



# Speedster GR

One man's dream car, carved from a 1978 911 SC Targa

STORY BY PETER LINSKY AND PHOTOS BY BRUCE SWEETMAN AND GARY ENGEL

Oregonian Gary Engel decided that he couldn't afford to have someone else build his dream car to the exacting standard he envisioned—so he decided he'd do as much of the work as possible himself, and if it took a lot longer than he'd hoped, so be it. It has, in fact, taken the better part of 20 years for Engel to fulfill his dream.

This stunning topless Porsche appears a bit understated compared to some of the over-the-top creations you may have seen from various tuners, but closer examination reveals not only how imaginative Engel is, but how well all the pieces mesh.

Long before the factory unveiled a six-cylinder Speedster in 1989, Engel had begun planning his own. "The '89 was much too bulky for my tastes," he declares. "It was too wide and heavy. I wanted to simplify the concept, and in the mid '80s I had begun to accumulate parts." As a partner in an independent pre-owned Porsche and Ferrari business, he had ready access to both cars and parts. In 1988, with a growing pile of bits on hand, Engel began looking for a suitable chassis on which to base his dream.

"I'd considered buying a damaged SC, but after pricing out all the pieces of the

car that I could remove and sell, it made more sense to find a good, straight car to part out." He'd also avoid the additional expense of repairing any chassis damage. The starting point was a 1978 SC Targa, purchased from its second owner and showing about 112,000 miles on the clock. Chassis 9118210462 still wore its original paint and had never been hit, exactly what Engel was looking for. In the fall of 1994, work began in earnest. "I stripped the car and sold the entire interior, engine and transmission, brakes, bumpers, and wheels. That more than offset what I'd paid for the whole thing."

What would his new car look like? Engel had pinned numerous photos of factory-built 911 Carrera Speedsters and the designs from various European shops to his workshop walls and developed ideas in his head. Topping his list of requirements, though, was that the work be absolutely perfect no matter how long it might take. At that point, he admits, he had no idea how long that would be. The extensive body alterations were entrusted to Donn Lowe Customs in suburban Oregon City, Oregon, where the tub arrived in 1995.







Since chassis flex is the Achilles' heel of a convertible—especially with the powerful engine Engel had in mind, he and Jeff Gamroth of Rothsport in nearby Tualatin, Oregon, designed a fully integrated six-point roll cage, tying together all the suspension points. Engel and Paul Gilbert, an expert metal-shaper at Lowe's, cut, welded, and installed the fully gusseted structure, after which Engel painstakingly filled and smoothed every single weld.

"I wanted a show-car level of finish, even on the parts that would eventually be covered by body panels and not visible." Every single nut, bolt, and bracket that could be removed from the tub was taken off and bead-blasted, powder-coated, painted, plated or anodized, and clear-coated where necessary.

Engel wanted to incorporate what he believes are the best points of Porsche 911 design: a lower, smoother front end; a clipped windshield, and that most identifiable of features, an RS ducktail. The first was achieved with a pair of used 993 front fenders obtained from someone's Strosch body conversion. Gilbert sliced off the tops of the SC's fenders, trimmed the flush-headlight 993 fenders to fit, and butt-welded them into place. The cowl air intake and wiper arm hole were filled. Gilbert made a tool to roll the wheel opening lips, filled in the SC's fender gas filler lid, and shaved the outside door handles. Lowe tackled the difficult task of slicing and splicing the steel hood to remove the central valley.

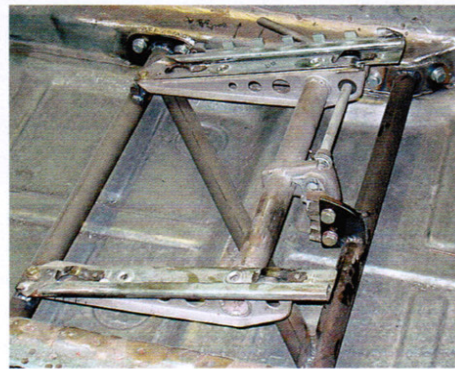
A close examination of the front lid reveals that the Porsche crest—a special silver copy by Ralph Booth—is not mounted on the lid's surface per standard practice but recessed for an almost flush appearance, an approach that Porsche would later adopt on the Cayenne. Engel made a laser-cut die slightly larger than the crest, then stamped a recess into another piece of sheet metal. Local customizer Wade Delco then cut a hole in the hood of the same shape and welded in the new section.

