

SECTION 3

INFORMATION BEFORE DRIVING YOUR TOYOTA

Information before driving your Toyota

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Break-in period

Drive gently and avoid high speeds.

Your vehicle does not need an elaborate break-in. But following a few simple tips for the first 1000 km (600 miles) can add to the future economy and long life of your vehicle:

- Avoid full-throttle acceleration when starting and driving.
- Avoid racing the hybrid engine.
- Try to avoid hard stops during the first 300 km (200 miles).

Fuel

FUEL TYPE

Your vehicle must use only unleaded gasoline.

To help prevent gas station mixups, your Toyota has a smaller fuel tank opening. The special nozzle on pumps with unleaded fuel will fit it, but the larger standard nozzle on pumps with leaded gas will not.

At a minimum, the gasoline you use should meet the specifications of ASTM D4814 in the U.S.A. and CGSB 3.5-M93 in Canada.

NOTICE

Do not use leaded gasoline. Use of leaded gasoline will cause the three-way catalytic converter to lose its effectiveness and the emission control system to function improperly. Also, this can increase maintenance costs.

OCTANE RATING

Select unleaded gasoline with an Octane Rating of 87 (Research Octane Number 91) or higher.

Use of unleaded fuel with an octane rating lower than 87 may result in engine knocking. Persistent knocking can lead to engine damage.

If your engine knocks...

If you detect heavy knocking even when using the recommended fuel, or if you hear steady knocking while holding a steady speed on level roads, consult your Toyota dealer.

However, occasionally, you may notice light knocking for a short time while accelerating or driving up hills. This is normal and there is no need for concern.

GASOLINE CONTAINING DETERGENT ADDITIVES

Toyota recommends the use of gasoline that contains detergent additives to avoid build-up of engine deposits.

However, all gasoline sold in the U.S. contains detergent additives to keep clean and/or clean intake systems.

QUALITY GASOLINE

Automotive manufacturers in the U.S., Europe and Japan have developed a specification for quality fuel named World-Wide Fuel Charter (WWFC) that is expected to be applied world wide. The WWFC consists of four categories that depend on required emission levels. In the U.S., category 4 has been adopted. The WWFC improves air quality by providing for better emissions in vehicle fleets, and customer satisfaction through better vehicle performance.

CLEANER BURNING GASOLINE

Cleaner burning gasoline, including reformulated gasoline that contains oxygenates such as ethanol or MTBE is available in many areas.

Toyota recommends the use of cleaner burning gasoline and appropriately blended reformulated gasoline. These types of gasoline provide excellent vehicle performance, reduce vehicle emissions, and improve air quality.

OXYGENATES IN GASOLINE

Toyota allows the use of oxygenate blended gasoline where the oxygenate content is up to 10% ethanol or 15% MTBE. If you use gasohol in your Toyota, be sure that it has an octane rating no lower than 87.

Toyota does not recommend the use of gasoline containing methanol.

GASOLINE CONTAINING MMT

Some gasoline contain an octane enhancing additive called MMT (Methylcyclopentadienyl Manganese Tricarbonyl).

Toyota does not recommend the use of gasoline that contains MMT. If fuel containing MMT is used, your emission control system may be adversely affected. The Malfunction Indicator Lamp on the instrument cluster may come on. If this happens, contact your Toyota dealer for service.

GASOLINE QUALITY

In a very few cases, you may experience driveability problems caused by the particular gasoline that you are using. If you continue to have unacceptable driveability, try changing gasoline brands. If this does not rectify your problem, then consult your Toyota dealer.

NOTICE
<ul style="list-style-type: none">◆ <i>Do not use gasohol other than stated above. It will cause fuel system damage or vehicle performance problems.</i>◆ <i>If drivability problems are encountered (poor hot starting, vaporizing, engine knock, etc.), discontinue its use.</i>◆ <i>Take care not to spill gasohol during refueling. Gasohol may cause paint damage.</i>

FUEL TANK CAPACITY

45 L (11.9 gal., 9.9 Imp.gal.)

The given fuel tank capacity is measured on EPA/CARB ORVR testing condition which is approved for nominal capacity measurement condition.

The fuel tank capacity is decreased at low ambient temperature. (decreased by about 5 L (1.3 gal., 1.1 Imp.gal.) at -10°C (14°F).)

Fuel pump shut-off system

The fuel pump shut-off system stops supplying fuel to the engine to minimize the risk of fuel leakage when the engine stalls or an airbag inflates upon collision. To restart the hybrid system after the fuel pump shut-off system activates, press the "POWER" switch to the "OFF" mode and start it.



CAUTION

Inspect the ground under the vehicle before restarting the hybrid system. If you find that fuel has leaked onto the ground, the fuel system has been damaged and is in need of repair. In this case, do not restart the hybrid system.

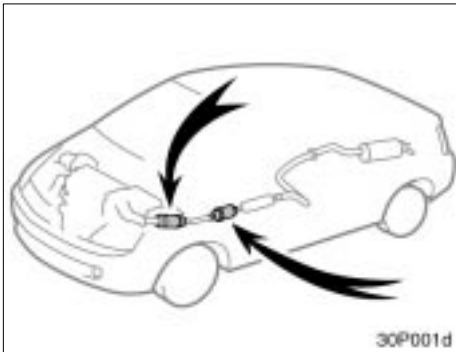
Operation in foreign countries

If you plan to drive your Toyota in another country...

First, comply with the vehicle registration laws.

Second, confirm the availability of the correct fuel (unleaded and minimum octane number).

Three-way catalytic converters



The three-way catalytic converters are emission control devices installed in the exhaust system.

Its purpose is to reduce pollutants in the exhaust gas.

CAUTION

- Keep people and combustible materials away from the exhaust pipe while the engine is running. The exhaust gas is very hot.
- Do not drive, idle or park your vehicle over anything that might burn easily such as grass, leaves, paper or rags.

