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H A R O L D ' S B R A C K E T

It wasn't that there was a problem, exactly. It was just that there had to be a better way.

Harold Dennis had just joined the vehicle assembly team at Saturn, and what brought him all the way to Spring Hill was simple: "They weren't just asking for a pair of hands," Harold explains. "They wanted our minds."

And what Harold had on his mind, after some time on the line, was the elaborate set of clamps and supports that held one particular part in place while he and his team worked on it. Everyone agreed that the system was just a little too cumbersome.

He thought awhile, made some sketches, showed them to his teammates, talked to a guy in maintenance who knew a thing or two about machining—and eventually came up with a simpler version of one rather unwieldy support bracket.

At first, some of the others were skeptical. But then they all gave it a try, and it wasn't long before the whole team decided unanimously to use Harold's bracket.

If by now you're wondering why we would choose to introduce Saturn's 1994 line of cars with a story about some guy and his bracket, you're right. In the grand scheme of things, Harold's bracket is a pretty small story.

What's interesting about Harold's bracket isn't just that it makes the job easier (though it does). Or that it saves time in the process (as much as twenty percent, by the team's estimation). Or even that Harold is a unique individual—though the team will attest to that, too.

It has to do with a philosophy at Saturn called continuous improvement.

A philosophy that says that in this particular race, there is no finish line. And at this particular company, everything matters—no matter how small, no matter what the source.

Everything from the way a shift feels on an uphill climb to how the doors lock. From the way the instrument panel gets wired to how the spaceframe is welded.

And yes, even a bracket.

If there's one thing Saturn has done in the past four years, it's surprise people.

For one thing, at most auto manufacturing plants, line workers like Harold Dennis don't generally go around inventing new tools and techniques. That sort of thing is usually left to the engineers.

Which begins to explain how, in just four years, Saturn has managed to rise from relative obscurity—and above considerable skepticism—to become a leading competitor in the small car category.

Because at Saturn, nothing is ever “left” to anyone.

That's why you hear about people like the Saturn Retailer in London, Ontario, who, on



of improvements since introducing the first cars in 1990. And they'll likely make many more in the years to come.

It all stems from one basic tenet at Saturn: that nothing is ever above questioning, and everything deserves

at a Time” are programs that celebrate even the smallest design innovations and commend the people who help make each Saturn car an exceptional value for the dollar.

There's also a lab called the Workplace Development Center, where technicians who work on the line collaborate with engineers to simulate processes on the assembly line. This way, they can try out new manufacturing methods without interrupting production or taking risks on the line. At the lab, they can also take apart competitors' cars to learn about them.

There's even a workshop called “Yesterday, Today, and Tomorrow,” which helps individuals understand the important role they play in building a new car company.

STICKING WITH IT

What continuous improvement means at Saturn—on the line and everywhere else.

the day his store was closed, invited a prospective customer to his home for a test drive.

Or about the engineers who turned an assignment into an opportunity. They were asked to find a way to use CFC-free refrigerant in the new Saturns—and while they were at it, they redesigned the entire air conditioning system so that it uses less refrigerant, takes up less space, and requires less engine power.

You even hear about customers themselves, like the ones who wrote to suggest a change to Saturn's optional power door locks. From now on, when you turn your key in the driver's door, you won't unlock the others—unless you want to.

All told, the people at Saturn have made hundreds

to be questioned. By anybody.

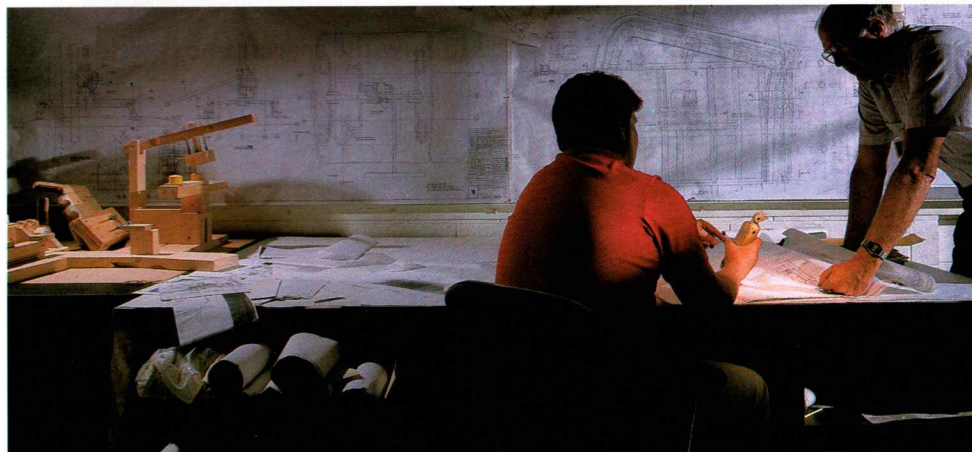
Understand: At Saturn, this isn't just some philosophy people read about in a company handbook. It's something they live—day in and day out.

That's why there are special programs throughout the company designed to recognize people who think of ways to improve the product or process. For example, “Dime at a Time” and “Dollar

All of which helps to explain yet another rather surprising turn of events: The very company that was once viewed as a renegade experiment is now asked to advise more established corporations—some that have been doing business for years, and doing it quite successfully.

Saturn has grown up to become a subject of study—for organizations ranging from aircraft manufacturers to business schools to other carmakers. And sometimes even from places as far away as Japan.

Go figure.



The Workplace Development Center in Spring Hill is complete with the same conveyors and tools used on the assembly line floor, giving teams the chance to learn new skills and test new ideas without disrupting current production.



If you've been looking at compact cars lately, you know the story:

The ones that perform tend to guzzle gas. And the fuel-efficient ones—well, they kind of putt.

That's precisely why the Saturn SL1 was engineered with something different in mind—a nice blend of power and efficiency.

It all starts with the engine—a 1.9-litre single-overhead-cam fuel injected version delivering 85 horsepower at 5,000 rpm. While this may not sound terribly vicious on paper, once you slide behind the wheel, you'll be pleasantly surprised.

With gear ratios carefully matched to engine output and an engine that's tuned to be exceptionally torque-heavy, you'll enjoy plenty of power for tooling around town—and lots of stamina for cruising the highway.

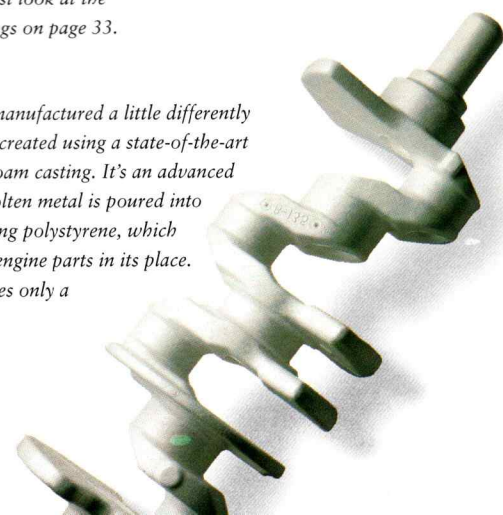
And because the SL1 weighs in at around 1035 kg (2,300 lbs.), it offers better gas mileage: an estimated 8.7 L/100 km (28 mpg) in town and 5.8 (37) on the highway with a manual transmission.

Nice numbers. Especially for a car with a



When it comes to fuel efficiency, automatic transmissions are usually far less efficient than manuals. But thanks to the advanced design of the transmission and to a sophisticated device called the powertrain control module, the Saturn four-speed automatic is nearly as efficient as its five-speed manual counterpart. Just look at the Transport Canada estimated ratings on page 33.

Saturn engines are manufactured a little differently from most—they're created using a state-of-the-art process called lost-foam casting. It's an advanced method whereby molten metal is poured into sand molds containing polystyrene, which evaporates, leaving engine parts in its place. This process produces only a minimum of scrap.





finish that looks as if it belongs on a car costing twice as much. The paint process used on the SL1 (and on all Saturn models) represents the latest technology available—a polyurethane primer, a water-borne acrylic base, and a polyurethane clearcoat—to create a brilliant, glossy, and remarkably durable finish.

But the SL1 story isn't just about a pretty exterior. It's also about what you'll find when you open the door and hop in.

Features such as variable-effort power steering. Reclining front bucket seats and split fold-down rear seats.



The SL1 certainly makes the most of its 85-horsepower engine. With torque-heavy tuning, you get plenty of performance for sprinting off the mark, cruising the highway, or just tooling around town.



Saturn SL's come with a four-speaker AM/FM stereo system that includes seven station presets per band, "seek-and-scan" tuning, separate adjustments for bass and treble, and a digital quartz clock. The SL1 also includes a cassette in addition to the features mentioned above.



Our most affordable sedan is the Saturn SL. The wheel covers (which you can see above) and the upholstery are slightly different from those found on the SL1. The SL comes with a five-speed manual transmission and manual steering.

A height-adjustable steering column. A full analog instrument panel, including a tachometer, trip odometer, and engine temperature gauge. Not to mention fourteen-inch all-season tires, tinted glass, composite halogen headlamps, a carpeted cargo area, and a rear window defogger.

All of which goes to show that Saturn's idea of "price/performance" is slightly different from everybody else's. You don't have to settle for one or the other.

THE
Hopeful

THE FEARLESS,

The

FIRST





CHRIS CONTRERAS

PURCHASED HER SL1 IN DECEMBER 1990

"I test-drove a lot of four-doors—the Honda Civic, a few Nissans, and then a Saturn.

"All in all, it took me six months to choose a car—not that I'm that picky. It was just that I had saved up my money to make a decent down payment, and I wanted to be careful.

"What sold me on Saturn—instead of the others—was that it came with more extras. ...It just seem like a great value.

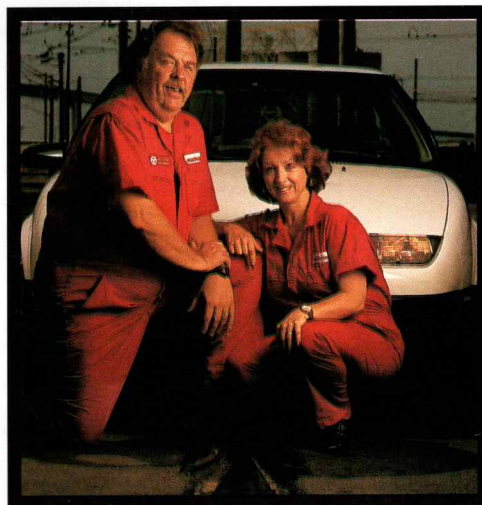
"A little after I bought my SL1, the bank where I worked asked me if I liked it. Well, I guess they liked it, too, because they bought about a dozen Saturns."

STEVE SCHAEFER
AND HIS SON DAVID

PURCHASED THEIR SL1 IN NOVEMBER 1990

"I can't say what it was, really, that made me go to see a Saturn that day, I just felt like I wanted to be part of this. I just wanted to find out what these cars were like and I didn't want to find out secondhand. I think there were two cars there – they hadn't even finished the showroom. ■ They popped the hood, and while I took a look they told me about lost-foam casting, about the manufacturing plant in Spring Hill, and a lot of other specifics. And then I took a test drive. ■ The car was great, but what really impressed me was the people. They didn't pressure you, but they were glad to talk, if you wanted to. It was like going to a museum, and they were docents. ■ When I bought it, my friends were skeptical, saying things like, 'How do you know what the resale value's gonna be?' and 'What if there's a problem?' ■ The car will be paid off next year, and I haven't had a problem yet. I have a son who's eleven now. I'm picturing when he's sixteen, I'm going to give it to him. I know he's already got his eye on it."

Back in 1990, a lot of people had a lot of questions about Saturn: "Will the car be as good as they say? Will the company truly be that different? Can any new automaker really compete?" Well, meet five of the 75,000 or so people who asked all those questions—and then went with their gut.



BILL & SHERRY COOPER

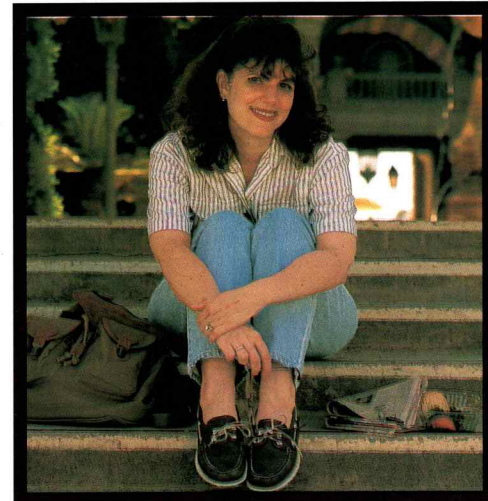
PURCHASED THEIR SL1 IN JANUARY 1991

"Bill always said, 'If there's ever another good American-made car, I'll buy it in a minute.

"After all, the last great car we'd bought was a '54 Chevy. After that, it was a Volkswagen Beetle. Then Hondas, Mazdas, and a Nissan truck.

"Well, honestly, we loved the Saturn from the first time we saw it. We weren't necessarily expecting that.

"It's impressive, really, what they've managed to do. Even one of our friends—a true dyed-in-the-wool Nissan fan—had to admit the car's great. Believe us, changing his mind was a feat in itself."



DANETTA GRAY

PURCHASED HER SC2 IN MARCH 1991,
PURCHASED HER SL2 IN JANUARY 1993

"My last car was an Acura, and before that I had a Toyota. In the past, when I purchased cars I always felt intimidated. So I used to take my dad with me to help negotiate the deal.

"This time was different. Dad wasn't around when I decided to stop in at the Saturn retailer—it was just a few blocks from my house.

