SECTION 3 – 1

STARTING AND DRIVING

Starting and driving

Three–way catalytic converters 192
Engine exhaust caution 193
Before starting the engine 194
Ignition switch with steering lock 194
Parking brake 195
How to start the engine 196
Automatic transmission 197
Electronic throttle control system 204
Cruise control 205
Traction control system 208
Vehicle skid control system 209
Brake system 211
Brake pad wear limit indicators 215
Tire information 216
Types of tires 225

THREE–WAY CATALYTIC CONVERTERS

Three–way catalytic converters are emission control devices installed in the exhaust system.

The 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 allow the engine to run at idle speed for more than 20 minutes.***
- ***Avoid racing the engine.***
- ***Do not push–start or pull–start your vehicle.***
- ***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 or fuel system could cause an extremely high three–way catalytic converter 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 Lexus 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 Lexus Maintenance Schedule. For scheduled maintenance information, refer to the "Owner's Manual Supplement / Scheduled Maintenance".*

ENGINE EXHAUST CAUTION

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 engine 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 engine 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 trunk lid closed while driving. An open or unsealed trunk lid 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, drive with the windows open and the trunk lid closed. Have the cause immediately located and corrected.**

BEFORE STARTING THE ENGINE

1. Check the area around the vehicle before entering it.
2. Adjust seat position, seatback angle, head restraint height and steering wheel angle.
3. Adjust the inside and outside rear view mirrors.
4. Lock all doors.
5. Fasten seat belts.

Remember to check that the service reminder indicators function when turning the ignition switch to "ON", and check the fuel gauge to see that you have sufficient fuel.

IGNITION SWITCH WITH STEERING LOCK

"START" – Starter motor on. The key will return to the "ON" position when released.

For starting tips, see page 196.

"ON" – Engine on and all accessories on.

This is the normal driving position.

NOTICE

Do not leave the ignition switch in the "ON" position if the engine is not running. The battery will discharge and the electronic ignition system could be damaged.

”ACC” – Accessories such as the radio operate, but the engine is off.

If you leave the key in the ”ACC” or ”LOCK” position and open the driver’s door, a buzzer will remind you to remove the key.*

*NOTE: *The volume or interval of beep sound can be changed. Ask your Lexus dealer for details.*

”LOCK” – Engine is off and the steering wheel is locked. The ignition key can be removed only at this position.

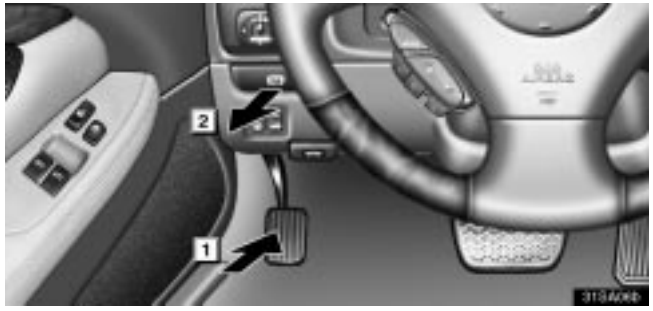
To turn the ignition switch from ”ACC” to the ”LOCK” position, you must put the transmission selector lever in the ”P” position.

Once you remove the key, the engine immobiliser system is automatically set. See ”Engine immobiliser system” on page 11.

When starting the engine, the key may seem stuck at the ”LOCK” position. To free it, first be sure the key is pushed all the way in, and then rock the steering wheel slightly while turning the key gently.

If, in an emergency, you must turn the engine off while the vehicle is moving, turn the ignition switch only to ”ACC”.

PARKING BRAKE



1 To set: Fully depress the parking brake pedal.

2 To release: Pull the parking brake release lever.

Before leaving your vehicle, firmly apply the parking brake.

⚠ CAUTION

Before driving, make sure the parking brake is fully released and that the parking brake reminder light is off.

HOW TO START THE ENGINE

Before cranking

1. Apply the parking brake firmly.

2. Turn off unnecessary lights and accessories.

3. Put the selector lever in ”P”. If you need to restart the engine while the vehicle is moving, put the selector lever in ”N”. A starter safety device will prevent the starter from operating if the selector lever is in any drive position.

4. Depress the brake pedal and hold it to the floor until driving off.

Starting the engine

Before starting the engine, be sure to follow the instructions in ”Before cranking”.

Normal starting procedure

The multiport fuel injection system/sequential multiport fuel injection system in your engine automatically controls the proper air–fuel mixture for starting. You can start a cold or hot engine as follows:

1. With your foot off the accelerator pedal, crank the engine by turning the ignition switch to ”START”. Release it when the engine starts.

