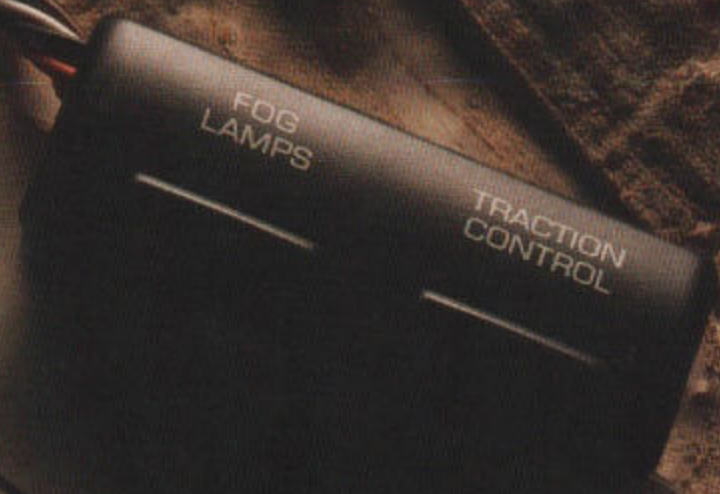
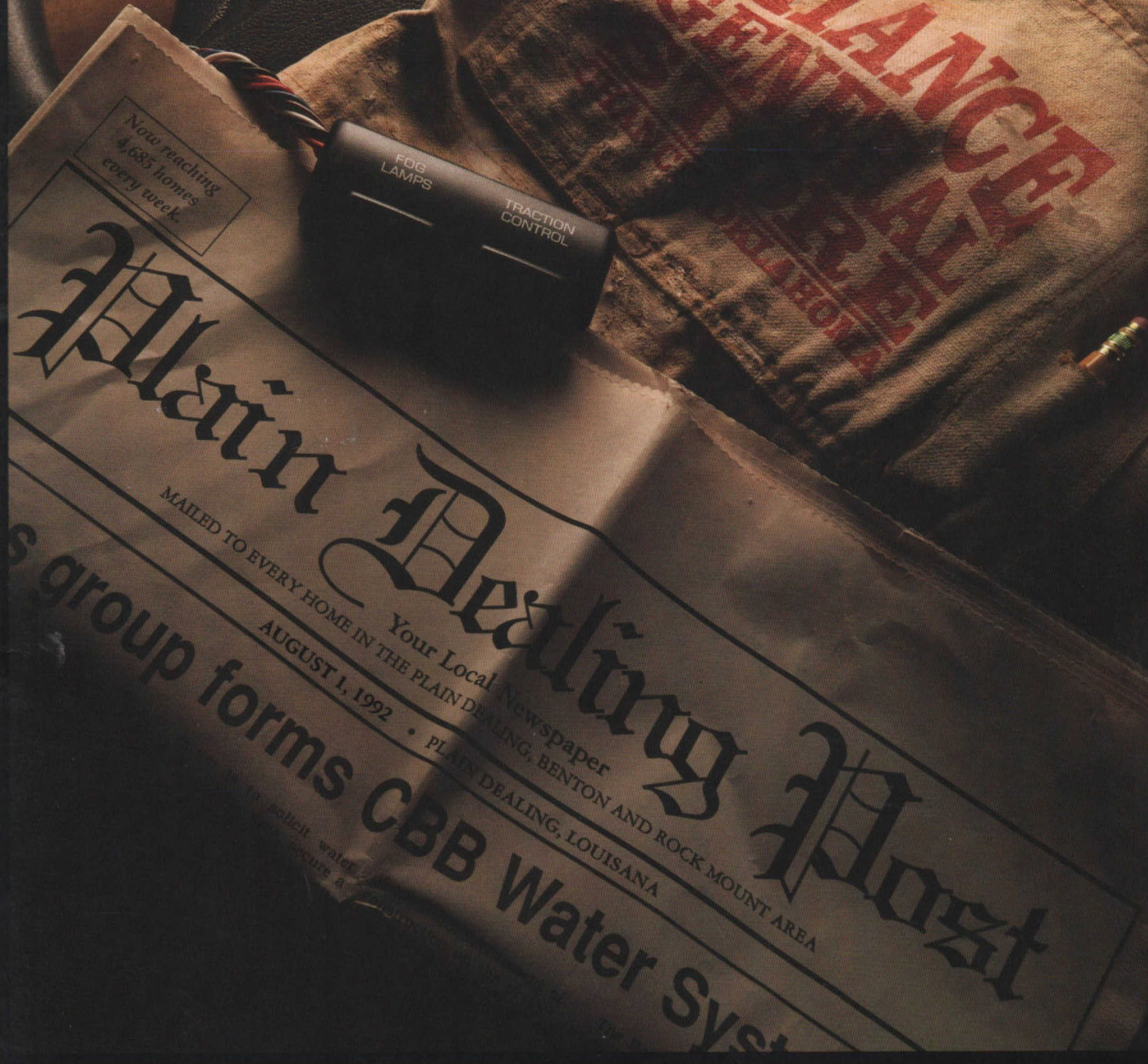




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CBB Water System

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Back in the early eighties, when Saturn was nothing more than a pipe dream in the minds of a few renegade engineers and hopeful technicians, the market analysts gave us fair warning: It would be next to impossible to lure people out of their imports and into American cars. Import owners, the analysts said, had not only grown to love their cars, but to trust them, to depend on them, and to purchase them with a loyalty unprecedented in any industry.

No doubt the analysts were right. It *was* next to impossible. Of the 200,000 or so people who now drive Saturns, virtually half say they would have purchased an import as their second choice.

But the point is, Saturn was their first choice. Which can't help but make you wonder: How is it that a new car company has managed to do what so many critics thought couldn't be done?

Well, it's not, as some people might suspect, because we re-created ourselves in the image of the Japanese. Or the Germans. Or anybody else, for that matter.

And it's not because we built a more sophisticated manufacturing complex in Tennessee. Developed a more democratic way of managing our business. Or found a more responsible way of treating our customers. Although don't get us wrong—these moves were certainly critical.

But the real reason for Saturn's survival—and even more, its surprising rise—is much more personal than that. The real reason is people.

People like Jim Galovich, who near the end of his shift spotted a wiring obstruction in one steering column. Instead of passing it off to the next crew, he stayed on himself, going down the line checking and rechecking every single car that he and his team had just helped assemble.

People like Rim Milunas, who seven years ago turned down good offers from leading computer companies, preferring to join a start-up car company with no product—regardless of how harebrained his friends thought it was.

Or people like Toledo retailer Connie Reinhart, who saw fit to lend her own personal Saturn to a couple whose current car had broken down—until their new Saturn could be delivered a few days later.

The fact is that the people who build and sell Saturns aren't that different from the people who buy them. What they want most out of life is something they can believe in. Something that really is everything it's cracked up to be—and maybe then some.

What Saturn has become, amazingly enough, is one of those rare endeavors in which thousands of people are truly focused on the same single commitment. Ask anybody at Saturn why the company exists, and they'll tell you: to beat the imports.