"The person who helped me was a guy named Charlie Chen. He was so patient, answering all my questions without making me feel uncomfortable. It was great. I bought the car and felt really good about it.

"One day about eighteen months later, I was driving along, and I got into a pretty serious accident. It wasn't my fault, but in any case, the car was totalled.

"You know, the minute my insurance company said I could buy a new car, I didn't think twice about what to do.

"I just went right back to see Charlie."



SL2

Your life may fit better into four doors than two these days, but that doesn't mean you've forgotten how good it feels to sit behind a sport-tuned engine and twist your way up a nice mountain switchback.

Well, fret no more. With the SL 2's 1.9-litre dual-overhead-cam multi-port fuel-injected engine delivering 124 horsepower at 5,600 rpm, you won't be fussing about hauling those two extra doors around.

In fact, with all this horsepower pushing a mere 1080 kg (2400 lbs.) or so, you'll have all the power you hoped for—not to mention some pretty impressive gas mileage.

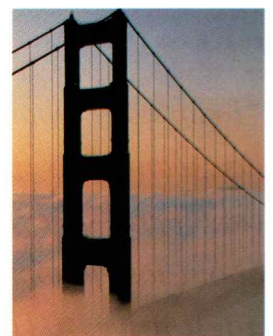
The SL2 (the manual version) offers an estimated rating of 9.9 L/100 km (25 mpg) in the city and 6.4 (34) on the highway. It comes with front-wheel drive, four-wheel independent suspension, and a five-speed, close-ratio transmission.

Or you might choose Saturn's optional automatic. This is the one Saturn engineers refer to as a "smart" automatic transmission,

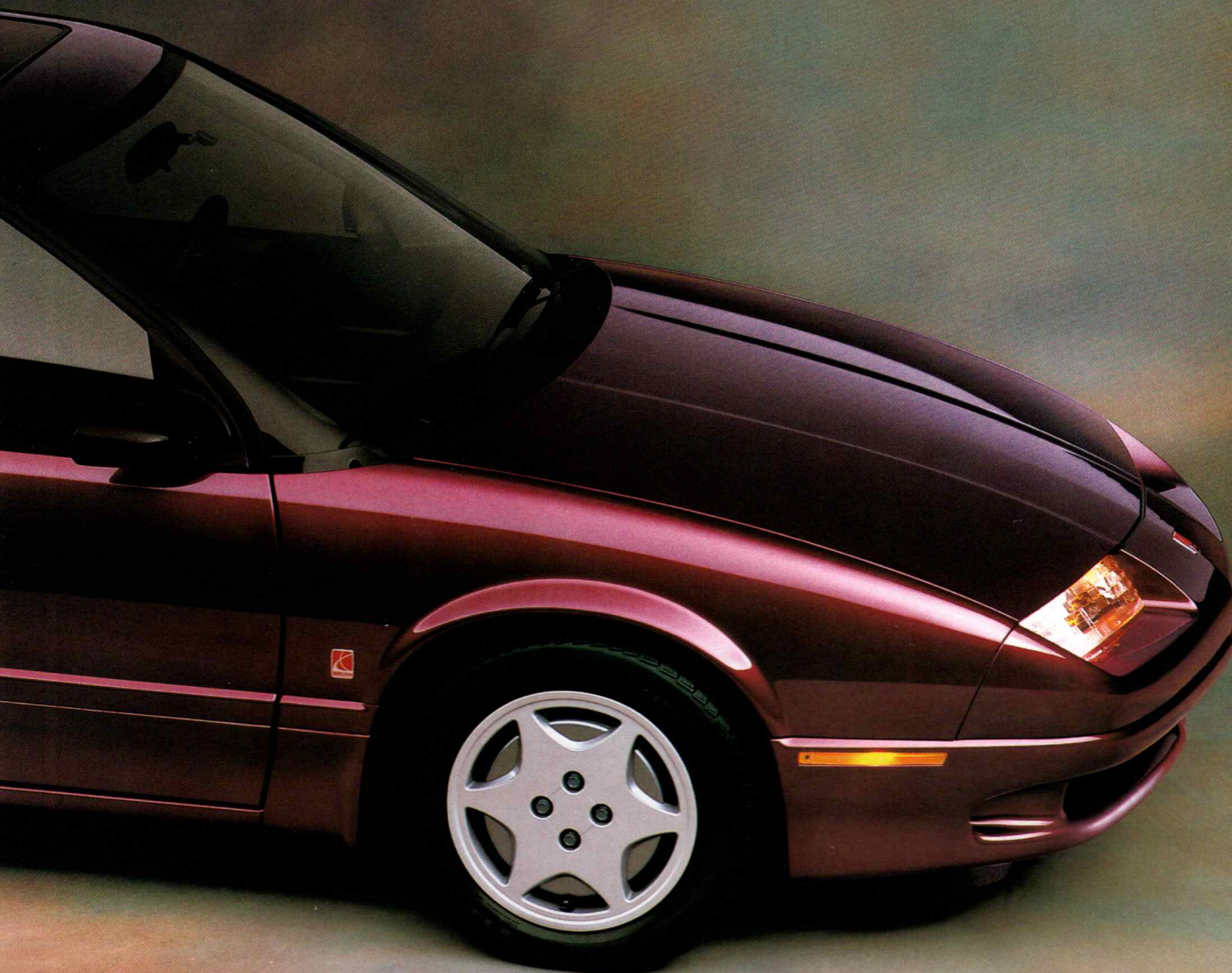


If you look under the hood, you'll see that Saturn's dual-overhead-cam engine (standard on the SL2, SC2, and SW2) features a multi-port fuel-injection system. It makes sure that each cylinder receives just the right amount of fuel for the best performance in any driving condition. This system also helps fuel efficiency.

New for this year is our fifteen-inch "sawtooth" alloy wheel design. We're not sure who should get credit for the name, but we do know that these wheels are an option on the SL2, SW2, and SC1.



You hardly have to live in the world's foggiest city to appreciate a good pair of foglamps. They're available on selected packages of the SL2 and SW2.

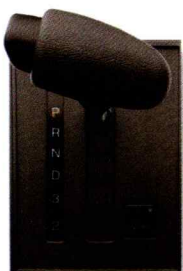


meaning it uses computer controls to influence shift feel, helping to make every shift as smooth as it can be.

About a year ago, Saturn engineers added two other innovations to the mix—"fuzzy logic" and "shift stabilization." Fuzzy logic helps put you in the right gear when you're driving downhill. And shift stabilization helps eliminate the indecisive meandering between gears that's characteristic of so many automatics attempting to negotiate inclines.

Sounds as if all this stabilizing might have required some

What's perfect for one driver isn't necessarily perfect for another. That's why Saturn's automatic offers two different driving modes—"normal" and "performance." To take the latter approach, just push the button. You'll experience sportier shifts, higher RPMs before upshifting, and downshifts that'll give you even more get-up-and-go for passing.



Our "smart" transmission offers some of the smoothest shifts in its class. Saturn's powertrain control module is at the heart of the story. Basically, it's a box containing two microprocessors—one controlling the engine, the other controlling the transmission, and each in constant communication with the other to help provide the perfect shift, regardless of road or weather conditions.



An AM/FM cassette player is standard equipment on the SL2. You also get two coaxial front speakers and two extended range rear speakers. A compact disc player with a 5 band graphic equalizer is optional.

fairly serious computing.

Well, yes—and no.

Since Saturn's automatic was already computer controlled, all the engineers had to do was write some new algorithms.

Which means all you have to do to experience them is slip into an SL2 and head for your nearest switchback, rolling hill, scenic city drive—or just about any surface with a decent slope to it.



If you're wondering what these people are doing out in the middle of a field, they're actually behind the Saturn plant in Spring Hill, Tennessee. Saturn Retailers visit the plant as part of their training, and many have buddies here—technicians who call and even visit their “adoped” retailers on a regular basis.

T H E  S A T U R N



R E T A I L E R

There is, we've learned, one thing most people want from most car dealers—besides a good car and a fair price—and that is never to see them again.

As a rule, if the owner of a new car is spending a lot of time with the person who sold that car, it's because there's something wrong with it.

Well, meet a few exceptions to the rule. From left to right, Stuart Lasser of Saturn of Denville and Saturn of Morristown, Beth Beans of Saturn of Doylestown, Roland Daniels of Saturn of Dadeland, Bob Yoshida of Saturn of Southwest Oregon, and Karen Tibus of Saturn of Plymouth, Saturn of Okemos, and Saturn of Farmington Hills. They're five of the nearly 260 Saturn Retailers in North America who've come to know their customers rather well—and not necessarily because there's anything wrong.

"We knew from the beginning that if Saturn was to succeed, we'd have to do more than just sell a good car," says Stuart. "We'd also have to change the way cars are sold, the way the people who sell them are perceived, and the way customers feel about the experience of shopping for a car—not to mention having it serviced later."

"To begin with, we don't ever want

anyone who buys a Saturn to drive home wondering if the next guy struck a better deal," Roland explains. "Few shoppers have the negotiating skills to match dealers who do it for a living. In a situation like that, the customer is at a disadvantage—and that's not what we're aiming for."

"The way I see it, I'm not just selling a car, I'm building a relationship," adds Bob. "And I want that relationship to start off properly when I hand over the keys."

Beth feels the same way. "My father started out with a service station, so I grew up learning about service—first at the station, then running a body shop. Now that I have my own Saturn store, I give my customers my home phone number, and I carry a beeper. I want them to know they can reach me at any time."

Adds Karen, "In the old days, when customers brought their cars in for service, they'd come in the back door and the salespeople would never see them. At our Saturn store, we look forward to seeing them."

"We post a calendar that shows who's scheduled for service, so our sales consultants can plan to be around to walk their customers over to the service area and introduce them to the technicians who will be working on the car. And our service technicians leave their business cards in the cars when they're finished, in case a customer has a question or wants to

talk about the work that was done. We want each customer to have a relationship not only with the person who sold the car, but with everyone that he or she encounters at Saturn."

As it happens, Saturn Retailers have even fostered strong ties with one another. Instead of butting heads with one another, they share ideas for everything from owner newsletters to community service programs.

"It may sound corny," confesses Karen, "but becoming part of Saturn has made me more aware of the way I treat people, more conscious of the environment, and more involved in the town where I live and work. And I think that's true of us all."

"In every aspect of our work, we try to think about what people want and expect—and then, if we can, give them a little more. And we hope that the next time these people start thinking about a new car, they'll think of us."

Stuart agrees. "Saturn's way of working may be different, but it's hardly rocket science. Saturn just makes it really easy to be a Retailer."

"It's simply a matter of doing business the way most people would want to—if they were given the chance."

It's kind of a universal desire. There's hardly anybody anywhere who hasn't yearned to put the pedal to the metal in a sleek, shiny sport coupe.

Then again, there's hardly anybody who hasn't cringed at the thought of forking over the payments necessary to fund such a set of wheels.

Well, there *is* a way to fund the wheels and skip some of the forking. Glance over and you'll see it—the SC1.

A quick look at its sculpted form and you'll understand why Saturn engineers enjoy working with flexible polymers.

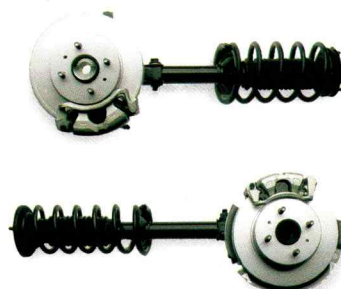
Then a look inside the cockpit and you'll appreciate their deep

respect for ergonomics. The driver's seat is precisely positioned in relation to the steering wheel and the shifter. Instrumentation is a clean, clear analog display—perfectly within your line of vision. The white-on-black gauges are beautifully simple—nothing fussy. And virtually all the controls require only a single, effortless motion.

The SC1 is powered by Saturn's standard 1.9-litre single-overhead-cam fuel-injected



By plugging this hand-held computer into a port beneath your dash, Saturn service technicians can download information from a memory chip in your car's power-train control module and feed it into a personal computer for diagnostic analysis.



All Saturn cars feature front-wheel drive and four-wheel independent suspension. The front suspension is a true MacPherson strut design—and the rear is an optimized tri-link.

The average driver shifts more than 680,000 times every 160,000 km. Mercy! That's a lot of shifting. It's also what inspired Saturn engineers to put the manual transmission through some heavy testing—to date, more than 22 million shifts.





engine—the one that gets the great gas mileage. Remember, this is also the one with the broad, flat torque curve—meaning you'll have plenty of thrust for cruising a freeway or cutting up back-country roads.

When you've finished your backroad tour, you might want to park this Saturn, pop the hood, and get acquainted. You probably know what's under the hood of a lot of new cars—a maze of technology so thick a mechanic has to be a contortionist merely to get at the problem. (And as we all know, when a mechanic



The National Weather Service says the average temperature in Mesa, Arizona in August is 34° C (that's 102° F) in the shade. Whew! That's hot. And Mesa is where we do our hot weather testing. Our engineers figured that anything that can keep it's cool there can breeze through traffic jams and steaming freeways anywhere.

For the entire time of your warranty, you're automatically enrolled in our around-the-clock roadside assistance program. No matter where you are, help is only a phone call away—just dial our toll-free 800 number. The program covers the Saturn, not just its owner—which means that whoever is driving can take advantage of the service. (Of course, all Saturns are also protected by Saturn's Warranty—see page 33 for details.)



contorts, an owner pays.)

Well, rest assured, there won't be much contorting with the SC1—or any other Saturn, for that matter. From traceable hoses to easy-to-replace spark plugs to a drip rail beneath the oil filter, what you'll see is a definite exception to the rule.

And that's also what you'll see when you read the little sticker on the window. One more exception to the rule.

