

Smart Consumer

The Car
Of The
Future
Is Here
—Now!



Toyota's New 'Miracle Car'

50+ Estimated mpg > Super-Ultra-Low Emissions
Family Room > Under \$20,000

The Miracle of Hybrid Technology

Toyota's Hybrid Synergy Drive system combines the best of electric and internal-combustion technology.

One Of The Most Advanced Cars

Toyota's hybrid-drive 2004 Prius is one of the most advanced cars you can buy. Someday, this is how all cars will be built. But the Prius is here today! It combines exceptional fuel economy with near-zero emissions, yet it looks and performs like a stylish midsize sedan, comfortably seats five and costs no more than a conventional economy car. And unlike conventional electric vehicles, it never needs to be plugged in to recharge its batteries. Prius is the first hybrid car with no compromises.

A Solid Foundation

Toyota has delivered more than 110,000 hybrid Prius sedans in 20 countries. The 2004 Prius is a totally new second-generation hybrid. This car is a high-tech



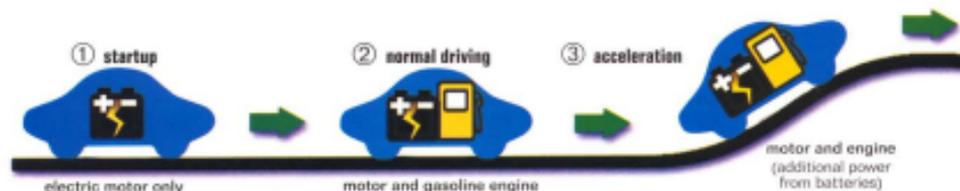
marvel, but it's also a reliable, roomy, easy-to-drive automobile based on years of practical experience.

Hybrid Synergy Drive

At the heart of this miracle car is the revolutionary Hybrid Synergy Drive. This is a series/parallel hybrid system—meaning that it exploits the advantages of both the electric motor and the gasoline internal-combustion engine to maximize performance and minimize emissions.

To understand why the Prius system is so brilliant, it helps to be acquainted with a few basic engineering principles.

An electric motor develops maximum torque from rest, which means it's perfect for powering a car away from a stoplight, for example. By contrast, a





gasoline internal-combustion engine develops little torque at low speeds but maximum torque at medium speeds. It's perfect for midrange acceleration and highway cruising.

Gas And Electric

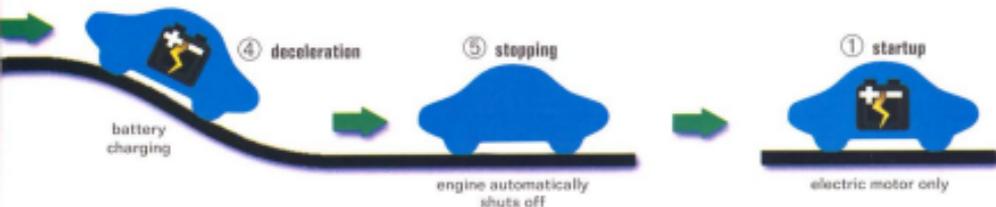
In the Prius, Toyota engineers cleverly exploit the complementary power characteristics of the electric motor and gasoline engine. During low-speed city driving, the gasoline engine shuts off and the Prius is powered by a 500-volt, 50-kilowatt (67 horsepower) electric motor. In this all-electric mode, the Prius emits zero tailpipe emissions and delivers excellent fuel economy. You can see the Prius' energy flow on the Energy Monitor screen on the multi-display unit in the center of the dash.

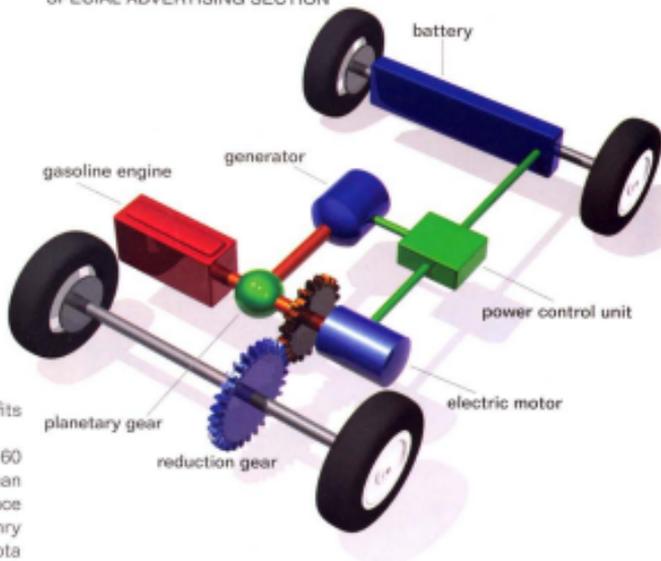
The compact electric motor produces 295 lb.ft. of torque over a range from zero to 1200 rpm. The

