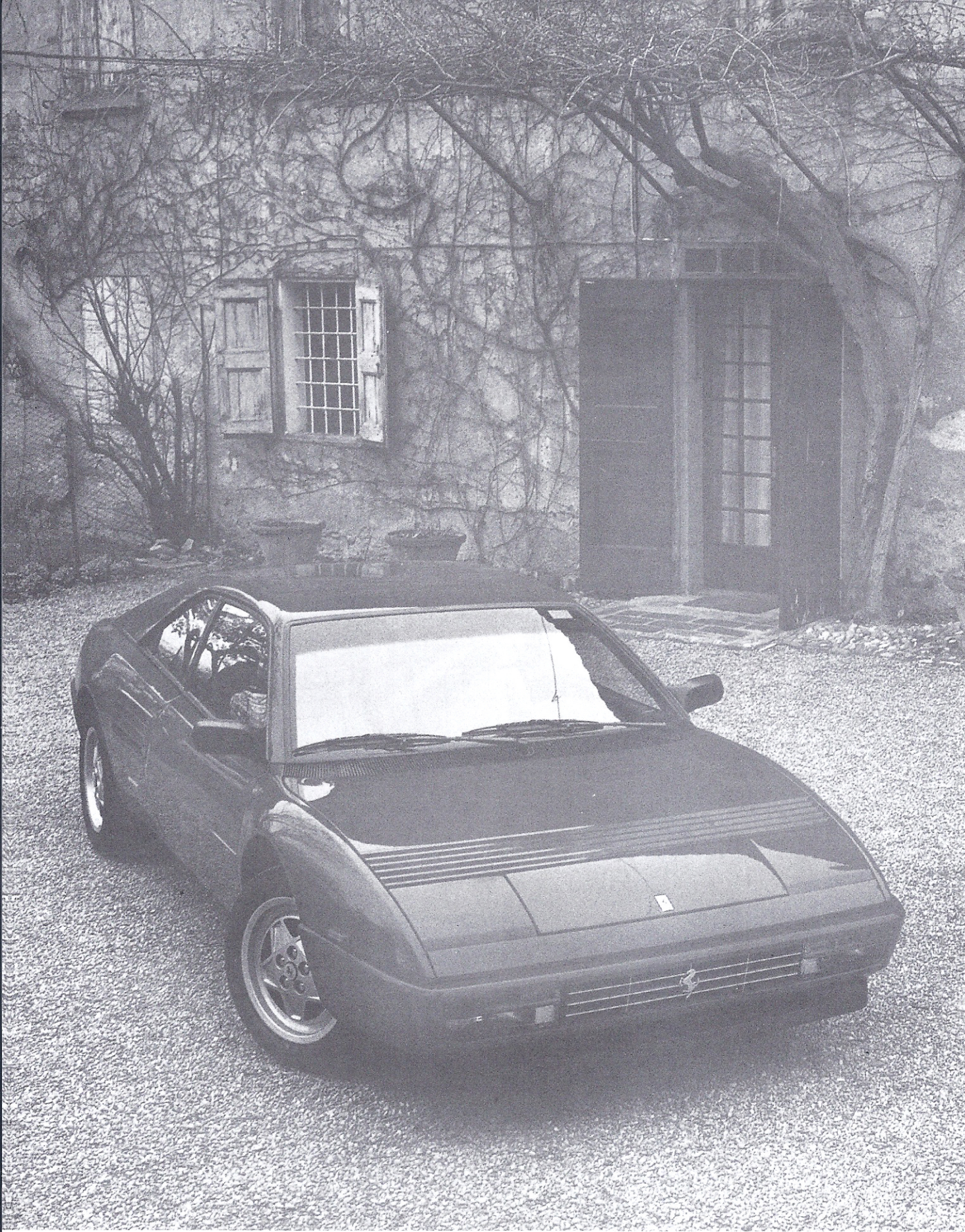
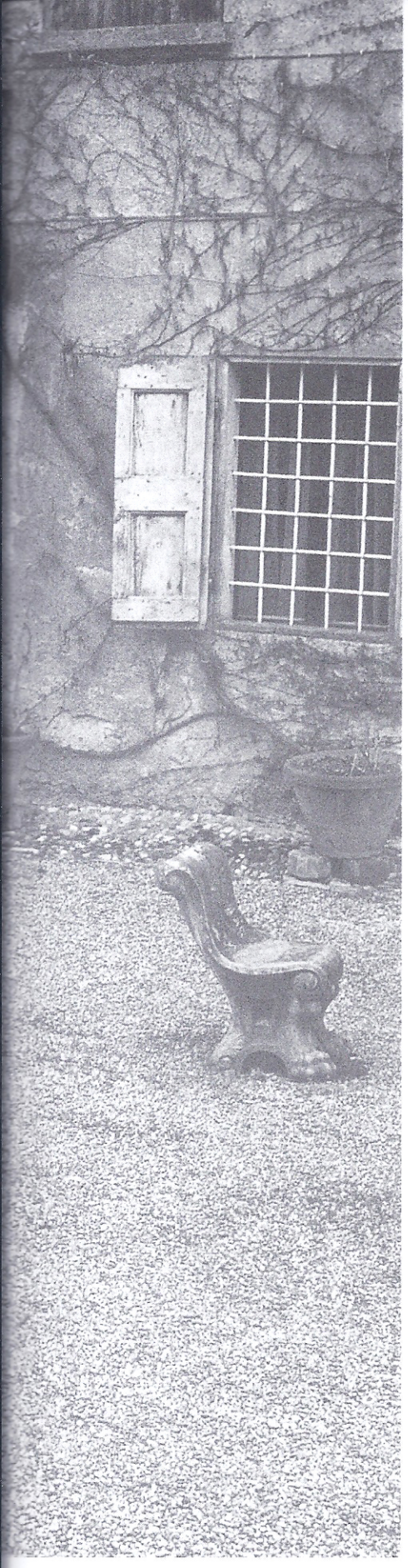