NOTICE

A large amount of unburned gases flowing into the three-way catalytic converter may cause it to overheat and create a fire hazard. To prevent this and other damage, observe the following precautions:

- ◆ Use only unleaded gasoline.
- ◆ Do not drive with an extremely low fuel level; running out of fuel could cause the engine to misfire, creating an excessive load on the three-way catalytic converter.
- ◆ Do not turn off the ignition while the vehicle is moving.
- ◆ Keep your engine in good running order. Malfunctions in the engine electrical system, electronic ignition system/distributor ignition system or fuel system could cause an extremely high temperature.
- ◆ If the engine becomes difficult to start or stalls frequently, take your vehicle in for a check-up as soon as possible. Remember, your Toyota dealer knows your vehicle and its three-way catalytic converter system best.

- ◆ To ensure that the three-way catalytic converter and the entire emission control system operate properly, your vehicle must receive the periodic inspections required by the Toyota Maintenance Schedule. For scheduled maintenance information, refer to the "Scheduled Maintenance Guide" or "Owner's Manual Supplement".

Engine exhaust cautions



CAUTION

- Avoid inhaling the engine exhaust. It contains carbon monoxide, which is a colorless and odorless gas. It can cause unconsciousness or even death.
- Make sure the exhaust system has no holes or loose connections. The system should be checked from time to time. If you hit something, or notice a change in the sound of the exhaust, have the system checked immediately.
- Do not run the hybrid system in a garage or enclosed area except for the time needed to drive the vehicle in or out. The exhaust gases cannot escape, making this a particularly dangerous situation.
- Do not remain for a long time in a parked vehicle with the hybrid system running. If it is unavoidable, however, do so only in an unconfined area and adjust the heating or cooling system to force outside air into the vehicle.

- Keep the back door closed while driving. An open or unsealed back door may cause exhaust gases to be drawn into the vehicle.
- To allow proper operation of your vehicle's ventilation system, keep the inlet grilles in front of the windshield clear of snow, leaves, or other obstructions.
- If you smell exhaust fumes in the vehicle, open the windows and close the back door to ensure plenty of fresh air enters the vehicle. If you can smell exhaust fumes even though there are no other vehicles in the surrounding area, have your vehicle checked by your Toyota dealer. Continued inhalation of exhaust fumes can lead to death by gas poisoning.

Facts about engine oil consumption

FUNCTIONS OF ENGINE OIL

Engine oil has the primary functions of lubricating and cooling the inside of the engine, and plays a major role in maintaining the engine in proper working order.

ENGINE OIL CONSUMPTION

It is normal that an engine should consume some engine oil during normal engine operation. The causes of oil consumption in a normal engine are as follows.

- Oil is used to lubricate pistons, piston rings and cylinders. A thin film of oil is left on the cylinder wall when a piston moves downwards in the cylinder. High negative pressure generated when the vehicle is decelerating sucks some of this oil into the combustion chamber. This oil as well as some part of the oil film left on the cylinder wall is burned by the high temperature combustion gases during the combustion process.

- Oil is also used to lubricate the stems of the intake valves. Some of this oil is sucked into the combustion chamber together with the intake air and is burned along with the fuel. High temperature exhaust gases also burn the oil used to lubricate the exhaust valve stems.

The amount of engine oil consumed depends on the viscosity of the oil, the quality of the oil and the conditions the vehicle is driven under.

More oil is consumed by high-speed driving and frequent acceleration and deceleration.

A new engine consumes more oil, since its pistons, piston rings and cylinder walls have not become conditioned.

Oil consumption: Max. 1.0 L per 1000 km (1.1 qt./600 miles, 0.9 Imp.qt./600 miles)

When judging the amount of oil consumption, note that the oil may become diluted and make it difficult to judge the true level accurately.

As an example, if a vehicle is used for repeated short trips, and consumes a normal amount of oil, the dipstick may not show any drop in the oil level at all, even after 1000 km (600 miles) or more. This is because the oil is gradually becoming diluted with fuel or moisture, making it appear that the oil level has not changed.

The diluting ingredients evaporate out when the vehicle is then driven at high speeds, as on an expressway, making it appear that oil is excessively consumed after driving at high speeds.

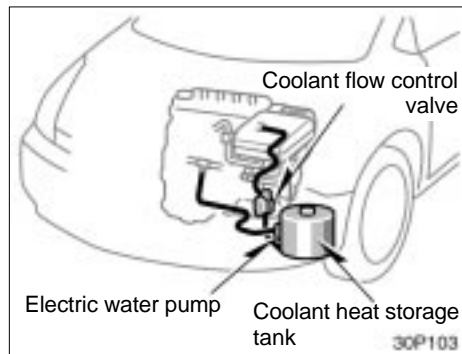
IMPORTANCE OF ENGINE OIL LEVEL CHECK

One of the most important points in proper vehicle maintenance is to keep the engine oil at the optimum level so that oil function will not be impaired. Therefore, it is essential that the oil level be checked regularly. Toyota recommends that the oil level be checked every time you refuel the vehicle.

For detailed information on oil level check, see "Checking the engine oil level" on page 404.

NOTICE
<i>Failure to check the oil level regularly could lead to serious engine trouble due to insufficient oil.</i>

Coolant heat storage system



The coolant heat storage tank system stores hot coolant and feeds it via the electric water pump automatically to warm the engine as required. This system helps generate clean emissions. To confirm the coolant heat storage system check, the pump may operate automatically with the vehicle stopped (in the "OFF" mode).

Although the pump may operate and cause noise while the vehicle is stopped, this does not indicate a malfunction.