With that thought in mind, we proudly introduce Saturn's new 1993 models. And some of the people who make these cars as unexpected as they are.



If ever life seems unfair, it's when you set out to buy a car that won't guzzle gas, won't break the bank, and won't drag its tail down a straightaway. You know the usual story: What performs, guzzles. And what's economical—well, it sort of putts.

From the beginning, the SL1 was engineered to deliver a nice blend of both power and efficiency*—not to mention a long list of standard features typically listed as optional on competitive models.

The story starts with a 1.9-liter single-overhead-cam fuel-injected engine delivering 85 horsepower at 5,000 rpm. While this may not sound terribly vicious on paper, it's plenty assertive on the road.

With "torque-heavy" tuning, and gear ratios carefully matched to the engine output, it'll give you all the energy you need for maneuvering through city traffic, and plenty

of stamina left over for cruising the freeway.

What's more, the engine components are built to be lightweight. While the crankshaft and cylinder sleeves are made of cast iron, the block and cylinder heads are made of aluminum. This gives the engine a free-revving character, making it that much more responsive.

Besides, the SL1 weighs in at a mere 2,321 pounds—fairly light for its class, which means there's less mass to propel. It's a characteristic you'll appreciate even more when you tally up your gas mileage. Equipped with a manual transmission, the SL1 clocks in with an estimated EPA rating of 28 miles per gallon in the city, and 37 on the highway.

Nice numbers. Especially for a car with a finish that looks as if it belongs on a car costing twice as much—which is the only other place you're likely to find it. The paint process used on the SL1 (and on all Saturn models) represents

the latest technology available—a flexible acrylic primer, a waterborne acrylic base, and a polyurethane clearcoat.

But this story isn't only about aesthetics. It's also about durability. The primer adheres to the polymer panel (another distinct advantage you can read about on page 13), and actually *gives* upon impact to help prevent the usual chipping and cracking so common with metal. The waterborne acrylic creates a "wet look" that's brilliant, glossy, almost three-dimensional. And the clearcoat helps shield the acrylic against dust, dirt, droppings, tree sap—all those things that can ruin a finish.

The SL1 comes with front-wheel drive, four-wheel independent suspension, and a few other extras: Driver-side airbag. Variable-effort power steering. A height-adjustable steering column. Full analog instrumentation—including a tachometer, trip odometer, and engine temperature gauge.

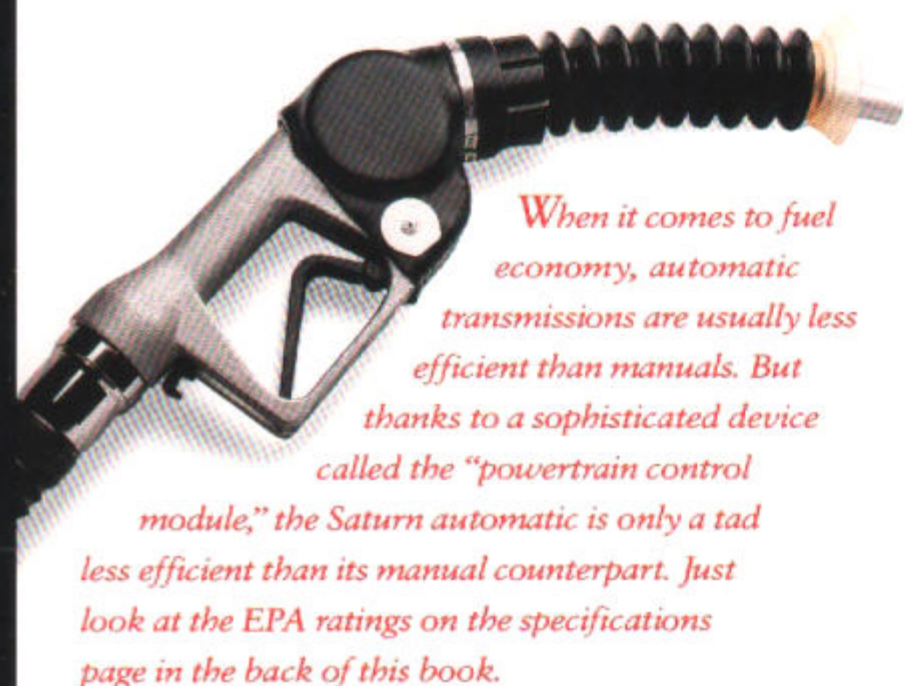
Fourteen-inch all-season tires. Tinted glass. Halogen composite headlamps. Reclining front bucket seats and split fold-down rear seats. Remote trunklid and fuel-filler door releases. A carpeted cargo area. Three-speed intermittent wipers. And a rear-window defogger.

All of which makes it clear that Saturn's notion of price/value isn't at all like that of some manufacturers—a car stripped to the bone, except for the bare essentials.

For us, it's not so much what you can live without that matters.

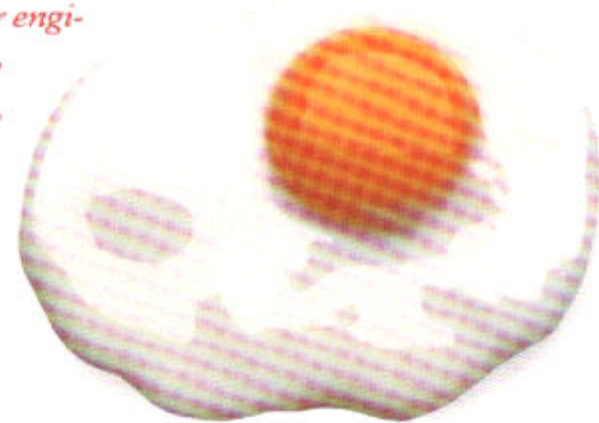
It's what you're happy to live *with*.

*With an automatic transmission, the SL1 gets an estimated EPA rating of 26 miles per gallon in the city and 36 on the highway.



When it comes to fuel economy, automatic transmissions are usually less efficient than manuals. But thanks to a sophisticated device called the "powertrain control module," the Saturn automatic is only a tad less efficient than its manual counterpart. Just look at the EPA ratings on the specifications page in the back of this book.

According to the National Weather Service, the average temperature from June to August in Mesa, Arizona, is a toasty 102 degrees in the shade. Our engineers figured any car that can keep its cool on a test track in Mesa ought to be able to sweat through a traffic jam just about anywhere.



Every Saturn model comes with a four-speaker AM/FM stereo system that includes seven station presets per band, seek/scan tuning, separate adjustments for bass and treble, and a digital quartz clock.

