
S2000

Contents

A closer

look at

the S2000.

Power,

Grace

and Balance.

AMERICAN HONDA MOTOR COMPANY

Introduction

Truly a driver's car...

The S2000's designers. From left: Assistant Ryoji Tsukamoto, Executive Chief Engineers Nobutoshi Ohba and Shigeru Uehara, and Chief Engineer Yutaka Otobe.

The one ingredient that separates a great car from the good ones is synergy — bringing all the components together and making everything work as a system.

The Honda S2000 offers this elusive ingredient in a package that provides exhilarating performance at every level, making the driver feel as one with the vehicle. It seems to respond with more sensitivity than normally attributed to machines. You find yourself enjoying the driving experience a little more than usual. Put simply, you are in total control.

The primary design directive for the S2000 was to build a car that would make a driver feel "as one" with the vehicle. The car was to have precise response to driver input, and an interior inspired by contemporary Formula 1 cockpits. The drivetrain parameters pushed the envelope and drew heavily upon Honda's racing experience. The goals have been met, and in some cases exceeded, in the production vehicle.

The S2000 is based on the SSM concept car, first shown at the 1995 Tokyo Motor Show. This is an artist's rendering of the design. The production version of the S2000 closely reflects the original shape of the SSM concept car.

In the next section, we feature some of Honda's many racing highlights, because the S2000 has virtues that emulate the sophistication and agility of open-wheel race cars as seen in CART and Formula 1. For example, like racing cars, the S2000 has a near-perfect front/rear weight distribution, a trait that helps the car react more quickly to driver input.

The new Honda also has a low polar moment, which is to say the major masses in the car (the engine, transmission and passenger compartment) are grouped near the center of the vehicle, which contributes to the S2000's quick reflexes.

The 2.0 liter S2000 engine is a compact masterpiece of modern engine design. Generating 240 horsepower, it places this car in a small and exclusive fraternity of high-powered and lightweight sports cars. The engine's packaging permits it to be located well back in the chassis, helping achieve the car's ideal weight distribution. In a feat of technical wizardry atypical of sports cars, the S2000 is also certified as a Low-Emission Vehicle (LEV) under California's tough emission standards.

The chassis that forms the structure for the S2000 employs many advanced features, with a sophisticated suspension system and great structural strength. In fact, the S2000 roadster has the kind of handling refinement normally reserved for the world's best coupes.

Each of the car's individual components are engineered to complement the basic premise of a great sports car — performance well beyond the point of mere adequacy.

You'll find explanations of each of these technologies in this book. And you'll learn that the S2000 is Honda's interpretation of what a modern sports car should be — high-tech, high-powered and great fun to drive.

In the case of the S2000, beauty is more than skin deep. This cutaway illustrates how the engine is set behind the front axle centerline. The 2.0 liter VTEC™ engine and suspension details are also visible.

Honda's racing heritage

Lessons learned in competition...

Richie Ginther drove this car to Honda's first Grand Prix win. His victory took place at the 1965 Mexican GP. The car is powered by a 1.5 liter V-12, mounted laterally in the chassis.

From the very beginning, Honda has been keenly interested in racing competition. Soichiro Honda was a practical man, and believed the accelerated pace of racing development held great value in training the company's engineers. He applied a pragmatic approach as well to finding new talent — he was more concerned with a person's demonstrable skill than their educational credentials. This may explain Honda's penchant for novel, sometimes revolutionary approaches to product design.

This focus on functionality can be seen in all Honda vehicles and powered products. Mechanical efficiency, environmental consciousness, and cars that are fun to drive are each Honda signature traits. Incorporating many fresh revisions to accepted sports-car design conventions, the Honda S2000 is engineered to deliver near-race-car performance with the dependability owners appreciate and expect from a Honda.

Someone once quipped that "while some car companies go racing, Honda is a racing company that happens to build cars." There is much truth in that statement. Honda, more frequently than one might expect, blurs the line between its racing ventures and its passenger-car business. Honda cars are a pleasure to own and drive because they are engineered and manufactured by enthusiasts, for enthusiasts.

In 1964, Honda entered international Formula 1 competition. One year later, driver Richie Ginther captured Honda's first win at the 1965 Mexican Grand Prix, in a car powered by a novel, laterally mounted V-12 engine displacing 1.5 liters. Not surprisingly, the engine and transmission resembled scaled-up motorcycle components. The next year, competing in the fiercely contested European Formula 2 circuit, Honda-powered cars scored 11 straight wins — a record that stood for decades.

Top: Grand Prix car powered by lateral-mount Honda V-12 (circa 1965). Center: Williams-Honda Formula 1 car (circa 1997). Bottom: McLaren-Honda Formula 1 car (circa 1988).

One of Honda's first sports cars, the S600, featured enclosed chain drives to power each rear wheel. Novel and very effective, the unusual approach signalled Honda's innovative perspective on technology.

Honda withdrew from Formula 1 in the early seventies to attend to its rapidly growing car business, but re-entered the series in 1983. Beginning with the 1986 season, Honda won 60 Grand Prix and six consecutive Constructor's Championships before again withdrawing from Formula 1 prior to the 1992 season.

In 1994, Honda began work on a new engine to compete in Indy-style racing. The result was a turbocharged, methanol-burning 2.65 liter V-8, making more than 750 horsepower. At Louden, New Hampshire the following year, Andre Ribiero posted the first CART win for the Honda engine, which powered his Reynard chassis. It was the beginning of a long list of wins for the powerplants, which are assembled and maintained at a Honda facility in Santa Clarita, California.

During the 1996 CART season, Honda engines finished first in 11 of the 16 races held. Ganassi team driver Jimmy Vasser was responsible for four of those postings, and he won the driver's championship for the year. His 1996 season teammate and Rookie of the Year Alex Zanardi would become the 1997 driver's champion, followed in the standings by Gil de Ferran and Vasser in second and third place.

The Honda juggernaut gained momentum in 1998, with 13 victories in 19 attempts, and Alex Zanardi capturing his second PPG Cup as the driver's champion. Honda was named Manufacturer's Champion for the second time in three years. Zanardi moved to Formula 1 for the 1999 season, replaced on the Ganassi payroll by former Formula 3000 champ Juan Montoya.

Honda's racing background hasn't been limited simply to on-track experience. The company also owns two of the world's premier racing facilities: Suzuka Circuit, which has played host to Formula 1 races, and Twin Ring Motegi, opened in 1997, which includes a two-mile oval track and an infield road-racing circuit. The course at Motegi hosts an annual CART race, and is used for testing and world-class motor racing competition.

The return on Honda's investment in racing can be seen in the cars it builds. With a direct application of racing technology, the S2000 sets new standards.

1962

One of Honda's first cars, the S600 features novel and efficient chain drive to each rear wheel.