2. After the engine runs for about 10 seconds, you are ready to drive.

If the weather is below freezing, let the engine warm up for a few minutes before driving. Do not leave the vehicle while the engine is warming up.

If the engine stalls ...

Simply restart it , using the correct procedure given in normal starting.

If the engine will not start

See ”If your vehicle will not start” on page 234.

NOTICE

- ***Do not crank for more than 30 seconds at a time. This may overheat the starter and wiring systems.***
- ***Do not race a cold engine.***
- ***If the engine becomes difficult to start or stalls frequently, have the engine checked immediately.***

AUTOMATIC TRANSMISSION

Your automatic transmission has a shift lock system to minimize the possibility of incorrect operation. This means you can only shift out of "P" position when the brake pedal is depressed with the ignition switch in "ON" position. (★)

▶ ***The shift position is displayed on the instrument cluster.***

P: Parking, engine starting and key removal position

R: Reverse position

N: Neutral position

D: Normal driving position (Shifting into overdrive possible)

4: Position for engine braking (Shifting into overdrive not possible)

When the cruise control is being used, even if you downshift from "D" to "4", engine braking will not be enabled because the cruise control is not cancelled. For the operation to decrease the vehicle speed, see page 207.

3, 2: Position for more powerful engine braking

L: Position for maximum engine braking

Correct use of the automatic transmission is explained in the following parts.

(a) Normal driving

(b) Using engine braking

(c) Using the ”3”, ”2” and ”L” positions

(d) Backing up

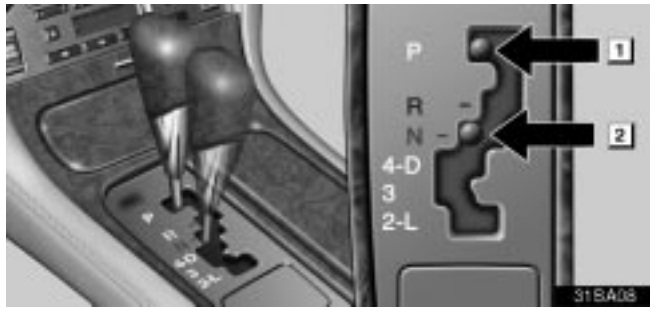
(e) Parking

(f) Good driving practice

(g) Rocking your vehicle if stuck

(h) If you cannot shift the selector lever

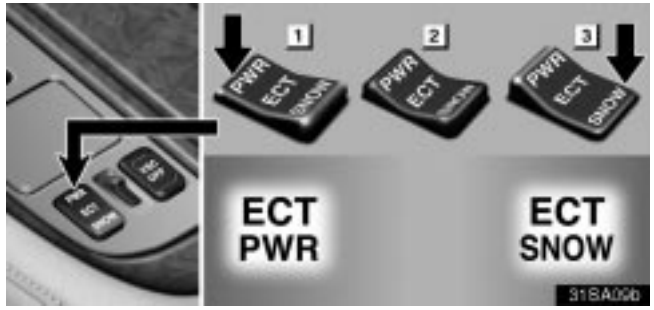
(a) Normal driving



▶ 1 *”P” (Park) position* 2 *”N” (Neutral) position*

1. Start the engine as instructed in ”How to start the engine” on page 196.

The transmission must be in ”P” or ”N”. The engine will not start in any drive position even if the ignition switch is turned to ”START”.



▶ 1 *Power position* 2 *Normal position*
3 *Snow position*

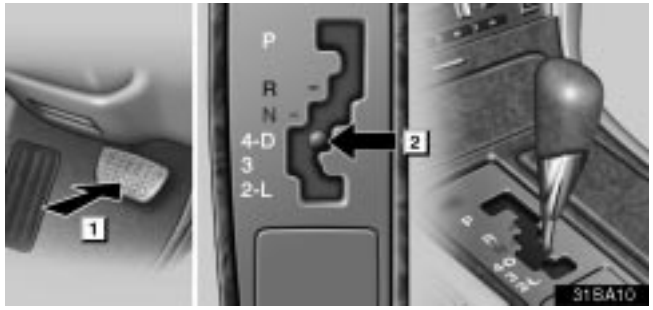
2. Set the driving pattern selector switch to the "Normal" position.

Your transmission has a driving pattern selector switch which allows you to select "Power", "Normal" or "Snow" mode to suit your driving condition. For ordinary driving, Lexus recommends that you use the "Normal" position to improve fuel economy.

