

More and Less

Though Lotus is working feverishly on two forthcoming sports cars, it hasn't neglected its existing lineup. We drive the souped-up Exige S 240, as well as the heavily liposuctioned 2-Eleven.

by JEFF GLENN photography courtesy LOTUS

The Lotus formula is simple: ample power, aggressive looks, light weight and solid chassis dynamics. Many carmakers manage to deliver on the first two parameters, but few get the last two as right as Lotus. The Elise dazzled us with its handling balance, and the Exige S added supercharged power and more aggressive styling to the equation. And now, the new-for-2008 Exige S 240 offers even more grunt, more stopping power and a giggle-inducing launch-control function.

We headed for the sunshine of the Nevada desert and Spring Mountain Raceway in rural Pahrump, Nevada to grab the newest Lotus by the scruff of the neck and toss it around a twisting road course to see what an extra \$3,890 on top of the \$61,000 Exige S gets you.

The sharp-eyed Lotus fan will immediately note the Exige S 240's roof scoop has crept for-



ward to the leading edge of the windshield from its central position on the Exige S. Both Exige models trade rearview mirror use for the power-enhancing benefit of an intercooler propped on top of the supercharged 1.8-liter Toyota 4-cylinder engine. For the S 240, the increased airflow of the new scoop works in conjunction with higher flow fuel injectors and a revised engine management calibration to generate an extra 20 horsepower—for a total of, you guessed it, 240—as well as an additional 5 lb-ft of torque, for 170. The peak numbers don't tell the entire story, however: Lotus has tuned the engine for better mid-range response, not just peak output.

Few visual cues distinguish the S 240 from the "standard" Exige, but there are other changes beneath the skin. Behind the

front wheels, four-piston calipers grab 0.6-inch larger brake rotors (12.1 inches in total), providing more stopping power than the smaller two-piston setup on the S.

Another difference is found in the traction-control department. The Exige S's setup intervenes through the engine-management software at a set percentage, and is either on or off, whereas the S 240's system is variable. It is controlled via a knob on the steering column, and allows from 0 to 10 percent slip before turning off completely. Each time the car starts, it returns to the full no-slip setting.

The traction control ties in directly with another new system only available on the S 240—launch control. Here's how it works: Hold the traction button for 5 seconds with the key in the on position, but the car not running. Then hold the throttle to the floor

for 5 seconds, and watch the tach needle swing up. Adjust the tach needle to the desired launch rpm with the traction control knob on the steering column, and release the throttle. That sets the launch control for anytime you're running after the next key start. When you want to launch, hold the clutch down, put the car in first and floor the throttle. The rev limiter holds the engine at the desired launch rpm, making a distinct "brap, brap, brap" sound. It does so by retarding spark; one in every eight cycles is firing. Then sidestep the clutch and you're off. The wheels spin at the desired launch rpm until the car reaches 6 mph, then traction control takes over and the car really gets down to business. The extra load on the clutch is taken up by a damper in the clutch plate, thus easing the strain on the drivetrain.





After a quick debrief on the car, Lotus turned us loose on a tight 1.5-mile loop of the 3.1-mile facility. The track layout is unusual, with more late apexes than I've ever seen strung together. These were combined with some third-gear esses, a few man-made elevation changes, one of which was a slight drop past the apex of a fourth-gear corner, and a short straight that only allowed us to reach 112 mph. It was an ideal setup for the nimble Lotus.

All of the S 240s on hand for our test were fitted with the \$1,650 Track Pack option, which adds adjustable Bilstein dampers with moveable spring perches for ride-height settings and an adjustable front anti-roll bar. When we started, the ten-position dampers had a road setting—3 out of a possible 10 clicks. Each click to a higher number on the collar at the bottom of the shock tube increases both bump and rebound damping

simultaneously. Lead suspension engineer Matt Becker explained that with the way the Bilsteins are valved, the adjustments have more impact on rebound than compression; both stiffen up, but the rebound side is affected more, which still allows the chassis to roll in the corners but keeps that load transfer in place longer, affording more grip. He also pointed out that the adjustment available on the front anti-roll bar is more for fine tuning, ultimately changing the amount of roll by only around 2 percent.