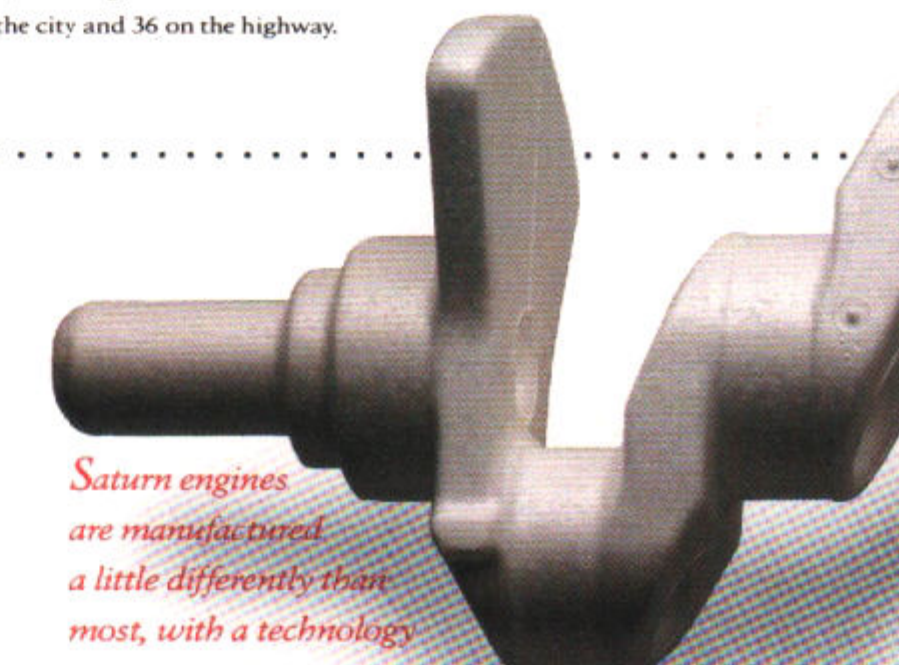


Car and Driver described Saturn's SL as the "best value" of any '92 small car with an M.S.R.P. of \$10,000 or less.* The SL features slightly different upholstery and wheel covers. And it's only available with a five-speed manual transmission and manual steering.

*The M.S.R.P. of a 1992 Saturn SL was \$8395.



No, we're not referring to a "fork in the road." It's "stainless steel" that we're emphasizing. All Saturns feature a stainless steel exhaust system—which means you can drive through quite a few snowstorms and a good deal of salt spray without worrying a bit about replacing your muffler.



Saturn engines are manufactured a little differently than most, with a technology called "lost foam casting." It's an advanced process whereby molten aluminum (cast iron, in the case of the crankshaft) is poured into sand molds containing polystyrene—which evaporates, leaving near-precision engine parts in its place.



One of the very first engineers to sign up with Saturn was Leo Hilke, a quiet, mild-mannered, but passionate man who has since become mentor to countless young engineers he recruited to help build the first Saturns.

You can see Leo standing there in the middle, holding his hat to his heart. Looking at him now you might wonder, as many people have, just why he decided to hire so many young people to tackle the job. Or more to the point, how he resisted the urge to staff the new company with more seasoned professionals like himself—the logical thing to do.

Well, if the truth be told, Leo didn't try to resist. In fact, he took great pains to recruit the more experienced of the engineering community. Trouble is, not many would come—with the exception of a few such as Dave Whittaker, who, like Leo, was willing to sacrifice just about anything for creative freedom.

Most others deemed Saturn just too big a gamble—a sentiment Leo could appreciate. The fact is, he got cold feet, too, when he looked up and found himself hiring his first 15

engineers right in his own living room. “It wasn't always easy to see the light at the end of the tunnel from the edge of a living room sofa,” Leo confesses.

But having been in the business as long as he has, Leo knows a good light when he sees one. And one particularly bright light was Bob Downs, a young development engineer who'd never developed much of anything past his drawing board, but was ready to pour heart and soul into Saturn's automatic transmission. (Perhaps you know the transmission—the one that earned 14 patents and caused a bit of a stir in the engineering community. A lot of people thought it couldn't be done.)

And then there was Dana Andreas, who, for reasons her classmates couldn't comprehend, turned down Boeing to take a crack at testing engines and designing an efficient exhaust manifold.

And Rim Milunas, a computer whiz who walked away from the chance to design mainframes at IBM to join Saturn and design electronic control systems—never mind how harebrained his college buddies said he was.

And then there were people like George Hurst, not exactly a young soul, but spirited all the same. George built

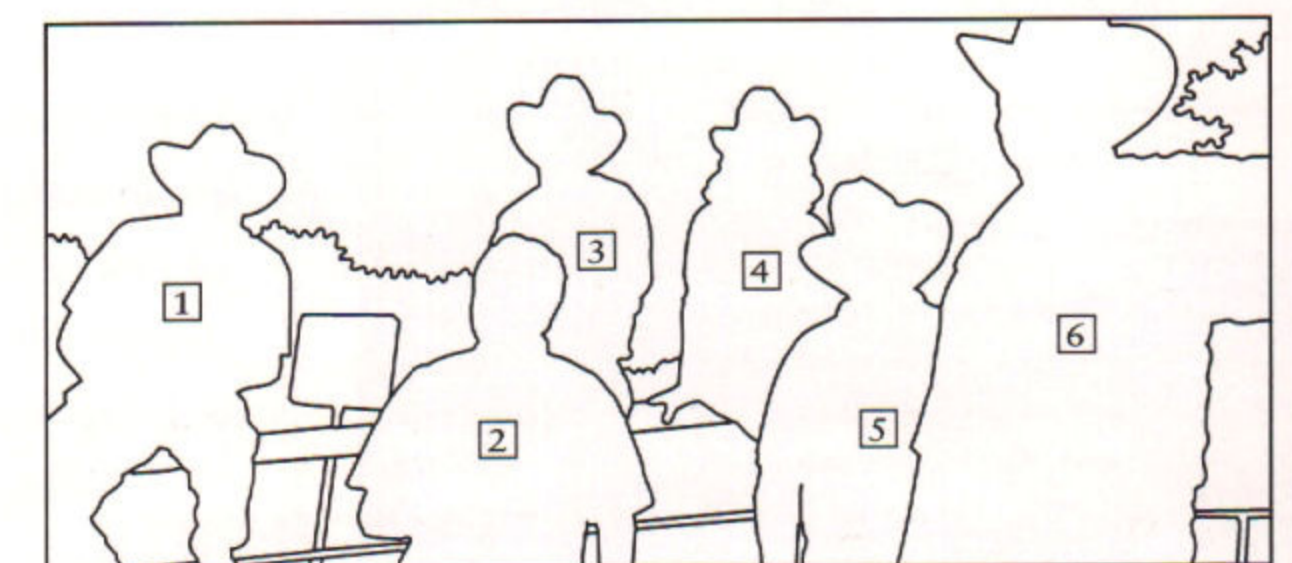
his first automatic transmission when automatics were first being made—in 1946, right after WWII. He came out of retirement to “break the kids in,” as he puts it. Well, he broke them in all right. What started as a three-month stint stretched into a seven-year commitment.