E L E V E N

H O U R S

TO

INSPIRATION POINT

ON THE SATURN LINE: WHAT'S DIFFERENT AND WHY



"Ten years ago, when people asked me what I did for a living—well, you might say I suddenly came down with industrial amnesia," says Fannie Asbury, who now works at the Saturn manufacturing facility in Spring Hill, Tennessee. "I just didn't like to talk about my work." Fellow technician Steve Halloway agrees. "Back then, the American auto industry was under attack from all directions. That's why I came here. It was a chance to turn things around. A chance to help build a car that would go up against the imports—and best of all, to have a say in the way it was done."

What Steve and Fannie are part of, and have been for the past four years, is a company that has managed to challenge most of the traditional rules of the auto industry, defy a host of skeptics, and win over thousands of loyal import buyers. A company that has changed not only the way cars are made, but the way car companies are run.

The Saturn story begins with a new manufacturing facility in Spring Hill. There, an entire car is assembled under one roof—raw materials coming in one door and a completed product going out the other—which means that those who build the cars actually get to see and appreciate the final product of their efforts, instead of just watching various parts get shipped out.

The story continues with a file folder—an agreement between labor and management that's so simple, it can be stapled instead of clamped into the more usual three-ring binder.

Far from merely punching in and punching out, Saturn technicians draw a salary and manage their own work areas. Everyone at Saturn understands how the business works, and spends over 90 hours every year in classes from leadership to finance. All team members are involved in decisions that affect them. And at least once a week, everyone sits down to talk.

Many of these talks have led to changes as basic as wiring the car's cockpit by mounting

it on a stand instead of crawling under the instrument panel—resulting in less strain for the people who connect the wires, and fewer malfunctions for the people who drive the cars.

And some talks are nothing short of revolutionary. Just this past summer, teams actually sat down and outlined ways to do the same amount of work with fewer people. The reason: Saturn was about to add a third crew, much of it made up of volunteers who transferred from the other two teams.

"For those of us who stayed on the original first and second crews, it was a little like losing a family member," says Steve. "But we all agreed that this was the best way to keep our costs down and still get that third crew up and running with plenty of experienced people. As a result, we've all learned to run leaner.

"In fact, one day when we were a few

people short, I looked up and there was the president of our union, standing right next to me, putting bolts in and whistling. I was mesmerized for a minute. In the old days, those guys made the rules—but never came near the production line.

"Now it's not unusual to see engineers pitching in—and on occasion, even retailers. It's all part of Saturn's team approach. They learn from the experience, and we appreciate the help—even if all they're doing is handing someone a wrench."

What all these people have in common is a single purpose and a singular commitment: to beat the pants off the imports.

According to Fannie, that commitment comes to life in the form of one giant Quality Assurance Department, staffed by 7,000 inspectors. Those inspectors happen to be the same 7,000 people who build the car. At Saturn, each team is responsible for its own quality control—not quite the way it works at most other car companies.

"All it takes is having the power to say, 'That's not right,'" explains Fannie. "We all know what to do then: stop the line and correct it.

"Nobody here will ever ship out a car that we wouldn't want for ourselves. We've had our pride given back to us. And it shows in the car.

"Now I'll walk up to any Saturn owner on the street and say, 'Hey, I helped make that car.' I'll never be afraid to say, 'Let me show you what I do.'"

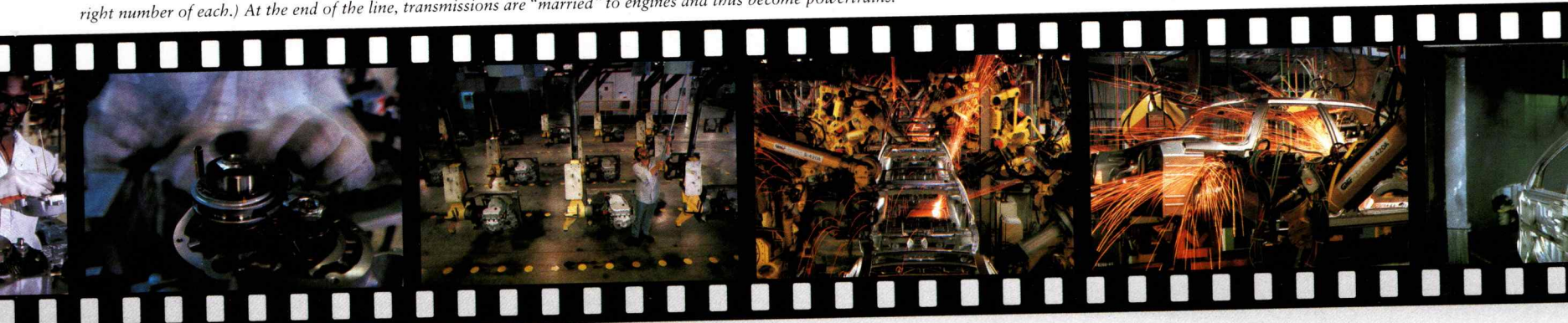
The night before

CASTING THE PARTS At Saturn, technicians create many engine parts using a revolutionary process known as lost-foam casting. Cleaner and safer than traditional methods, lost-foam casting produces neatly integrated parts that require only a minimum of machining before they go into the car.



6:30 AM

BUILDING THE POWERTRAIN Once parts are cast, machining technicians assemble them into engines and transmissions on the powertrain production line—the first line ever to build both manual and automatic transmissions on the same line. (This dual system allows Saturn to respond quickly to demand, producing just the right number of each.) At the end of the line, transmissions are “married” to engines and thus become powertrains.



6:43 AM

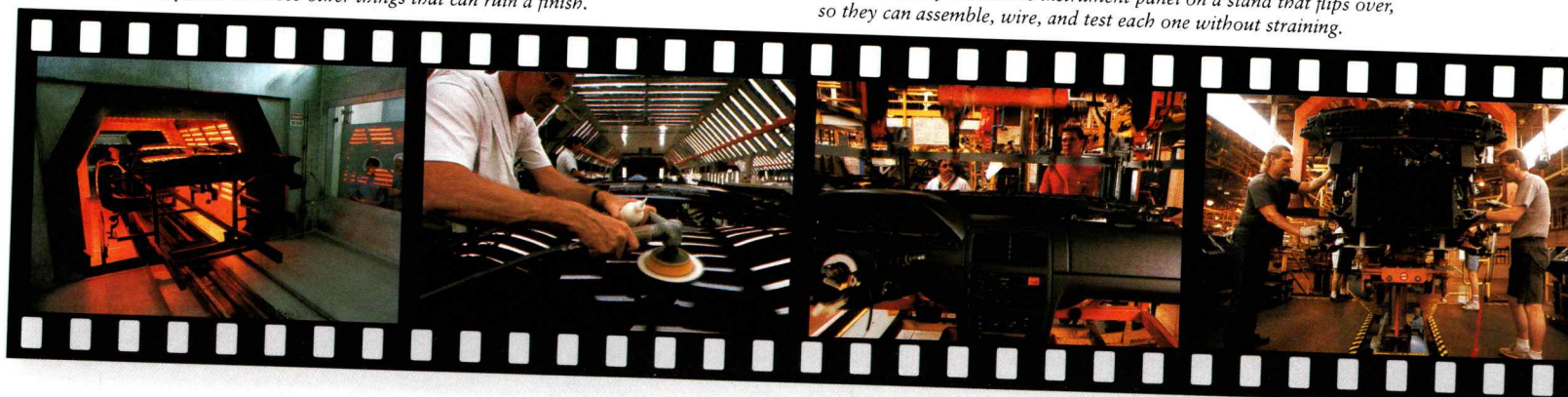
FORGING THE FRAME Two hundred relentless robots make scores of precise structural welds to create the Saturn spaceframe. Then, laser beams check the completed spaceframe for accuracy in dimensions and tolerances.

7:53 AM

PAINTING THE PIECES Technicians treat the hood and roof of each Saturn with five different coatings, and the bodyside panels with three. The first is a polyurethane primer, specially formulated to give upon impact instead of chipping. Next comes a colorcoat formulated with a waterborne acrylic for a glossy “wet look.” And finally, a polyurethane clearcoat helps protect against acid rain, tree sap, and all those other things that can ruin a finish.

8:05 AM

CREATING THE COCKPIT For the first time in the U.S. auto industry, technicians don’t have to crawl under the dashboard to wire the cockpit. At Saturn, they mount the instrument panel on a stand that flips over, so they can assemble, wire, and test each one without straining.



2:56 PM

PUTTING IT ALL TOGETHER—WELL, ALMOST At the end of the trim line, what was once a collection of parts has become a car. Of course, it would look much snappier with bodyside panels. But it works just fine this way—which also means it can be tested early in the manufacturing process.

5:04 PM

ROCKING THE HECK OUT OF IT To make sure that defects are caught and repaired before the car leaves the factory, the new Saturn is started up and put through its paces in a Dynamic Vehicle Roller Test booth. Interestingly enough, the repair bay area at Saturn is relatively small. That’s because it’s not needed much.



4:28 PM

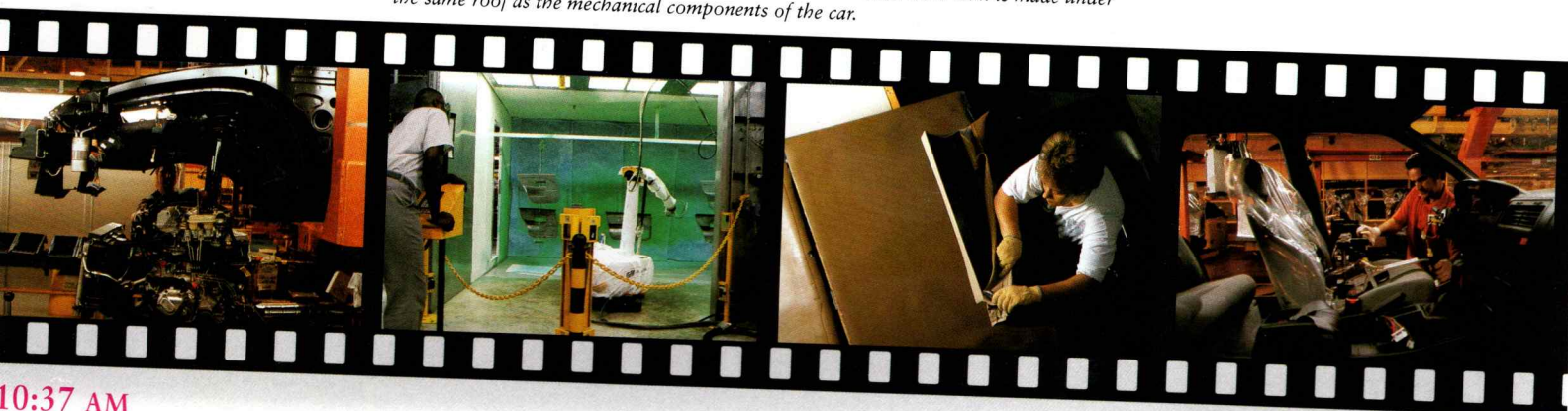
PUTTING IT ALL TOGETHER Instead of struggling to walk alongside a moving conveyor belt and work on a car at the same time, Saturn technicians ride along on comfortable birch “skillets.” Thanks to pneumatic lifts, they can also raise and lower the entire car to the most convenient height to add bodyside panels.

7:07 AM
PROTECTING THE METAL To help protect every nook of every Saturn against corrosion, the spaceframe is dipped into a 200,000-gallon tank of electrostatically charged primer.



7:36 AM
SHAPING THE SIDES Meanwhile, in another part of the plant, technicians are molding Saturn bodyside panels from polymer—a material that actually bends and bounces back on impact. (By the way, any that don't pass muster are ground up and the plastic is used for other purposes.)

11:15 AM
ASSEMBLING THE INSIDES At Saturn, even the interior door trim is made under the same roof as the mechanical components of the car.



10:37 AM
MARRYING THE BODY TO THE CHASSIS Here, the conveyors carrying the car's spaceframe and chassis finally meet, and four technicians work together to connect and bolt them.



5:16 PM
FINALLY, THE RUBBER MEETS THE ROAD After passing the roller test, each car is driven through Inspiration Point and off to its new owner.



This model year will see Saturn's half-millionth car roll off the line.

Say you could create your own sports coupe. What might it be?

Part Ferrari, part Maserati, maybe a little Corvette thrown in for good measure? Just the perfect mix for tooling around on your own private island off the coast of Greece, while they put the finishing touches on your palace.

Ahem. Back to reality. For those who are still saving up for that island, may we suggest a reasonable alternative—the Saturn SC2.

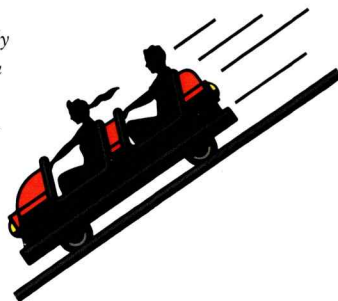
It's powered by Saturn's performance engine: the 1.9-litre 16-valve dual-overhead-cam multi-port fuel-

injected model that delivers 124 horsepower at 5,600 rpm, and 122 foot-pounds of torque at 4,800 rpm. In fact, this engine delivers 118 foot-pounds of torque at just 2,400 rpm—which makes it pretty gutsy getting off the line.

With variable-effort power steering, the SC2 is exceptionally nimble. Its long wheel-base and wide track increase stability. So does its sport-tuned suspension—a true MacPherson



Our goal from the very beginning has been to build cars that are not only reasonably priced, but fun to drive. We invite you to check out the SC2's sport-tuned suspension and see just how well we did.



Ah, hills. They're beautiful to look at, but usually fairly jerky to negotiate in an automatic—unless it's a Saturn automatic. With Saturn's shift stabilization and fuzzy logic on your side, you can relax and enjoy the view—and a smooth ride.