Driving toward the track for the first time, I was surprised by the shifter, which is significantly less clunky than on the last Lotus Elise I drove. "The design is exactly the same, but we've sourced a new supplier and taken a small amount of mass out of the unit," explained chief engineer Nick Adams. I was also a little surprised at just how compliant the suspension is, but then once out

on the road course, pitch and body roll were more dramatic than I expected. The Exige S 240 turned in quickly, but it didn't feel glued down, and the roll at the rear was more severe than the front, which translated into some high-speed oversteer over the downhill side of the fast fourth-gear corner. Even at slower speeds, the throttle didn't pin down the rear as quickly as I'd like. Plus, the ultra-powerful, fade-free brakes really stood the Exige on its nose.

I came in, consulted with Becker, then reached around the wheels and clicked the shock adjusters up to 8 in the front and 7 in the rear. "We've played around with it, and these settings seem to work pretty well for this track," he said. Back out, and the change transformed the car. Roll and pitch were still noticeable, but less severe, and most importantly, the Exige was willing to change direction more rapidly. A trailing throttle still got the Lotus rotating sideways, but I could stop the rotation quicker by getting back on the gas. The high-speed oversteer over the apex of the fast corner completely settled down, too.

Lotus says you can feel the added power and torque over the Exige S, and on a car this light (2,100 pounds) I won't argue the point. However, on the track, the S 240 doesn't overwhelm you with acceleration; it's still very much a momentum car that rewards carrying high speed around the corners, though now it shoots out of the slow stuff even better. As with the S, the supercharger adds a race-car-like gear whine to the auditory experience.

The traction control proved helpful in learning the new track, allowing me to find out where the car wanted to slide. The system smoothly pulls power when the wheels break loose. Dialing it back was even more rewarding, and I found that somewhere near 8 percent slip felt fastest for getting around the sharpest corners. Set at 6,500 rpm, the launch control was surprisingly smooth, and a total laugh to execute. Adams jokes, "If nothing else, setting it up is a great trick for the car park at the pub."



Below: Intercooler is unchanged on S 240, but the model's more efficient scoop feeds it more air.



Non-fat Lotus

EVEN AFTER A DAY of flogging the lightweight and extremely track-worthy Exige S 240, the Lotus 2-Eleven proved to be a poignant lesson in mass reduction. The crew from Hethel decided they could go one better with the Elise/Exige formula by lopping off 400 odd pounds and adding a few horsepower to the mix.

How do you remove that much weight? Throw away the roof, the windshield and the doors, then strip the interior, leaving only seats, gauge pod, shift lever and pedals. The result is a 1,643-pound Lotus, and that's with a full tank of fuel.

The 2-Eleven looks like a sports racer based on the Elise/Exige theme. The nose is familiar, but rests on top of a large, flat splitter. The little round taillights also say Elise, but the coke-bottled sides are gone, replaced with flat-slabbed rockers that extend further toward the ground. Above the sills, the panels emerge from more aggressive vents behind the front wheels and flare out to envelop the rears. Below the rear lights, the polished muffler is in plain view, recalling the flyweight Super Seven.

There's more to it than just pulling pieces from an Elise or Exige. Without the inconvenience of compromising rigidity for doors, the aluminum monocoque's sills could be raised and the front suspension pick-up points and steering rack were moved to compensate for the 3.5-inch lower ride height. Rear suspension geometry remains similar to the road-going Exige's.