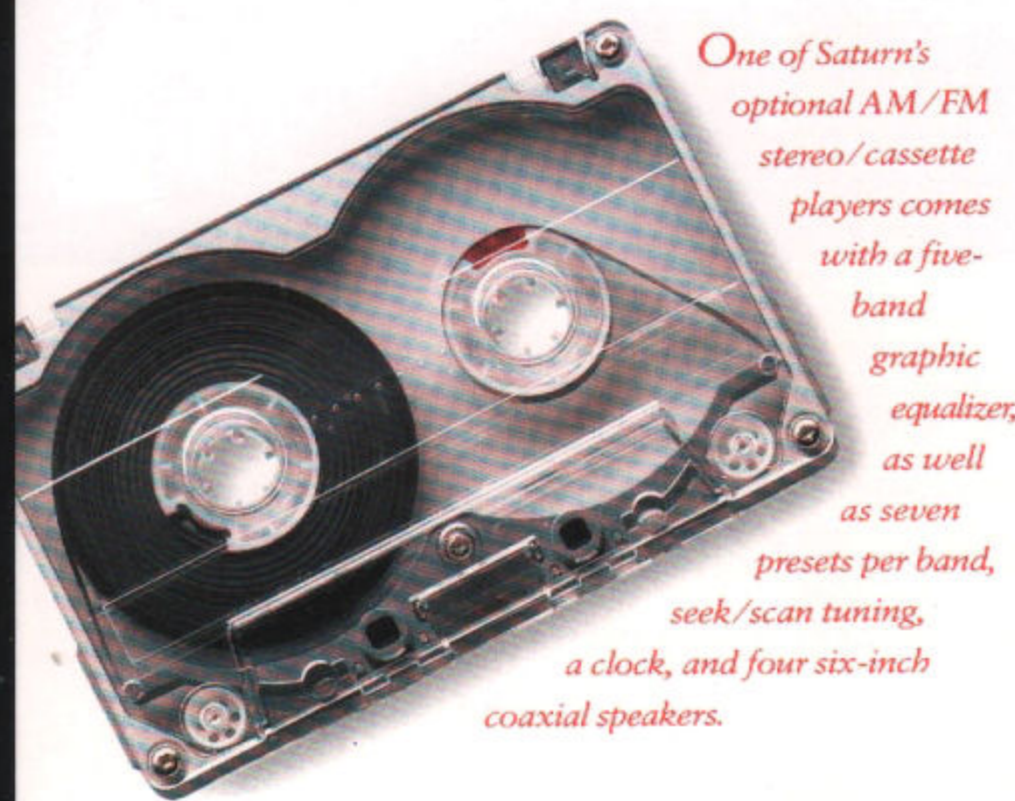
What, you might ask, would persuade a veteran like George to take on Saturn in what was supposed to be the twilight of his career?

Probably the same things that persuaded so many young graduates to walk away from jobs they thought they wanted, to jobs they'd never thought of at all.

Because challenges as unique as Saturn just don't come around that often. And people this determined don't get the chance to work together that often.

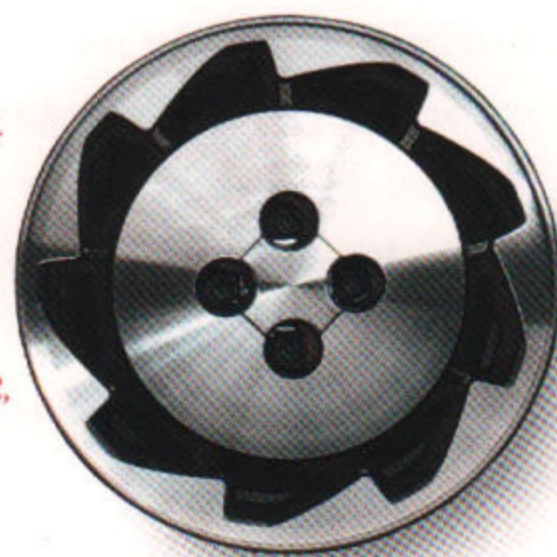
- 1 Dave Whittaker
- 2 Leo Hilke
- 3 Bob Downs
- 4 Dana Andreas
- 5 George Hurst
- 6 Rim Milunas





One of Saturn's optional AM/FM stereo/cassette players comes with a five-band graphic equalizer, as well as seven presets per band, seek/scan tuning, a clock, and four six-inch coaxial speakers.

For people who want their wheels to turn a little differently, Saturn offers this design. They're 15-inch alloy wheels, and they're optional on the SL2, the SW2, and the SC1.



Sherlock Holmes could have used a couple of these in his travels. And they'll come in handy for you, too. Foglamps are now optional on both the SL2 and the SW2.



Common sense will tell you it's risky business changing a best-seller. You start fussing with it, adding stuff here and there, and pretty soon you're bound to do something somebody doesn't like.

Well, foolish though we may be, we fussed anyway. And we added stuff. And we don't think we messed up anything for anybody.

As before, our best-selling sport sedan, the SL2, starts off with Saturn's performance engine: a 1.9-liter dual-overhead-cam multi-port fuel-injected version that delivers 124 horsepower at 5,600 rpms. As any SL2 owner can verify, with this amount of horsepower pushing a mere 2,423 pounds, you won't find yourself straining to keep up with anybody. Or wishing you had a turbocharger.

Working with a five-speed close-ratio transmission, this engine's tuned to give you a good surge of power when you accelerate.

Then again, if you spend most of your time in the city and get tired of shifting your way through stop and go traffic, you may want to take a spin in Saturn's optional automatic—which has an impressive history all its own, one you can read about on page 20. But we digress.

This story has to do with a couple of young engineers who, fortunately for us, don't yet know how to leave well enough alone.

The enhancement we asked for was a snow switch—a button you push to help keep your wheels from spinning when you're starting up in snow. Actually, the button would make your car start in third gear instead of first. It was a simple enough request. So simple, in fact, that the team designed it, punched it, looked at it, and yawned. Our enterprising engineers found the button rather boring.

So what they designed instead was something considerably more effective, and therefore cool enough for them to feel good about. Rather than a button, they gave us a traction control system, which now comes

on Saturns equipped with both an optional automatic transmission and an optional anti-lock braking system.

What's so great about this? Imagine you're passing a car on a snowy interstate, or you're just pulling out of a parking lot. It's cold. It's grey. And you're not looking down at the pavement in front of you. Like any sensible person, you're looking ahead at where you're going. Then, suddenly, your wheels seem to have a mind of their own. Your steering has little effect. And you're afraid you're going to slide into perfectly defenseless vehicles parked on each side of you—or even worse, right into the path of oncoming cars.