1965

Richie Ginther wins the Mexican Grand Prix in a car powered by a 1.5 liter Honda V-12. The win marks the first Honda victory in Formula 1.

1983

Honda resumes racing activity after dedicating several years solely to production vehicle improvements.

1988

Formula 1 phenom Ayrton Senna drives a Honda-powered McLaren to victory in 15 of 16 races held.

1982

After acquiring 71 F-1 wins, five Driver's titles and six Constructor's Championships, Honda shifts to CART/USAC Indy Racing.

1985

Driving a Reynard chassis, Andre Ribeiro scores the first Honda-powered CART victory at the oval in Loudon, New Hampshire.

1986

Cars powered by the turbocharged Honda V-8 begin dominance in CART/PPG Cup competition that continues today.

1999

Honda unveils the 240-horsepower, six-speed S2000 roadster, a modern interpretation of what a sports car should be.

Juan Montoya, driving the Target/Chip Ganassi Racing entry in CART PPG Cup competition. The car is powered by the latest generation turbocharged Honda V-8, making a reputed 900 horsepower.

S2000 Engine

Highest specific output of any production engine...

The S2000 comes by its sophistication honestly. Current CART FedEx Championship engines built by Honda are turbocharged V-8s rated at nearly 900 horsepower.

Honda's S2000 engine, a DOHC VTEC™ design, incorporates technologies important for weight and size reduction and for the highest performance available from an engine. The engine is extremely compact, allowing its placement well back in the chassis to help establish the car's near-perfect 49/51 (front/rear) weight distribution.

Total package weight for the engine is a scant 326 pounds. To put this in perspective, the S2000 engine produces 0.73 horsepower per pound, while the Prelude SH 4-cylinder engine, which displaces 2.2 liters and produces 200 horsepower, weighs about 360 pounds and produces 0.56 horsepower per pound.

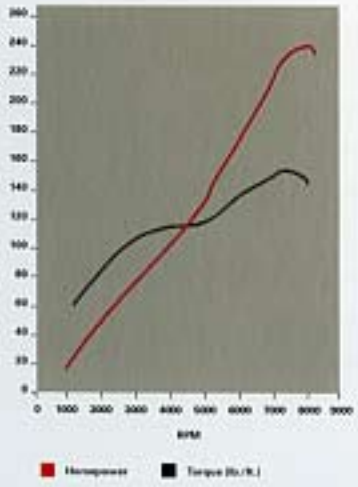
Honda engines are, as a norm, efficient. Powerful and responsive, they are also among the cleanest in terms of emissions. More than 80% of all Honda vehicles (sold in the U.S.) meet or exceed Low-Emission Vehicle (LEV) standards, the result of a concentrated and determined effort at Honda to build internal combustion engines that do not damage the environment.

Despite its compact size, the 2.0 liter, 4-cylinder S2000 engine produces 240 horsepower, or 120 horsepower per liter — more than any other normally aspirated automobile engine on the market. Even with its ample output, the engine meets California's strict LEV standards, thanks to Honda's Programmed Fuel Injection (PGM-FI), direct ignition system and well-developed basic design.

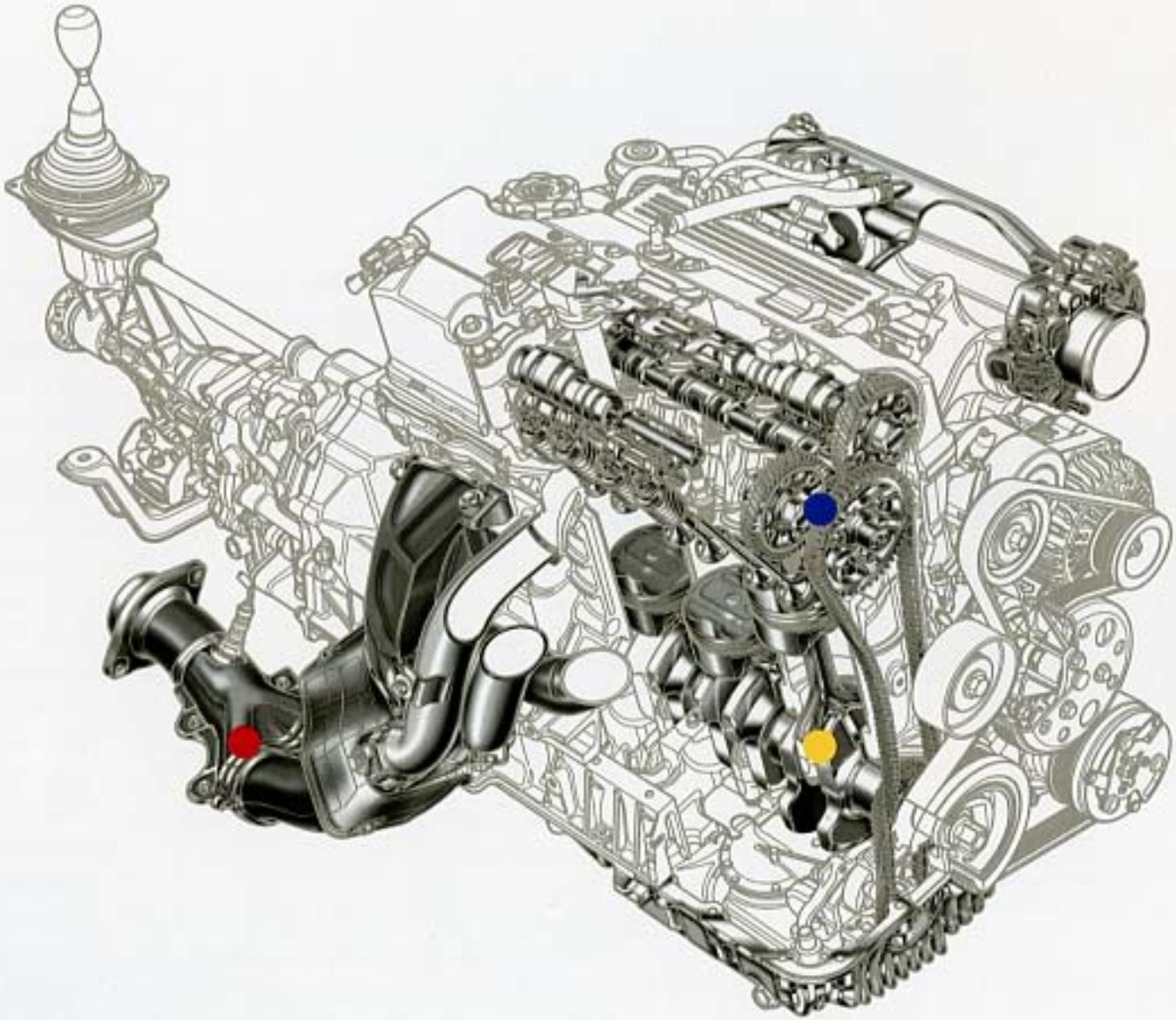
Engine highlights include:

- Reinforced aluminum block with ladder-style bearing support and fiber-reinforced cylinders for reduced friction and extended wear characteristics
- Forged-steel connecting rods and crankshaft to meet the grueling demands of high-speed operation
- Forged aluminum pistons with ultra-short skirts and reduced compression height, which reduce friction and rod angularity for increased engine output
- Honda VTEC engine technology for extended power range and performance at all engine rpm
- Compact scissors gear and chain camshaft drive mechanism
- Honda's sequential, Multi-Point Programmed Fuel Injection (PGM-FI) for increased power and fuel efficiency
- Direct ignition system (one coil for each spark plug)
- Certification as a Low-Emission Vehicle (LEV) under California's tough standards

ENGINE PERFORMANCE



The engine's power curve peaks at a very high 8300 rpm. The characteristic double rise in the torque curve indicates the valve timing change brought on by the VTEC system.



- *Tubular stainless steel exhaust manifold*
- *Forged steel crankshaft and connecting rods*
- *Narrow chain/gear camshaft drive system*

Forged aluminum pistons are designed to minimize friction and to handle the engine's high-rpm output. The connecting rods and crankshaft are forged steel.

S2000 Engine Designed for High-RPM Use

The basic structure of the S2000 engine resembles a contemporary racing engine in several ways. One of these features is visible in the lower end of the block, where a large ladder-type support surrounds the crankshaft bearings, virtually eliminating block flex and bearing distortion under the strain of high-rpm operation.

The engine's crankshaft and connecting rods are forged and carbonized to give them greater strength and improved resistance to fatigue. These treated parts are preferred over typical cast parts because the forging process establishes a directional "grain" in the metal, providing very high strength with a minimum of weight. This makes forged parts particularly suited to high-rpm, high-stress environments.

The pistons in the S2000 engine are forged aluminum, with an unusually short skirt and compression height for a production part. The design is ideal for reducing friction and minimizing reciprocating mass, yielding higher engine output. The wrist pins are a lightweight design, again to reduce reciprocating weight. Internal engine parts will accelerate faster and absorb less engine power if they are light — a fact not lost on Honda's engineers, and a standard characteristic of racing engines.

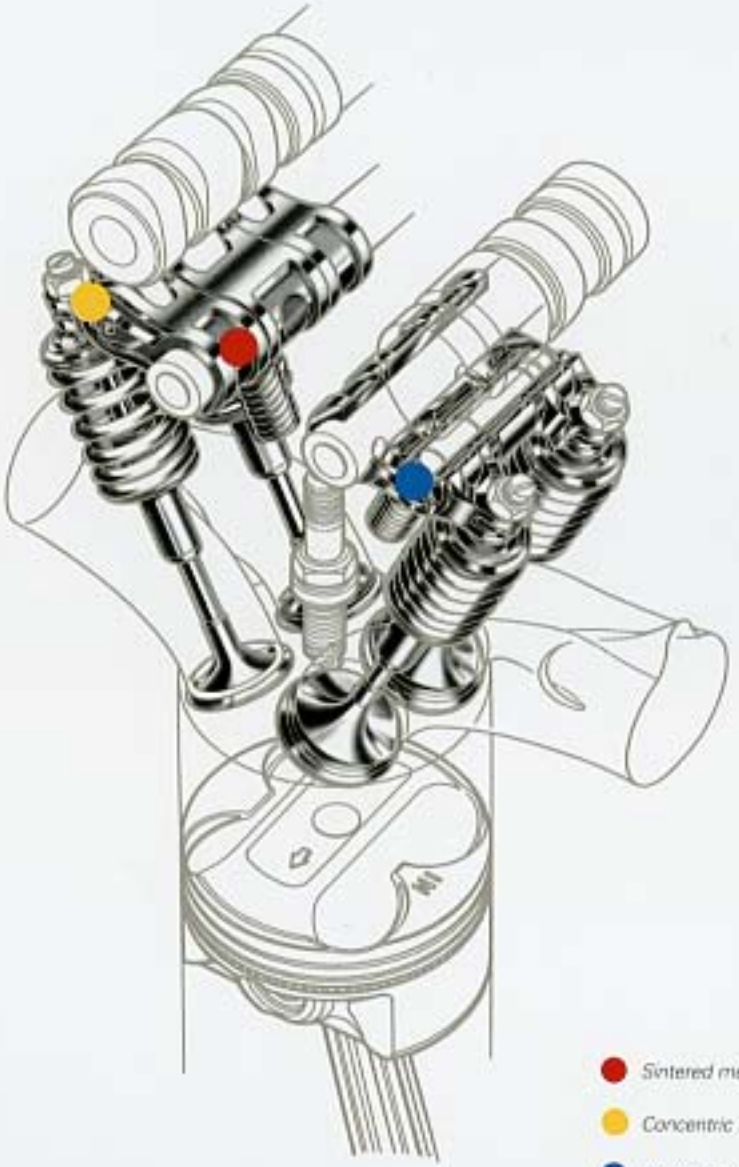
To maximize efficiency in the valvetrain, the S2000 engine incorporates special lightweight, sintered roller rockers beneath centrally located camshafts. The packaging of the valvetrain components is substantially more compact than typical DOHC designs.

Honda VTEC Engine Technology

Honda's Variable Valve Timing and Lift Electronic Control (VTEC) system provides the S2000 engine (and many others in Honda automobiles) with optimum valve timing at all engine speeds. To match engine requirements, the system provides optimal low lift and short duration at low rpm, and high lift and longer duration at high rpm.

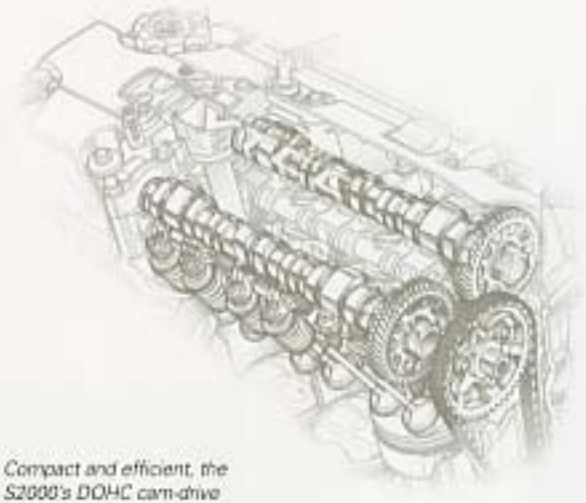
The technology, also found in the Accord, Civic Si, and Prelude, generates high-combustion chamber swirl for reduced emissions at low speed, while providing enough valve timing at high engine speeds for maximum performance. The variable valve timing and lift compensate for changes in the engine's ability to move air through the intake and exhaust tracts at varying speeds, providing the optimum valve timing throughout the operating range.