Prius weighs only 2890 lb., so this instant torque really accelerates it away from a stop. Under gentle acceleration, the electric motor can drive the Prius up to 40 mph before the internal-combustion engine automatically starts up. Under full-throttle acceleration, the gasoline engine fires up immediately to provide extra power.

The Prius' 1.5-liter double-overhead-cam all-aluminum 4-cylinder engine is rated 76 horsepower and 82 lb.ft. of torque. It utilizes variable valve timing and precise electronic fuel injection—engineering finesse that adds up to an extremely efficient powerplant.

During hard acceleration, both the gasoline engine and electric motor work in tandem to drive the wheels. Power for the electric motor comes from an on-board high-performance nickel-metal-hydride battery that develops a fantastic





1250 watts per kilogram and fits under the rear seat.

Acceleration from zero to 60 mph takes only a little more than 10 seconds, which is performance comparable to a 4-cylinder Camry LE. On the test track, Toyota engineers have zoomed to over 100 mph in a Prius, which means it's easily capable of highway cruising. Once up to highway speed, the gasoline engine has power to spare because, as you remember from high-school phys-

ics, the electric motor itself acts as a large generator, helping slow the Prius and recharge the battery. Engineers call this regenerative braking. Not only does it help cut fuel consumption and reduce

emissions, the electric motor can simultaneously recharge the batteries and provide current for the electric motor, which is connected to the differential. There's no need for a gearbox. The planetary gear set serves as a continuously variable transmission. There's no need for a starter. The generator starts the engine. Like a fighter plane, the Prius uses electronic "drive by wire" throttle control and shift control.



ics, it takes less power to keep a body in motion than it takes to accelerate that body up to speed.

On the highway, the gasoline engine can use part of its power to drive the Prius and part to drive a generator to recharge the battery. Under braking or when descending a hill, the electric

motor itself acts as a large generator, helping slow the Prius to stop quicker, too.

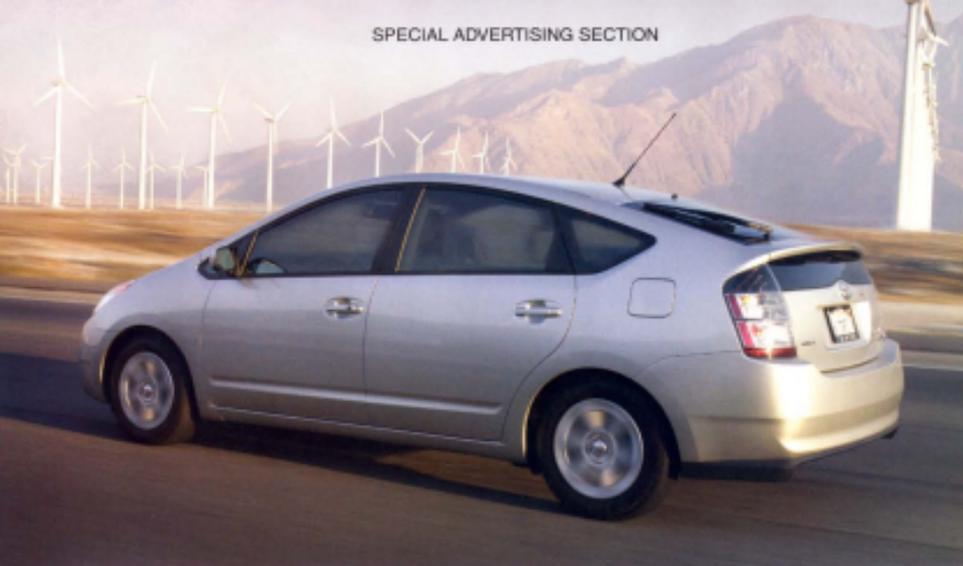
Power-Split Device

Toyota engineers have given the Prius a clever planetary gear set that connects the electric motor and gasoline engine to the wheels. At highway speeds, the generator