The SC2 is outfitted with P195/60R 15 87H all-season tires—fondly called Firehawk GTA Performance Series Radials. They were specially designed for Saturn by Firestone.



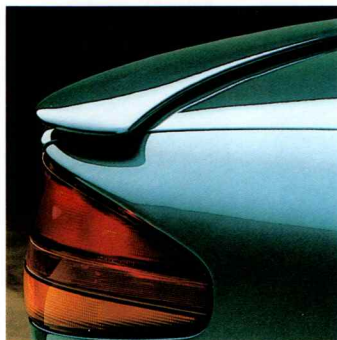


strut design with a large stabilizer bar up front and an additional bar in back, so you can hug the sharpest of corners and still keep all four tires kissing the road.

The SC2 comes with a close-ratio, five-speed manual transmission that's a pure pleasure to shift. Then again, you might opt for Saturn's state-of-the-art automatic transmission and anti-lock brakes. Choose both and you'll also get a feature few other cars in this class can claim: electronic traction control.

Say you happen across a slippery patch

It may not be a whale tail, but our rear spoiler is a nice addition to our sportier cars. You can get it on selected packages of the SL2 and SC2.



A Saturn grips the road like few other cars in its class. That's because all Saturns equipped with anti-lock brakes and automatic transmissions also come with electronic traction control. If you come upon a patch of ice, an oil slick, or another slippery surface, traction control takes immediate action to help keep you in control.

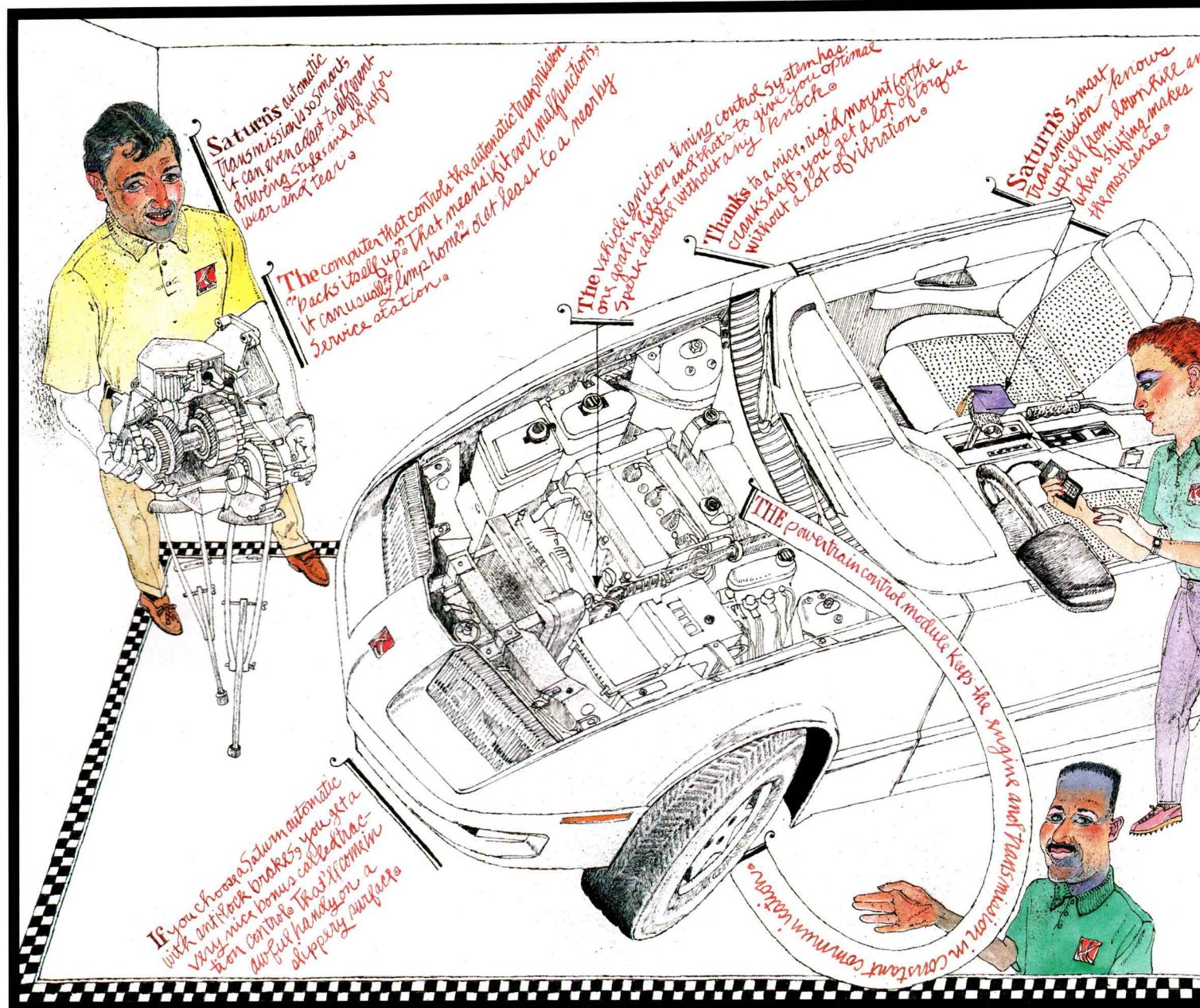
Both Saturn engines are designed to be torque-heavy—that is, they're tuned to have a broad, flat torque curve, with a nice, wide power band. If you're not sure what this means, just press the throttle when the light turns green. That'll tell you all you need to know.



of ice or oil, and your wheels suddenly seem to disregard your instructions—making you, the driver, feel woefully left out. Traction control will step in to help synchronize wheel spin and make the most of whatever traction you've got.

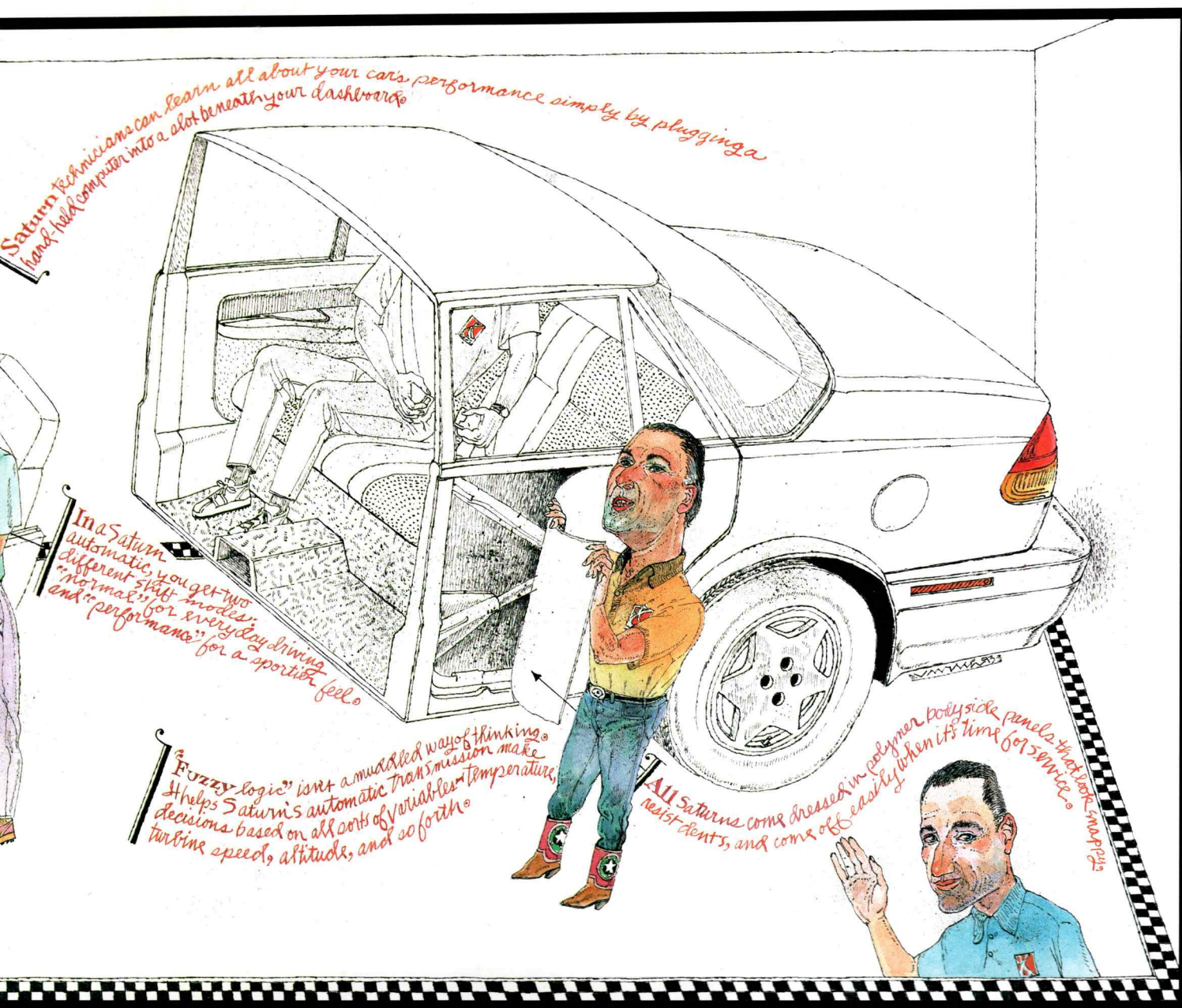
This way you'll be free to focus on the reason you wanted a sport coupe in the first place—to make your everyday drive seem a little less everyday.

Who needs an island, anyway?



SATURN INNOVATION





IS & PATENTS

“**T**here was the time of pain, followed by the time of extreme pain,” recalls transmission engineer Bob Downs. “We were getting pressure from all sides to make this thing work—or abandon it and go back to a traditional design. The Spring Hill factory was gearing up for production. The press was watching. The world was waiting to see the car. And a lot of very experienced engineers thought that what we were doing was laughable.” ➤

Since its founding in 1985, Saturn has come up with more than 100 new ways to design, build, and sell cars—from the parts that go into them, to the techniques used to make them, to the way the whole company does business. Along the way, the company has garnered some 55 patents. Below are a few of our engineers' favorites:

U.S. Patent No. 4,653,351

Issued: March 31, 1987
Clutch-to-Clutch Power-On
Downshifting in a Motor Vehicle
Automatic Transmission

U.S. Patent No. 4,707,789

Issued: Nov. 17, 1987
Adaptive Direct Pressure Shift Control
for a Motor Vehicle

U.S. Patent No. 4,756,213

Issued: July 12, 1988
Transmission Control with a
Clutch Priority Valve

U.S. Patent No. 4,779,490

Issued: Oct. 25, 1988
Output Speed Sensor Diagnostic Control
for a Motor Vehicle Transmission

U.S. Patent No. 4,805,750

Issued: Feb. 21, 1989
Steady State Slip Detection/Correction
for a Motor Vehicle Transmission

U.S. Patent No. 4,827,881

Issued: May 9, 1989
Engine Oil Pump

U.S. Patent No. 4,843,551

Issued: June 27, 1989
Failure Mode Shift Pattern Alteration
for an Electronically Controlled
Transmission

U.S. Patent No. 4,893,874

Issued: Jan. 16, 1990
Free Falling Latch Plate Assembly
for Seatbelt

U.S. Patent No. 4,901,692

Issued: Feb. 20, 1990
Engine and Low Vibration Crankshaft

U.S. Patent No. 4,902,041

Issued: Feb. 20, 1990
Bezel Assembly for Seatbelt Retractor

U.S. Patent No. 4,958,537

Issued: Sept. 25, 1990
Transmission Casing Cover with
Tubular Conduit Cast in a Single Unit

U.S. Patent No. 4,987,974

Issued: Jan. 29, 1991
Device to Assist with the Radial
Distribution of Lubricating Fluid
from a Rotating Shaft

U.S. Patent No. 5,036,727

Issued: Aug. 6, 1991
Connecting Bolt and Assembly
for Engine

U.S. Patent No. 5,036,729

Issued: Aug. 6, 1991
Coast-Sync-Coast Downshift Control
Method for Clutch-to-Clutch
Transmission Shifting

U.S. Patent No. 5,046,592

Issued: Sept. 10, 1991
Servo Shift Control for an
Automatic Transmission
Forward/Reverse Mechanism

U.S. Patent No. 5,056,022

Issued: Oct. 8, 1991
Throttle Position Sensor Error Recovery
Control Method

Those engineers had their reasons, too, admits Leo Hilke, leader of the powertrain engineering team. "What we had in mind was just too different, too radical. Even now, I could prove with statistics that we couldn't accomplish what we've accomplished."

The fact was that some of the engineers working on the project were fresh out of college. Others had plenty of experience developing hot new concepts, but had never actually taken a component of this significance all the way from the drawing board to production. In other words, few of them really had the experience to know their limitations.

And that, as it turned out, was the beauty of it. These engineers simply didn't know that what they were trying to do was supposed to be impossible.

So what they did was build it—a "smart" automatic transmission. Smart in the sense that it makes use of computer algorithms, silicon sensors, and tiny solenoid valves to seek out the "perfect shift." That means they designed it to translate a variety of variables—temperature, altitude, turbine speed, and so on—into a shift so smooth that it's nearly imperceptible. In fact, the transmission is so intelligent that it actually learns, adjusting itself over time to compensate for wear and to adapt to different driving styles.

But its performance attributes are only part of the story. The new transmission also has far fewer mechanical parts than traditional automatics, so it's simpler to manufacture. And it can be built on the same assembly line as the manual transmissions—a first in the industry. To date, this smart transmission has racked

up some 23 patents—which makes the fact that it almost didn't get built that much more interesting.