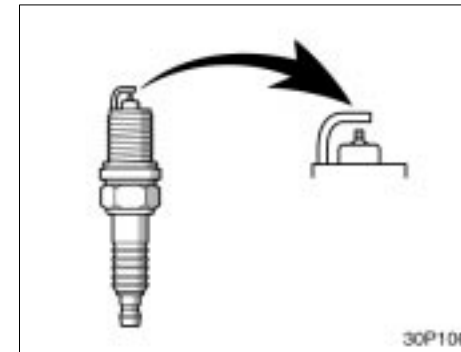
CAUTION

- The coolant in this tank is hot even if the engine and radiator are cold.
- For replacement of the coolant, contact your Toyota dealer.
- Do not touch bolts (9 pieces) painted in yellow.
- In case the bolts are loosened, there is a risk of hot coolant coming out from inside the tank.
- When this has any malfunction, the surface of this tank gets hot. To prevent burning yourself, do not touch the tank.

INFORMATION

- *In such cases as the time of engine starting and a short trip after the engine is stopped, the electric water pump will work for a moment, but this is no problem.*
- *This is for the preparation for good emission.*

Iridium-tipped spark plugs



Your engine is fitted with iridium-tipped spark plugs.

NOTICE

Use only iridium-tipped spark plugs. Do not adjust gaps for engine performance or smooth drivability.

Brake system

REGENERATIVE BRAKE

When the brake is applied, the electric motor used as a generator converts kinetic energy into electric energy.

The regenerative brake works in the following operations.

1. When the accelerator pedal is released, the reduced speed equal to engine braking in a gasoline-fueled vehicle is obtained in accordance with the running mode position of the shift lever.
2. When the brake pedal is depressed with the shift lever in "D" or "B", the regenerative brake works.

HYDRAULIC BRAKE

This brake system has 3 independent hydraulic circuits. If either circuit should fail, the other will still work. However, the pedal will be harder to press, and your stopping distance will increase. Also, the brake system warning light may come on.



BRAKE ACTUATOR

The brake actuator uses brake fluid pressurized by the pump to power-assist the brakes. If the brake actuator fails during driving, the brake system warning light comes on and buzzer sounds continuously. In this case, the brakes may not work properly. If they do not work well, depress the brake pedal firmly. If the brake system warning light comes on, immediately stop your vehicle and contact your Toyota dealer.

The red and yellow brake system warning light may stay on for about 60 seconds after the "IG-ON" mode is enabled. It is normal if the light turns off after a while.

Depressing the brake pedal repeatedly may turn on the red and yellow brake system warning light and buzzer. It is normal if the light turns off and the buzzer stops sounding after a few seconds.

You may hear a small sound in the engine compartment after the hybrid system is started or the brake pedal is depressed repeatedly. This is a pump pulsating sound of the brake system, and it is not a malfunction.

In the following conditions, you may hear a motor sound in the engine compartment.

- The brake pedal is depressed when the hybrid system is turned off.
- The driver's door is opened.
- For a few seconds after the hybrid system is "OFF" and about 90 seconds have passed.

The brake pedal stroke may be short when you press the "POWER" switch with the brake pedal depressed.



CAUTION

- Do not pump the brake pedal if the hybrid system is not operating. Each push on the pedal uses up your reserved brake fluid pressure.
- Even if the power assist is completely lost, the brakes will still work. But you will have to push the pedal hard, much harder than normal. And your braking distance will increase.

ANTI-LOCK BRAKE SYSTEM

The anti-lock brake system is designed to automatically help prevent lock-up of the wheels during a sudden braking or braking on slippery road surfaces. This assists in providing directional stability and steering performance of the vehicle under these circumstances.

Effective way to press the ABS brake pedal: When the anti-lock brake system function is in action, the slip indicator in the instrument cluster flashes and you will hear a noise. In this situation, to let the anti-lock brake system work for you, just hold the brake pedal down more firmly. Do not pump the brake in a panic stop. This will result in reduced braking performance.

The anti-lock brake system becomes operative after the vehicle has accelerated to a speed in excess of approximately 10 km/h (6 mph). It stops operating when the vehicle decelerates to a speed below approximately 5 km/h (3 mph).

Depressing the brake pedal on slippery road surfaces such as on a manhole cover, a steel plate at a construction site, joints in a bridge, etc. on a rainy day tends to activate the anti-lock brake system.

When the anti-lock brake system is activated, the following condition may occur. They do not indicate a malfunction of the system:

- You may hear the anti-lock brake system operating and the vibrations of the vehicle body and steering wheel. You may also hear the motor sound in the engine compartment even after the vehicle is stopped.



CAUTION

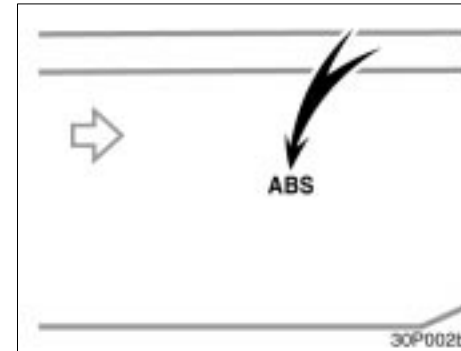
Do not overestimate the anti-lock brake system: Although the anti-lock brake system assists in providing vehicle control, it is still important to drive with all due care and maintain a moderate speed and safe distance from the vehicle in front of you, because there are limits to the vehicle stability and effectiveness of steering wheel operation even with the anti-lock brake system on.

If tire grip performance exceeds its capability, or if hydroplaning occurs during high speed driving in the rain, the anti-lock brake system does not provide vehicle control.

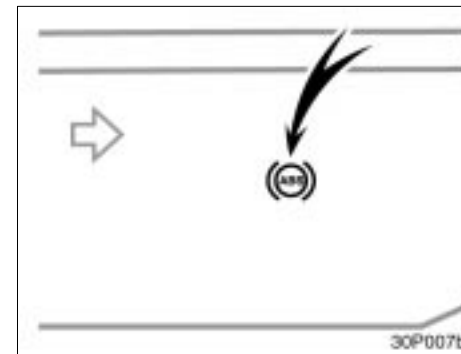
Anti-lock brake system is not designed to shorten the stopping distance: Always drive at a moderate speed and maintain a safe distance from the vehicle in front of you. Compared with vehicles without an anti-lock brake system, your vehicle may require a longer stopping distance in the following cases:

- Driving on rough, gravel or snow-covered roads.
- Driving with tire chains installed.
- Driving over the steps such as the joints on the road.
- Driving on roads where the road surface is pitted or has other differences in surface height.