Cleaner And Frugal

The new Prius offers an uncanny blend of performance and cleanliness. Its tailpipe emissions are so benign that it qualifies as a Super-Ultra-Low Emissions Vehicle (SULEV) by California Air Resources Board (CARB) standards, producing nearly 90 percent fewer smog-forming emissions than an Ultra-Low Emissions Vehicle.

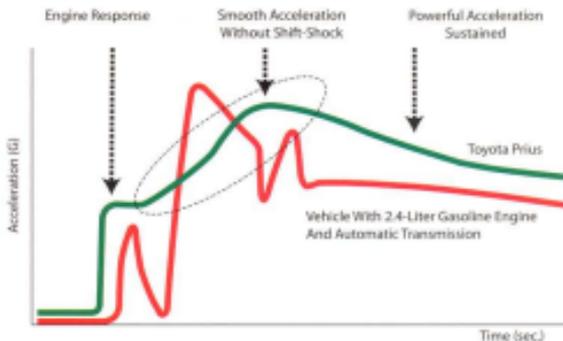
Prius also meets CARB's Advanced Technology Partial Zero Emissions Vehicle standard, which includes not only the SULEV standard, but zero fuel evaporative emissions, a 150,000-mile durability test and an extended emissions system warranty. Compared to a



30 mph to 50 mph Acceleration Performance

conventional 2004 car, the Prius is in a league of its own.

The midsize 2004 Prius is predicted to return a Toyota estimate of 60 mpg city/50 mpg highway/55 mpg combined. Most vehicles powered by gasoline internal-combustion engines use more fuel for stop-and-go city driving than for highway cruising. But because it does much of its city driving under electric power—and because regenerative braking



Toyota Hybrid Synergy Drive

actually helps recharge the batteries—the Prius uses less fuel in the city test than on the highway test.

The 2004 Prius' fuel economy is approximately 15 percent better than the previous Prius, which was already a spectacularly efficient vehicle. The new Prius is targeted to achieve approximately twice the fuel economy of its closest midsize competitor, and offers better estimated mileage than any compact sedan sold in the United States. Those fuel savings really add up.

Inside The New 2004 Toyota Prius

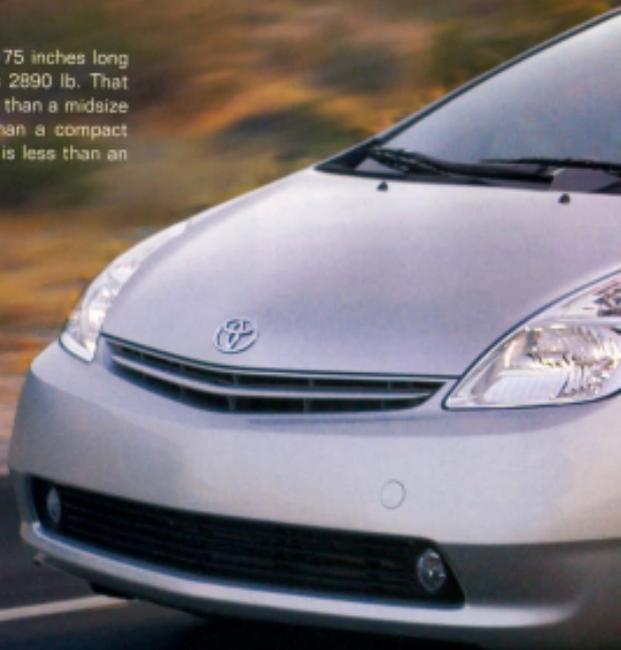
Toyota's newest family car can do things no other vehicle on the road can do.

It's Not Just The Engine

The Prius is more than just a fuel-sipping powertrain. This is a real car, engineered in every detail to be comfortable, convenient and efficient for the people who will ride in it. Start with the body. The Prius' unique contours slip through air like a teardrop, with a drag coefficient of just 0.26 Cd. This ultra-low coefficient of drag makes the Prius as slippery as a performance sports car.