"We were awfully close to our target production date," explains Bob, "and we were nowhere near ready. One day Leo took me aside and said, 'Bob, I have to know. Are you really going to be able to pull this off?'"

"I was stressed out and scared to death. I really didn't know if we could make it all work on time. But for me and my team, quitting now would be unthinkable.

"So I looked him right in the eye, and I said, 'Leo, I give you my personal commitment. We'll bring that transmission home for you or die in the attempt.'

"And it almost did kill me, too. I mean—I used to have hair!"

Thinking back on that day, Leo has this to say. "Standing there, seeing how strongly Bob felt about it, I just had to stop and remind myself why I pulled this team together in the first place. And then get the heck out of the way and trust."

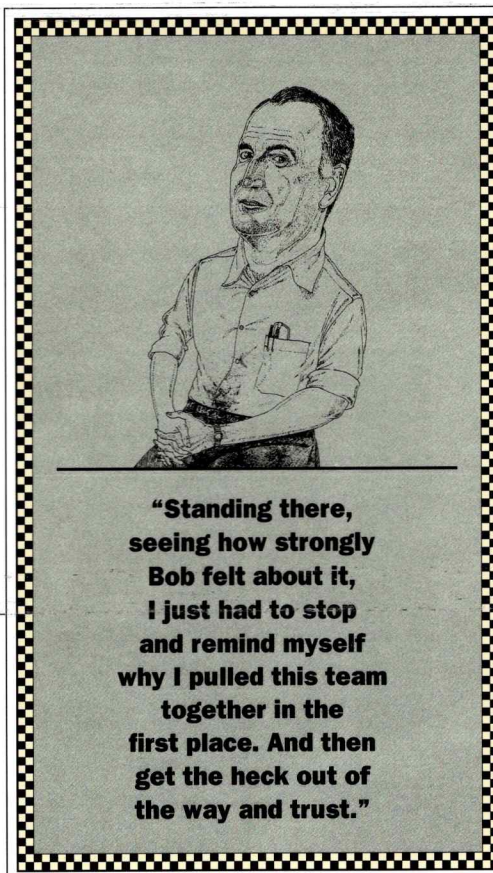
That trust paid off—and has continued to pay off in the years since the launch.

Not content to sit around comparing patents, the team kept tinkering with the transmission's microprocessor, and came up with a few other notable enhancements.

"The product planning group asked us to develop a snow switch," recalls Rim Milunas, an engineer on the team, "a button people could press to keep their wheels from spinning when they start up in snow. Basically,

it would make the car start in a higher gear.

"Well, we designed the thing, built it, and then a group of us holed up in Kapuskasing, Canada, to test it where the temperature was a nippy thirty-eight below. Which meant that



when we weren't out in the snow pushing our new button, we were huddled inside, comparing notes. And coming to a unanimous conclusion about our new button: Boring!

"We said, 'We can do better.'"

As it happened, a far better solution lurked in the sophisticated circuitry found in every Saturn—the powertrain control module. Essentially the brain of Saturn's engine and smart transmission, this is the computer that controls the feel of every shift. It's made up of two microprocessors—one that controls the engine, and one that controls the transmission—each in constant communication with the other. By making a few adjustments to the microprocessors and some tweaks to the anti-lock

braking system, the engineering team found a way to add a feature that few other cars in Saturn's class can claim—traction control.

Here's how Rim explains it: Say you're winding your way along your favorite mountain highway, minding your own business, when you come across a slippery patch in the road. All at once, your wheels seem to acquire a mind of their own, and you get the dreadful feeling that you're about to do some unplanned off-road exploring.

That's when the team's electronic traction control will spring into action. Sensors recognize that your wheels are spinning at different speeds, and the powertrain control module issues commands to help regulate that spin. First, it retards spark to the engine. If that's not enough, it shifts into a higher gear. Then, if it has to, it interrupts the flow of fuel to the engine. All of this works to maximize whatever traction you still have available—and helps keep you on the road, where you belong.

"The trick is to think of things the

customer will like, and find ways to do them without adding an arm and a leg to the cost of the car," says Larry Nitz, one of the engineers who helped create the transmis-

sion's electronic control system. "We're in the business of little twists of technology—technology that you wouldn't expect in a car in this class."

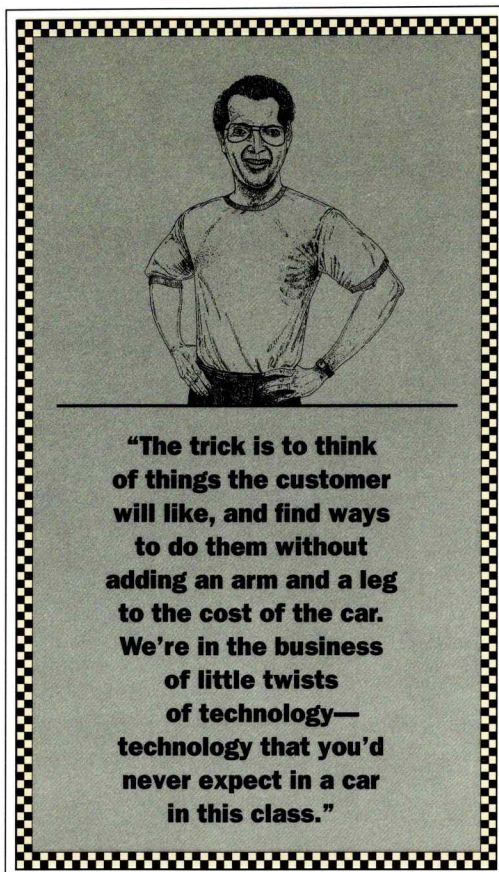
For another unexpected twist, the engineers refined the transmission's shift patterns by making additional adjustments to the microprocessor. The goal was to eliminate "hunting," the uncertain back-and-forth shifting that drivers of automatics often feel when they're going up steep hills. So the team added a feature called "shift stabilization," which helps detect the

precise grade and altitude of every hill and chooses the right gear for each part of the climb. Then they added "fuzzy logic," which is a way of analyzing complex conditions by weighing a lot of different variables at once—in this case, to select the right gear for every downhill slope. As Larry puts it, now Saturn's smart transmission even knows enough to shift precisely when an expert driver would.

"We came here to create something that had never been built before," Bob says, reminiscing. "And it was harder than we ever could have suspected. We've been through some tough times together.

"These days, I feel as if there's nothing this team couldn't take on. We're like a bunch of grizzled veterans now."

"I think it really floors people—even some people at Saturn—how quickly we'll go after the most difficult assignments," adds Rim. "Call us crazy, but now things don't even seem fun unless they look halfway impossible."



U.S. Patent No. 5,070,746
Issued: Dec. 10, 1991
Shift Scheduling Method for Clutch Energy Limitation for an Automatic Transmission

U.S. Patent No. 5,070,830
Issued: Dec. 10, 1991
Powertrain Stiffening Bracket

U.S. Patent No. 5,079,946
Issued: Jan. 14, 1992
Valve Position Sensor Diagnostic

U.S. Patent No. 5,086,665
Issued: Feb. 11, 1992
Adaptive Shift Pressure Characterization of an Electronically Controlled Automatic Transmission

U.S. Patent No. 5,086,670
Issued: Feb. 11, 1992
Adaptive Transmission Shift Pressure Control with Closed-Loop Compensation

U.S. Patent No. 5,086,860
Issued: Feb. 11, 1992
Vehicular Battery Retainer and Shield

U.S. Patent No. 5,090,382
Issued: Feb. 25, 1992
Vehicle Engine Ignition Timing with Adaptive Knock Retard

U.S. Patent No. 5,111,872
Issued: May 12, 1992
Transmission Casing Cover with Tubular Conduit Cast in a Single Unit

U.S. Patent No. 5,119,695
Issued: June 9, 1992
Open-Loop Clutch-to-Clutch Upshift Control having Clutch Overlap Regulation

U.S. Patent No. 5,129,286
Issued: July 14, 1992
Engine Torque Management for Clutch-to-Clutch Upshifting of an Automatic Shift Transmission

U.S. Patent No. 5,129,371
Issued: July 14, 1992
Cam Cover Oil Separator for Crankcase Ventilation

U.S. Patent No. 5,151,855
Issued: Sept. 29, 1992
Multiple Microprocessor Single Power Supply System Shutdown

U.S. Patent No. 5,151,858
Issued: Sept. 29, 1992
Multiple Mode Adaptive Pressure Control for an Automatic Transmission

U.S. Patent No. 5,163,399
Issued: Nov. 17, 1992
Method of Adjusting Engine Output Power to Compensate for Loading Due to a Variable Capacity Air Conditioning Compressor

U.S. Patent No. 5,163,404
Issued: Nov. 17, 1992
Vehicle Engine Ignition Timing System and Method with Windowing Knock Control

U.S. Patent No. 5,172,609
Issued: Dec. 22, 1992
Gradeability-Based Shift Pattern Control for an Automatic Transmission

U.S. Patent No. 5,186,294
Issued: Feb. 16, 1993
Control Method for the Engagement of a Torque Converter Clutch

U.S. Patent No. 5,201,237
Issued: April 13, 1993
Shift Fork for a Vehicular Transmission

S W 1
S W 2

Look at it this way. You're not saying good-bye to your youth, you're simply getting more space for your stuff.

You know, the gardening tools, the camping gear, the big dogs, the small kids—all of life's accoutrements that just won't fit in the old two-seater.

But amazingly enough, there are a few things Saturn wagons—both the SW1 and the SW2—have in common with those beloved two-seaters of your past.

First of all, both wagons are driven by spirited powerplants: the SW1 by the 1.9-litre

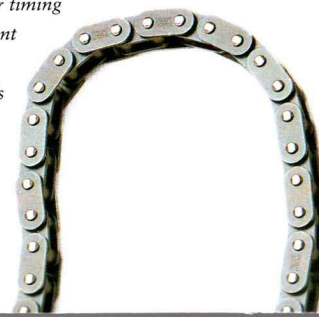
single-overhead-cam engine, and the SW2 by the dual-overhead-cam version.

And thanks to the Saturn spaceframe, both wagons are about as nimble as any Saturn sedan. The spaceframe design creates a tight and rigid body structure that, combined with the suspension, helps isolate the driver from potholes, dips, bumps, and other annoyances. It also kept us from having to weigh the wagons down



It's always good to see what's ahead of you. But it's also smart to keep your eyes peeled for what's behind you. Both Saturn wagons come with a dependable rear wiper.

Many cars in our class give you a rubber timing belt, which, when it breaks, can mean bent valves—not to mention a big repair bill. Even if it doesn't break, it typically needs to be replaced at 100,000 km—and that's rarely cheap. Saturn, on the other hand, gives you a far more durable steel timing chain.



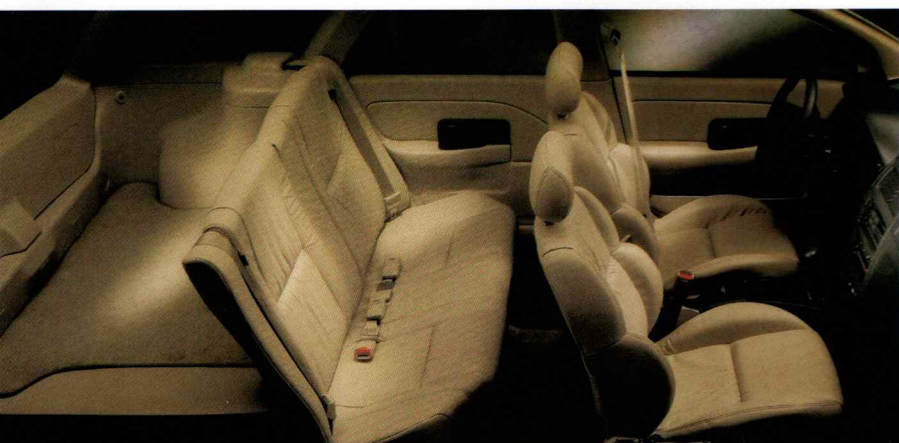
So the neighborhood kids are out playing. It's all fun and games, until something bounces toward your brand-new Saturn. Not to worry. Saturn bodyside panels are actually designed to bend—and bounce back.





with extraneous supports. In fact, they weigh only 20 kg. (45 lbs.) more than the Saturn sedans—which means the wagons feel and perform a lot like our sedans.

Not bad, considering their carrying capacity—1595 L (56.3 cu. ft.) with the rear seats down. Even with the seats up, they will easily accommodate a 21-inch television set (still in its cumbersome cardboard box). They should even earn the approval of your favorite canine—and we're talking a lumbering Labrador



The SW1 and SW2 each offer 2551.3 L (90.1 cu. ft.) of passenger space (large enough, for instance, to haul the whole basketball team's starting lineup) and 817 L (28.8 cu. ft.) of cargo space (so they can bring their gear—backpacks, duffel bags, and the like). Or, if you tend to have more gear than teammates, put down the rear seats and take advantage of the whopping 1595 L (56.3 cu. ft.) of cargo space. So pile it in—and hit the road.

here, not just a perky Pekingese.

Both wagons come dressed in the same dent-resistant polymer bodyside panels that distinguish all Saturns—panels known for their ability to bounce back and shrug off most of the usual dents, dings, and nicks.

And maybe a few not-so-usual. Like Robbie, the grocery boy, who, even after two years' practice, still can't pilot a shopping cart.