3. For more powerful acceleration and sporty driving, use the "Power" position.

In the "Power" position, the "ECT PWR" light in the instrument cluster is on and the transmission is shifted up at higher vehicle speeds and shifted down more responsively than in the "Normal" position.

For "Snow" mode, see "Electronic Throttle Control System" on page 204.



▶ 1 *Brake pedal* 2 *"D" (Drive) position*

4. With your foot holding down the brake pedal, shift the selector lever to "D".

Always use the "D" position to improve fuel economy and quiet driving. Only in this position, shifting into the overdrive gear is possible. However, while the engine coolant temperature is low, the transmission will not shift into the overdrive gear even in the "D" position. (See "(b) Using engine braking" and "(f) Good driving practice" for exceptions.)

⚠ CAUTION

Never put your foot on the accelerator pedal while shifting.

5. Release the parking brake and brake pedal. Depress the accelerator pedal slowly for smooth starting.

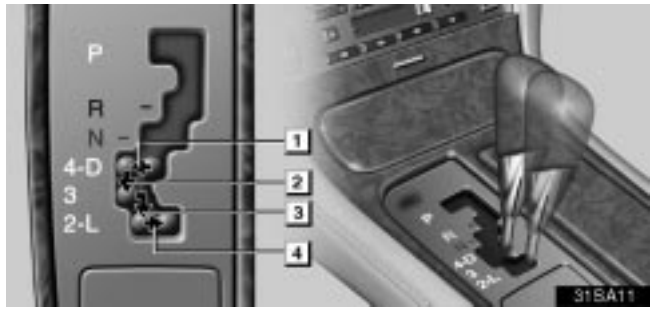
In normal cruising, the vehicle will start in first gear and automatically shift up to the most suitable gear. On inclines, declines or winding roads, etc., the vehicle shifts up and down automatically according to the running conditions to obtain the suitable driving power and engine braking.

When the lever is in the "4" position, the automatic transmission system will select the most suitable gear for the running conditions such as hill climbing, hard towing, etc.

If you need to accelerate rapidly while driving, depress the accelerator pedal to the full throttle position. This provides more acceleration by automatically downshifting the transmission to the next lower gear or beyond, depending on the vehicle speed.

If engine braking is needed, such as in descending a long hill, see "(b) Using engine braking".

(b) Using engine braking



To use the braking power of the engine, downshift the transmission in the way described below:

1 Shift into the "4" position. The transmission will downshift to fourth gear and engine braking will be obtained.

When the cruise control is being used, even if you downshift from "D" to "4", engine braking will not be applied because the cruise control is not cancelled. If you need to decrease the vehicle speed, see page 207.

2 Shift into the "3" position. The transmission will downshift to third gear when the vehicle speed is or becomes lower than 137 km/h (85 mph) and more powerful engine braking will be obtained.

3 Shift into the ”2” position. The transmission will downshift to second gear when the vehicle speed is or becomes lower than 82 km/h (51 mph) and more powerful engine braking than that of ”3” position will be obtained.

4 Shift into the ”L” position. The transmission will downshift to first gear when the vehicle speed is or becomes lower than 39 km/h (24 mph) and maximum engine braking will be applied.

⚠ CAUTION

Be careful when downshifting on a slippery surface. The abrupt change in engine speed could cause the vehicle to spin or skid.

(c) Using the ”3”, ”2” and ”L” positions

The ”3”, ”2” and ”L” positions are used for strong engine braking as described previously.

With the selector lever in ”3”, ”2” or ”L”, you can start the vehicle in motion as with the lever in ”D”.

With the selector lever in ”3” or ”2”, the vehicle will start in first gear and automatically shift to third or second gear.

With the selector lever in ”L”, the transmission is engaged in first gear.

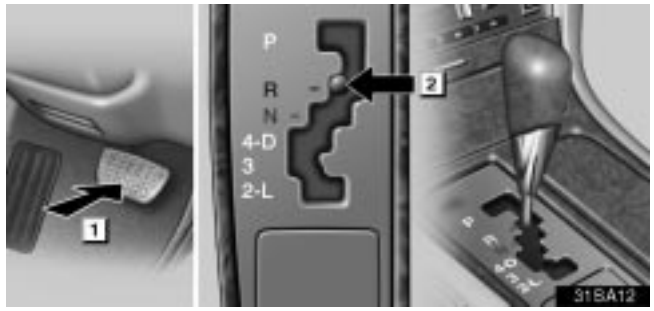
NOTICE

- ***Be careful not to over–rev the engine. Watch the tachometer to keep engine rpm from going into the red zone. The approximate maximum allowable speed for each position is given below for your reference:***