Provision was made for a B&B oil cooler in the nose, and Engel crafted a new front fiberglass bumper cover, based on a RUF Yellow Bird valance which he extensively modified. Engel designed a new "crush zone" ahead of the well-braced nose structure but hidden behind the plastic cover. The factory's heavy aluminum bumper beam and impact shock absorbers were replaced with a new steel

cross-piece and collapsible tubular bars bolted to the tub. The rear bumper was similarly modified. The windshield, frame, mirror, and visors are all from a 1989 Speedster; the SC's cowl was modified to match the windshield frame.

Engel fabricated new, deeper rocker panels blended to the body shell. Again, his dedication to faultless work meant shaping the new rockers from foam glued to the body. He then made profile templates every six inches. Gilbert used those as guides to form the steel rockers that would be welded to the tub.

After more than two and a half years of labor, the tub was ready for paint. Engel called upon Wade Delco for that task, and



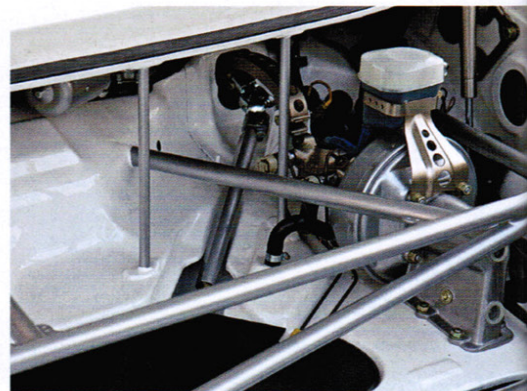
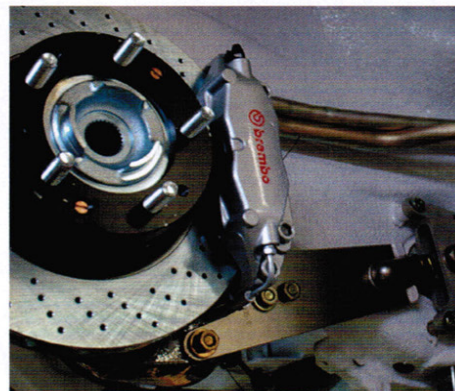
coats of Mercedes-Benz silver. Then the cage was masked and Delco painted the body shell. Everything topside was then clear-coated. Afterward Engel did touch-up by hand at seams and tight areas that the spray could not fill or reach evenly.

Those tasks completed, Engel brought the car home to begin a very slow and methodical fitting and installation of new body seals, a custom-made dashboard, steering, and other chassis hardware.

The front trunk contains a factory 100-liter Rally gas tank with custom underhood filler. Several small-diameter steel bars add vertical stiffness to the cowl. All unnecessary holes in the cowl bulkhead have been filled and smoothed. To



**Clockwise from top left:** New seat mounting brackets were fabricated using parts from a 914. The SC tub and rollcage almost ready for paint. Front trunk compartment is heavily reinforced; note the new cowl supports and angled, telescoping steering linkage taken from a VW Jetta. Massive Brembo stoppers installed at all four corners. **Opposite:** A flat hood gives this 911 a very different look.



by June, 2007, all the prep work had been done. Engel had decided to have the car sprayed a single-stage Pure White and was toying with the idea of a contrasting color to use for the stiffening cage and other trim. One night, while on eBay, he saw a set of silver-faced 911 gauges, and that struck an immediate chord. *Weiss mit Silber*: white with silver. With the body carefully masked, the rollcage received several

improve balance, a small battery was relocated to the "smuggler's box," now topped by a carbon-fiber lid. A small fabricated tool box now rests in the old battery well. The stock Porsche fuse and relay panel on the inner fender wall now wears a hinged cover instead of the original snap-on part, and also contains relays for the H1 100-watt headlamps.