FERRARI

MONDIAL t

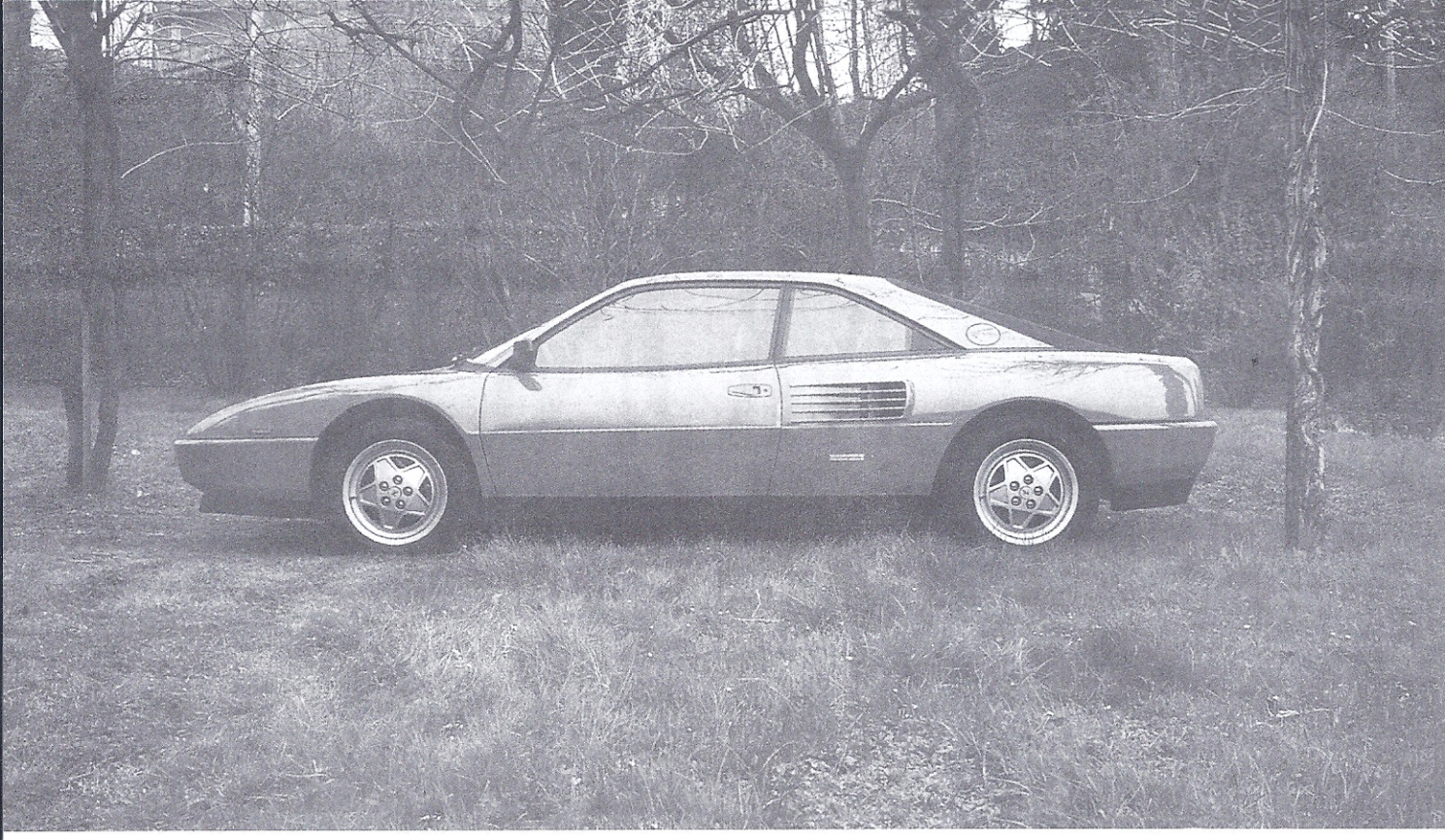
Little t, more cc

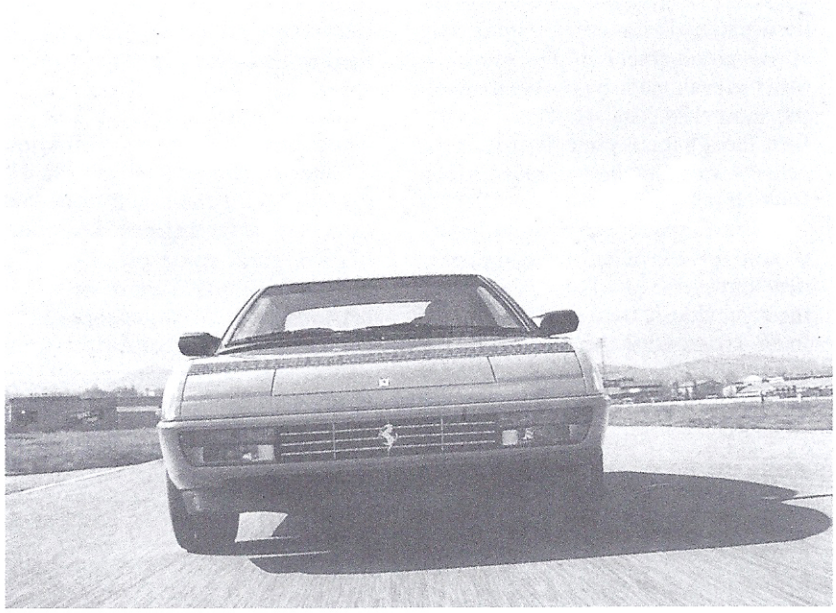
PHOTOS BY GUY MANGIAMELE

THE FERRARI MONDIAL t is more than a new model. It is the spearhead of a new generation of Ferrari V-8 models, not only more powerful, but also more technically advanced. There is even better handling and more comfort than ever before. The new Mondial t has its engine mounted longitudinally and is hardly distinguishable externally from its predecessor which had a transverse engine. The clever arrangement of the transmission has even made it possible to retain the same 104.3-in. wheelbase as before, though this is pretty long for a so-called 4-seat car with rear seats strictly for well-behaved dogs.