Honda's VTEC technology employs three cam followers for each pair of intake and exhaust valves on the engine. The third follower rides on a more aggressive cam lobe, which provides the added lift and duration for high-rpm operation. At a predetermined engine speed, VTEC operation is actuated electronically, employing a hydraulic spool valve and a lateral piston to lock the two intake (or exhaust) rockers to the third follower.



- Sintered metal camshaft rocker
- Concentric roller follower
- Sliding VTEC engagement pin

VTEC technology was developed first on the race track, and then employed on several Honda models. The S2000 is equipped with the latest version of the system.



Compact and efficient, the S2000's DOHC cam-drive system uses a silent primary chain, with automatic adjustment and an accurate, reliable geared secondary drive.

Special Engine Features

The drive system for the dual camshafts in this engine is noteworthy for its extremely compact size. Typical belt drive arrangements can account for as much as four inches of engine length. Honda's S2000 engine utilizes a very narrow chain and gear camshaft drive that is mechanically more efficient than a belt, reducing the space required by more than two inches.

Geared drives are widely used in racing engines because of their dependability and greater timing accuracy at high rpm. Each camshaft gear is a split (scissors) type, consisting of two concentric, spring-loaded gears, set at a slight angle from each other. When engaging the teeth of the idler gear, the spring-loaded split teeth of the cam gear take up any backlash, ensuring quieter operation.

Engine Electronics

Honda's sequential, electronic Programmed Fuel-Injection system (PGM-FI) is used on the S2000 engine. Sequential operation refers to injector actuation in the normal firing order of the engine. The precision of the S2000's fuel and spark mapping, combined with a high-flow and advanced-design catalytic converter, are contributing factors to the S2000's certification as a Low-Emission Vehicle (LEV) under California's tough standards.

A standard ignition distributor is replaced on the S2000 engine with a direct ignition system, with a coaxial coil mounted on each spark plug. Sensors mounted on each of the two camshafts work in concert with a third, crank position sensor to supply the engine computer with necessary timing information. The computer uses the information and input from other sensors to determine the optimum spark timing. This arrangement allows much more accurate spark timing than is available with a distributor and single-coil ignition.

Honda's VTEC technology allows the S2000 engine to provide torque over a wide range of engine speeds. The system alters valve timing and duration to suit engine conditions, allowing the engine to generate greater horsepower and torque.

S2000 Drivetrain

Low-mass, high-efficiency engineering...

Drivetrain Highlights Include:

- New 6-speed close-ratio manual transmission
- Extremely short shifter throw
- Torque-sensing limited-slip differential for improved road adhesion

Another mark of a great sports car is a refined drivetrain capable of getting the car's power to the ground efficiently. The S2000's clutch, transmission and differential are matched perfectly to the car's high engine output and refined handling characteristics. Honda has long been a leader in drivetrain technology for front-drive vehicles, and in refining the form, Honda has developed sophisticated transmission and engine technologies. Many of these lessons have been brought to bear in the S2000. An example is the geartrain layout in the S2000's new 6-speed manual transmission — its output stage is adapted directly from Honda's smooth- and quick-shifting front drive gearboxes.

To take advantage of the high output from the S2000 engine, a close-ratio 6-speed manual transmission was engineered from a clean sheet of paper at Honda. It features a pressurized lubrication system, one of the first applications of this technology to a production car. Advantages include longer transmission life, and smoother, easier shifting under all conditions. Given the intended use of the S2000, pressurized lubrication of the transmission is vitally important to ensure adequate oiling under high g-loads encountered in cornering.

This is the only car in the Honda product line that has rear-wheel drive; the other exception is an SUV — the Honda Passport. Honda's front-wheel-drive cars are proven performers in fuel efficiency, economy and driver satisfaction, but traditional sports cars tend to have more power for their weight than passenger cars. A powerful engine in a front-drive configuration places severe loads on the front tires — they are both steering and propelling the vehicle. The rear-drive layout offers advantages for high-powered cars in the division of work between front and rear wheels.

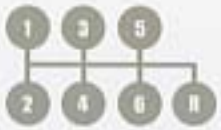
Honda engineers are no strangers to high-performance drivetrain design, and they developed the S2000 components to be low in inertia, mechanically opti-

mized to maximize efficiency, and technically advanced to complement the overall design goals for the car.