  ”3” . . . 147 km/h (92 mph)
  ”2” . . . . 96 km/h (60 mph)
  ”L” . . . . 62 km/h (39 mph)

- ***Do not continue hill climbing or hard towing for a long time in the ”3”, ”2” or ”L” position. This may cause severe automatic transmission damage from overheating. To prevent such damage, ”4” position should be used in hill climbing or hard towing.***

(d) Backing up



▶ 1 *Brake pedal* 2 *"R" (Reverse) position*

1. Bring the vehicle to a complete stop.

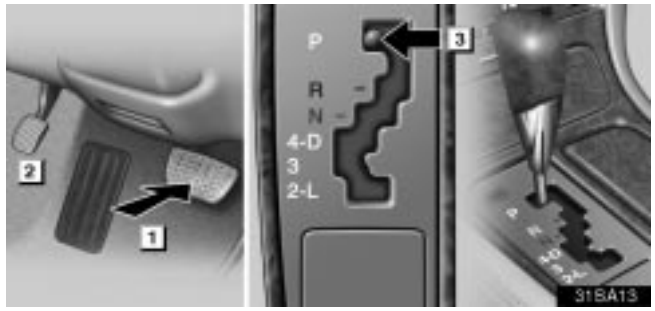
2. With the brake pedal held down with your foot, shift the selector lever to the "R" position.

NOTICE

Never shift into reverse while the vehicle is moving.

When you are backing up, you can adjust the outside rear view mirrors down quickly. For details, see page 99.

(e) Parking



▶ 1 *Brake pedal* 2 *Parking brake pedal*
3 *"P" (Park) position*

1. Bring the vehicle to a complete stop.

2. Depress the parking brake pedal fully.

3. With the brake pedal held down with your foot, shift the selector lever to the "P" position.

⚠ CAUTION

Never attempt to move the selector lever into "P" under any circumstances while the vehicle is moving. Serious mechanical damage and loss of vehicle control may result.

(f) Good driving practice

If the transmission repeatedly shifts up and down between fourth and overdrive gears when climbing a gentle slope, shift the selector lever to the "4" position. Be sure to shift the selector lever to the "D" position after climbing the slope.

⚠ CAUTION

Always keep your foot on the brake pedal while stopped with the engine running. This prevents the vehicle from creeping.

NOTICE

Do not hold the vehicle on an upgrade with the accelerator pedal. This can cause the transmission to overheat. Always use the brake pedal or parking brake.

(g) Rocking your vehicle if stuck

⚠ CAUTION

If your vehicle becomes stuck in snow, mud, sand, etc., then you may attempt to rock the vehicle free by moving it forward and backward. Do not attempt this procedure if people or objects are anywhere near the vehicle. During the rocking operation the vehicle may suddenly move forward or backward as it becomes unstuck, causing injury or damage to nearby people or objects.

NOTICE

If you rock your vehicle, observe the following precautions to prevent damage to the transmission and other parts.

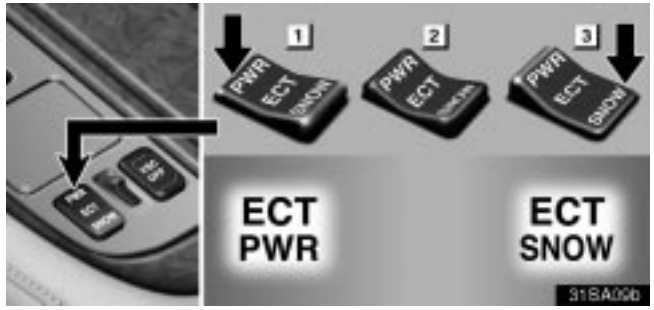
- ***Do not depress the accelerator pedal while shifting the selector lever or before the transmission is completely shifted to forward or reverse gear.***
- ***Do not race the engine and avoid spinning the wheels.***
- ***If your vehicle remains stuck after rocking the vehicle several times, consider other ways such as towing.***

(h) If you cannot shift the selector lever

If you cannot shift the selector lever even though the brake pedal is depressed, use the shift lock override button. For instructions, see ”If you cannot shift automatic transmission selector lever” on page 269.

ELECTRONIC THROTTLE CONTROL SYSTEM

The electronic throttle control system always maintains appropriate engine output in relation to the accelerator opening in all driving conditions.



▶ 1 ***Power position*** 2 ***Normal position***
3 ***Snow position***

The electronic throttle control system has 3 modes: Normal, Power and Snow modes.