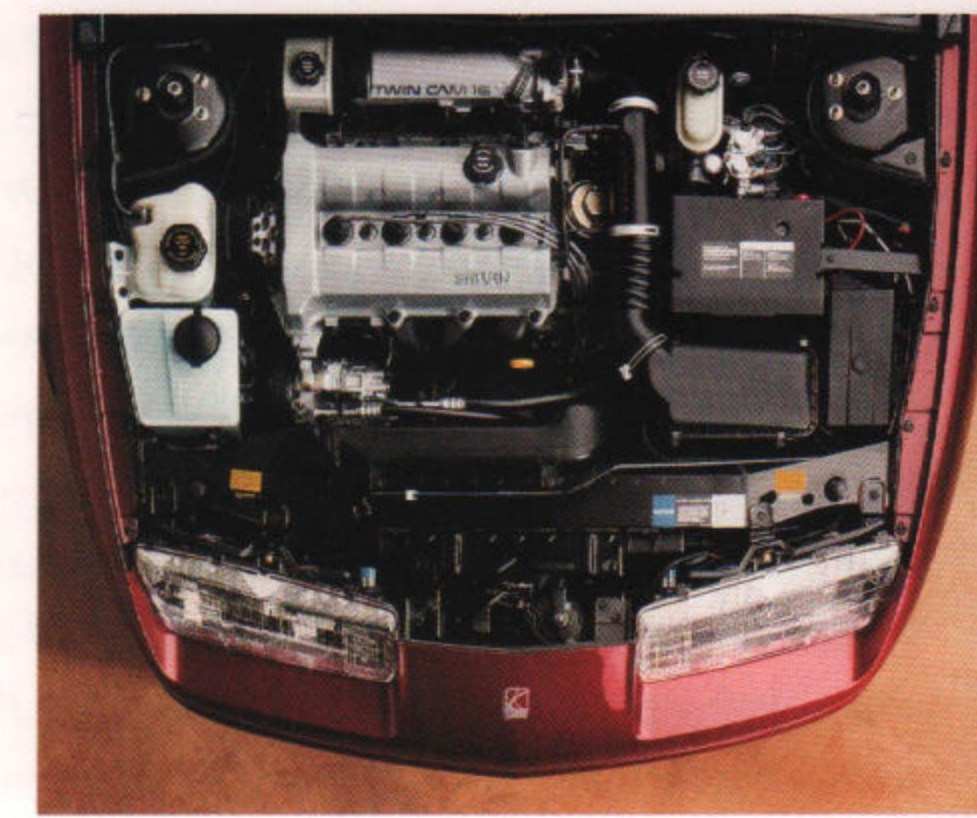
Clearly, you've just happened upon a good patch of ice, a slick of oil, or something slippery. The point is, your wheels have lost their grip. This would be a very convenient time to have traction control.

By coming alive instantaneously on its own, Saturn's new traction control will make the most of whatever traction you've got to help you keep your balance on ice, snow, or any other glassy surface. Sensors detect that your wheels are spinning at different speeds, and a computer issues commands to regulate the spin: First, the computer retards spark to the engine. Then it shifts to a higher gear. And then, if it has to, it interrupts the flow of fuel to the engine.

What's unique about Saturn's system is that, unlike those on other vehicles, it doesn't require a whole new computer to get the job done. Our engineers used existing technology: Saturn's optional anti-lock braking and powertrain control systems.

Which means that whenever you opt for an automatic Saturn with ABS, you get traction control as part of the package. To get it on competitive vehicles, you pay a lot more—provided you can even find it on models in this price range.

And trust us. This year, that's not likely.



Saturn's dual-overhead-cam engine (standard on the SL2, the SC2, and the SW2) features a multi-port fuel injection system to make sure that each cylinder receives just the right amount of fuel for optimum performance in all driving conditions. This system also helps improve fuel efficiency.



Even as initial designs were being completed, Saturn engineers were talking to major insurance companies about safety, repair costs, and other things affecting insurance rates.

Claim # 602-3310597
Pamela Scott



Car interiors have a funny way of affecting people in one of two ways.

On the one hand, they grow on you. You get more impressed as time goes by. You notice thoughtful touches here and there, and as you do, you think to yourself—or better yet, you say out loud: “These guys are smart. They really know their stuff.”

On the other hand, interiors can get to you. If something’s not quite right, it bugs the heck out of you every single time you sit down in that car, and you think to yourself—or worse, you say out loud: “These guys are stupid. Who would ever put that kind of knob there? What were they thinking?”

Rest assured, Saturn engineers have gone out of their way to make certain that nothing ever bugs you, and that just about everything pleases you. Starting with the light,

airy, open feeling of any Saturn you slide into—even the sporty coupes.

From the beginning, Saturn engineers have been cautious to avoid the cramped “cockpit” feeling that’s characteristic of so many cars in this class. They’ve also been careful to make Saturn interiors “intuitive”—so natural that people can do things without taking their eyes off the road for longer than an instant, if at all.

The minute you look at the instrumentation, you’ll see how well they achieved this goal. The panel is a simple, easy-to-read, white-on-black analog display, complete with a tachometer and a temperature gauge to tell you what’s going on with your engine. All gauges are placed comfortably within the driver’s line of vision, and all controls are very easy to reach—unless, of course, you’re a five-year-old sitting in the back seat, and you get a sudden impulse to

open your door and hop out. In that case you’ll be stymied. Because if your parents have done their part, you’re not likely to be hopping anywhere. All Saturns feature child-security rear door locks.

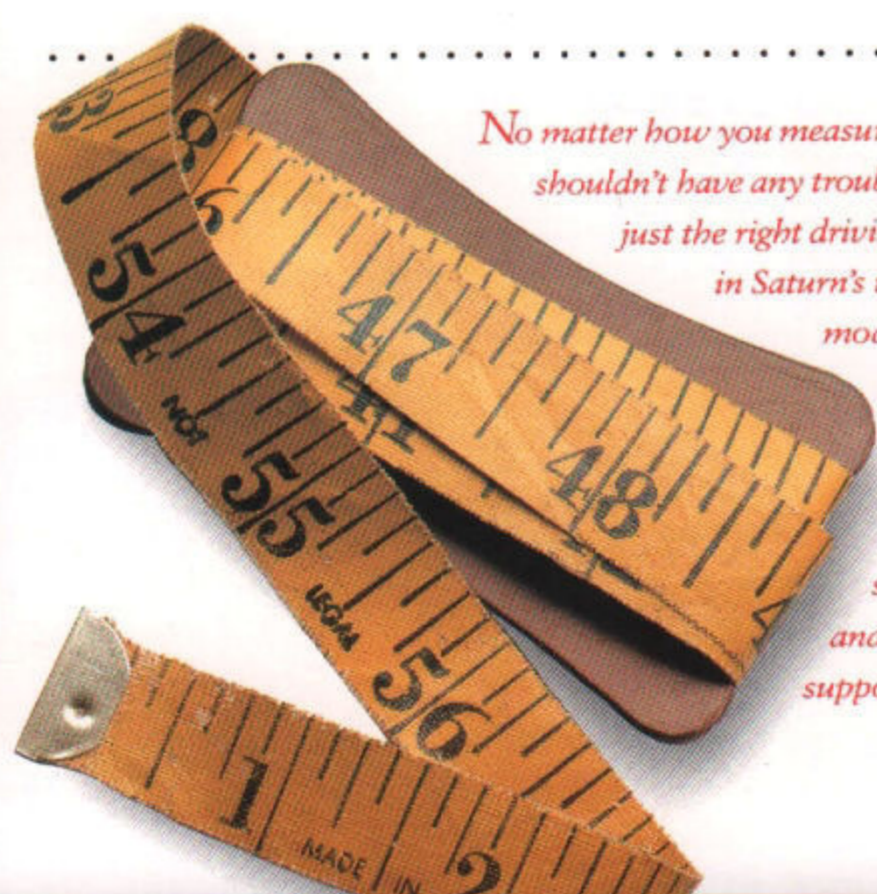
In keeping with the spirit of simplicity, most switches can be operated in a single motion, not a series of steps. Even the power windows have what engineers enjoy describing as “logic” switches—meaning up will always be up, and down will be down. In other words, you won’t find yourself confused and punching every which way just to get something—anything—to happen. And the auto express feature on the driver’s side means you don’t have to hold the button down—you just touch it, and it does the rest on its own.