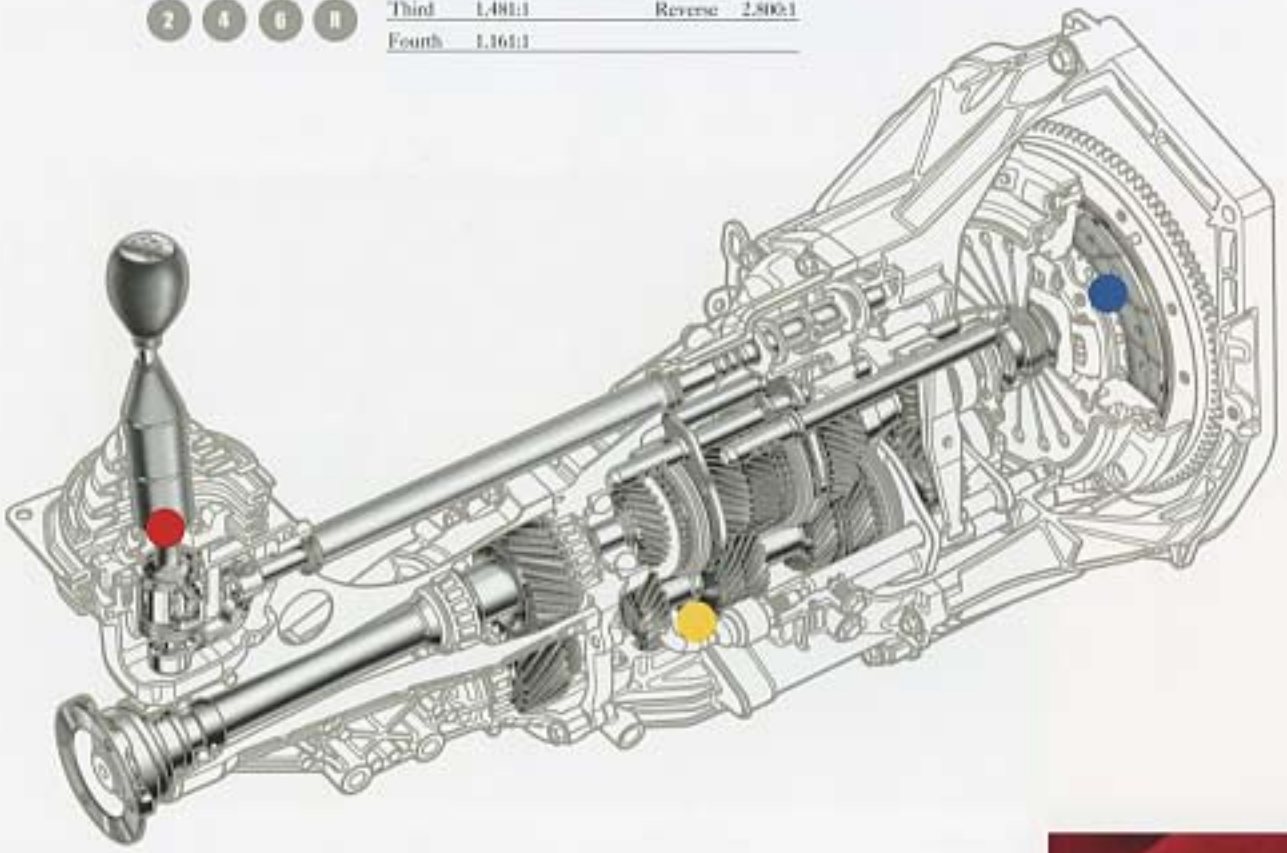
Six-Speed Close-Ratio Transmission

The S2000's all-new 6-speed manual transmission incorporates design elements taken both from racing and from Honda's considerable experience with production cars. It is designed to handle the considerable output of the S2000 engine, with durable materials suitable for the rigors of energetic driving.

Gear ratios for the S2000 have been carefully selected to take advantage of the engine's high-revving potential. Direct shift linkage and a very short throw result in a confident, carefully calibrated feel. Double-cone synchronizers on first, third and fourth gears, and triple-cone synchronizers on second gear and a separate lubrication pump add to transmission durability and smooth operation.



GEAR RATIOS			
First	3.133:1	Fifth	0.971:1
Second	2.045:1	Sixth	0.811:1
Third	1.481:1	Reverse	2.800:1
Fourth	1.161:1		



- *Precise, integral shifter mounting*
- *Transmission lubrication pump*
- *Pull-type clutch assembly*

An aluminum shifter handle operates with short, precise movement very much like a race car's.

In a driver's car, the quality of the controls is important. The S2000's clutch has been designed to have a light, precise action. And textured pedals improve grip.

High-Performance Clutch

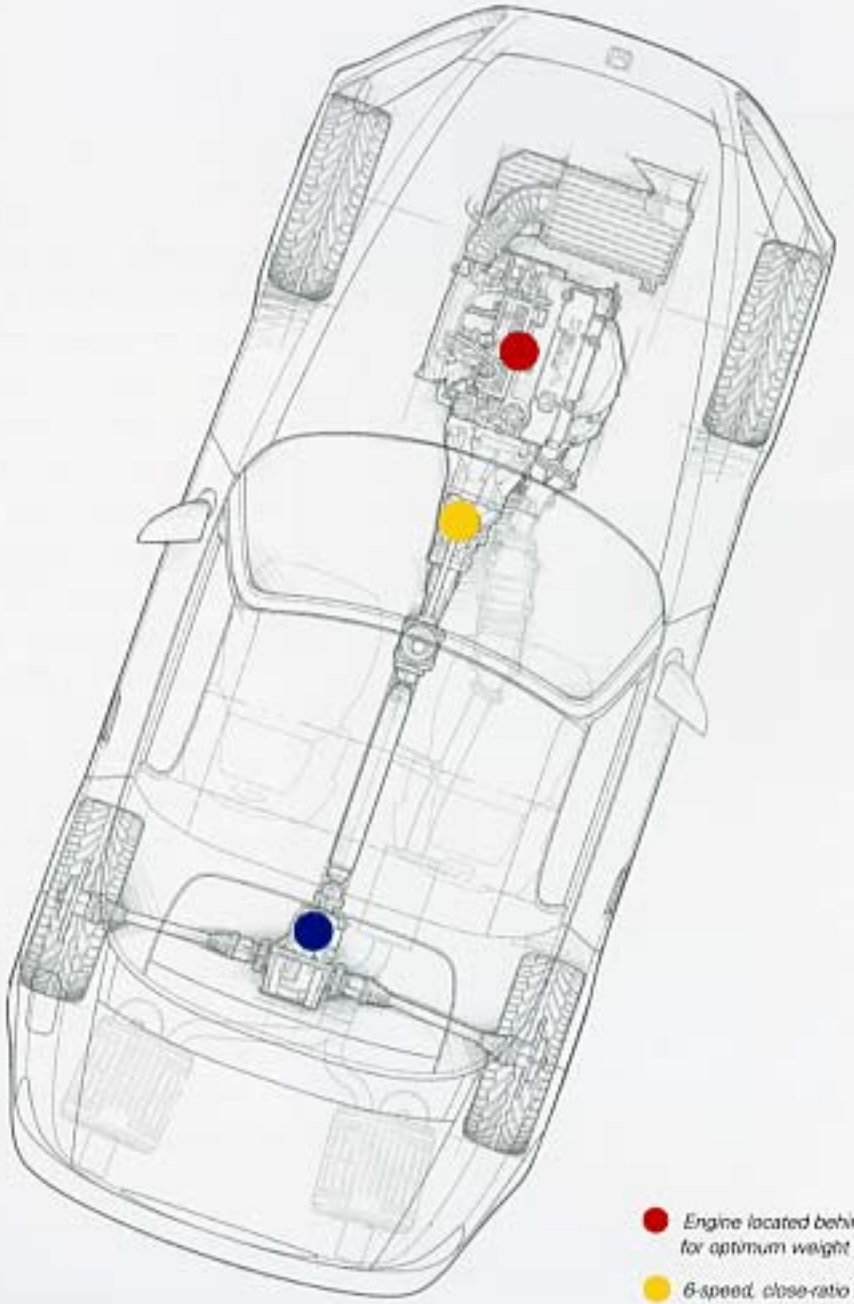
Drivetrain inefficiencies can steal a considerable amount of performance from any vehicle, and Honda's engineers worked hard to maximize the drivetrain efficiency of the S2000. One result of this effort can be found in the S2000 clutch. The flywheel, pressure plate and clutch disc are compact and lighter than usual, thanks to the use of high-grade materials and careful design. This high-performance clutch accelerates and decelerates with less engine effort, resulting in a greater net output at the rear wheels.

