. Bridgestone's remarkably sticky new street tire contributed greatly to the overall positive impression made by the Supercup Carrera. These two examples of cutting edge technology dovetail convincingly on final approach to the limit of adhesion.

Per dictum of management at Bridgestone, this irreplaceable Carrera never leaves pit lane without a chosen guide aboard. In my case, David Murry had been retained as on-board counsel for the day. Murry, as you may recall, finished third in the worldwide Porsche Cup standings for 1995, after handily winning the SCCA World Challenge in a Rohr Racing 911 Turbo.

■ **Club Sport fans will recognize the door pulls, but the Matter roll cage and non-airbag Momo wheel are straight from the race program.**

PHOTO CLAUDIA LYONS





PHOTO CLAUDIA LYONS

■ **In 1996, Bridgestone will be showing their Supercup Carrera at all the Indy races. No plans to race this training horse, however.**

Given his current level of expertise in racing the new multilink suspension 993, Murry is the ideal choice for tutor. His easy and relaxed approach to speed is a product of his training as a Skip Barber School instructor. We started off without helmets, with Murry driving and me listening closely. Or as closely as I could over the blatting din of nearly four liters of flat six.

Willow Springs is a daunting circuit. Most of it is ultra-quick, with sneaky late-apex first and last turns, guaranteed to retain your attention every lap. A recent repaving of the circuit has elevated the road surface two inches clear of the surrounding desert. This crowning effect means that if you drop a wheel off the pavement through inattention or over-exuberance, you're bound to have a more serious incident than you would in the absence of such a precipitous drop-off. So before Murry said a word, I knew it was incumbent upon me to keep the tach in the black and frown at the crown.

From the get-go, the Carrera impressed me as remarkably docile and dependable. It sounded like a race car, but it didn't act like one. As we toured the desert sedately enough to put the jackrabbits to sleep, I gained respect for the gentle nature of this car and its appointed chauffeur. In order to establish a rhythm on track, Murry stressed that predictability is the number one asset a driver seeks from a race car. "This Porsche has it in spades. You can depend on it to do the same thing time and again. No nasty surprises since Porsche has gone to the multilink suspension. The

ride may feel too harsh here because this car has been set up for the mirror smooth tracks of Europe. So maybe it is a bit too stiffly sprung for Willow. But all those ball joints and spherical rod ends keep unwanted motion to a minimum. And reduced compliance means increased predictability."

We circulated ever more quickly, but the only white knuckles in the car

Finally, at the very top, the reinforced disc bit the lightened flywheel so suddenly that we were launched with a comical start.

belonged to me. Murry continued to expound on the virtues of our trusty mount with the same laconic drawl that marked his conversation seven speed zones ago. But his soft Atlanta patois belied the fact that he had slipped the Carrera into fast forward without half realizing what he had done. His speed through the long, double-apex sweeper leading onto the pit straight inched up lap by lap until we were pushing those ultra Bridgestones right to their limit. I had no idea a car could corner this fast on real street tires. Not "R" compound cheater rubber, mind you, but honest 20,000 mile long-length carbon, silica-reinforced doughnuts. And even past warp speed, Murry's

voice continued to address matters of line and apex without so much as an increase in octave.

As we idled into pit lane, I realized with some trepidation that my own hour to strut and fret upon the stage had finally arrived. Again we strapped in without helmets, but this time it was me flicking the ignition key on. The race motor settled into an immediate rumpa-rumpa, even after I probed the throttle pedal uncertainly a couple of times. The unmuffled exhaust note seemed hypernaturally responsive to throttle pedal travel, and the revs soared wildly in response to each blip with my right foot. In short order, the "modified flywheel and clutch disc" presented challenges of their own as I dipped the clutch pedal but failed to find the engagement point anywhere along the stroke. Finally, at the very top, the reinforced disc bit the lightened flywheel so suddenly that we were launched with a comical start.