INTERIORS

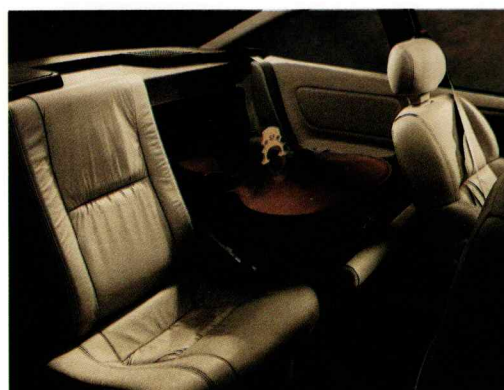
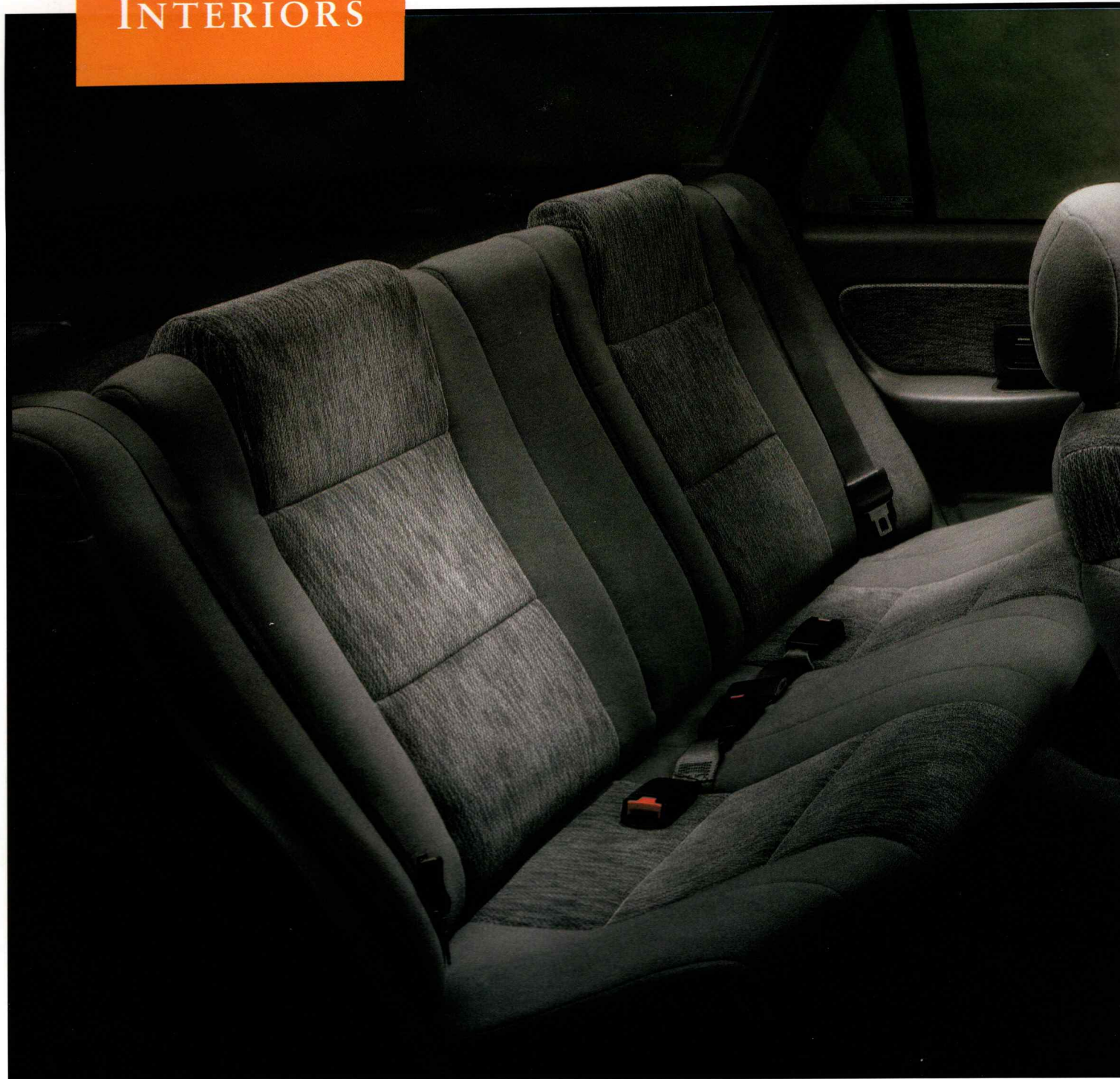
Let's see. If you commute half an hour each way, five days a week, that adds up to ... oh, 260-some-odd hours a year sitting right in here.

Or maybe you take only the occasional weekend jaunt, or pick up two-by-fours at the hardware store, or transport the scout troop to camp—well, that's still probably a good 200 hours a year sitting in this very spot.

Not a fact that went unpondered by Saturn engineers. Which you'll definitely appreciate once you get behind the wheel and sit awhile.

Each Saturn model features a remarkably open, airy feel to the cabin—not always the rule for cars in this class. A simple, clear instrument panel, with easy-to-read white-on-black analog displays. And a reassuring certainty that every switch, button, and control will be right where you need it when you reach for it.

What's more, Saturn controls can be operated with a single fluid motion—a touch, a turn, or a flick—instead of a series of steps. And Saturn's power windows have “logic switches,”



The rear seats in Saturn cars split 60/40—you can put either side down. So you can pack whatever combination of stuff and people that needs to accompany you on the journey—an unwieldy cello, a couple of weeks' worth of groceries, skis, and your kids, friends, or neighbors—with everything and everyone traveling in comfort.

Few things are as pleasant to sit on as leather. Saturn's optional leather comes in tan on the SL2 and SW2, and in black or tan on the SC2. The option also includes a leather-wrapped parking brake handle, gearshift knob, and steering wheel. (Actually, the leather-wrapped steering wheel is standard on the SC2.)





meaning up will always mean up, and down will mean—well, down.

Speaking of switches, there are a few that parents will find particularly appealing—especially parents of antsy kids with fast fingers. By flipping a switch, you can make certain the rear doors can't be opened en route by even the most persistent offspring.

Not that your offspring will necessarily *want* to disembark—especially considering all the places they can stash their stuff. A glovebox large enough to swallow a softball mitt. Map pockets in the doors that will hold a



Here's a driver's eye view of a Saturn cockpit. As you can see, everything is within effortless reach, and vital controls are well within the driver's line of sight.

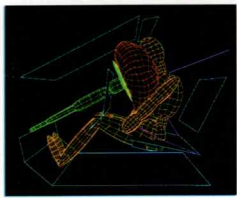
One of the first things you'll notice about Saturn's instrument panel is that it's simple. There's nothing to distract you. It's a clean, clear analog display with gauges that give you all the necessary information.



mighty mean collection of baseball cards. A rear console (in the SC1 and SC2) that can safely hold two open cans of pop. And, of course, rear seats that split 60/40.

While all these design details may not radically affect a five-minute sprint to the store, they do have a way of adding up. Who knows? They just might make that 260-hour commuter trek downright enjoyable.

Have a nice trip.



Working with a Cray Research supercomputer, Saturn safety engineers integrate two software programs—one that calculates structural damage to the vehicle, and one that calculates human injury—to analyze the effectiveness of various designs. What they've learned has helped them build a better restraint system and a more resilient vehicle structure.



The Saturn spaceframe—also called a “reinforced passenger cage”—is designed to help prevent the space where you sit from being intruded upon during a crash.

So who's the six-foot dummy in the pink underwear? Or the tyke on the end, secured in the child seat? Or the faceless fellow in the middle?

Obviously, this is Saturn's family of crash-test dummies, known in the business by a more flattering moniker—anthropomorphic test devices.

These are the dummies that ride in the cars that Saturn engineers crash test at some 50 km./hr., simulating head-on collisions. And that's just the start of it.

Of course, many carmakers have their own collection of dummies to photograph and crash tests to tout. But only some companies—Saturn being one—can claim such an *extended* family of dummies.

You see, when it comes to certifying for crashworthiness, the government mandates the use of two dummies who sit in the front seats of the crash vehicle. Both are 50th-percentile males who, at five feet eight inches and 179 pounds, represent the average male driver and passenger.

All of which brings us back to our family portrait, and why it's so—well, large.

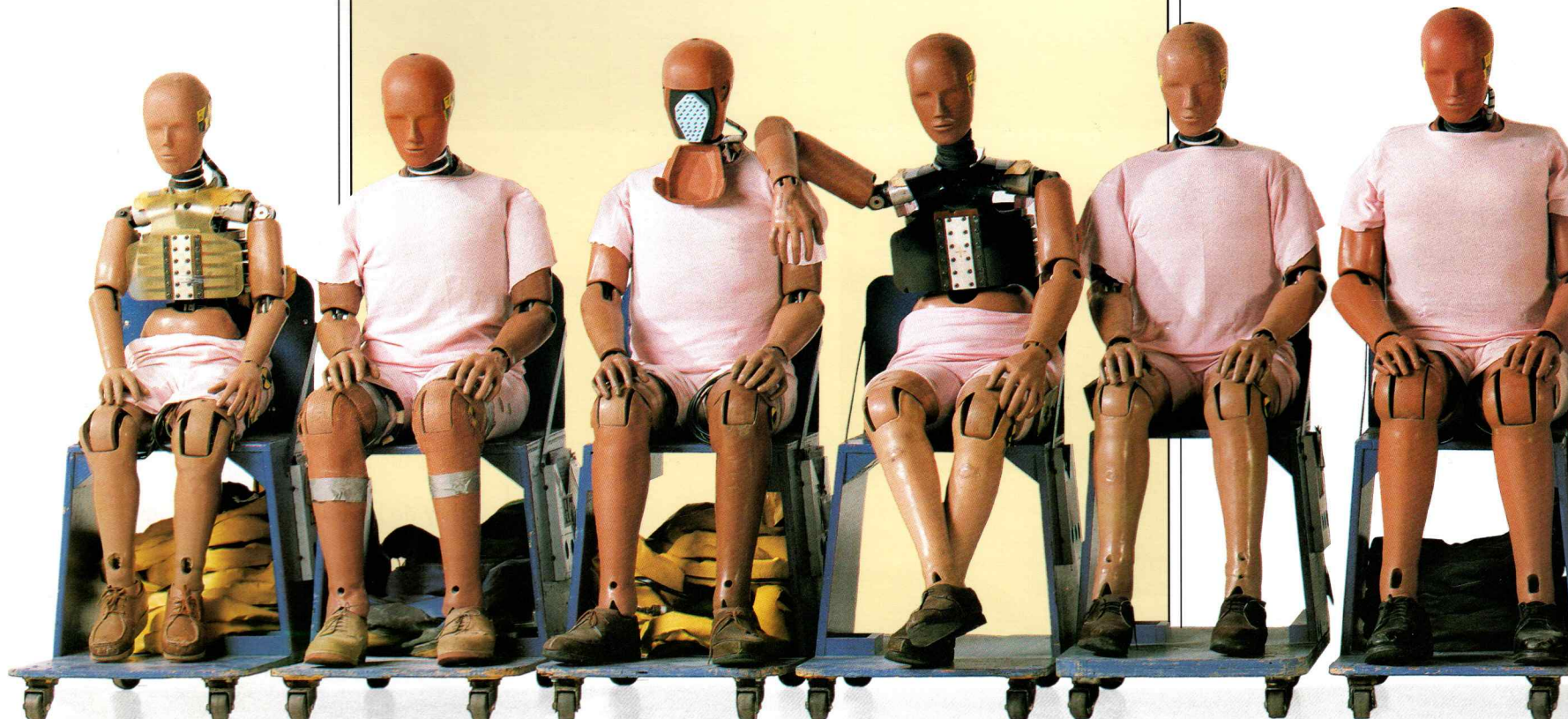
As Ken Wasmer, head of the Saturn safety team and the lone human below, explains, “At Saturn, we don't really believe our job is done just because we meet government safety standards. That is, we also set some higher goals of our own—however incremental a difference they might make. When you're talking about human lives, the average just isn't enough.”



Good news for parents and other transporters of kids: All Saturn sedans and wagons come with child-security locks on the rear doors. Simply flip a switch, and there you go—your kids can't unlock or open the doors from the inside.



An anti-lock braking system is something you'd expect to find on an expensive vehicle. Well, you can also get optional anti-lock brakes on any Saturn. They help you maintain control when you need it most—in rain, snow, sleet, and emergencies.





Our optional power door locks now have an added security feature. Turn your key in the driver-side lock once clockwise, and you unlock only the driver's door. Turn it back, do it again, and you can unlock all the doors at once.



To be certain to meet government regulations, Saturn performs some crash tests at higher speeds than the government requires. That way we can account for variations that vehicle weight, materials, and optional equipment would cause in a crash test. We also test dummies sitting in positions in addition to those mandated, because, as we all know, different people sit differently.



Precisely why Ken's team enlisted the help of one four-foot eleven-inch, 112-pound female—the dummy you see sitting ninth from the left. Smaller than ninety-five percent of her peers, she helped Saturn engineers learn more about what happens to petite drivers in a collision.

Weighing in at a hearty 234 pounds and measuring a strapping six feet, the guy seventh from the left gave our engineers a good look at another part of the spectrum.

And then there's the forty-six-pound six-year-old sitting tenth from the left, who gave us the insight to build the seats of our cars with a special ramp to help combat a phenomenon called "submarining"—the tendency for children and even some adults to slide forward and under their lap belts in certain types of accidents.

There's also the six-month-old on the end, who played a role in helping to protect the most fragile member of the family.

Now, about that faceless fellow sitting third from the left. He gave up his face for frangible foam—foam designed specifically to help measure the forces placed on the face in an accident.

The fellow sitting next to him sports sensors in his chest. He's designed to help us evaluate the dynamic forces placed on the chest and the compression of the rib cage by the seatbelt in a collision.