The SC's doors have been completely



guttled of factory glass, window hardware, and latching mechanisms. Opening a door is now accomplished by pushing down a small Sterling silver skull in the trim pad, which in turn operates a bell-crank and rod that releases the latch. Engel and Mike Branum crafted wood “drape forms” to shape new curved and tapered Plexiglas side windows, which were produced by a shop that manufactures boat windshields.

Since this is a fair-weather toy, Engel dispensed with a top altogether, a chancy decision in oft-rainy Oregon. The single remaining shortened windshield wiper arm and longer blade—which help meet licensing requirements—park on the pas-

modified 1994 911 Speedster tonneau. The rear quarters are stock SC, but Engel again designed and fabricated his own rear valance and bumper cover, which is notched and flared for the single exhaust pipe.

The engine cover with its modified ducktail came from a 1974 Carrera. Both the rear lid and the front hood panel are supported by brushed stainless gas springs. Above the spoiler is an elegant intake grille laser-cut from a single piece of stainless steel, reinforced with a single center rib and counter-bored for appearance. The grille was then bead-blasted for a matte finish. A similar grille protects the front oil cooler.

headrests were raised and fashioned to resemble those of the McLaren, and the side bolsters were deepened. The buckets are fitted with electric heating grids. “I had to have those,” says Engel, “because that’s the only way my wife will ride with me on cool evenings.” Engel felt that the factory Speedster’s seats were placed too high—“Every photo of the Speedster on the road showed the occupants’ heads above the windshield header”—so he fabricated a pair of “Z” brackets which are bolted to the sill and tunnel, atop which are mounted tiltable seat frames from a 914. Because the seats are lower and the Plexiglas side windows don’t retract, padded armrests were mounted on the



senger side of the glass. The wiper motor case and linkage were clear-coated. A pair of unusual outside split-panel convex anti-glare rear-view mirrors came from Strosek Design; Engel credits his close friend Vasek Polak Jr. for chasing those down in Europe.

The rear of the car offers its own interesting details. The sturdy roll bar with its removable rear braces is surrounded by a

Inside the cockpit Engel removed the SC’s rear jump seats and sheet metal and modified the rear bulkhead. He then turned his attention to crafting new driver and passenger chairs. “I wanted to buy McLaren F1 seats, but they were \$4,000 each! No, thanks!” He eventually found a set of fiberglass buckets from a SAAB Sonnet III, and spent countless hours modifying them to suit his taste. The

topmost side intrusion bar for the driver and passenger. Their feet rest upon drilled Rennline aluminum floorboards backed up with black ABS plastic. The driver’s dead-pedal carries the same visual theme

The dashboard came from a 1976 911, the one year that has no openings for center air vents or radio speaker. The dashboard’s defroster vent openings were filled and recovered. There is provision to plug



in an MP3 player to power the door speakers and a custom-boxed rear sub-woofer. Some interesting changes were made to driver controls. The 911 sport steering wheel (thicker rim, no hub offset) is now height-adjustable, thanks to a modified Volkswagen Jetta steering column. The steering shaft—which telescopes neatly on itself—twists a brush-finished and clear-coated steering rack. Almost every bracket is drilled for appearance and lightness. In

ple, lacks any markings, but it's still easy to read from the hands alone, like a luxury wristwatch. The shift tower was moved 2.25 in. rearward, and the WEVO shift lever is capped with a custom drilled knob. The handbrake lever was shortened to fit. The glovebox was eliminated—"Old Speedsters didn't have one", notes Engel—but there's quite a bit of storage space in the door shells, and some soft luggage can be tucked behind the

with the rest of the car's electrical needs. The control boxes are hidden beneath the Speedster's fiberglass tonneau cover. The stainless steel exhaust system came from GHL and feeds a two-in, one-out Monty muffler with a contour-cut tip.