"It only catches at the very top" cautioned Murry as I slipped the gear lever into second, marveling at the short solid throw and crispness of the shift action. The linkage felt Heim-jointed and precise, and as things turned out I never missed a shift all day. The steering conveyed a kind of precision that I have never experienced in any other Porsche. The responsiveness was as quick as a Formula Ford, and quite unexpected in a tin-top of this size. The gear splits were lovely, with little more than a 500 rpm drop between upshifts. The stripped body shell resonated like a tympanum to the ripples in the pavement and the per-

cussions of the engine. No doubt about it, this was a racing Porsche.

That high engagement point on the clutch pedal continued to produce jerky shifts, until Murry pointed out that there was really no need to depress the clutch to the floor: "Just use the top part of the pedal, and you'll avoid the delay between depressing the clutch and engaging your gear." That smoothed up my act quite a bit, and with the basic mechanics of operation under control, I began to concentrate on the intricacies of Willow Springs and the untapped potential of this Porsche.

As Murry dwelled upon the importance of smoothness, I quickly concluded that my years of autocross training were working against me in this new strange environment. Autocross is a violent thrash which subjugates theory to empiricism. Do It Now, Think About It Later. Ironically, the higher speed sport of road racing allows much more time for prudent decision making. Compared to autocrossing, things were happening in slow motion on the track. Though the scenery was blurry, my focus wasn't. Gradually I exorcised the clumsiness that comes with any first automotive acquaintance. As my shifting smoothed, the transition between trail braking and throttle application approached a state of grace that made us decide to grab our helmets. It was time to drive this Supercup Carrera the way Porsche intended.

As we strapped in again, I moved the Recaro an inch closer to the dash. Damn if I didn't lock myself into a seating position that put me too close to the wheel. Too late now, though, because once I realized my mistake, we were committed to a stint of at least ten laps. Meanwhile, Dave Murry was imparting words of wisdom that I would have died to know. But I couldn't hear a word he was saying. The message was garbled, inaudible, thanks to the full-face Bell covering his mouth, the Simpson insulation pads covering my ears, and the incessant drone of that open exhaust.

Helmets exert a strange force upon the human psych that must date to the shield and spear period. As soon as you don one, you develop a sense of imperviousness that flatters to deceive. Now that I was ensconced in my own little world, and effectively insulated from advice, I began to drive quick too quickly. Even so, the race-

PHOTO CLAUDIA LYONS



■ **So many tips, so little time. David Murry (left) is as good a teacher as he is a driver. The Supercup 993 goes nowhere without him aboard.**

tweaked 911 is an amazingly forgiving rear-engine car. Even if you miss an apex, even if you're sitting so close to the steering wheel that oversteer begins in your arms, this car won't swap ends. The S-02 tires contribute a great deal to the general sense of well-being. They work themselves gradually up to the limit, then operate in a most forgiving way in territory that would have you off the road on other street tires. The Supercup Porsche

The Supercup Porsche won't leave you gasping as you press the envelope because it seals the ragged edge with a Ziplock closure.

won't leave you gasping as you press the envelope because it seals the ragged edge with a Ziplock closure.

We trundled into the pits again, and as Murry pulled off his helmet to continue his analysis, I took my hands off the Momo to do the same. Just at that instant, we managed to collect the only pothole on pit road, wouldn't you know it. Potholes and solid rod ends mix less well than oil and water.

Kaboom! "I noticed you were starting to miss a couple of apexes, so I think it's just as well we cool off" said my copilot, as I tried to explain that I had managed to handcuff myself by relocating the seat blah blah....

We grabbed a couple of Zimas and watched a movie crew film a scene

from, of all things, "James Dean: Race With Destiny." So we weren't the only ones playing Porsche in the pits today. Here was George Barris, Mr. KalkKustom himself, acting as consultant on this flick. And here was a sultry looking Casper van Dien, playing James Dean. And parked right next to our Supercup car were a pair of movie props that looked just about right for background color: an E Production Speedster like the one Dean raced, and a replica 550 RS "Little Bastard" like the one he died in.

