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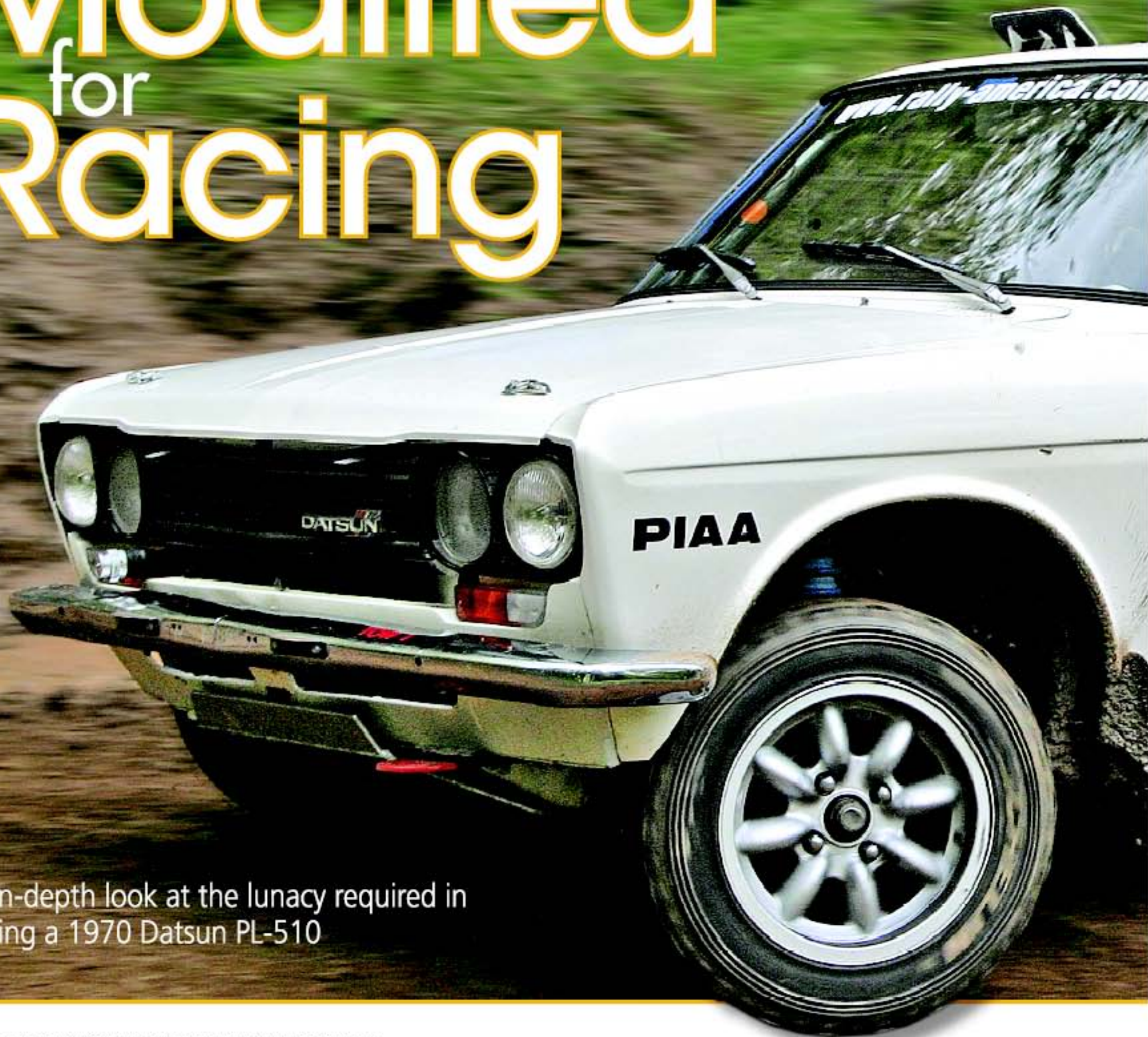
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RETRO RALLY:
Winning With A Datsun 510

TECH:
Project Spitfire
PART VII

Modified for Racing



An in-depth look at the lunacy required in rallying a 1970 Datsun PL-510

WORDS AND PHOTOGRAPHY BY DAVID TRAVER ADOLPHUS

Make no mistake: Dan Cook and Bill Rhodes are wackos. And like many people with mental illnesses, they have become adept at interacting with sane persons on a daily basis. They have both built up fronts so convincing they include respectable jobs and long-term relationships, enough to fool even an experienced professional. And while we at Hemmings are accustomed to people who take the hobby over the edge, we really had no idea of the depth of Dan and Bill's prob-

lem until we saw their car.

There aren't more than a half dozen vintage cars rallied off-road seriously today. Trying to make an old car stand up to a multi-day pounding, and remain competitive in a field dominated by 21st century Subaru WRX STis and Mitsubishi Evos, requires a huge commitment of time and energy, even if your car is a Datsun 510, with a long and proud competition history.