To save space, the longitudinally mounted V-8 is mated to a completely new transverse gearbox, an arrangement previously used in Ferrari's Formula 1 cars until the team switched from normally aspirated 12-cylinder engines to shorter turbocharged V-6s. A twin-plate clutch is mounted overhanging the rear axle and is driven through a long shaft, which locates the final drive as close as possible to the rear of the engine. From the clutch, a pair of gears sends the drive forward to a pair of bevel gears, driving a transverse-mounted gearbox containing the 40-percent limited-slip differential of the final drive, only a few inches to the rear of the cylinder block. This, together with a switch to dry-sump lubrication, lowers the engine about 5 in., further lowering the car's center of gravity by 1.4 in.

The 3.4-liter 32-valve V-8 is a development of Ferrari's well-known 3.2-liter engine and retains the 180-degree ("flat") crankshaft characteristic of V-8 racing engines. This configuration gives pride of place to an efficient exhaust system at the expense of perfect balance, because engine forces of the second order remain unbalanced. The engine is well insulated from the body, and vibration-





free, but a high-pitched scream is emitted as the superbly revving engine approaches its 7500-rpm redline.

The new engine develops 296 bhp DIN at 7200 rpm and a maximum torque of 238 lb-ft at 4200 rpm benefits from the latest Bosch Motronic 2.5 fuel-injection system with a hot-wire air flow meter. Thus equipped, it runs a 10.4:1 compression ratio, even though it is tuned to use unleaded fuel of only 95 octane rating.

But the more powerful engine and the completely new transmission are not the only novel features—as far as Ferrari is concerned—in the externally almost unchanged car. The Mondial t is the first Ferrari featuring power-assisted rack-and-pinion steering. Also a Ferrari first are the Mondial t's electronically controlled, variable stiffness shock absorbers with three driver-selectable ranges.

Helped by the long wheelbase, the soft setting makes the car quite comfortable on rough roads and at leisurely speeds, while the medium setting provides a good compromise between comfort and the tautness required for fast driving on most types of roads. It is the setting I would choose most of the time for my many long drives across Europe, while the hard mode is just what you want for the occasional excursion on the race track so many Ferrari owners enjoy. It was just what was required for some quick laps of Ferrari's own Fiorano circuit.

The new power-assisted steering makes an enormous difference to the driveability of the car. I am not a fanatic of power-assisted steering in sports cars, but neither have I liked most of Ferrari's manual steering systems. Even rack-and-pinion steering from Ferrari has always had a somewhat dead feel and some friction. The Mondial's power-assisted steering does away with all this. It is not very sophisticated, but it is smooth, accurate, not too light at speed and provides sufficient feedback.

Its gearing is also quicker than the old Mondial's, enabling the driver to perform quick corrections if necessary. When exploring the limits, the necessity arises more often than perhaps it should, because of the Mondial t's propensity for final oversteer.

The way the front end is glued to the road and its ability to turn in at the slightest movement of the steering wheel is wonderful. Never is any understeer felt and there is never any fight to hit a bend's apex. Nevertheless, the development engineers have slightly overshot their target. While the front end remains glued to the asphalt, the ultimate cornering speed, though still high, is limited by the early breakaway of the rear end, even with moderate power applied. This should not be confused with power oversteer which, with 296 bhp on tap, is easy to obtain in the appropriate gear.

And thanks to the limited-slip differential that prevents the inside wheel from spinning wildly while the outside one stubbornly continues to grip, power oversteer is easy to control. If I were responsible for handling at Ferrari, I would specify a slightly stronger front anti-roll bar, maybe in conjunction with a lighter rear one to achieve more neutral handling in the t.