You’ll also notice that the stereo is located *above* the climate controls, instead of below them. The engineers figured that unless you’re planning a little sojourn to

Saskatchewan, you’ll probably spend more time adjusting your stereo than, say, your heater, so why not make it the easier of the two to reach?

No matter where you travel, you’ll probably appreciate the amount of storage space, including map pockets in the doors, a glovebox that’s large and deep, a rear seat console (on the coupes), and mesh pockets on the backs of the front passenger seats (in every model but the SL). The sedans and the coupes both offer a fairly impressive cargo capacity, with a wide trunklid cutout to make loading and unloading easier. And the wagons come with their own special set of cargo stats—28.8 cubic feet of space with the rear seats up, and 56.3 with them down.

Of course, all this carrying capacity may not mean much on a twenty-minute jaunt to the store. But about that trip to Saskatchewan...



No matter how you measure up, you shouldn’t have any trouble finding just the right driving position in Saturn’s upper-level models: the SL2, the SW2, or the SC2. You simply adjust the seat height and lumbar support.



All Saturn rear seats split 60/40 instead of the usual 50/50. This allows you to tote people and whatever else you need to tote that much more easily—anything from unwieldy musical instruments to snowboards to a cartful of groceries.

A compact disc player with an upgraded speaker system is optional with every Saturn model. The system includes all the essentials: AM/FM stereo, graphic equalizer, 11 presets per band, audio search, fast forward/reverse, pause, seek/scan tuning, and a digital quartz clock.



One of the first things you’ll notice about Saturn’s instrumentation is its simplicity. It’s a clear, clean analog display with gauges that provide real information and fall easily within the driver’s line of vision.



If you’re tired of sitting on cloth upholstery, why not try sitting on leather? Saturn’s optional leather comes in tan on the SL2, in black or tan on the SC2. It also includes a leather-wrapped parking brake handle, a gearshift knob, and a leather-wrapped steering wheel (actually, the latter is already standard on the SC2).



Ask technician Joe Easterling why he hired on at Saturn, and he'll quickly tell you. It wasn't because he needed a job. He already had one. It was because of who interviewed him.

"It was a car maker like myself," Joe explains. "A guy who knew what kinds of skills it took, what kinds of attitudes people ought to have. He was somebody I thought I could trust—and so far, I haven't been wrong."

What Joe heard in that interview went something like this: You assemble your own team. You hire each other, make your own decisions, and manage your own area. There won't be any foremen breathing down your neck. There won't be any time clocks. Every team inspects itself, takes responsibility for its own work.

"Maybe this doesn't sound like that big of a deal to some people," Joe says, "people who haven't worked in this industry. But it's pretty incredible to us."

Incredible is probably a good word for it. Talk to just about any technician at Saturn and it would be tough to miss the passion. For whatever reasons—and no

doubt there are many—what Saturn represents to a lot of people is their first opportunity to call their own shots. Their first bit of freedom to control their own destiny.

"This is our chance to prove that we can build a real competitor," adds Derek Allen, "and we don't need a lot of outside supervision to do it."

As Shawn Carpenter describes it: "The people at Saturn believe in their product pretty much the same way they trust in each other. Maybe it's because so many of us left our homes to come here and we've sort of latched onto each other as substitute family. Maybe it's because we're all making a similar sacrifice. We all came to Tennessee to do the same job. There's no confusion about why we're here."

It doesn't seem there's much confusion about anything, as far as the technicians are concerned.

Take, for instance, the way they handled Kevin Franklin's problem. One day Kevin was scheduled to start his shift at the same time his six-year-old son Chad was scheduled to suit up for his first official T-ball game. As Kevin explains, personal things like T-ball don't score big points in big factories.

But they do count for something at Saturn—which is why Kevin was able to attend his son's game. When he told his team about the situation, they decided to work it out and cover his shift for him.

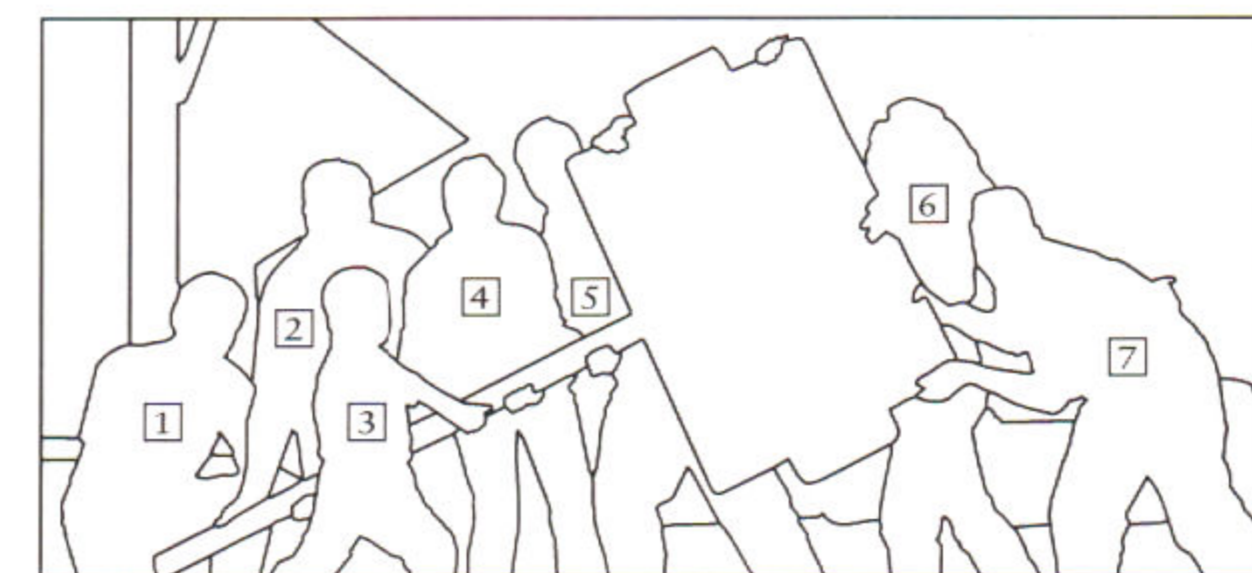
As technician Tom Rosenburg explains: "We figure that if we pay attention to the little things, the big things will take care of themselves."