Torque-Sensing Limited-Slip Differential

Sports cars with a high power-to-weight ratio occasionally have trouble getting all the traction they need to convert that horsepower into forward motion. To this end, Honda has equipped the S2000 with a Torsen® limited-slip differential as the

centerpiece of its rear axle components. This differential is noted for its "intelligent" nature, automatically splitting torque evenly between the left and right rear wheels for maximum traction when needed, and changing modes in such a way that the driver never becomes aware of its actions. When one wheel loses traction due to water or ice, for example, the S2000's differential responds by temporarily "locking" the two rear axle shafts together, effectively transferring the power to both drive wheels evenly.

Under normal circumstances, there are slight speed differences at the wheels as a car negotiates a corner. The S2000 differential can sense any unusually large difference in the relative speed of the rear wheels and react instantly to compensate.



Engine located behind front axle for optimum weight distribution

6-speed, close-ratio manual transmission

Torque-sensing limited-slip differential

Chassis and Suspension Highlights

- Modern design blends high strength with light weight
- Double wishbone layout for optimum geometry and ride quality
- Sophisticated in-wheel suspension design derived from racing applications
- Large, powerful 4-wheel disc brakes
- Electric-assist power steering

S2000 Chassis and Suspension

Strength and balance...

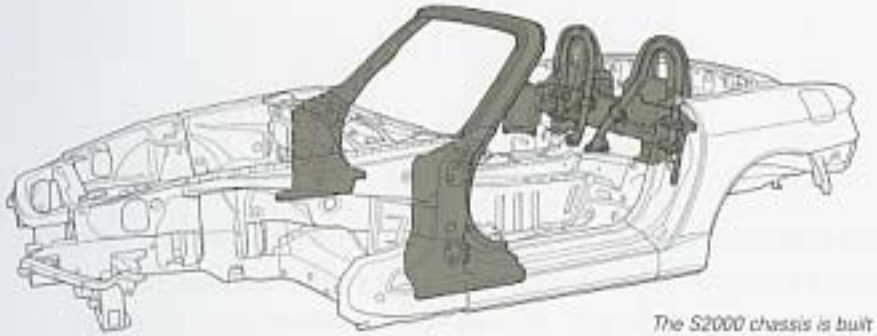
Without a solid foundation at their core, sports cars would behave more like normal passenger cars. The importance of a strong chassis with a minimum of weight cannot be overstated in modern sports-car design. This aspect of fundamental engineering is applied to every Honda automobile. Chassis strength is an absolute necessity for fine-tuning a car's road manners. In fact, chassis flexibility can negate the benefits of a proper selection of springs, shock absorbers and stabilizer bars, severely compromising ride and handling.

Also critical is a suspension system featuring weight reduced to the minimum required for strength and durability. "Suspension geometry" is a term often bandied about as an elusive but vital ingredient in any performance car. The geometry of suspension movement is built around one directive: optimizing contact between the road and the tires under all conditions. Most often, this describes a design that keeps the tires perpendicular to the road surface as the car negotiates bumps and turns. This seemingly simple parameter presents itself differently with each change in wheelbase and track, or weight and speed — it's a moving target.

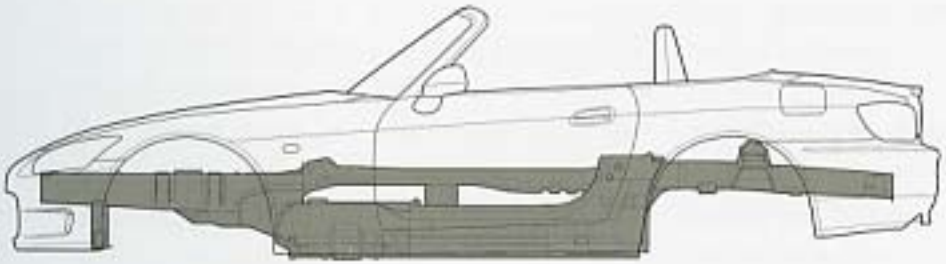
Honda's S2000 is equipped with a chassis and suspension system designed to provide unusually fine road feel and response to driver input. The majority of Honda automobiles share the S2000's double wishbone suspension layout, proven to produce superior handling and ride quality. The weight of these components has been optimized to work in concert.

Chassis Features

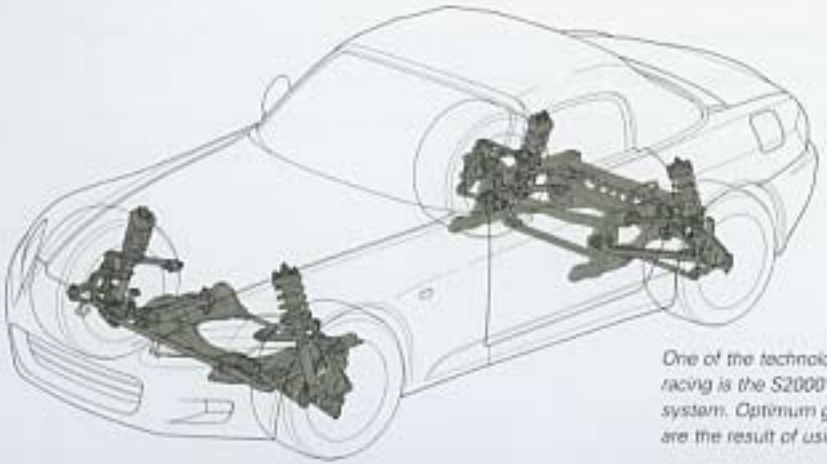
The chassis for the S2000 is a steel fabrication designed to provide the car with terrific strength and a minimum of weight. The car's chief designer, Shigeru Uehara, used a combination of acquired experience and assistance from supercomputers to optimize the S2000 chassis. Incidentally, Uehara was the project leader for the Acura NSX.



The S2000 chassis is built to help maintain structural integrity and driver safety in the event of a rollover. Windshield frame and roll bars are fully integrated chassis components.



The high X-bone chassis approach is a modified monocoque design, and provides the S2000 with incredible torsional and structural strength.

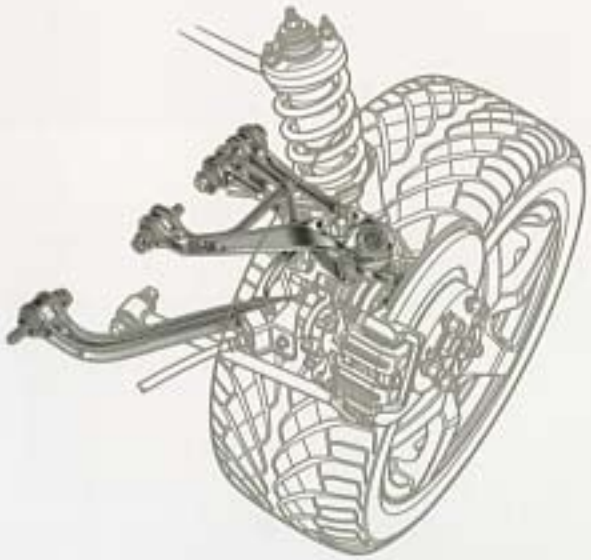


One of the technologies adapted from racing is the S2000's in-wheel suspension system. Optimum geometry and response are the result of using the system.