A Real Car

The Prius is not some experiment. It's 175 inches long on a 106.3-inch wheelbase and weighs 2890 lb. That means the Prius weighs just 200 lb. less than a midsize Toyota Camry and is an inch longer than a compact Toyota Corolla. However, its wheelbase is less than an





inch shorter than that of a full-size luxury Toyota Avalon. No wonder there's so much room inside.

The Prius boasts 112.3 cubic feet of interior volume. That's enough to solidly qualify as a midsize car, according to federal standards.

Even better, all this space is usable. The Prius is a 5-passenger, 5-door liftback. Thanks to the high rear roofline, it functions like a station wagon. With the rear seats up, there's a tall, wide and deep cargo area of 16.1 cubic feet. The 60/40 split rear seats easily fold down to reveal a van-like cargo area.

Passengers benefit from all this room, too. Both front and rear passengers sit on comfortable



chair-height seats with plenty of room in every direction.

As you would expect from any Toyota, safety is not neglected. The front seatbelts feature pretensioners and force limiters. There are 3-point seatbelts for all three rear passengers. In addition to a dual-stage SRS airbag system, the Prius can be ordered with optional side and side curtain airbags that help protect the head and torso of the driver and passengers in a side impact.

Tried-And-True Engineering

The front-wheel-drive Prius chassis is deliberately conventional, which makes it reliable and easy to repair. Steering is by rack-and-pinion, with electric power assist. Independent front suspension is provided by MacPherson struts with a stabilizer bar. The space-saving torsion-beam rear suspension also is fitted with a stabilizer bar. Antilock braking and regenerative braking are standard, as is Traction Control and Hill Acceleration Control, which helps the driver going uphill and down. Vehicle Stability Control is optional.

High-Tech Electronics

The 2004 Prius is chock-full of high-tech gear. For example, a





conventional car drives the air conditioner with a rubber belt from the engine, which wastes fuel and means there's no heat or a/c if the engine is turned off. Not so the Prius. Toyota engineers developed a brilliant electrically driven heater/air conditioner that operates even when the engine is not running. This clever feature comes as standard equipment on every Prius.

Many of the Prius' functions are controlled from a 7-inch multi-display screen in the center of the



dash. This touch-screen display controls the optional navigation system, the climate control system, and an information display that provides access to the trip computer.

The most commonly used controls are duplicated by push buttons on the steering wheel spokes, including the 6-speaker

audio system, climate controls, map and phone.

Among the luxury car features that you might not expect to find as standard equipment on a car that starts for less than \$20,000 are cruise control, a cabin filtration system, power windows, power door locks, heated side mirrors and remote keyless entry. The key fob also includes a transponder chip that activates all systems when it's inserted into a dashboard slot. This system replaces a conventional ignition key and ignition lock.

Smart Entry & Start

Optional is a new system called Smart Entry & Start. With it, the key fob detects and acknowledges signals broadcast by sensors in the door handles. Simply walk up to the Prius with the key fob in your pocket and the door will be placed in unlock-standby. Just pull the handle and the door will unlock. Push the power button and the Prius will start and run. When you exit the vehicle, the system shuts down. You press a button to lock the doors.

Other options include everything from an auto-dimming rearview mirror to a voice-activated DVD navigation system. If you order every possible option, a "fully loaded" Prius still costs less than \$26,000, including the cost of transportation.

Every Prius is covered by a standard Toyota 36-month/36,000-mile warranty that includes roadside assistance. The powertrain is covered by a 60-month/60,000-mile warranty. Buyers are protected against corrosion for 60 months with no mileage limit. The Prius' battery, battery control module, hybrid control module and inverter/converter are covered by a 96-month/100,000-mile warranty. Now, that's real peace of mind.



Easy Ownership

The Prius is a real car that happens to be hybrid-powered, a car that you can buy for your family and use every day. It comfortably holds five people. The only unusual part of owning a Prius is that your fuel bills may be dramatically reduced, and you'll be driving the car of the future—right now.

Toyota's 'Miracle Car' On The Road



The Prius is a marvel of technology. But how does it perform on the road?