Install all 4 tires of specified size at appropriate pressure: The anti-lock brake system detects vehicle speeds using the speed sensors for respective wheels' turning speeds. The use of tires other than specified may fail to detect the accurate turning speed, resulting in a longer stopping distance.



Vehicle sold in the U.S.A.



Vehicle sold in Canada

“ABS” warning light


The light comes on when the “IG-ON” mode is enabled. If the anti-lock brake system works properly, the light turns off after the “READY” light comes on. Thereafter, if the system malfunctions, the light comes on again.

When the “ABS” warning light is on (and the brake system warning light is on), the anti-lock brake system does not operate, but the brake system still operates conventionally.

If any of the following conditions occurs, this indicates a malfunction somewhere in the components monitored by the warning light system. Contact your Toyota dealer as soon as possible to service the vehicle.

- The light does not come on when the “IG-ON” mode is enabled, or the “READY” light remains on.
- The light comes on while you are driving.

A warning light turning on briefly during operation does not indicate a problem.

 **CAUTION**

If the “ABS” warning light remains on together with the red brake system warning light, immediately stop your vehicle at a safe place and contact your Toyota dealer.

In this case, not only the anti-lock brake system function and brake assist function will fail but also the vehicle will become extremely unstable during braking.

Any of the following conditions may occur, but does not indicate a malfunction:

- The light may stay on for about 60 seconds after the “IG-ON” mode is enabled. It is normal if it turns off after a while.
- Depressing the brake pedal repeatedly may turn on the light. It is normal if it turns off after a few seconds.

BRAKE ASSIST SYSTEM

When you slam the brakes on, the brake assist system judges as an emergency stop and provides more powerful braking for a driver who cannot hold down the brake pedal firmly.

When you slam the brakes on, more powerful braking will be applied. At this time, you may hear a sound in the engine compartment. This does not indicate a malfunction.

The brake assist system becomes operative after the vehicle has accelerated to a speed in excess of approximately 10 km/h (6 mph). It stops operating when the vehicle decelerates to a speed below approximately 5 km/h (3 mph).

For an explanation of this system's warning light, see “Service reminder indicators and warning buzzers” on page 125.

Electric power steering system

The electric power steering system, using an electric motor, assists the turning of the steering wheel.

In the following cases, you may feel the steering becomes heavy. However, the electric power steering system warning light does not come on. (Because it is not a malfunction.)

- When maneuvering the steering frequently or keeping the steering wheel turned fully while the vehicle is stopped or moving very slowly

The power steering effect will be reduced to prevent the system from overheating. Avoid turning the steering wheel, or stop the vehicle. When you leave the vehicle in the "IG-ON" mode for a while, the system will become cool.

NOTICE

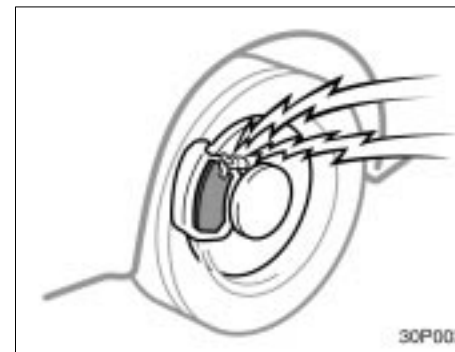
If you repeat the operation which will turn on the overheating prevention function, the electric power steering system may be damaged.

- When the 12 volt battery is discharged
Check the 12 volt battery's condition. If necessary, recharge or replace the battery. For details, see "Checking 12 volt battery condition" on page 418.
- When the steering wheel is operated with the hybrid system not to be turned on (with the "READY" light off)
The 12 volt battery capacity is decreased temporarily. The system returns to normal some time after the hybrid system is turned on.

If there is a problem somewhere in the electric power steering system, the warning light comes on in the multi-information display. For details, see "Multi-information display" on page 133.

When you move the steering wheel, an electrical motor noise may be heard. This is power steering motor noise, and is not a malfunction.

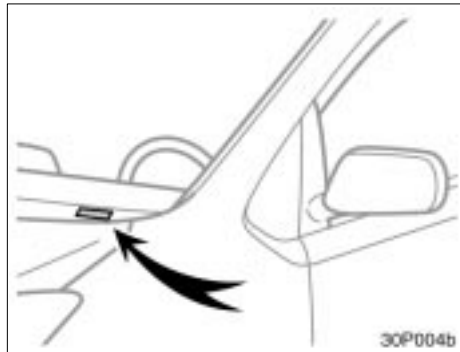
Brake pad wear limit indicators



The brake pad wear limit indicators on your disc brakes give a warning noise when the brake pads are worn to where replacement is required.

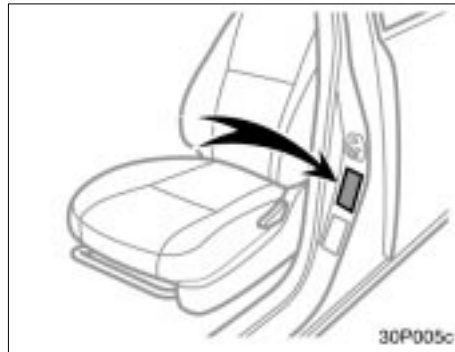
If you hear a squealing or scraping noise while driving, have the brake pads checked and replaced by your Toyota dealer as soon as possible. Expensive rotor damage can result if the pads are not replaced when necessary.