Providing the strength of some of the best closed-top cars, the S2000 chassis is a solid foundation for greatly improved handling.

- *Subframes welded to main chassis structure*
- *Side sections provide improved impact protection*
- *High X-bone chassis*

Refined handling is a mark of a great sports car. Suspension on the S2000 is directly derived from racing applications.



The S2000 features an in-wheel suspension very similar to a race car's. The system allows lighter components and optimized geometry.

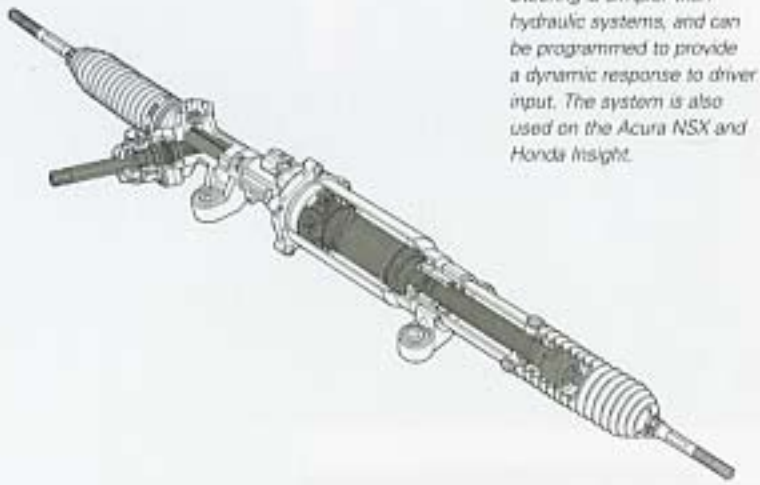
The resulting layout, called a high X-bone chassis, is remarkably rigid under the stress of high cornering loads — a quality not typically found in convertibles. Chassis strength of this kind (engineers call it torsional stiffness) invariably produces a vehicle with better potential for precision handling. This trait is found in every competitive race car — and the Honda S2000.

One of the marks of a great sports car is an ability to change direction quickly. To accomplish this with the S2000, Honda engineers located the heavier drivetrain components as close as possible to the center of the car. This gives the car what engineers call a low polar moment, which translates to a car turning quickly and precisely. Other benefits from this approach are better overall balance and improved braking stability. In fact, the S2000's near-ideal 49/51 weight distribution was achieved in part by its engine placement — behind the front wheels.

Suspension Features

The new S2000 is designed to be a true driver's car, blending high performance with responsive handling. One of the engineering goals set during the car's development was making the car feel "as one with the driver." To this end, the S2000 features a suspension derived from Honda's many years of racing experience.

The system is based on a so-called double wishbone arrangement, with upper and lower control arms for each of the four wheels. The design provides very good geometry to keep the tire in contact with the road, and also offers superb ride qualities. Double wishbone suspension systems are used on all Honda automobiles, including Accord, Prelude, and Civic, and shared by virtually every race-car design.



Honda's Electric Power Steering is simpler than hydraulic systems, and can be programmed to provide a dynamic response to driver input. The system is also used on the Acura NSX and Honda Insight.

In-Wheel Suspension System

The S2000 features an adaptation of the double wishbone layout called in-wheel suspension, an aspect of the car directly evolved from racing applications. This design emulates contemporary open-wheeled race car suspension, with double wishbones and the ball joints placed almost directly over the center of the tire patch. Of the many advantages found in this arrangement, perhaps the most significant is a minimum of weight and bulk.

The in-wheel system permits smaller wheel bearing and brake rotor supports than conventional designs. In terms of weight, the bearing support is by far the largest and heaviest structural part of any suspension system. Even a slight reduction of weight in this area yields great returns. Lower weight results in better driver feedback from the road surface, and increased traction, especially on rough road surfaces. In-wheel suspension also provides optimum suspension geometry for maximized adhesion under all driving conditions.

Powerful Disc Brakes

Featuring very large, 11-inch rotors at all four wheels, the S2000 is equipped with a set of disc brakes worthy of a modern world-class sports car. An anti-lock braking system (ABS) is standard equipment on the S2000. Together, the systems produce minimal stopping distances.

Special attention is paid to pedal feel, carefully tuned to give the driver flawless feedback and feel. The brake feel is particularly linear, and the potential for brake fade almost nil.

Electric-Assist Power Steering

Electric-assist power steering provides the S2000 with programmed control that utilizes vehicle speed and driver input to calculate the amount of assistance and driver feedback necessary. The result is greatly improved steering feel at all driving speeds. The system is lighter and less complicated than standard hydraulic-assist designs.

The S2000's extremely light alloy wheels conceal brakes that are among the best in the business. The brakes feature 11-inch rotors and pad material engineered for severe use.

Body and Interior Highlights

- Functional and ergonomic Formula 1-inspired interior
- Driver-oriented controls
- Optimized tactile response for all driver actions
- Power-operated convertible top

Body and Interior

Driver-oriented design...

Honda intended from the start to make the S2000 a driver's car. While some of the features that bring this concept about are incorporated in the chassis and drivetrain of the car, most can be observed in the S2000 interior layout. The S2000 offers complete vehicle and accessory control with minimal movement from a proper driving position.

The S2000's responsiveness extends to the driver's compartment in ergonomically optimized controls. Clear, racing-inspired instrumentation and excellent outward visibility combine to provide a superb driving environment.

Standard features include power windows and door locks, and a power-operated soft top. A power mechanism raises or retracts the S2000 convertible top in about six seconds, without tools. When stowed, the top rests behind the seats, out of the way. The stowed top can be neatly concealed with a molded one-piece boot.

The car's wheelbase and general dimension are similar to other classic designs. At 162 inches in length, it is 10 inches shorter than the Porsche Boxster and within an inch of the Porsche's wheelbase and height, at 94.5 and 50.6 inches respectively for the S2000. In addition, the S2000 is marginally lighter than the Boxster, at about 2809 versus 2810 pounds.

Relative to other Honda cars, the S2000 is 450 pounds lighter than an Accord EX V-6 coupe (3259 lbs.), and 233 pounds lighter than the Prelude SH (3042 lbs.).

Body and Interior Features

Honda's S2000 complements its high-performance nature with an interior inspired by modern Formula 1 race car cockpits. For a race driver, getting information at a glance is of vital importance. Similarly, a driver should have immediate access to important data for a safer, more enjoyable driving experience.