Lots of people have time and energy to devote to hopeless causes, though, and the

world is richer for their noble, if doomed, efforts to breed lavender cats, square the circle or get 100 mpg from an old Chevy using magnets. Yes, those people are the misguided many who make the sunsets brighter and remind us to watch our loved ones carefully. But once in a while, the power of their compulsion enables someone to push through the barriers that separate our world from theirs, and they overcome physics and the forces of reason to bring their vision to life.

At this point, you're thinking we're full of



Pete Kuncis/On A Limb Racing Rally Photography

it. But you haven't met Dan and Bill. We did, at the Maine Forest Rally in July 2006, where they finished 17th overall, first in Group 2, and as the top two-wheel-drive car (front or rear). For context, eight of the cars that finished ahead were Subaru WRXs of some stripe; six were Mitsubishi Evos, with a Ford Escort Cosworth the winner. Not one of those cars was built before 1995...and the next oldest car was an '87 VW Golf.

Dan is the car's owner, and performed most of the construction himself. In col-





Driver's Sparco Rev seat, with Sabelt three-inch six-point harness, faces a leather-trimmed steering wheel and custom aluminum dash with Auto Meter liquid-filled gauges



Navvie's office features a Terratrip 303+ with front wheel and transmission sensors



More complete than when acquired, the '70 begins transformation in unheated garage

lege, he had hooked up with rally legend John Buffum's (HS&EC #6) stepson, Paul Choiniere, and his buddy Scott Weinheimer. Together, they followed Buffum all over the country as spectators. "One rally, I kept going back to each year—the Susquehannock Trail Pro Rally (STPR). ...It was there, with these guys in the woods year after year, that we all joked about being able to go faster."

Bill, the navigator, was along for one of these trips. "Not knowing what to expect, my first sensation on [a] stage was hearing a racing motor's throaty crackle and pop, deep in the woods, and then seeing John Buffum burst out of the woods." He watched Buffum "perfectly ditch-hooking his Audi Sport Quattro around the corner I was standing over...I had no idea people actually did

this legally, relatively close to my home."

We can only speculate about the unique combination of high-octane gasoline and backwoods swamp water that must have infected them, and left them susceptible to so-called friends who told them, "You could go faster than that." Bill suggests that as their talk about rallying evolved from idle speculation into serious consideration through the 1990s, other volatile racing fuels may have been present as well. "When Dan announced that he was going to buy a car and was going to enter rallies, I considered the idea for about half of a second and then offered to navigate for him. There was no actual discussion or rational thought involved in the decision on my part."

In 1999, Dan acquired an already pre-



Owner-designed rollcage, built by 510 racer Dave Patten, protects and stiffens



Mil-spec loom with fiberglass/neoprene shielded, tin- or silver-coated Belden wire



Hints of damage are visible in the wrecked '68, scavenged to help build the '70



Custom alloy control box with LEDs, circuit breakers, mil-spec connections



Rebello engine has flowed 44mm Mikuni carbs, Nissan Competition oil spray bar and intake manifold, cockpit switchable crankfire and distributor ignition, anti-surge oil pan

pared 1968 Datsun 510 "with a decent U.S. rally pedigree. In our first events (and even at rally school), we got an overwhelmingly positive fan reaction for campaigning that historic car," said Bill. The car got slightly less historic at the STPR in June 2003, when they wrapped it around a tree. "There was really no debate between us as to whether we would find another historic RWD car. The modern AWD cars are fast and smooth, but I'm not sure they are as much fun."

Dan found their current car in August of 2003, and decided to take the lessons learned from racing—and crashing—the '68 to heart when building the '70. It came as a bare shell, lacking fenders, glass, wiring, suspension or a drivetrain. Dan had spent a year in Buffum's Libra Racing shop, but had never been in charge of a complete build. "With this project, I had to teach myself everything." And he did, learning cutting and MIG welding for all the steel components; electrical theory, design and practice; and teaching himself chassis, suspension and roll-cage design. By the time he had the car ready for a

shakedown run in July 2005, the only things farmed out had been aluminum welding and the construction of the massive double roll cage, built to his specs by Dave Patten in Dunbarton, New Hampshire.

Dan and his wife Becky were dating at the time of the crash in June 2003. "She says

she had guts to go along and get married after it," and she went further, and married him, got pregnant and had their son Ethan during the build of the new car. "Building a rally car as a newlywed is something that probably wasn't the smartest thing to do."

"I was working on the 510. Nights,



Owner stiffened the chassis and welded seams, painted with DuPont Imron. Multiple reinforcements and Nissan Safari springs buoy rear



Fuel tank left in stock location for safety; further back might improve balance. Rallying requires comprehensive repair kit. Underneath, differential is protected with skid plate



Panasport racing 14- or 15-inch alloys, depending on event, with Michelins

weekends, vacations." He spent two long winters in an uninsulated Vermont garage, working by the scant warmth of a woodstove. "Satisfaction came in small doses," he said. "At times, it was hard to stay fully motivated."