**Your Toyota's identification—
—Vehicle identification
number**



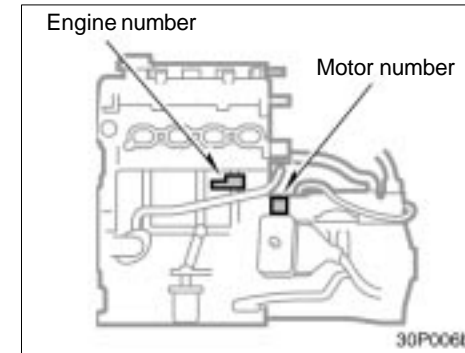
The vehicle identification number (VIN) is the legal identifier for your vehicle. This number is on the left top of the instrument panel, and can be seen through the windshield from outside.

This is the primary identification number for your Toyota. It is used in registering the ownership of your vehicle.



The vehicle identification number (VIN) is also on the Certification Label.

—Engine and motor number



The engine and motor number plates are installed on the engine and trans-axle case as shown.

Theft prevention labels

Your new vehicle carries theft prevention labels which are approximately 47 mm (1.85 in.) by 12 mm (0.47 in.).

The purpose of these labels is to reduce the incidence of vehicle thefts by facilitating the tracing and recovery of parts from stolen vehicles. The label is designed so that once it is applied to a surface, any attempt to remove it will result in destroying the integrity of the label. Transferring these labels intact from one part to another, will be impossible.

NOTICE
<i>You should not attempt to remove the theft prevention labels as it may violate certain state or federal laws.</i>

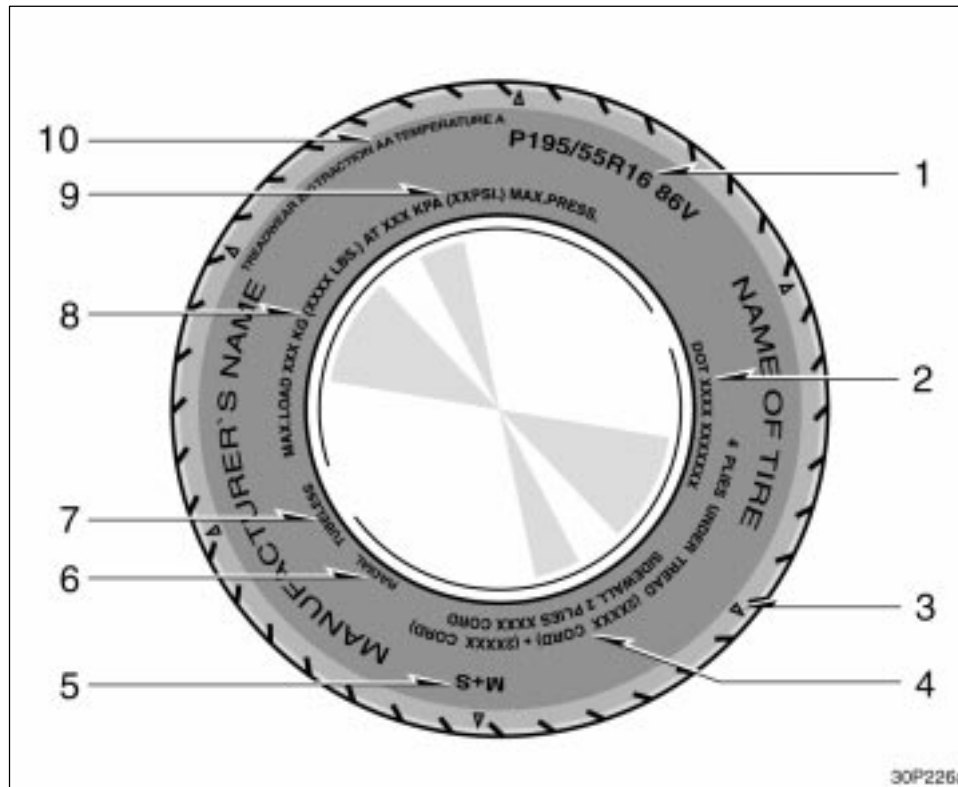
Suspension and chassis



CAUTION

Do not modify the suspension/chassis with lift kits, spacers, springs, etc. It can cause dangerous handling characteristics, resulting in loss of control.

**Tire information—
—Tire symbols (Standard tire)**

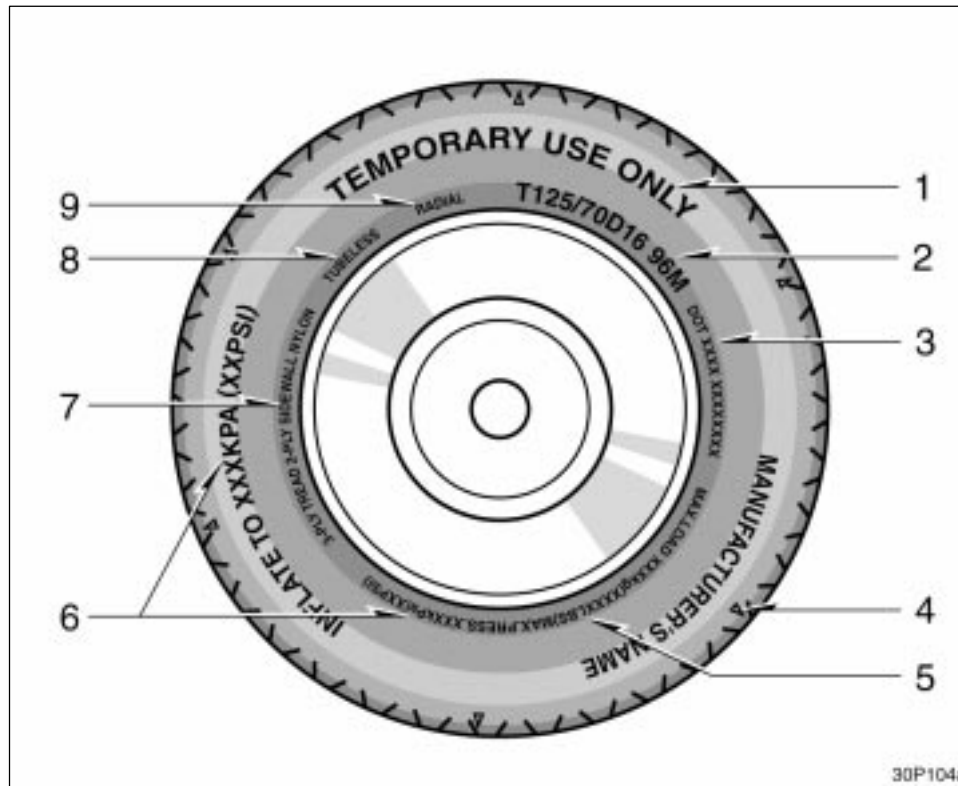


This illustration indicates typical tire symbols.