Normal mode: For ordinary driving, Lexus recommends that you use the normal mode to improve fuel economy.

Power mode: For more powerful acceleration and sporty driving.

In the power mode, the ”ECT PWR” light in the instrument cluster is on and the transmission is shifted up at higher vehicle speeds and shifted down more responsively than in the normal mode.

To return to the normal mode, push the driving pattern selector switch lightly on the ”SNOW” side.

Snow mode: For slippery road surfaces such as in snow. In this mode, the spinning of the rear wheels is controlled appropriately.

When you push the driving pattern selector switch on the ”SNOW” side, the snow mode is turned on and the ”ECT SNOW” light in the instrument cluster comes on.

To return to the normal mode, push the driving pattern selector switch on the ”SNOW” side again.

When you turn the ignition switch off in the snow mode, the mode automatically changes to the normal mode.

CRUISE CONTROL

The cruise control allows you to cruise the vehicle at a desired speed over 40 km/h (25 mph) with your foot off the accelerator pedal.

Your cruising speed can be maintained although a slight speed change may occur when driving up or down a gradient, within the limits of engine performance. On steeper hills, a great speed change will occur so it is better to drive without the cruise control.

When the cruise control is on, the driving pattern of the automatic transmission is fixed in the normal position, regardless of the position of the selector switch.

⚠ CAUTION

- **To help maintain maximum control of your vehicle, do not use the cruise control when driving in heavy or varying traffic, or on slippery (rainy, icy or snow–covered) or winding roads.**
- **Avoid vehicle speed increases when driving downhill. If the vehicle speed is too fast in relation to the cruise control set speed, cancel the cruise control then downshift the transmission to use engine braking to slow down.**

Turning on the system

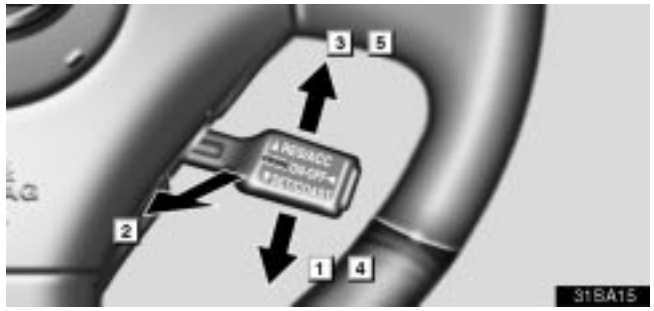
To operate the cruise control, push the main switch. This turns the system on. The indicator light in the instrument cluster shows that you can now set your desired cruising speed. Another push on the switch will turn the system completely off.

When the ignition switch is turned off, the main switch is also automatically turned off. To use the cruise control again, push the main switch again to turn it on.

⚠ CAUTION

To avoid accidental cruise control engagement, keep the main switch off when not using the cruise control.

Setting operation



▶***Each function is described below.***

1 Setting at a desired speed.

The transmission must be in ”D” or “4” before you set the cruise control speed.

Bring the vehicle to the desired speed, press the control lever downward in the ”SET/COAST” direction and release it. This sets the vehicle at that speed. Now you may take your foot off the accelerator pedal. If you need acceleration – for example, when passing – depress the accelerator pedal enough for the vehicle to exceed the set speed. When you release the accelerator pedal, the vehicle will return to the speed set prior to the acceleration.

2 Cancelling the preset speed

You can cancel the preset speed by either of the following:

a. Pulling the control lever in the ”CANCEL” direction.

b. Depressing the brake pedal.

If the vehicle speed falls below about 40 km/h (25 mph), the preset speed will be automatically cancelled.

If the vehicle speed drops 16 km/h (10 mph) below the preset speed, the preset speed will also automatically be cancelled.

If the preset speed automatically cancels out for other than these reasons, have your vehicle checked by your Lexus dealer at the earliest opportunity.

3 Resetting to a faster speed

Press the control lever upward in the ”RES/ACC” direction and hold it. Release the lever when the desired speed is attained. While the lever is held upward, the vehicle will gradually gain speed.

When the difference between the actual vehicle speed and the set speed is less than 5 km/h (3 mph), the set speed can be increased 1.6 km/h (1 mph) each time by pressing the control lever upward in the ”RES/ACC” direction quickly within 0.6 seconds.

However, a quicker way to reset is to accelerate the vehicle and then press the control lever downward in the ”SET/COAST” direction.

4 Resetting to a slower speed

Press the control lever downward in the ”SET/COAST” direction and hold it. Release the lever when the desired speed is attained. While the lever is held downward, the vehicle speed will gradually decrease.