"Don't get us wrong," Yvonne Ferguson adds. "It's not like we're perfect or anything. We have our squabbles, just like anybody else. It's just that here we don't let them affect our product."

Maybe that's because at Saturn there are other, more important things affecting the product. Things like trust, teamwork, a sense of responsibility.

And call us crazy, but we think things like T-ball have a lot to do with the quality built into these cars.

Maybe even more than a lot.



- 1 Tom Rosenburg
- 2 Kevin Franklin
- 3 Chad Franklin
- 4 Yvonne Ferguson
- 5 Joe Easterling
- 6 Shawn Carpenter
- 7 Derek Allen



For all those people whose lives have grown too big to squeeze into just any interior, we proudly present our wagon interior. All told, Saturn wagons offer 90.1 cubic feet of passenger space and 28.8 cubic feet of cargo space. So load up and head out.



Both Saturn engines are designed to be torque heavy—that is, tuned to have a broad, flat torque curve, with a nice wide power band. If you're not sure what this means, just press the throttle when the light turns green. That will tell you all you need to know.

If you need a lot of space but don't have a lot of funds, you might check out Saturn's entry-level wagon, the SW1. It comes with a 1.9-liter single-overhead-cam fuel-injected engine, a five-speed manual transmission, and slightly different upholstery than the SW2.



Ah, for the good old days. When gas was cheap. Cars were big. And families traveled in wagons.

Let's see: your mother and her mother were in the front, next to Dad. Your aunt was in the back, where she could balance the potato salad on her knees and still have both arms free to keep peace between you and your siblings. Half the house was crammed into the rear, along with the dog who panted, slobbered, and paced from one side of the car to the other.

Back then, wagons weren't wagons. They were ocean liners—except that "float" hardly describes the ride. They sort of lumbered and lurched and heaved their way from one pit stop to the next. They were never what one would call zippy. Or spirited. Or even all that eager.

Well, welcome to eager. And zippy. Not to mention spirited, sporty, and reasonable.

Don't get us wrong. If your lot in life is to haul the little league team and all their gear, go ahead, buy a bus. But if you want to sprint down the highway in style and take some stuff along—gardening tools, camping gear, big dogs, small kids—then check out the wagon in the photo above.

Actually, there are two wagons—the SW1 and the SW2. The SW1 is powered by Saturn's 1.9-liter single-overhead-cam engine, while the SW2 is driven by the dual-overhead-cam version.

Regardless of the different powerplants, you could legitimately think of either wagon as a "family sports car." Because amazingly enough, both wagons are about as light on their feet as any Saturn sedan—or, for that matter, even a coupe.

For this advantage, we owe thanks to an earlier innovation: the Saturn spaceframe. It creates a tight and rigid body structure that works with the suspension to insulate the driver from bumps, potholes, dips, and other unnecessary interruptions. It also kept us from having to

weight the poor wagon down with extraneous supports. In fact, we were able to achieve the same structural rigidity with a few reinforcements. When it's all said and done, the wagon weighs only about 45 pounds more than a sedan.

Not bad, considering its carrying capacity. Instead of defining space merely in terms of cubic feet, we looked at what you could put where, and how easily. And what you might just appreciate.

The cargo area will easily accommodate a 21-inch television set (still in its box). It should also meet with the approval of your favorite canine—remember, we're talking big dog here, not a dainty little beast.

The hatch door, by the way, should get everybody's approval. It rests open at just the right angle—not too high and not too low. There's a net in the cargo area to keep your groceries from spilling. There's lots and lots of storage space—56.3 cubic feet, with the rear seats down. And visibility to rear angles—sometimes a problem when it comes to wagons—is excellent.

Both the SW1 and the SW2 come dressed in the same dent-resistant polymer bodyside panels that distinguish all Saturns. Statistically speaking, when it comes to dents and dings, these panels are two to four times more resilient than steel. They're so flexible, they'll actually bend and bounce back, and they won't rust or oxidize.

And because paint adheres to polymer much better than to steel, the panels are far more resistant to chips. Which means they're capable of shrugging off all the usual dents, dings, nicks, and bumps.

And maybe a few of the not-so-usual. Little Cindy's slow-pitched softball. Mort's unpredictable tennis serve. Or Lenny, the grocery boy, who just can't seem to pilot a shopping cart.



When it comes to dents and dings, Saturn's polymer bodyside panels are two to four times more resilient than steel. Because polymers are flexible, they just bend and bounce back. Steel bodyside panels aren't so forgiving.



It's always good to see what's ahead of you. But it's also smart to keep an eye peeled behind you. Both Saturn wagons come with a two-speed intermittent rear wiper and a nice good washer.

Owning a Saturn automatically enrolls you in a 24-hour roadside assistance program for the duration of your car's warranty. All you have to do is call our 800 number, and we'll help you get the assistance you need. The nice part is, the program covers the Saturn car, not just its owner—which means that a family member or friend can take advantage of this service as well.

OPEN
24 hours



Evaluating a car's safety is a lot like buying health insurance. Try as you may, you never really know how good your policy is—until you get sick. Likewise, you never really know how safe your car is—until you get in an accident.

Which brings us to the ailing Saturn above—which, incidentally, we rammed into a wall at 30 miles per hour. Given the heightened interest in safety these days, you've probably seen a lot of cars like this lately—in television commercials, ads, maybe even brochures. Manufacturers are undoubtedly going out of their way to win your trust by touting their testing efforts.

And from the looks of this photo, so are we. Except that our story is a little different. The nice thing about starting a new car company at such a late date is the chance to make the most of the latest technology. Saturn's spaceframe

is a prime example. The frame itself is called a "reinforced passenger cage." It comprises some 3,700 structural welds, and numerous strategically placed reinforcements—all designed to help keep the space where you sit intact during a crash, limiting possible intrusion.

Another example of advanced technology is the dummy our engineers use for development testing. Saturn uses the later Hybrid III, as opposed to the earlier Hybrid II. Outfitted with additional sensors in his neck, chest, and lower legs, the Hybrid III has a more "biofidelic" design—in other words, he's closer to being human and responds much more as you would in an accident. The better we can design around him, the better we can help protect you.

You may notice we say "he" a lot, when referring to our dummy. That's not because we're sexist. That's because the standard dummy required by law to pass certification

weighs in at 179 pounds and stands 5'8"—representing an average-size man. Given that most Saturns are designed to be family cars, you'll be relieved to know that we conduct our development tests with other family representatives, as well—everyone from a petite female, to a six-year-old child, to a six-month-old sitting in a child safety seat.

What's more, we test at higher speeds than the law requires, and with dummies seated in positions other than those mandated.