1. **Tire size**—For details, see “Tire size” on page 338.
2. **DOT and Tire Identification Number (TIN)**—For details, see “DOT and Tire Identification Number (TIN)” on page 337.
3. **Location of tread wear indicators**—For details, see “Checking and replacing tires” on page 411.
4. **Tire ply composition and materials**—Plies mean a layer of rubber-coated parallel cords. Cords mean the strands forming the plies in the tire.
5. **Summer tire or all season tire**—An all season tire has “M+S” on the sidewall. A tire not marked with “M+S” is a summer tire. For details, see “Types of tires” on page 347.

- 6. Radial tires or bias-ply tires—**A radial tire has “RADIAL” on the sidewall. The tire not marked with “RADIAL” is a bias-ply tire.
- 7. “TUBELESS” or “TUBE TYPE”**
—A tubeless tire does not have a tube inside the tire and air is directly filled in the tire. A tube type tire has a tube inside the tire and the tube maintains the air pressure.
- 8. Load limit at maximum cold tire inflation pressure—**For details, see “Checking and replacing tires” on page 411.
- 9. Maximum cold tire inflation pressure—**This means the pressure to which a tire may be inflated. For recommended cold tire inflation pressure, see “Tires” on page 434.
- 10. Uniform tire quality grading—**For details, see “Uniform tire quality grading” that follows.

—Tire symbols
(Compact spare tire)



This illustration indicates typical tire symbols.

1. **"TEMPORARY USE ONLY"**—A compact spare tire is identified by the phrase "TEMPORARY USE ONLY" molded into its sidewall. This tire is designed for temporary emergency use only. For details, see "Compact spare tire" on page 366.
2. **Tire size**—For details, see "Tire size" on page 338.
3. **DOT and Tire Identification Number (TIN)**—For details, see "DOT and Tire Identification Number (TIN)" on page 337.
4. **Location of tread wear indicators**—For details, see "Checking and replacing tires" on page 411.
5. **Load limit at maximum cold tire inflation pressure**—For details, see "Checking and replacing tires" on page 411.

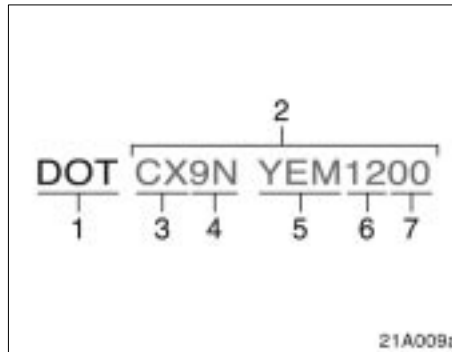
6. Maximum cold tire inflation pressure—This means the pressure to which a tire may be inflated. For recommended cold tire inflation pressure, see “Tires” on page 434.

7. Tire ply composition and materials—Plies mean a layer of rubber-coated parallel cords. Cords mean the strands forming the plies in the tire.

8. “TUBELESS” or “TUBE TYPE”
—A tubeless tire does not have a tube inside the tire and air is directly filled in the tire. A tube type tire has a tube inside the tire and the tube maintains the air pressure.

9. Radial tires or bias-ply tires—A radial tire has “RADIAL” on the sidewall. The tire not marked with “RADIAL” is a bias-ply tire.

—DOT and Tire Identification Number (TIN)

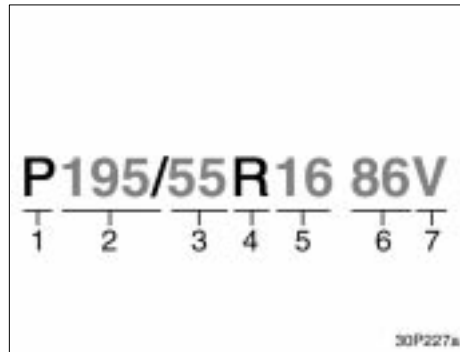


This illustration indicates typical DOT and Tire Identification Number (TIN).

1. “DOT” symbol
2. Tire Identification Number (TIN)
3. Tire manufacturer’s identification mark
4. Tire size code
5. Manufacturer’s optional tire type code (3 or 4 letters)
6. Manufacturing week
7. Manufacturing year

The “DOT” symbol certifies that the tire conforms to applicable Federal Motor Vehicle Safety Standards.

—Tire size



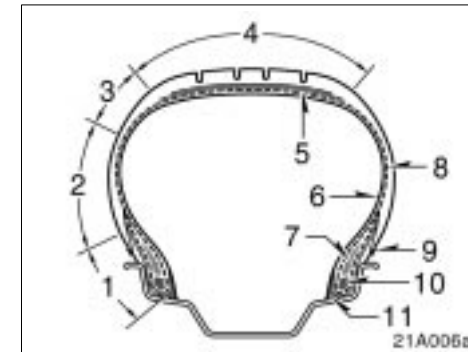
This illustration indicates typical tire size.