The same engine from the Exige S 240 gives a bit more power in the 2-Eleven—252 hp vs. 240, with 179 lb-ft of torque—thanks to feeding more air through the intercooler. An aerodynamics trick uses a front scoop to cut air from the boundary layer (the slower moving turbulent air close to the body surface) and reattach it just in front of the rear scoop that feeds the intercooler.

The 6-speed gearbox is also lifted directly from the Exige S 240, as is the traction control, although the 2-Eleven's smaller two-pot front calipers come from the standard Exige S—less weight means there's less stopping power needed.

Entering the 2-Eleven is a bit like mounting a tall-sided Seven. Once behind the wheel, I clicked myself into the 6-point harness and had the crew adjust the tall post mirrors that are totally out of reach once you're belted in. Then I turned the key, hit the start button and was off. The 2-Eleven accelerates with even more pronounced urgency than the Exige S 240, and shifts come up noticeably quicker, simply as a result of the reduction in weight. With no windshield pillars or high-mounted intercooler, outward visibility is perfect.

The suspension on the test car was set quite soft, but that didn't stop me from laughing out loud as I sliced through the esses faster than in the Exige with much less effort. The steering is noticeably lighter and just as precise, and the rear end is much more planted. The 2-Eleven reminds me of a softly sprung but more powerful Sports 2000 racing car.

The real plus of the 2-Eleven rests in the fact that it's not a pure track racer, one that would require a more intensive maintenance schedule. For the equivalent thrills in a dedicated sports racer, you'd need to nut-and-bolt the car on an hourly schedule, making sure all the pieces haven't vibrated loose. The production-based Lotus will hold up a lot longer, and require less adjustments and rebuilds.

What's the rub? Lotus will sell you a 2-Eleven in the States, but only as an off-road track car, while England and Japan allow it to be road-registered. Call it track candy. Because of this, Lotus only planned to build 80 cars off its separate Lotus Sport assembly line, but it has been flooded with nearly 200 orders since the first photos started circulating on the Internet. In response, it has shifted assembly to the regular Elise/Exige line, with Lotus Sport putting the final touches and options into the cars.

As far as SCCA legality goes, talks are underway to develop a package (extended roll bar and other small changes) to make the 2-Eleven legal for some open-class competition. Regardless, if you're looking into a dedicated track car that can be rolled off the trailer and run all day, it's a pretty tough package to beat.—J.G.



The biggest point Lotus is trying to make with the Exige lineup is that it's more capable than the Elise, yet still a competent road car. It's true: With the Track Pack setup the driver can adjust the dampers to be compliant enough to deal with less-than-perfect surfaces. There's no question that the Exige is a cracking performer in the twisties. Actually, it's almost too good, with so much grip that working the car hard results in serious throw-me-in-jail speeds. One doesn't have to press that hard, but the car begs for it.

Driving around town, I feel one of the advantages of the supercharger pulling away from the stoplight. The power delivery is

much more linear than the normally aspirated 4-cylinder; you don't need to rev the engine as much, as the propulsion is right there—even more so on the S 240. Unfortunately, the gravelly supercharger sound is annoying without a helmet to filter it out, but I was having so much fun, I didn't care.

Unfortunately, there's an 800-pound gorilla standing right behind the car in that diagonal parking space I'm trying to back into, and I can't see it because the intercooler renders the rearview mirror useless. I honestly tried to discount this Exige drawback, but at the end of the day, I like to see out the back of a car I'm going to drive on the street. The large side mirrors help, but

they don't solve the problem.

Adams admits it's a concession Lotus had to make. The new 2-Eleven puts the same intercooler in the "boot," but that car has very different aerodynamics without a roof or doors, and is even more of a track-day special. For 2008, Lotus has popped a unique non-intercooled supercharger into the new \$54,000 Elise SC. This setup preserves the car's rearward vision, but the engine doesn't pack the punch of the intercooled version. Life's a trade off, but the Exige S 240 is no worse than the Exige S in this regard, and its added power is accompanied by even better mid-range response. This model is worth an extra four grand. ●