For all the various roles they take on, the Saturn dummies below do share one common trait—they're Hybrid III's (except the three kids at the far right). Saturn uses Hybrid III dummies in most developmental testing, because a Hybrid III is more biofidelic than the earlier Hybrid II—that is, much more humanlike, and far more likely to respond to forces as you would in an accident.

And that's the point, isn't it? The better we can help protect the family below, the better we can help protect you and yours.



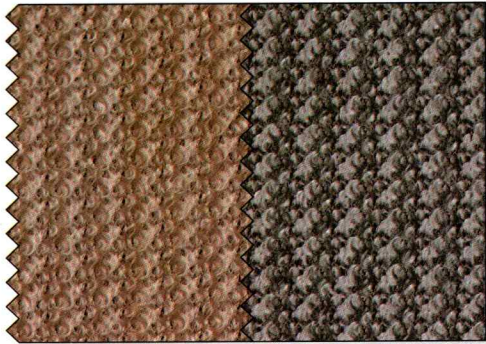
Every Saturn has "crumple zones," areas specially designed to crumple upon impact, thereby helping to absorb and dissipate the force of front or rear-end crashes before that force reaches the passenger compartment.



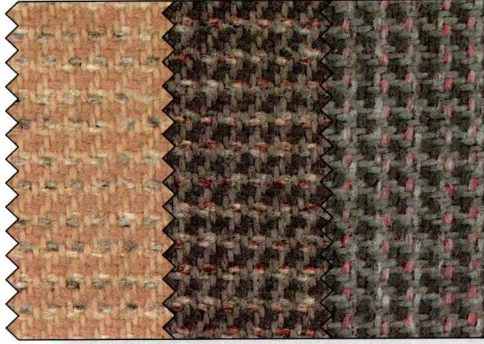
In case you didn't already know, driver-side airbags are standard on all new Saturn cars.

COLORS

INTERIOR TRIM



SL & SC1



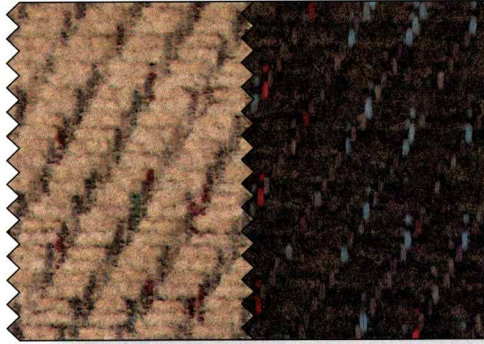
SL1



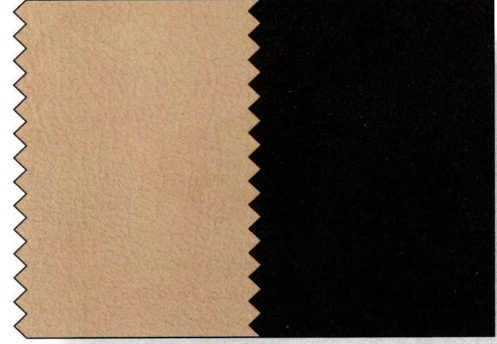
SW1



SL2 & SW2



SC2



SC2, SL2 & SW2

EXTERIOR PAINT



COLOR COMBINATIONS



SL

Exterior	Standard Cloth
Blue	Grey
Gold	Tan
Grey	Grey
Medium Red	Grey or Tan
White	Grey



SL1

Exterior	Standard Cloth
Blue	Blue
Blue Green	Grey or Tan
Gold	Tan
Grey	Grey
Medium Red	Grey or Tan
Plum	Grey or Tan
White	Blue or Grey



SL2

Exterior	Standard Cloth	Optional Leather
Blue	Blue	Not Available
Blue Black	Blue, Grey or Tan	Tan
Gold	Tan	Tan
Blue Green	Grey or Tan	Tan
Medium Red	Grey or Tan	Tan
Plum	Grey or Tan	Tan
White	Grey or Tan	Tan



SW1

Exterior	Standard Cloth
Blue	Blue
Blue Green	Grey or Tan
Gold	Tan
Medium Red	Grey or Tan
Plum	Grey or Tan
White	Blue or Grey



SC1

Exterior	Standard Cloth
Aquamarine	Grey
Blue Black	Grey
Blue Green	Tan
Gold	Tan
Medium Red	Grey or Tan
Plum	Grey or Tan
White	Grey or Tan



SC2

Exterior	Stripe	Standard Cloth	Optional Leather
Aquamarine	Silver	Black	Black
Blue Black	Gold	Black or Tan	Black or Tan
Blue Green	Gold	Black or Tan	Black or Tan
Gold	Black	Tan	Tan
Plum	Gold	Black or Tan	Black or Tan
Red	Gold	Black or Tan	Black or Tan
White	Gold	Tan	Tan

SW2

Exterior	Standard Cloth	Optional Leather
Blue	Blue	Not Available
Blue Black	Blue, Grey or Tan	Tan
Gold	Tan	Tan
Blue Green	Grey or Tan	Tan
Medium Red	Grey or Tan	Tan
Plum	Grey or Tan	Tan
White	Grey or Tan	Tan



SPECIFICATIONS

TECHNICAL FEATURES

	Sedans			Wagons		Coupes	
	SL	SL1	SL2	SW1	SW2	SC1	SC2
1.9-litre, SOHC, 8-valve inline 4-cylinder engine	■	■	●	■	●	■	●
1.9-litre, DOHC, 16-valve inline 4-cylinder engine	●	●	■	●	■	●	■
5-speed manual transmission	■	■	■	■	■	■	■
Electronically controlled 4-speed automatic transmission with lockup torque converter and driver-selectable performance/normal shift mode switch	●	◆	◆	◆	◆	◆	◆
Manual rack-and-pinion steering	■	●	●	●	●	●	●
Variable-effort power steering (vehicle speed sensitive, rack-and-pinion)	●	■	■	■	■	■	■
Power-assisted ventilated front disc/rear drum brakes	■	■	■	■	■	■	■
Sport-tuned suspension system with front and rear stabilizer bars	●	●	■	●	■	●	■

INSTRUMENTATION

Standard Analog – 180 kph. speedometer, 7000-rpm tachometer, trip odometer, fuel gauge and engine coolant temperature gauge	■	■	●	■	●	■	●
Performances Analog – 210 kph. speedometer, 8000-rpm tachometer, trip odometer, fuel gauge and engine coolant temperature gauge	●	●	■	●	■	●	■

EXTERIOR FEATURES

Dent/corrosion-resistant polymer bodyside panels	■	■	■	■	■	■	■
Black bumper fascias	■	■	●	■	●	●	●
Colour-keyed bumper fascias	●	●	■	●	■	■	■
Tinted glass	■	■	■	■	■	■	■
Halogen headlamps (retractable SC2 only)	■	■	■	■	■	■	■
Driver-side black mirror (manual)	■	■	■	■	■	■	●
Passenger-side black mirror (manual)	▲	■	■	■	■	■	●
Dual colour-keyed mirrors (manual)	●	●	●	●	●	●	■
Full wheel covers	■	■	■	■	■	■	●
Trunklid reflex panel	●	●	■	●	●	●	●
Foglamps	●	●	★	●	★	●	●
Rear spoiler	●	●	★	●	●	●	★
15-inch alloy wheels (teardrop)	●	●	●	●	●	●	■

COMFORT AND CONVENIENCE

Adjustable steering column	■	■	■	■	■	■	■
Remote hood, fuel-filler door and trunklid/liftgate door releases	■	■	■	■	■	■	■
Rear window defogger	■	■	■	■	■	■	■
Front intermittent wipers with 3 variable-speed settings	■	■	■	■	■	■	■
Rear wiper/washer system	●	●	●	■	■	●	●
Heat/ventilation system with 4-speed fan	■	■	■	■	■	■	■
Rear seat footwell vents	■	■	■	■	■	■	■
Warning chimes for headlights-on and key-in ignition	■	■	■	■	■	■	■
Full-length front console with storage and ashtrays	■	■	■	■	■	■	■
Rear seat console with cupholders and storage	●	●	●	●	●	■	■
Centre front console armrest with cupholder and storage	▲	▲	▲	▲	▲	▲	▲
Glove compartment	■	■	■	■	■	■	■
Front door storage pockets	■	■	■	■	■	■	■
Front passenger-side seatback storage pockets	●	●	■	●	■	●	■
Coat hooks and passenger assist grips	■	■	■	■	■	■	■
Cargo area light	■	■	■	■	■	■	■
Cargo area convenience net	▲	▲	▲	■	■	▲	▲
3-way dome light (including delayed shut-off feature on SL2, SW2 and SC2)	■	■	■	■	■	■	■
Driver-side visor vanity mirror	▲	▲	▲	▲	▲	▲	▲
Passenger-side visor vanity mirror	■	■	■	■	■	■	■
Cruise control	●	★	★	★	★	★	★

INTERIOR/SEAT TRIM

	Sedans			Wagons		Coupes	
	SL	SL1	SL2	SW1	SW2	SC1	SC2
Reclining front bucket seat with adjustable headrests	■	■	■	■	■	■	■
Driver seat with adjustable lumbar support and cushion height	●	●	■	●	■	●	■
60/40 split fold-down rear seatbacks	■	■	■	■	■	■	■
Cloth/vinyl seat upholstery	■	●	●	■	●	■	●
Full cloth seat upholstery	●	■	■	●	■	●	■
Cut-pile passenger compartment carpet	■	■	■	■	■	■	■
Cargo area carpet	■	■	■	■	■	■	■
Leather-wrapped steering wheel	●	●	●	●	●	●	■

SAFETY FEATURES

Driver-side airbag (supplemental inflatable restraint)	■	■	■	■	■	■	■
Anti-lock Braking System (ABS) includes 4-wheel disc brakes	◆	◆	◆	◆	◆	◆	◆
Traction Control (available with Anti-lock Braking System and automatic transmission only)	●	◆	◆	◆	◆	◆	◆
Two-point power door locks (unlocks either driver-side door or all doors)	●	★	★	★	★	★	★
Child-security rear door locks	■	■	■	■	■	●	●

AUDIO SYSTEMS

AM/FM stereo with digital clock and four speakers	■	●	●	●	●	●	●
AM/FM stereo with cassette, digital clock and four speakers	●	■	■	■	■	■	■
AM/FM stereo with compact disc player, graphic equalizer, digital clock and four speakers (coaxial front/extended range rear on factory installations)	●	●	◆	●	◆	◆	◆
Coaxial front/extended range rear speakers	●	●	■	●	■	★	■

OPTIONAL EQUIPMENT

Air conditioning with "CFC-free" refrigerant	◆	◆	◆	◆	◆	◆	◆
Leather Appointments – include leather seating areas, leather-wrapped parking brake grip, gearshift knob and steering wheel. (Requires air conditioning, cruise control, power door locks, power windows and power passenger-side mirror)	●	●	◆	●	◆	●	◆
Power sunroof with tilt-up feature, inner sliding shade and dual map lights	●	◆	◆	●	●	◆	◆
15-inch alloy wheels (sawtooth) (SC1 also includes 195/60R15 87T FTX02 touring tires)	●	●	◆	●	◆	◆	●

PACKAGES

SL – Option package not available.

SL1/SL2/SW1/SW2 – Cruise control, power passenger-side mirror, power locks and power windows are available as a factory option package.

SL2 – Package also available which includes foglamps, spoiler, and alloy wheels in addition to cruise control, power passenger-side mirror, power locks and power windows.

SW2 – Package also available which includes foglamps, and alloy wheels in addition to cruise control, power passenger-side mirror, power locks and power windows.

SC1 – Cruise control, power passenger-side mirror, power locks, power windows, and coaxial front/extended range rear speakers are available as a factory option package.

SC1 – Package also available which includes foglamps and spoiler in addition to cruise control, power passenger-side mirror, power locks, power windows, and coaxial front/extended range rear speakers.

SC2 – Package available which includes cruise control, power passenger-side mirror, power locks, power windows and spoiler.