When the difference between the actual vehicle speed and the set speed is less than 5 km/h (3 mph), the set speed can be lowered 1.6 km/h (1 mph) each time by pressing the control lever downward in the ”SET/COAST” direction quickly within 0.6 seconds.

However, a quicker way to reset is to depress the brake pedal and then press the control lever downward in the ”SET/COAST” direction.

Even if you downshift the transmission from ”D” position to ”4” with the cruise control on, engine braking will not be applied because the cruise control is not cancelled. To decrease the vehicle speed, reset to a slower speed with the cruise control lever or depress the brake pedal. If you use the brake pedal, cruise control is cancelled.

5 Resuming the preset speed

If the preset speed is cancelled by pulling the control lever or by depressing the brake pedal or vehicle skid control activation, pushing the lever up in the ”RES/ACC” direction will restore the speed set prior to cancellation. However, once the vehicle speed falls below about 40 km/h (25 mph), the preset speed will not be resumed.

Cruise control failure warning

If the ”CRUISE” indicator light in the instrument cluster flashes when using the cruise control, push the main switch to turn the system off and then push it again to turn it on.

If any of the following conditions then occurs, there is some trouble in the cruise control system.

- The indicator light does not come on.
- The indicator light flashes again.
- The indicator light goes out after it comes on.

If this is the case, contact your Lexus dealer and have your Lexus inspected.

TRACTION CONTROL SYSTEM

The traction control system automatically helps control the spinning of the rear wheels which may occur when accelerating on slippery road surfaces, thus assisting driver to control the driving power of the rear wheels.

▶***Slip indicator light***

When you turn the ignition switch on, this system always turns on. Leave the system on during ordinary driving so that it can operate when needed. When traction control is applied, the slip indicator light blinks.

You may hear a sound in the engine compartment for a few seconds when the engine is started or just after the vehicle is started. This means that the traction control system is in the self–check mode, and does not indicate malfunction.

When the traction control system is operating, you may feel vibration of your vehicle, caused by operation of the brakes. This indicates the system is functioning properly.

When getting the vehicle out of mud or new snow, etc. the traction control system will help operate to prevent the wheels from spinning.

To turn off the traction control system, see page 210.

⚠ CAUTION

Under certain slippery road conditions, full traction of the vehicle and power to the rear wheels cannot be maintained, even though the traction control system is in operation. Do not drive the vehicle under any speed or maneuvering conditions which will cause the vehicle to lose traction. In situations where the road surface is covered with ice or snow, your vehicle should be fitted with snow tires or tire chains. Always drive at an appropriate and cautious pace.

VEHICLE SKID CONTROL SYSTEM

The vehicle skid control system helps provide integrated control of the systems such as an anti–lock brake system, traction control, engine control, etc. This system automatically controls the output of the brakes or engine to help prevent the vehicle from skidding when cornering on a slippery road surface or abrupt steering wheel operation occurs.

▶***Slip indicator light***

If the vehicle is going to skid during driving, the slip indicator light flashes and an alarm sounds intermittently.

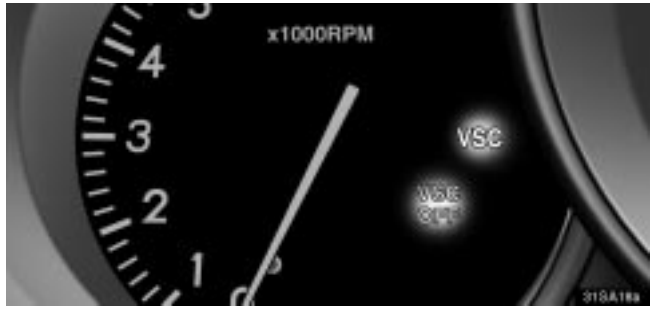
The vehicle skid control activates when the vehicle speed is about more than 15 km/h (9 mph).

You may hear a sound in the engine compartment for a few seconds when the engine is started or just after the vehicle is started. This means that the vehicle skid control is in the self–check mode and does not indicate a malfunction.

You can turn off the vehicle skid control system by pushing the ”VSC OFF” switch. The ”VSC OFF” indicator comes on. At this time, the traction control system also turns off. You cannot turn off either one of them. Pushing the ”VSC OFF” switch a second time turns the system back on and extinguishes the ”VSC OFF” indicator light.

When you turn the ignition switch on, this system always turns on.

Vehicle skid control system failure warning



These lights warn when there is a problem somewhere in the vehicle skid control system or traction control system.