Debating whether this was art imitating life or life mimicking death, I climbed aboard the Supercup 911 for my final stint at Willow. By pre-arrangement, Dave Murry and I had agreed upon a series of pantomimes that would convey the basics without speech: a depressed palm for throttle, an uplifted palm for brake, double hands gripping an imaginary wheel for steering input advice. The sign language worked well, and the Supercup car worked even better. "Muscle memory" is what Murry called it afterward: "When you go out and drive a strange car, the first few laps feel awkward and you feel out of control, but the more you understand the car, the more you react to what it's doing automatically. Your muscle memory is already there, so you know exactly what to do, and have trained yourself not to do anything else." So the predictability factor isn't limited to the car alone.

As my tolerance level for speed increased, my comfort level in the Carrera began to soar. The tail started to hang out here and there without cause for concern. The upshifts became crisp and well-timed, the downshifts remained slow and deliberate. Circulating ever faster elevated

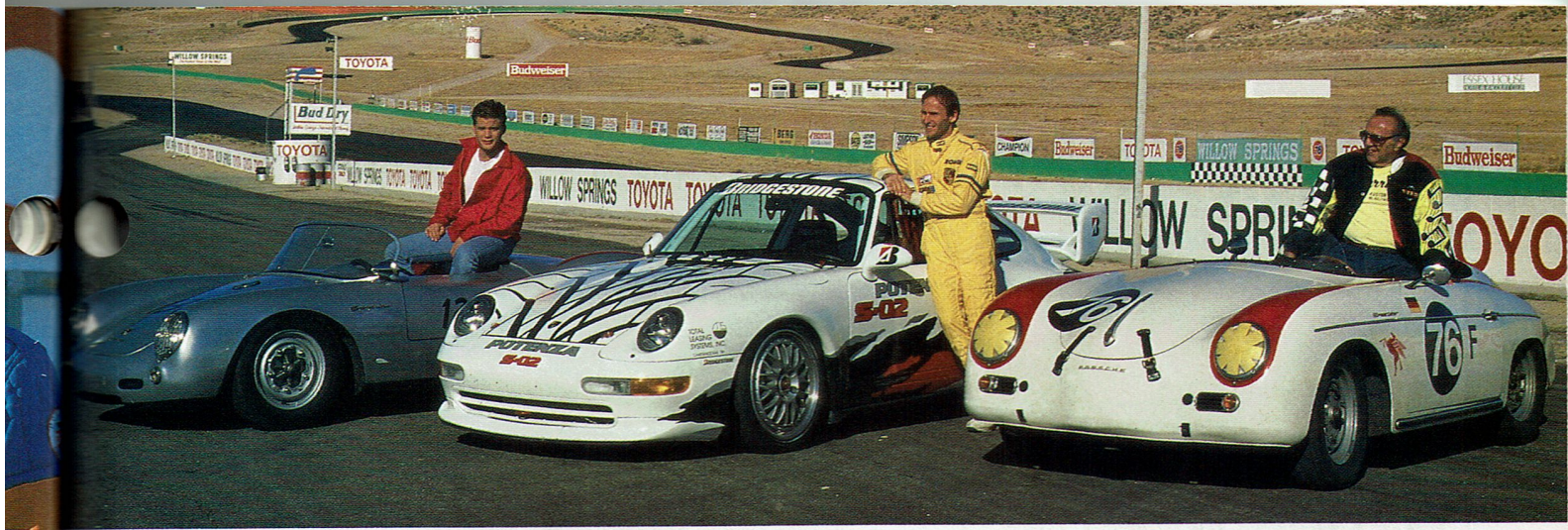


PHOTO CLAUDIA LYONS

■ George Barris (right) astride the E Production Speedster, David Murry (center) with our Supercup cover car, and Casper Van Dien (left) on the 550 replica of James Dean's "Little Bastard."

my turn-approach speed, requiring harder braking force. That in turn activated the ABS 5 Bosch system in the more demanding braking zones, like the end of the pit straight, and the uphill left that demarks the "Balcony" section. The initial pulse of this new ABS is so quick it eliminates the delay/coast drawback typical of other ABS systems. Murry loves the way the Supercup brakes work: "The new generation of ABS doesn't give you that big release in the beginning of the stop, and that's the most important part, when you're travelling the most distance per second. In every other street and race car I've driven with ABS, the first time you get it to release, the system takes almost a half second to regain braking, and that's a lot of distance."