The S2000's soft top can be raised or lowered in about six seconds with its standard power operated system. The mechanism is lighter than most, in keeping with the S2000's other lightweight components.

1. The S2000 interior is carefully arranged to give the driver quick command of all vehicle functions.
2. Fully adjustable driver's seat with upper and lower side bolsters for maximum support.
3. Storage includes these console compartments.
4. Head restraints are molded into the upper seat structure.
5. Engine start button and remote audio controls.
6. Beverage holder positioned for ease of use, near top and hazard flasher switches.
7. A race car-inspired digital instrument display provides information at a glance.

Primary instrumentation for the S2000 is provided on a high-visibility digital display very similar to those found in today's open-wheeled racing cars. A tachometer arc complements a digital speedometer display. Both items are displayed in large, easy-to-read form for quick reference. This instrument panel is unique in Honda's vehicle lineup, perfectly appropriate for the S2000.

The S2000's highly visible engine start button is a clear reference to contemporary race cars. The button works in conjunction with a keyed master switch positioned in the steering column. This master switch is an integral part of Honda's Immobilizer Theft-Deterrent System. Only the owner's properly coded keys will activate the S2000's ignition system to start the car.

When the owner's key is removed, the Immobilizer system sends an electronic instruction to the vehicle computer, effectively disabling the ignition and fuel injection systems until the key is again used.

For all driver interactions with the S2000, Honda engineers strove to optimize the tactile response between driver and car. An example is the brake pedal — firm enough to inspire confidence, and capable of accurately relaying brake response to the driver.

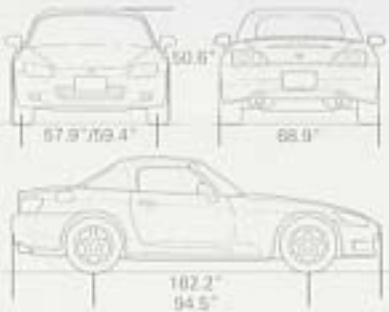
Comfort and convenience features for the S2000 include those you'd expect to find in a world-class sports car. The car has a 4-way adjustable driver's seat upholstered in leather with firm bolsters befitting a performance car. Color-keyed rotary heating and ventilation controls similar to those found in the high-performance Civic Si are located within easy reach, facing the driver from the center of the instrument panel. Volume and tuning controls for the car's audio system are located within easy reach. In fact, all of the S2000's vehicle controls are positioned with a bias toward the driver.

Unlike most preceding sports cars, the S2000 provides more than dependable, reliable and high-quality transportation. This carefully designed interior offers the driver an opportunity to feel as one with the car. Honda engineers made that the primary goal for the S2000, and owners will find the goal has been met.

The S2000 offers superb visibility and excellent ergonomics, improving driver control and safety.

ACCESSORIES

- 6 disc CD changer
- Security system
- Body side strakes
- Trunk spoiler
- Front under-body spoiler
- Dust cover
- Black chrome emblem kit
- Ashtray
- Aero screen
- Titanium shift knob
- Trunk cargo net
- S2000 floor mats
- Engine block heater



Interior Dimensions

Headroom (in.)	*34.6*
Legroom (in.)	*44.3*
Shoulder Room (in.)	*50.2*
Hiproom (in.)	*49.8*
Cargo Volume (cu. ft.)	*5.0*
Passenger Volume (cu. ft.)	*48.4*
Curb Weight (lbs.)	*2809*

Body/Suspension/Chassis

High X-Bone Monocoque Frame
Suspension: Independent In-Wheel Double Wishbone w/Coil Springs
Stabilizer Bar (mm, front/rear) *28.2/27.2*
Coaxial Electric Power Rack-and-Pinion Steering
Steering Wheel Turns, Lock-to-Lock *2.4*
Overall Turning Ratio *13.8*
Turning Diameter, Curb-to-Curb (ft.) *35.4*
Power-Assisted 4-Wheel Disc Brakes
Anti-Lock Braking System (ABS) *3-Channel*
Wheels (front/rear) *16x6.5JJ / 16x7.5JJ*
Tires: Bridgestone Potenza S-02 (front/rear)
205/55 R16 89W / 225/50 R16 92W

EPA Mileage Estimates*/Fuel Capacity

6-Speed Manual (City/Highway)	*20/26*
Fuel (gal.)	*13.2*

Drivetrain

Type: Front Engine/Rear-Wheel Drive
6-Speed Manual Transmission w/Torque-Sensing Limited-Slip Differential
Final Drive Ratio *4.100*

Engine

Type: Aluminum-Alloy In-Line 4 w/Fiber-Reinforced (FRM) Cylinder Walls

Displacement (cc/cu. in.)	*1997/121.9*
Horsepower @ rpm (SAE net)	*240 @ 8300*
Torque (lb.-ft. @ rpm)	*153 @ 7500*
Compression Ratio	*11.0:1*
Valve Train:	*DOHC 16-Valve VTEC™*
Fuel System:	*Multi-Point Programmed Fuel Injection (PGM-FI)*
Ignition System:	*Electronic w/Immobilizer Theft-Deterrent System*

Exterior Features

Electrically Powered Soft Top / Dual-Outlet Exhaust / High-Intensity Discharge (HID) Headlights / Lightweight Alloy Wheels / Body-Colored Dual Power Mirrors / Remote Keyless Entry System / Impact-Absorbing Body-Colored Bumpers

Interior Features

Dual Front Airbags (SRS)
Power Windows
Power Door Locks
Cruise Control
Map Lights
Air Conditioning
Micron Air-Filtration System
AM/FM Stereo CD Player
Remote-Operated Audio Controls
Digital Instrument Panel
Ventilated Leather-Trimmed Seats
Center Console Storage Compartment w/Lock
Beverage Holder
2-Speed/Intermittent Windshield Wipers
3-Point Seat Belts with Pretensioners
Aluminum Shift Knob
Engine Start Button
Aluminum Pedals

Maintenance needs vary with use and driving conditions. **3-Year/36,000-Mile Limited Warranty**: Ordinary maintenance or adjustments, parts subject to normal wear and replacement, and certain items are excluded. See your Honda dealer for the terms and conditions of this limited warranty. *Mileage figures shown for comparison only. Actual mileage may vary. **Always use seat belts and child restraints.** Specifications, features, illustrations and equipment shown in this brochure are based upon the latest available information at the time of printing. Although descriptions are believed correct, accuracy cannot be guaranteed. American Honda Motor Co., Inc., reserves the right to make changes at any time, without notice or obligation, in colors, specifications, accessories, materials and models. Some features mentioned herein are not available in all areas. See your Honda dealer for details. Some vehicles may be shown with optional equipment. ©1999 American Honda Motor Co., Inc. Litho in U.S.A. 9/99.


HONDA