If the ”VSC” warning light and ”VSC OFF” indicator light come on, have your vehicle checked by Lexus dealer as soon as possible.

The lights will come on when the ignition switch is turned to ”ON”, and will go off after about a few seconds.

The lights may stay on for 60 seconds after the ignition switch is turned to the “ON” position. It is normal if they go out after a while.

Depressing the brake pedal repeatedly may turn on the lights. It is normal if they go out after a few seconds.

If the ”VSC” warning light and ”VSC OFF” indicator light come on, the vehicle skid control system does not activate, however, it is no problem to continue your driving.

CAUTION

- **Do not rely excessively on the vehicle skid control system. Even if the vehicle skid control system is operating, you must always drive carefully and attentively to avoid serious injury. Reckless driving will result in an unexpected accident. If the slip indicator light flashes, sounding an alarm, special care should be taken while driving.**
- **Only use tires of specified size. The size, manufacturer, brand and tread pattern for all 4 tires should be the same. If you use the tires other than specified, or different type or size, the vehicle skid control system may not function correctly. When replacing the tires or wheels, contact your Lexus dealer.**

BRAKE SYSTEM

This brake system has 2 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 be longer. Also, the brake system warning light may come on.

CAUTION

Do not drive your vehicle with only a single brake system. Have your brakes fixed immediately.

Brake booster

The brake booster uses brake fluid pressurized by the pump to power–assist the brakes. If the brake booster 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 Lexus dealer.

The brake system warning light may stay on for about 60 seconds after the ignition switch is turned to the “ON” position. It is normal if the light turns off after a while.

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

You may hear a small sound in the engine compartment after the engine 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.

⚠ CAUTION

- **Do not pump the brake pedal if the engine stalls. Each push on the pedal uses up your brake fluid pressure reserve.**
- **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 be longer.**

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, you may feel the brake pedal pulsating and 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 the manhole cover, the steel plate under the construction, joints in the bridge, etc. on a rainy day tends to activate the anti–lock brake system.

You may hear a click or motor sound in the engine compartment for a few seconds when the engine is started or just after the vehicle is started. This means that the anti–lock brake system is in the self–check mode, and does not indicate a malfunction.

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

- You may hear the anti–lock brake system operating and feel the brake pedal pulsating 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.
- At the end of the anti–lock brake system activation, the brake pedal may move a little forward.

⚠ 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 tires 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 the 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.

”ABS” warning light

The light comes on when the ignition switch is turned to the “ON” position. If the anti–lock brake system and the brake assist system work properly, the light turns off after a few seconds. Thereafter, if either of the systems malfunctions, the light comes on again.

When the “ABS” warning light is on (and the brake system warning light is off), the anti–lock brake system, the brake assist system, the traction control system and/or the vehicle skid control system do/does not operate, but the brake system still operates conventionally.

When the “ABS” warning light is on (and the brake system warning light is off), the anti–lock brake system does not operate so that the wheels could lock up during a sudden braking or braking on slippery road surfaces.

If either of the following conditions occur, this indicates a malfunction somewhere in the parts monitored by the warning light system. Contact your Lexus dealer as soon as possible to service the vehicle.

- The light does not come on when the ignition switch is turned to the “ON” position, or 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 brake system warning light, immediately stop your vehicle at a safe place and contact your Lexus dealer.

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

Either of the following conditions may occur, but do not indicate the malfunction:

- The light may stay on for about 60 seconds after the engine is started. 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.

Drum–in–disc type parking brake system

Your vehicle has a drum–in–disc type parking brake system. This type of brake system needs bedding–down of the brake shoes periodically or whenever the parking brake shoes and/or drums are replaced.

Have your Lexus dealer perform the bedding–down.

Brake assist system

If you slam the brakes on such as in an emergency, the brake assist system provides more powerful braking.

If you slam the brakes on, more powerful braking will be applied. At this time, you may hear a sound in the engine compartment and feel the vibrations of the brake pedal. 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).

The brake assist system may not work for about 60 seconds after the engine is started.

For an explanation of this system's warning light, see "ABS" warning light on page 45 or 214.

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 the extent that replacement is required.

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

TIRE INFORMATION

This vehicle can be equipped with either run–flat tires (RFT) or standard tires. You can continue driving on the vehicle with run–flat tires even if any tire goes flat. It is able to run for a maximum of 160 km (100 miles) at a speed below 90 km/h (55 mph) after the low tire pressure warning light blinks and chimes sound. When you drive your vehicle after the low tire pressure warning light blinks and chimes sound, the tire must be replaced. Do not use the repaired tire. A spare tire is not provided on the vehicle with run–flat tires.