Finally I managed to string together two laps at good speed with nice lines and precise apexes, smooth, transi-

tions from brake to throttle, and plenty of speed at the end of both the back and the front straight. Screaming by the pits in 5th gear, the Carrera pulled 7100 rpm, which translates to 140 mph. The back straight, also taken in 5th, is about 1000 rpm slower. If you were going to race here, you'd want to make 5th gear a hair taller, or 6th gear shorter. The 911 felt planted everywhere, perhaps most reassuringly of all in the 120 mph sweeper onto the pit straight, where the S-02 Potenzas show no slip angle whatsoever. I later found that the 911's five-adjustment rear wing was set for maximum downforce, the tires were pumped to 28psi front and 30psi rear, the front sway bar was set at the midway position with the rear bar notched full soft. There was no oversteer, no understeer, just a dead flat neutral race car platform that responded like the thoroughbred Porsche planned it to be.

Into the pits. Miss the chuckhole. Sigh of relief. No runs, no hits, no terrors. Later, I would have the opportunity to examine a parts price sheet for the Supercup car. I'm glad I saw it afterwards. Let's say you dropped a wheel off, and stuffed a front corner. The parts prices are listed in DM, so just multiply each number by 70 percent to find out what the dollar damage would be: racing shock absorber — DM 679, main spring — DM 149, helper spring — DM 95, bushing — DM 334, anti-roll bar — DM 335. Already, you're up to about DM 1592, or \$1100, and that doesn't include bending one of those \$1000 BBS modular race rims. As you can see, mistakes cost dearly when you're racing the latest Porsche Supercup car. So unless someone else is paying for the errors, it's definitely in your best interests not to make them in the first place.

■ No fuel cell for Supercup racing, but a strut tower brace, spherical shock mounts and ABS 5 from Bosch make this a real racecar.

■ All Supercup 993s are fitted with central air jacks as standard.

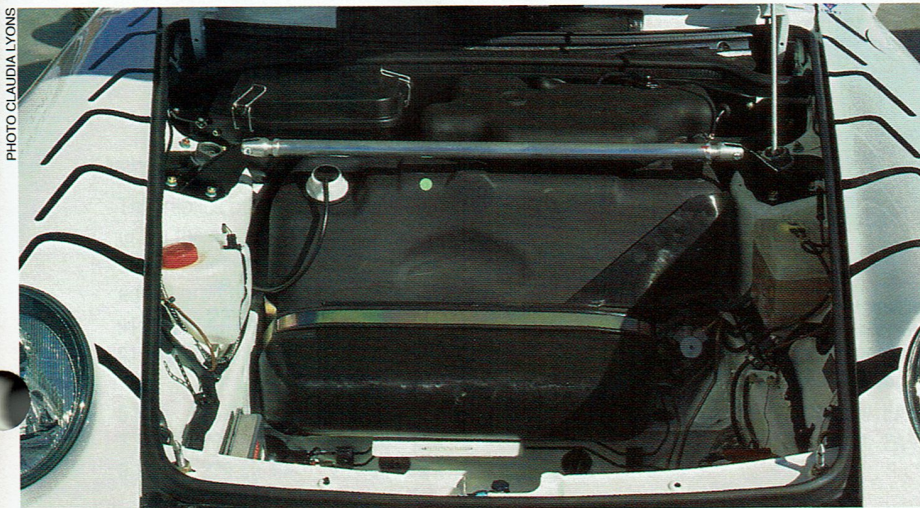


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