1. Tire use (P=Passenger car, T=Temporary use)
2. Section width (in millimeters)
3. Aspect ratio (tire height to section width)
4. Tire construction code (R=Radial, D=Diagonal)
5. Wheel diameter (in inches)
6. Load index (2 digits or 3 digits)
7. Speed symbol (alphabet with one letter)



1. Section width
2. Tire height
3. Wheel diameter

—Name of each section of tire



1. Bead
2. Sidewall
3. Shoulder
4. Tread
5. Belt
6. Inner liner
7. Reinforcing rubber
8. Carcass
9. Rim lines
10. Bead wires
11. Chafer

—Uniform tire quality grading

This information has been prepared in accordance with regulations issued by the National Highway Traffic Safety Administration of the U.S. Department of Transportation. It provides the purchasers and/or prospective purchasers of Toyota vehicles with information on uniform tire quality grading.

Your Toyota dealer will help answer any questions you may have as you read this information.

DOT quality grades—All passenger car tires must conform to Federal Safety Requirements in addition to these grades. Quality grades can be found where applicable on the tire sidewall between tread shoulder and maximum section width. For example: Treadwear 200 Traction AA Temperature A.

Tread wear—The tread wear grade is a comparative rating based on the wear rate of the tire when tested under controlled conditions on a specified government test course. For example, a tire graded 150 would wear one and a half (1-1/2) times as well on the government course as a tire graded 100. The relative performance of tires depends upon the actual conditions of their use, however, and may depart significantly from the norm due to variations in driving habits, service practices and differences in road characteristics and climate.

Traction AA, A, B, C—The traction grades, from highest to lowest, are AA, A, B, and C, and they represent the tire's ability to stop on wet pavement as measured under controlled conditions on specified government test surfaces of asphalt and concrete. A tire marked C may have poor traction performance.

Warning: The traction grade assigned to this tire is based on braking (straight ahead) traction tests and does not include cornering (turning) traction.

Temperature A, B, C—The temperature grades are A (the highest), B, and C, representing the tire's resistance to the generation of heat and its ability to dissipate heat when tested under controlled conditions on a specified indoor laboratory test wheel. Sustained high temperature can cause the material of the tire to degenerate and reduce tire life, and excessive temperature can lead to sudden tire failure. The grade C corresponds to a level of performance which all passenger car tires must meet under the Federal Motor Vehicle Safety Standard No. 109. Grades B and A represent higher levels of performance on the laboratory test wheel than the minimum required by law.

Warning: The temperature grades for this tire are established for a tire that is properly inflated and not overloaded. Excessive speed, underinflation, or excessive loading, either separately or in combination, can cause heat buildup and possible tire failure.

—Glossary of tire terminology

Tire related term	Meaning
Cold tire inflation pressure	tire inflation pressure when the vehicle has been parked for at least 3 hours or more, or it has not been driven more than 1.5 km or 1 mile under that condition
Maximum inflation pressure	the maximum cold inflation pressure to which a tire may be inflated and it is shown on the sidewall of the tire
Recommended inflation pressure	cold tire inflation pressure recommended by a manufacturer
Accessory weight	the combined weight (in excess of those standard items which may be replaced) of automatic transmission, power steering, power brakes, power windows, power seats, radio, and heater, to the extent that these items are available as factory-installed equipment (whether installed or not)
Curb weight	the weight of a motor vehicle with standard equipment including the maximum capacity of fuel, oil, and coolant, and, if so equipped, air conditioning and additional weight optional engine
Maximum loaded vehicle weight	the sum of— (a) curb weight; (b) accessory weight; (c) vehicle capacity weight; and (d) production options weight
Normal occupant weight	68 kg (150 lb.) times the number of occupants specified in the second column of Table 1 that follows

Tire related term	Meaning
Production options weight	the combined weight of those installed regular production options weighing over 2.3 kg (5 lb.) in excess of those standard items which they replace, not previously considered in curb weight or accessory weight, including heavy duty brakes, ride levelers, roof rack, heavy duty battery, and special trim
Vehicle capacity weight (Total load capacity)	the rated cargo and luggage load plus 68 kg (150 lb.) times the vehicle's designated seating capacity
Intended outboard sidewall	(A) the sidewall that contains a whitewall, bears white lettering or bears manufacturer, brand, and/or model name molding that is higher or deeper than the same molding on the other sidewall of the tire, or (B) the outward facing sidewall of an asymmetrical tire that has a particular side that must always face outward when mounted on a vehicle
Occupant distribution	distribution of occupants in a vehicle as specified in the third column of Table 1 that follows
Rim	a metal support for a tire or a tire and tube assembly upon which the tire beads are seated
Rim diameter (Wheel diameter)	nominal diameter of the bead seat
Rim size designation	rim diameter and width
Rim type designation	the industry of manufacturer's designation for a rim by style or code
Rim width	nominal distance between rim flanges
Vehicle maximum load on the tire	the load on an individual tire that is determined by distributing to each axle its share of the maximum loaded vehicle weight and dividing by two

Tire related term	Meaning
Vehicle normal load on the tire	the load on an individual tire that is determined by distributing to each axle its share of the curb weight, accessory weight, and normal occupant weight (distributed in accordance with Table 1 that follows) and dividing by two
Weather side	the surface area of the rim not covered by the inflated tire

Table 1– Occupant loading and distribution for vehicle normal load for various designated seating capacities

Designated seating capacity, number of occupants	Vehicle normal load, number of occupants	Occupant distribution in a normally loaded vehicle
2 through 4	2	2 in front
5 through 10	3	2 in front, 1 in second seat

Vehicle load limits

Vehicle load limits include total load capacity, seating capacity, towing capacity and cargo capacity. Follow the load limits shown below. Total load capacity and seating capacity are also described on the tire and loading information label. For location of the tire and loading information label, see “Checking tire inflation pressure” on page 409.

Total load capacity:

365 kg (810 lb.)

Total load capacity means combined weight of occupants, cargo and luggage.