The RSA motor was already devoid of an A/C compressor, heater assist fan, power steering pump, cruise control, and dual pulley. All extraneous mounts and fixtures on the engine were also removed,



the middle of the steering wheel's horn pad is an all-silver Porsche crest salvaged from a wrecked 996 GT3, repeating the theme established on the front lid. Polak was able to obtain a package of carbon-fiber sheet from an IMSA BMW team, and Engel used it on the dashboard, the front trunk and at the rear of the shift tunnel. If you look closely, you'll even see a carbon fiber disc on the headlamp knob.

The instruments now wear silver-faces—the work of North Hollywood Speedometer—and present a decidedly upscale appearance. The clock, for exam-

seats where a fire extinguisher also resides.

Rothsport's Jeff Gamroth replaced the SC's original 3.0 air-cooled six with one from a 1992 964 RS America. Displacement of the M64/01 RSA motor is 3.6 liters, and with 11.3:1 compression, two-stage resonance intake manifolding, and some careful tuning produces 280 hp at 6100 rpm. Torque is a stout 251 lb-ft at 4800 rpm. A Split-Second mass airflow sensor works with the Motronic twin-plug ignition and 993 E-coils. A new wiring harness marries the engine and its Motronic electronic management system

and the auxiliary belt now requires but a single pulley.

As with every other component on this car, Engel meticulously detailed the motor, including sanding down the molding flashes from the plastic intake runners before painting the runners silver. The engine compartment was also cleaned up as befits a custom; all miscellaneous relays and the fuel filter relocated to less obvious positions. There's a stainless steel Rennline RSR-style motor bracket which was bead-blasted for a matte finish. New engine tin was fabricated and powder-



coated silver (are you sensing a theme here?). The 964's original flywheel was replaced with a lightweight aluminum unit from Patrick Motorsports to mate with an aluminum pressure plate from Rothsport. An extremely low-mileage magnesium 915 transaxle was fitted with a new close-ratio gerset, internal oil pump, and a Quaife torque-sensing limited-slip by gearbox guru Gordon

Products provided new 20mm anti-roll bars front and rear. Brakes are Brembo GT four-piston calipers front and rear, with ventilated and cross-drilled front rotors. Engel used 930 rear brake discs, because he needed their built-in parking-brake drums.

Unable to find a set of wheels that suited his taste, Engel decided to design his own and have them made. After working with a Solid Works draftsman on the design, a machinist to create the centers,

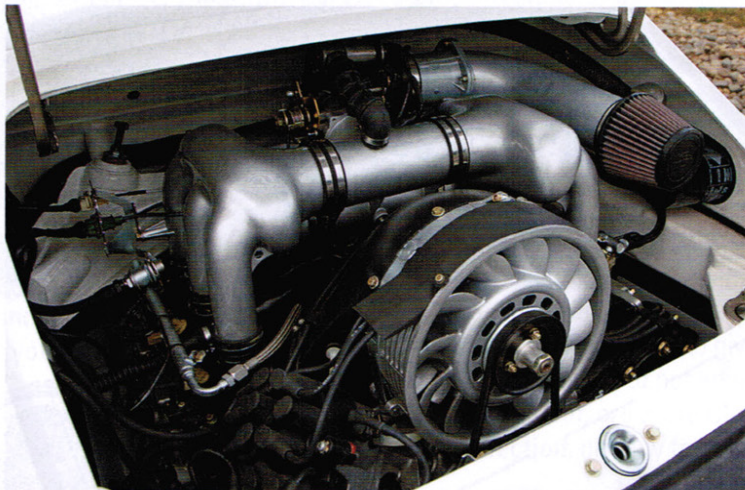
for the first time in the chassis.

In early 2012, the car was ready for upholstery. Ken Dickman of Kenetic Design covered the buckets and the rest of the interior in a combination of rich black Alcantara and leather. After considering traditional German square-weave carpeting, Engel found an unusual "true black" carpeting material used on 1950s-era GM cars. By the end of 2012, the car was running and complete, and Engel began focusing on the final details of the project that had consumed so much of his adult life.