Of course, you may be wondering, about now, how any crash sensors—accelerometers, as they're called—could possibly live through a beating like the one above. Well, that's the problem. They're often demolished in the event. Which is why Saturn enlists the help of a Cray Research supercomputer. Thanks to sophisticated simulation software, we're able to re-create a crash on the computer,

track and analyze its force, and thus devise better ways to control it.

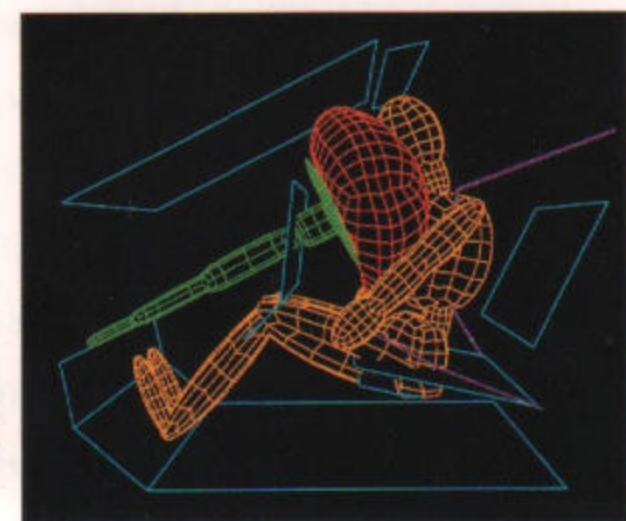
In fact, recently we were able to use computer technology to simulate the interaction between a driver and an airbag. (If you haven't heard, driver-side airbags are now standard on all Saturns.) To develop the system, our engineers ran two programs on a Cray simultaneously—one calculating structural damage, and one calculating human injury. This way, they could simulate an impact, slice the vehicle at any given point during the event, and inspect the damage. It's like having a camera focusing on every possible point in space.

As you might imagine, this sort of technology could take a lot of the mystery out of the safety game—at least when you're buying a Saturn.

It may not look particularly distinctive, but this is not your run-of-the-mill seatbelt latch plate. It's a patented design that adjusts much more easily to children. It also helps parents secure child safety seats—something the engineers made sure of by purchasing an array of such seats, trying them out, and making design decisions that parents will appreciate.



Every Saturn vehicle comes with "crumple zones," areas specifically designed to crumple upon impact, thereby helping to absorb and dissipate the energy of a crash—before it reaches the passenger compartment.



In case you didn't know, all Saturns now come with driver-side airbags. What you see here is a crash simulated on a Cray supercomputer. By correlating two software programs—one calculating structural damage and one human injury—engineers are able to freeze the frame to analyze the situation at any point during the event.

An anti-lock braking system is an option you'd expect to find on a more expensive car. But it's also an option on every Saturn. ABS helps you stop more quickly, and maintain control

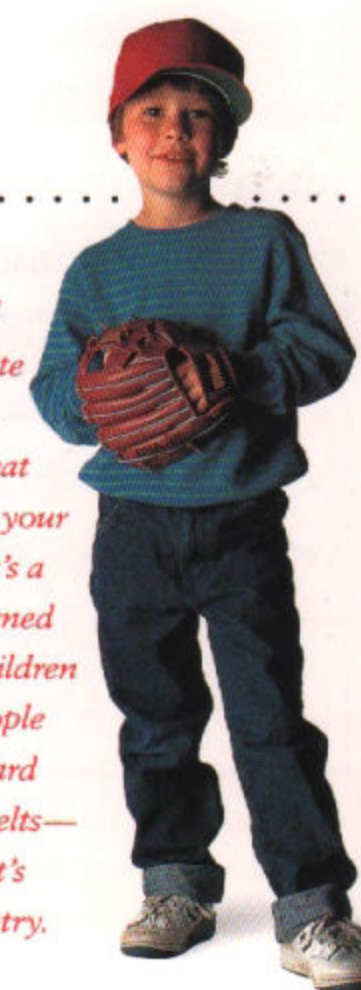


when you need it most: in rain, snow, sleet, or other emergencies.



Sometimes you just can't react quickly enough on a slippery surface to keep your wheels from spinning. That's when Saturn's optional traction control snaps into action. It responds to hazards you might not foresee and helps control wheel spin—either by retarding spark, shifting gears, or interrupting the flow of fuel to the engine.

You can't see this feature, but you'll certainly appreciate it when you're sitting in the back seat—which is where your children will be. It's a special ramp designed to help prevent children or other petite people from sliding forward under the safety belts—"submarining," as it's called in the industry.





As an engineer whose parents were factory technicians, Tracey Myers has a unique perspective: “The car is good because the situation is good. You can’t appreciate what our work environment is now, unless you understand what it was then.”

As Tracey recalls, people didn’t talk, they fought. People didn’t care, they endured. Now you can walk into Saturn and feel the difference. People ask questions. They listen. They collaborate. And they do what’s right, not just what’s expedient.

Take the challenge facing Michele Smith’s engineering team and Jim Galovich’s manufacturing team one afternoon on the line. Just before the end of Jim’s shift, he noticed a wiring obstruction in a portion of the steering column that Michele had helped design.

Rather than leave it for the next crew to deal with, he called Michele, and the two spent the next 36 hours working side-by-side, meticulously inspecting each component Jim and his team had just assembled.

Once they found the obstruction, the solution didn’t

come from an engineer, but from a technician, Chris Brandt, who designed a simple retainer to shield the wire during assembly.

According to Michele, people can view Saturn as they would a harvest. “We’re going to reap what we sow,” says Michele. “If we sow fear, we’re going to reap fear. If we sow good intentions, then we’re going to reap good people and good product.”

“We’re only as good as our weakest link,” adds Chris. “Everybody knows that now. That’s why everybody cares about everybody else, and nobody wants to see anybody lose.”

It’s an attitude Pat Murphy experienced, firsthand, one morning on the line. In order to run lean and mean, everyone at Saturn is trained and certified in several different jobs. The job Pat was tackling this day was new to her, and she was struggling to keep up with the team. Just when she was about to fall behind, she looked up to find that everything she hadn’t done had already been done for her.

“The whole team had been watching and bailing me out all along,” she said. “It was as if gifts had been laid out before me.”

According to Gary Merryman, who’s been with Saturn almost from day one, a lot of people see this new company as their last chance to right some of the wrongs they’ve encountered in their careers.

“Understand,” says Gary, “these people came from 42 different states across the country, but the fact is, this time, they came by choice.”

“I know this is going to sound farfetched to people outside the auto industry. But the only life experience I’ve had that can even compare to how I feel now at Saturn is how I felt when I was in Vietnam. Not the war itself, mind you, but the feeling I had for all the people who shared that moment in time. There are no lines of demarcation, no class division, no prejudice—just teamwork. It’s a bond you can’t really explain.

“This feeling, more than anything, must be why everybody at Saturn gets along so well. And this feeling, as much as anything, could be why the cars are making it.”

- 1 Pat Murphy
- 2 Tracey Myers
- 3 Chris Brandt
- 4 Jim Galovich
- 5 Michele Smith
- 6 Gary Merryman