KEY

■ Standard Equipment ◆ Factory Installed Option ● Not Available
▲ Retailer Installed Accessory ★ Included in Factory Option Package

ENGINE AND ELECTRICAL

Availability	SL/SL1/SW1/SC1	SL2/SW2/SC2
Engine Type	1.9-litre, SOHC, 8-valve inline 4-cylinder	1.9-litre, DOHC, 16-valve inline 4-cylinder
Displacement	1901cc (116 cu. in.)	1901cc (116 cu. in.)
Horsepower (SAE Net)	85 hp @ 5000 rpm	124 hp @ 5600 rpm
Torque (SAE Net)	107 ft. lbs. @ 2400 rpm	122 ft. lbs. @ 4800 rpm 118 ft. lbs. @ 2400 rpm
Redline	5600 rpm	6500 rpm
Bore & Stroke	82 mm x 90 mm (3.23 in. x 3.54 in.)	82 mm x 90 mm (3.23 in. x 3.54 in.)
Compression Ratio	9.3:1	9.5:1
Fuel System	Fuel injection	Multi-port fuel injection
Valve Train	2 valves per cylinder, chain-driven	4 valves per cylinder, chain-driven
Engine Block	Aluminum alloy with cast-iron cylinder liners	Aluminum alloy with cast-iron cylinder liners
Cylinder Head	Aluminum alloy	Alluminum alloy
Emission System	3-way catalyst	3-way catalyst
Ignition System	Distributorless electronic	Distributorless electronic
Alternator	12-volt, 85-amp	12-volt, 85-amp
Battery	12-volt, 525 cold cranking amps	12-volt, 525 cold cranking amps
Recommended Fuel	87 octane unleaded regular	87 octane unleaded regular

BODY / SUSPENSION / CHASSIS

Body Type	Steel spaceframe
Exterior Panels	Polymer vertical bodyside panels and bumper fascias; galvanized steel hood (All); steel roof and trunklid (Sedans/Coupes); polymer roof and rear liftgate (Wagons)
Bumpers	8-kph (5-mph) front and rear
Front Suspension	Independent MacPherson strut lateral link and tension strut/stabilizer bar
Rear Suspension	Independent tri-link with strut/spring module
Steering Type	Manual rack-and-pinion (SL); variable-effort power steering (vehicle speed sensitive, rack-and-pinion) (SL1/SL2/SW1/SW2/SC1/SC2)
Steering Ratio	24.4:1 (SL); 18.3:1 (SL1/SW1); 16.3:1 (SL2/SW2/SC1/SC2)
Steering Wheel Turns, lock-to-lock	4.0 (SL); 3.0 (SL1/SW1); 2.67 (SL2/SW2/SC1/SC2)
Turning Circles, curb-to-curb	11.3 m (37.1 ft.) (SL/SL1/SL2/SW1/SW2); 11.1 m (36.1 ft.) (SC1/SC2)
Braking System	Dual-diagonal, power-assisted front disc/rear drum
Front Disc	Ventilated, 250.5 mm (9.86 in.) diameter
Rear Drum	200 mm (7.87 in.) diameter
Wheels	14" forged steel with full covers (SL/SL1/SW1/SC1) 15" forged steel with full covers (SL2/SW2) 15" alloy (teardrop) wheels (SC2)
Tires, Steel-Belted Radial	P175/70R 14 84S Firestone all-season (SL/SL1/SW1/SC1) P195/60R 15 87T Firestone Firehawk FTX02 touring (SL2/SW2)* P195/60R 15 87H Firestone Firehawk GTA performance (SC2)* T115/70R 14 88M compact spare <i>*Tire chains may not be used with P195/60R15 tires.</i>
Exhaust System	Full stainless steel

DRIVETRAIN

Type: Transverse front-engine/front-wheel drive with equal length halfshafts

Transmissions	Manual		Optional Automatic	
	SL/SL1/SC1/SW1	SL2/SC2/SW2	SL1/SC1/SW1	SL2/SC2/SW2
Gear ratio (:1)				
1st	3.250	3.250	2.526	2.526
2nd	1.809	2.055	1.266	1.556
3rd	1.207	1.423	0.811	1.030
4th	0.861	1.032	0.595	0.700
5th	0.643	0.730	—	—
Final Drive	4.060	4.060	4.133	4.133

CAPACITIES / VOLUMES

Engine Coolant	6.7 litres (7.0 quarts)		
Engine Oil	3.8 litres (4.0 quarts)		
Fuel Tank	48.5 litres (12.8 gallons)		
	SL/SL1/SL2	SW1/SW2	SC1/SC2
Passenger Volume*	2511 L (88.7 cu. ft.)	2551.3 L (90.1 cu. ft.)	2163.4 L (76.4 cu. ft.)
Cargo Volume*	337 L (11.9 cu. ft.)	817 L (28.8 cu. ft.) (rear seats up) 1595 L (56.3 cu. ft.) (rear seats down)	308.7 L (10.9 cu. ft.)
<i>*Transport Canada Estimated</i>			

BASE CURB WEIGHT WITH OPTIONAL AIR CONDITIONING

Manual Transmission		Optional Automatic Transmission	
SL/SL1	1049.7 kg (2314.2 lb)	SL1	1065.5 kg (2349.0 lb)
SL2	1091.1 kg (2405.4 lb)	SL2	1104.1 kg (2334.1 lb)
SW1	1071.5 kg (2362.2 lb)	SW1	1087.4 kg (2397.3 lb)
SW2	1110.2 kg (2447.5 lb)	SW2	1123.2 kg (2476.2 lb)
SC1	1034.1 kg (2279.8 lb)	SC1	1049.9 kg (2314.6 lb)
SC2	1077.6 kg (2375.7 lb)	SC2	1090.6 kg (2404.3 lb)

EXTERIOR DIMENSIONS / AERODYNAMICS

	SL/SL1/SL2	SW1/SW2	SC1/SC2
Wheelbase	260.1 cm (102.4 in.)	260.1 cm (102.4 in.)	252.0 cm (99.2 in.)
Overall Length	447.8 cm (176.3 in.)	447.8 cm (176.3 in.)	440.0 cm (173.2 in.) – SC1 446.5 cm (175.8 in.) – SC2
Overall Width	171.8 cm (67.6 in.)	171.8 cm (67.6 in.)	171.6 cm (67.5 in.)
Overall Height	133.4 cm (52.5 in.)	136.4 cm (53.7 in.)	128.6 cm (50.6 in.)
Track, front	144.3 cm (56.8 in.)	144.3 cm (56.8 in.)	144.3 cm (56.8 in.)
Track, rear	142.2 cm (56.0 in.)	142.2 cm (56.0 in.)	142.2 cm (56.0 in.)
Coefficient of Drag (cd)	.325 – SL .331 – SL1 .345 – SL2	.335 – SW1 .345 – SW2	.311 – SC1 .325 – SC2
Ground Clearance	14.5 cm (5.7 in.)	14.5 cm (5.7 in.)	14.2 cm (5.6 in.)

INTERIOR DIMENSIONS

	SL/SL1/SL2	SW1/SW2	SC1/SC2
<i>Front</i>			
Head Room	97.9 cm (38.5 in.)	98.5 cm (38.8 in.)	95.2 cm (37.5 in.) – SC1 88.8 cm (35.0 in.) – SC2
Leg Room	108.0 cm (42.5 in.)	108.0 cm (42.5 in.)	108.1 cm (42.6 in.)
Shoulder Room	137.9 cm (54.3 in.)	137.9 cm (54.3 in.)	136.4 cm (53.7 in.)
Hip Room	131.2 cm (51.7 in.)	131.2 cm (51.7 in.)	130.4 cm (51.3 in.)
<i>Rear</i>			
Head Room	92.3 cm (36.3 in.)	95.0 cm (37.4 in.)	89.1 cm (35.1 in.)
Leg Room	82.7 cm (32.6 in.)	82.7 cm (32.6 in.)	67.2 cm (26.5 in.)
Shoulder Room	137.9 cm (54.3 in.)	137.9 cm (54.3 in.)	130.4 cm (51.3 in.)
Hip Room	128.9 cm (50.7 in.)	128.9 cm (50.7 in.)	125.1 cm (49.2 in.)

ESTIMATED MILEAGE (CITY / HIGHWAY)

Estimated L/100 km	SL/SL1/SC1	SW1	SL2/SC2/SW2
Manual Transmission	8.7/5.8	8.7/5.8	9.9/6.4
Automatic Transmission	9.2/6.1	9.3/6.2	10.1/6.7

A WORD ABOUT THE SATURN OWNER PROTECTION PLAN

Moneyback Guarantee: Within the first 30 days or 2,500 km of delivery, whichever comes first, the original purchaser may return their 1994 Saturn vehicle – for any reason – if not completely satisfied. In the event that an owner of a new Saturn returns their car, they may select another one or ask for a full refund of the purchase price. Program provisions are detailed in our 1994 Owner Protection Plan Brochure.

Saturn Warranty: Our New Car Limited Warranty covers virtually everything on the vehicle from the front bumper to the rear for the *first 3 years or 60,000 km*, whichever comes first. (Except for the tires, which are covered separately by Firestone.) There are no deductibles, and the warranty covers the cost of any repairs to correct any vehicle defect related to materials or workmanship during the warranty period. Maintenance and wear items are covered up to their first scheduled maintenance inspection or replacement period. In the event that the vehicle is sold, the balance of the warranty remains in effect for subsequent owners at no additional cost. If you want to know more about the Saturn New Car Limited Warranty, please refer to the warranty and owner assistance booklet inside the Owner's Handbook.

24-Hour Roadside Assistance: From the moment of purchase, throughout the term of the Saturn Limited Warranty, every Saturn owner is enrolled in Saturn's "24-Hour Roadside Assistance Program." If a problem is experienced, the owner can dial toll free 1-800-461-3434 and Saturn advisors will arrange towing service or other assistance that is needed. If the problem is due to a warranty-covered defect, Saturn will pay for the cost of the towing service. New Saturn owners receive an information package in the mail within a few weeks after vehicle delivery. This package describes the program and includes an ownership card.

Saturn Service Plan: For every Saturn owner there are different needs. That's why Saturn offers several Saturn Service Plan options to supplement an owner's warranty coverage: some covering the powertrain only, and others covering virtually the entire car. Together with the other Owner Protection Plan features, the Saturn Service Plan – fully backed by Saturn – offers greater convenience and added peace of mind. Coverage available up to *6 years or 160,000 km*, whichever comes first.

Owner Assistance: If Saturn owners need help, or perhaps just have questions about their car, they can call their retailer and ask for the Customer Assistance Liaison, who personally handles the requests. Or, Saturn owners can take advantage of a direct link to Saturn by calling the Saturn Assistance Centre at 1-800-263-1999.

See your Saturn retailer for more details about the Owner Protection Plan.

A WORD ABOUT SATURN SAFETY FEATURES

Occupant Protection: Driver-side airbag (supplemental inflatable restraint system) • Automatic shoulder/manual lap belt system for driver and right front passenger including visual and audible warning system • Manual lap/shoulder safety belts, outboard rear seat positions • Manual lap safety belts, centre rear positions (Sedans and Wagons only) • Energy-absorbing steering column • Energy-absorbing instrument panel • Interlocking door latches • Laminated windshield glass with urethane bonding • Side-guard door beams • Passenger-guard inside door lock handles • Head restraint, driver and front passenger (adjustable) • Breakway inside rearview mirror • Security door lock and door retention components • Child tether anchors.

Accident Avoidance: Side marker lamps and reflectors • Parking lamps that illuminate with headlamps • Four-way hazard warning flashers • Backup lamps • Centre high-mounted stop lamp • Directional signal control with lane change feature (turn signal lamp) • Windshield defroster, washer and multi-speed wipers • Inside manual day/night rearview mirror • Outside left rearview mirror (right mirror where applicable) • Brake system with dual master cylinder and warning light • Starter safety switch • Dual action hood latch • Low glare finish on inside windshield mouldings, wiper arms and blades • Illuminated heater and defroster controls • Tires with built-in tread wear indicators • Audible brake lining wear indicators, disc brakes • Daytime running lights.



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PAUL SADLON SATURN SAAB ISUZU
580 Bayfield Street, Barrie, Ontario L4M 5A3
(705) 722 6334

1994 SATURN PREFERRED EQUIPMENT GROUPS

SPORT WAGONS
=====

SW1 Sport Wagon
=====

Engine: 1.9L SOHC 85hp	Standard Vehicle Price
1SA: 5 Speed Manual - AM/FM cassette, dual outside mirrors	\$13,645.00
1SB: 4 Speed Automatic - AM/FM cassette, dual outside mirrors	14,545.00
1SC: 5 Speed Manual - AM/FM cassette, power RH mirror, cruise control, power locks, power windows	14,595.00
1SD: 4 Speed Automatic - AM/FM cassette, power RH mirror, cruise control, power locks, power windows	15,495.00

ADDITIONAL FACTORY-INSTALLED OPTIONS:

Air conditioning 1,090.00

Anti-lock braking system (ABS)

5 Speed manual transmission 825.00

4 Speed automatic transmission 915.00

ABS when supplied with automatic transmission includes Traction
Control as a standard feature.

A Destination Freight Charge of \$400.00, a \$48.00 Administration Fee,
applicable taxes and licensing are not included in the Standard
Vehicle Price.

Prices and specifications subject to change without notice.

01.10.1993

PAUL SADLON SATURN SAAB ISUZU
580 Bayfield Street, Barrie, Ontario L4M 5A3
(705) 722 6334

1994 SATURN PREFERRED EQUIPMENT GROUPS

SPORT WAGONS
=====

SW2 Sport Touring Wagon
=====

Engine: 1.9L DOHC 124hp

Standard
Vehicle Price

1SE: 5 Speed Manual - AM/FM cassette, dual outside mirrors, 15" steel wheels	\$15,485.00
1SF: 4 Speed Automatic - AM/FM cassette, dual outside mirrors, 15" steel wheels	16,385.00
1SG: 5 Speed Manual - AM/FM cassette, power RH mirror, 15" steel wheels, cruise control, power locks, power windows	16,435.00
1SH: 4 Speed Automatic - AM/FM cassette, power RH mirror, 15" steel wheels, cruise control, power locks, power windows	17,335.00
1SJ: 5 Speed Manual - AM/FM cassette, power RH mirror, 15" alloy wheels, cruise control, power locks, power windows, fog lamps	16,895.00
1SK: 4 Speed Automatic - AM/FM cassette, power RH mirror, 15" alloy wheels, cruise control, power locks, power windows, fog lamps	17,795.00

ADDITIONAL FACTORY-INSTALLED OPTIONS:

Air conditioning 1,090.00

Anti-lock braking system (ABS)

5 Speed manual transmission 825.00

4 Speed automatic transmission 915.00

ABS when supplied with automatic transmission includes Traction Control as a standard feature.

AM/FM radio with CD player and equalizer 400.00

Aluminium sawtooth wheels (1SE,1SF,1SG,1SH) 375.00

Leather seating and trim (only available in 1SG,1SH,1SJ,1SK and when air-conditioning has also been ordered) 800.00

A Destination Freight Charge of \$400.00, a \$48.00 Administration Fee, applicable taxes and licensing are not included in the Standard Vehicle Price.

Prices and specifications subject to change without notice.

01.10.1993