What happens when this metal sculpture hits the road? Is it all show, no go? Hardly. Slipping into the car requires raising the steering wheel and easing over the side members and seat bolsters, then adjusting the seat, dropping the steering wheel, and belting up. The buckets fit like a Saville Road suit. A brief twist of the ignition key brings the 3.6 to life, where it settles into a rumbling, crackling, 1100-rpm



**Above left:** The finely detailed cockpit with custom buckets, armrests on the intrusion bar, fixed Plexiglas side windows, and a very simple dashboard. **Below left:** Rothsport prepped this 3.6 RSA six that pumps out a very adequate 280 hp through a 915 transaxle fitted with a close-ratio gerset and Quaife torque-sensing LSD.



Ledbetter. Axles came from a 930 and use oversize CV joints.

The SC's original MacPherson strut/torsion bar layout has been replaced with a full coil-over system with adjustable JRZ shocks from Eisenlohr Racing Products. An ERP alloy crossmember bolted to the tub locates the front suspension. Cary Eisenlohr, a friend of Engel's, recommended reinforcement of the rear crossmember when changing to coil-overs. The trailing arms are stock, although beautifully refinished, and Engel installed ERP 935 adjustable spring plates. Smart Racing

a wheel manufacturer to weld the centers to the outers, and a wheel finisher to polish, anodize, and paint the new wheels, Engel finally obtained a set of stunning, one-off, 18-in. rotary-forged Fuchs-style aluminum wheels to his liking.

Health problems briefly sidelined Engel in early 2009, but as soon as he was back on his feet, the chassis was sent to Rothsport, where expert fabricator and engineer Carl van Austen took charge of installing the remainder of the electrical parts, suspension, and drivetrain. Late the following year, the rebuilt engine fired up

idle. Snick into first, hand-brake off, add some revs, ease out the clutch, and...I stall it. Twice. It takes a few tries before I figure out how to introduce a very light flywheel and very direct clutch.

With gobs of torque at hand, this sub-2400-lb roadster responds instantly to throttle input. Mid-range response is shattering, and even fifth gear pulls like a train. Triple-digit velocities arrive very quickly, but that big-bore exhaust system and an intake pipe just a few feet behind the seats make this a deliciously loud ride under hard acceleration. Fortunately, cruising at 3000 to 4000 rpm brings the din back to the acceptable range.

The WEVO shifting linkage is very precise, a far cry from the factory bits. Under braking, I also learn that wide athletic shoes tend to catch the edge of the Rennline gas pedal; narrower shoes would be a better idea. The low seating position allows good forward vision. The view aft is somewhat hampered by the rollbar, but Engel is trying to figure out a better rear-view mirror location...perhaps some-



## Gary Engel's dream car is a gleaming example of attention to detail filtered through an artist's eye

thing height-adjustable on a vertical rod, just like the original Speedster. There is some air buffeting; the tapered side windows otherwise do a good job of directing airflow around the cockpit. Ride quality is impressively supple but reassuring. Thanks to the extensive chassis reinforcement, there's absolutely no sign of flexing, rattles or squeaks.

Stepping back from this fascinating design, some thoughts come to mind. First of all, when it comes to creativity and individuality it's apparent that Engel has set an extremely high standard. While it's always difficult to improve on what the factory brings to market, his "Speedster GR"—the last two letters represent Engel's first and

middle initials—presents a very different approach. The design is striking and its dazzling white and silver paint visually arresting. The finish, for example, is so good that you can read the lettering on a fluorescent work lamp bulb in its reflection. The hand-cut gussets that Engel used throughout the rollbar and chassis tubing are astonishing—okay, we've all seen gussets before, but each of these is gently contoured and has three small lightening holes. It's almost like pinstriping, but in metal. The custom grilles, the dashboard instruments, the wheels, all add up to a stunning automotive statement.

Now that the car is finished and he's able to drive it, I asked Engel if he would

ever have undertaken a project like this if he'd known it would take so long to complete. "Well, it's not finished," he gently corrects. "There are a number of things I still have in mind. I want to do some more detail lightening," indicating several components that don't seem to have enough holes. "I also want to put some carpeting in the front trunk, and convert the gauges to LED back-lighting." So it's the journey that Engel treasures most, with the destination always around the next corner. Gary will, I suspect, always find more to do. ■

*Special thanks to Blakeslee Vineyard Estate in Sherwood, Oregon.*