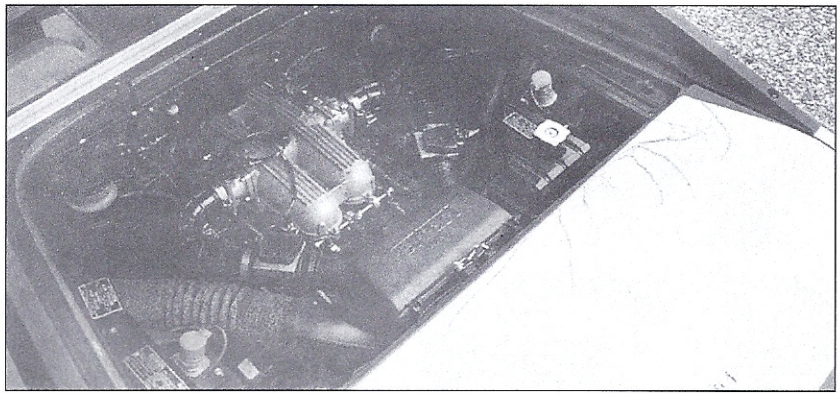
The brakes stood up to the Fiorano test with fine endurance. True, I made a point of braking rather early and smoothly, but Fiorano is an extremely demanding course and taking this into consideration, their performance was very creditable, with no sign of fade. The ATE anti-lock system is now standard equipment and proved very effective in obtaining a 1g average deceleration from 60 mph without any deviation from the set course.

With its new 3.4-liter engine, the new Mondial t is now a full match for the Ferrari 328, but its engine is not only a bag of power. It is also utterly flexible. Not only does it idle like clockwork, but it will pull away from 1000 rpm in 4th or even 5th gear without hesitation and starts pulling quite strongly from around 3000 rpm on. The gear ratios are quite well chosen, with a vigorous 3rd reaching up to around 100 mph. Though the gearbox is new, the cable-operated gearshift mechanism remains typically Ferrari: stiff with a lot of perceptible friction and slow when shifting dogleg-wise from 1st to 2nd. The limited-slip differential is very effective when accelerating out of a slow bend in a low gear, but can be felt creating some roughness when rounding a tight bend under moderate acceleration.

Air conditioning with automatic temperature control is standard, and air output is individually and separately adjustable by the driver and passenger. While the Mondial t test car was a not-too-well-kept demonstrator, the new cars on the assembly lines were beautifully finished and suggested excellent workmanship.

It may not provide the fun and exhilaration of an F40, but the Mondial t is a jolly fine, very fast car which inevitably makes one think of other things to come. I just cannot wait for the 348 and I am bound to dream, one of these days, of power-assisted steering in a Testarossa.

—Paul Frère, Ferrari, 1989



PRICE

List price, all POE	$84,080
Price as tested	$84,080

ENGINE

Type	dohc 4-valve V-8
Displacement	3405 cc
Bore x stroke	85.0 x 75.0
Compression ratio	10.4:1
Horsepower, (DIN):	296 bhp @ 7200 rpm
Torque	238 lb-ft @ 4200 rpm
Maximum engine speed	7400 rpm
Fuel injection	electronic port
Fuel	95 pump oct

GENERAL DATA

Wheelbase	104.3 in.
Track, f/r	59.9 in./61.4 in.
Length	178.5 in.
Width	71.2 in.
Height	48.6 in.
Trunk space	5.0 cu ft

DRIVETRAIN

Transmission	5-sp manual
Gear ratios: 5th	0.86:1
4th	1.09:1
3rd	1.15:1
2nd	2.11:1
1st	3.21:1

CHASSIS & BODY

Layout	mid engine/rear drive
Body/frame	steel/tubular steel
Brakes, f/r	11.4-in. vented discs/ 11.4-in. vented discs, vacuum assist
Wheels	cast alloy, 16 x 7 f, 16 x 8 r
Tires	Goodyear Eagle VR, 205/55VR-16 f, 225/55VR-16 r
Steering	rack & pinion, power assist
Turns, lock to lock	2.9
Suspension, f/r:	unequal-length A-arms, coil springs, tube shocks, anti-roll bar/unequal-length A-arms, coil springs, tube shocks, anti-roll bar

ACCELERATION

Time to speed	Seconds
0–40 mph	3.3
0–50 mph	4.6
0–60 mph	5.9
0–70 mph	7.7
0–80 mph	9.6
0–90 mph	11.8
0–100 mph	14.9
0–110 mph	18.7
Time to distance	
0–1320 ft (¼ mi)	14.2

Subjective ratings consist of excellent, very good, good, average, poor. na means information is not available.