At 2,580 pounds race ready, it's around 400 pounds heavier than a stock 510. Credit that roll cage, innumerable gussets and stiffeners, 14- or 15-inch wheels and Michelin gravel tires (depending on the event) and a massive one-piece aluminum skid plate. On the other hand, the 200-plus horsepower developed by the 2,340cc Rebello L-series four is more than twice what the stock 1.6-liter engine made, so that's all right. The transmission is a Malcolm Garrett Racing Engines-built Nissan 280Z overdrive

five-speed, with a 4.4 or 5.13 rear differential, again depending on the event.

It is so much easier to mention what does remain stock, than to detail the almost entirely custom-built car. There's some of the sheetmetal, the rear halfshafts and differential carrier. There's the 3.5 turn steering box and the flywheel. That would be everything that wasn't either custom built by Dan for the car, or adapted from a rally-specific component. And the top item on Dan's to-do list is a quicker-ratio steering setup.

"I like how this car operates as a rally car," said Dan. "While running a relatively short [95-inch] wheelbase, the car is still very stable." It's balanced 51/49 front to rear and 50/50 side-to-side with Dan and Bill aboard. "The car loves rough roads! In

fact, the car does its best work on rough, technical roads."

And we can attest to that, as Dan strapped us into the navigator's Race Tech RT seat and settled into his Sparco for some dirt road fun. Fired up, there's no doubt you're in a race car. The sound of the 12.5:1 compression engine through Dan's four-two-one 2½-inch exhaust is one of the reasons for their popularity with spectators, an inline-four's distinctive growl highlighted by the ever-changing modulation of the throttle.

We're proudest that we managed not to display any overt signs of panic during the ride-along. We've been on real race tracks with real racing drivers, and after a couple of minutes, you get used to that. You do not get used to this.



Inner headlamp buckets are screened intakes; fiberglass front fenders, rocker panels have double walls. Windows are custom-made Lexan



Tow hooks are specified, but in rally, you return on your tires, or without them



Real men go bald on purpose to avoid helmet hair. As rally becomes more popular and competitive in the US, the car will undergo continuing modification to keep up

The ride was far smoother than we expected; custom Bilsteins front and rear and long suspension travel keep the wheels planted. In fact, the car squats a little when it digs in, and then launches with the fury of a thousand angry wasps toward a curve suddenly eight inches away. As in any race car, you don't pay too much attention to the speedometer, but our external observations suggest we were up toward 80 mph on the flat.

At the top of a hill, a large pothole loomed, and suddenly we were pointed straight at a

deep, deep ditch. Then we weren't. A little kick swung the rear out around it, and a quick flick brought it back. Like any professional driver, Dan can narrate what he's doing, but we weren't listening. Instead, we were watching the scenery change direction fluidly yet with warp-speed rapidity, listening to the gravel pelting the undercarriage, and struggling with contradictory urges to hurl and simultaneously yell our war cry. We emerged shaky and exhilarated, thinking about our daily-driver Subaru, the old BMW

sedans in the barn and the possibilities.

"I knew that taking on a project like this by myself would push me to my limits, and it did," said Dan. "I'm often asked why I am rallying a hard-to-find specimen, and frankly, I try to forget how much work has gone into it and just try to rally."

"The American rally community is a really friendly, supportive group of enthusiasts, and it's a privilege to share their sport with them," adds Bill. "I feel lucky just to be able to enter and compete." 🏆

Navigation with Bill "Ballast" Rhodes

A navigator can contribute significantly to the team's success—but one mistake can also end the day for the team. So the stakes are high, but when we finish, it's a great sense of accomplishment.

When we started, the role of the navigator was pretty basic—call out the sparse "tulips" in the old-style routebook... and try not to puke. While I enjoyed watching the scenery down the road through the side windows as Dan pitched the car around corners, I usually felt that there was just too much time between notes. Under that system, the navigator's role was limited to trying to keep the driver focused and under control, and not missing a timely call on a cautionary note.

But with the advent of the newer "stage notes," which provide about 10 times the level of information, the role of the navvie has become much more important—and fun. I don't watch much scenery any more. A bad navigator can now find lots of ways to ruin a result for a team.

When we decide to enter an event, I electronically plot the likely stages on my computerized mapping software based on publicly available information about the event and stages, as

well as any prior experiences at the same event. We work out a "movement plan" (details of all the pre-event and post-event travel, inspections, etc).

When the stage timer counts down to zero, my job is to call the notes (through our helmet intercoms) at a pace that matches Dan's ability to hear and comprehend the information, and then have time to prepare for the road conditions ahead.

I try to maintain a rather emotionless cadence, and only emphasize by voice pitch difficult corners and actual dangers identified in the notes. Maintaining a good cadence (in terms of speed and pitch) is a hallmark of good rally navigation, and it's a skill that must be practiced. I am always rusty at the first event of the season. But, when we are in sync, stage miles seem to fly by.

Navigating can be stressful, but not particularly so (for me) while competing on stage. It can be really hot and cramped in the car, and at the end of the day you are exhausted, but the sport is one of the most pure, unadulterated thrill rides I can imagine, and I take pride in not only competing in but, more importantly, finishing events.

—Bill Rhodes