Seating capacity:

Total 5 (Front 2, Rear 3)

Seating capacity means the maximum number of occupants whose estimated average weight is 68 kg (150 lb.) per person. Depending on the weight of each person, the seating capacity given may exceed the total load capacity.

NOTICE

Even if the number of occupants are within the seating capacity, do not exceed the total load capacity.

Towing capacity

Toyota does not recommend towing a trailer with your vehicle. Your vehicle is not designed for trailer towing.

Cargo capacity

Cargo capacity may increase or decrease depending on the size (weight) and the number of occupants. For details, see “Capacity and distribution” that follows.



CAUTION

Do not apply the load more than each load limit. That may cause not only damage to the tires, but also deterioration to the steering ability and braking ability, which may cause an accident.

Cargo and luggage— —Stowage precautions

When stowing cargo and luggage in the vehicle, observe the following:

- Put cargo and luggage in the luggage compartment when at all possible. Be sure all items are secured in place.
- Be careful to keep the vehicle balanced. Locating the weight as far forward as possible helps maintain balance.
- For better fuel economy, do not carry unneeded weight.



CAUTION

- **To prevent cargo and luggage from sliding forward during braking, do not stack anything in the luggage compartment. Keep cargo and luggage low, as close to the floor as possible.**

- Never allow anyone to ride in the luggage compartment. It is not designed for passengers. They should ride in their seats with their seat belts properly fastened. Otherwise, they are much more likely to suffer serious bodily injury, in the event of sudden braking or a collision.
- Do not place anything on the luggage cover. Such items may be thrown about and possibly injure people in the vehicle during sudden braking or an accident. Secure all items in a safe place.
- Do not drive with objects left on top of the instrument panel. They may interfere with the driver's field of view. Or they may move during sharp vehicle acceleration or turning, and impair the driver's control of the vehicle. In an accident they may injure the vehicle occupants.

NOTICE

Do not load the vehicle beyond the vehicle capacity weight given in Section 9.

—Capacity and distribution

Cargo capacity depends on the total weight of the occupants.

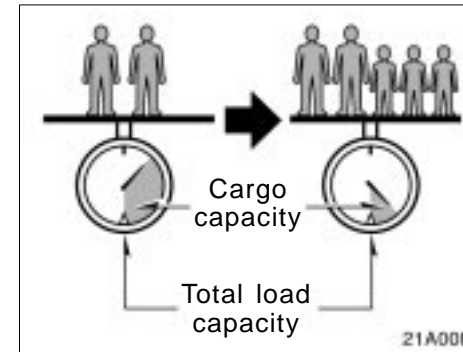
(Cargo capacity) = (Total load capacity) – (Total weight of occupants)

Steps for Determining Correct Load Limit—

- (1) Locate the statement "The combined weight of occupants and cargo should never exceed XXX kg or XXX lbs." on your vehicle's placard.
- (2) Determine the combined weight of the driver and passengers that will be riding in your vehicle.
- (3) Subtract the combined weight of the driver and passengers from XXX kg or XXX lbs.

- (4) The resulting figure equals the available amount of cargo and luggage load capacity. For example, if the “XXX” amount equals 1400 lbs. and there will be five 150 lb. passengers in your vehicle, the amount of available cargo and luggage load capacity is 650 lbs. (1400–750 (5x150)=650 lbs.)
- (5) Determine the combined weight of luggage and cargo being loaded on the vehicle. That weight may not safely exceed the available cargo and luggage load capacity calculated in Step 4.
- (6) If your vehicle will be towing a trailer, load from your trailer will be transferred to your vehicle. Consult this manual to determine how this reduces the available cargo and luggage load capacity of your vehicle.

Toyota does not recommend towing a trailer with your vehicle. Your vehicle is not designed for trailer towing.



Example on Your Vehicle

In case that 2 people with the combined weight of 166 kg (366 lb.) are riding in your vehicle with the total load capacity of 365 kg (810 lb.), the available amount of cargo and luggage load capacity will be as follows:

$$365 \text{ kg} - 166 \text{ kg} = 199 \text{ kg.}$$

$$(810 \text{ lb.} - 366 \text{ lb.} = 444 \text{ lb.})$$

From this condition, if 3 more passengers with the combined weight of 176 kg (388 lb.) get on, the available cargo and luggage load will be reduced as follows:

199 kg – 176 kg = 23 kg.
(444 lb. – 388 lb. = 56 lb.)

As shown in the above example, if the number of occupants increases, the cargo and luggage load equaling the combined weight of occupants who got on later must be reduced. In other words, if the increase in the number of occupants causes the excess of the total load capacity (combined weight of occupants plus cargo and luggage load), you have to reduce the cargo and luggage on your vehicle.

For details about total load capacity, see “Vehicle load limits” on page 344.



CAUTION

Even if the total load of occupant's weight and the cargo load is less than the total load capacity, do not apply the load unevenly. That may cause not only damage to the tire but also deterioration to the steering ability due to unbalance of the vehicle, causing an accident.

Types of tires

Determine what kind of tires your vehicle is originally equipped with.

1. All season tires

All season tires are designed to provide better traction in snow and to be adequate for driving in most winter conditions, as well as for use all year round.

All season tires, however, do not have adequate traction performance compared with snow tires in heavy or loose snow. Also, all season tires fall short in acceleration and handling performance compared with summer tires in highway driving.

2. Summer tires

Summer tires are high-speed capability tires best suited to highway driving under dry conditions.

Since summer tires do not have the same traction performance as snow tires, summer tires are inadequate for driving on snow-covered or icy roads. For driving on snow-covered or icy roads, we recommend using snow tires. If installing snow tires, be sure to replace all four tires.

The details about how to distinguish summer tires from all season tires are described on page 334.



CAUTION

- **Do not mix summer and all season tires on your vehicle as this can cause dangerous handling characteristics, resulting in loss of control.**
- **Do not use tire other than the manufacturer's designated tires, and never mix tires or wheels of the sizes different from the originally equipped tires and wheels.**