Palm Springs Scenic Loop

Let's see how the 2004 Toyota Prius handles on the road with a hearty test drive. Come on along.

Our favorite test drive climbs out of Palm Desert, Calif., on scenic Route 74, the Palms to Pines Highway, and passes Lake Hemet where the old "Bonanza" TV show was filmed. Then it turns off on California Route 243 to the adorable mountain town of Idyllwild, swoops back down from 7000 feet to Banning, where you hop on the I-10 Freeway to

the 111 turnoff that becomes Palm Canyon Drive through upscale Palm Springs, Cathedral City and back to Palm Desert.

In all, our Palm Springs test loop covers 108 miles and combines twisty mountain 2-lane, stop-and-go city traffic and a healthy stretch of high-speed freeway. After driving the 2004 Toyota Prius over the loop, on a brutally hot day when temperatures ranged from 75 degrees on top of the mountains to 115 in the Coachella Valley, all we can say is, "Buy this car!"



out-accelerating, out-cornering and out-braking our own photographers who were in an expensive American convertible.

Driving the Prius as hard as it can be driven, in really difficult conditions, we still achieved excellent fuel mileage. Driven with only slightly less brio, the Prius averaged just slightly less than Toyota's estimated 50 mpg on the highway.

Remarkably Normal

The most remarkable thing about the Prius is how normal it is.

The Prius we drove had a typical Toyota interior, impeccably trimmed in multi tones of gray with brushed-aluminum accents. The adjustable bucket seats are comfortable for hours at a stretch and give great support even for a 6-foot 200-pounder.

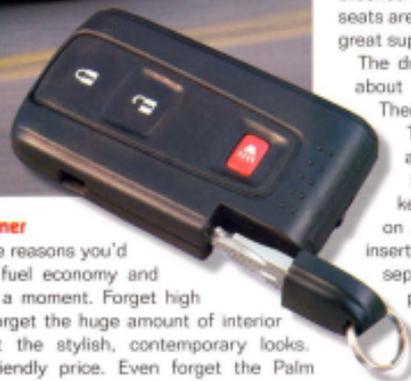
The driving position is so good you never think about it. Same goes for most of the controls. There are good sightlines in every direction.

The only driving procedures that are at all unusual are Power On and Power Off. Instead of a key, the Prius has a small key fob like the remote door lock control on conventional cars. To start the Prius, you insert this device into a slot in the dash. There's a separate Power button to push. The instrument panel lights up, and "Ready" appears.

The "gear shift lever" is a large selector on the dash. When the ride is over, you push a large button labeled "P" for Park that selects the parking gear, then push Power to turn everything off. That allows the key fob to be removed.

Strong Performer

But not for the reasons you'd think. Forget fuel economy and emissions for a moment. Forget high technology. Forget the huge amount of interior space. Forget the stylish, contemporary looks. Forget the friendly price. Even forget the Palm Springs-quality air conditioning. This thing is fun to drive! The Prius really steps out. Far and away, we were the fastest-moving vehicle on the road, easily





Accelerating away from a Palm Springs stoplight, the Prius outran almost everything. It's amazing! Thanks to power from

both the electric motor and gasoline engine, it simply zooms away from traffic. The Prius just accelerates in one long smooth curve until you find yourself reaching the speed limit well before you expected to. Toyota claims zero to 60 in 10 seconds and a top track speed over 100 mph. We think the company is being typically conservative. The Prius certainly feels much quicker.

The brakes are equally spectacular. On the spec page, the brakes seem perfectly conven-

tional. It must have something to do with the regenerative braking system because the Prius feels like it could outstop a sports car.

Precise Handling

But it's the handling that's the most pleasant surprise. Despite the Prius' tall roof and van-like seating position, most of the weight is carried low in the chassis. The result is a stable, secure ride that inspires you to push the car around because it's so much fun. On relatively narrow 185/65R15 tires designed more for low rolling resistance than strafing apexes, the lightweight Prius absolutely carves through corners faster than you'd ever dream possible. There's lots of tire squeal from both front and rear to warn you when it's time to back off.

Don't buy a 2004 Toyota Prius just to conserve gas and be a good person and help save the world. That's just the cherry on the sundae. Buy a Prius because, for around \$20,000, you get a great, no-compromise car that's really fun to drive.