The tire pressure warning system is equipped to warn you of the low tire pressure.

A “RFT” or “EMT” mark is molded on the sidewall of the run–flat tire.

If you cannot distinguish between the standard tire and run–flat tire, consult Lexus dealer.

A spare tire is not provided on the vehicle equipped with run–flat tires. Confirm whether your vehicle is equipped with a spare tire or not. If you have a flat tire, you have to take a different action depending on whether the tires are standard tires or run–flat tires.

Run–flat tires characteristics:

The vehicle with run–flat tires allows you to continue driving for up to 160 km (100 miles) at the moderate speed and do not ever exceed 90 km/h (55 mph) even with a flat tire. After such usage, the tire must be replaced. If you are not sure, consult your Lexus dealer. If you have a flat tire, decrease the speed and drive at lower speed to reduce the extent to which the tire is damaged.

However, in some conditions (such as at high temperatures), you could not continue driving for up to 160 km (100 miles).

The use of non–genuine wheels may prohibit optimum performance.

The run–flat tires equipped on this vehicle are ones dedicated for SC430. Do not use them on another model.

Do not mix run–flat tires with standard tires.

The tire warranty book covers the detailed information on run–flat tires. For details, see the tire warranty book.

Tire pressure warning system

This light and chimes warn you that the tire pressure is low. This light comes on when the ignition switch is turned to the “ON” position and goes off after a few seconds. This means the low tire pressure warning light is operating properly.

If the warning light does not go off, or comes on or blinks during driving, or the chimes sound, this indicates that air pressure is low. Make sure there is no flat tire. If the warning light comes on again even after air is put in the tires, a tire may be flat or the system may be malfunctioning.

If this warning light comes on, the action you must take is different depending on the type of tires used.

Vehicles with run–flat tires:

If the warning light is on, the tire pressure is lower than specified.

Stop your vehicle at a safe place as soon as possible and check that the tire pressure is as specified on the tire pressure label. The air pressure gauge is located in the tool bag. If the warning light comes on or blinks even after tire pressure adjustment, it is probable that you have a flat tire. If you cannot verify the tire pressure soon, go to the nearest Lexus dealer or authorized tire dealer at the moderate speed and do not ever exceed 90 km/h (55 mph) and have all your vehicle’s tires checked and adjusted. And whether there is a flat tire or not should be also checked at this time. If any tire must be replaced, see “If you have a flat tire” on page 239.

If the warning light does not go off about more than 15 minutes after air is put in the deflated tire, the system might be malfunctioning. Consult your Lexus dealer.

If you drive over about 180 km/h (112 mph) with the tires not inflated at the designated pressure for high speed driving, the warning light may turn on. If the tires are at the designated pressure for ordinary speed driving, decreasing the speed will turn off the warning light. (For the designated pressure for high speed driving, see “Specifications” on page 306.)

CAUTION

If the warning light comes on, take your vehicle to the nearest Lexus dealer, tire dealer or gas station as soon as possible, observing the following instructions:

- **Decelerate as soon as possible to the most appropriate speed that conditions permit. Do not drive over 90 km/h (55 mph).**
- **Avoid abrupt steering wheel maneuvering and braking. If the vehicle tires deteriorate, you could lose control of the steering wheel or the brakes, causing death or serious injury.**
- **The warning system may not activate immediately if bursts or sudden air leakage should occur.**

If the warning light blinks and chimes sound every few minutes, the tire pressure is very low.

Decrease your speed as soon as possible and take your vehicle to the nearest Lexus dealer or authorized tire dealer at a speed below 90 km/h (55 mph).

When you drive your vehicle after the low tire pressure warning light blinks and chimes sound, the tire must be replaced. Do not use the repaired tire.

CAUTION

If the warning light blinks and chimes sound, take your vehicle to the nearest Lexus dealer or authorized tire dealer as soon as possible, observing the following instructions:

- **Decelerate as soon as possible to the most appropriate speed that conditions permit. Do not drive for longer than 160 km (100 miles) or over 90 km/h (55 mph).**
- **Avoid abrupt steering wheel maneuvering and braking. If the vehicle tires deteriorate, you could lose control of the steering wheel or the brakes, causing death or serious injury.**
- **The warning system may not activate immediately if bursts or sudden air leakage should occur.**

NOTICE

- ***Do not use liquid sealants for a flat tire as air pressure sensors will be damaged.***
- ***Take due care not to go over a curb stone and be careful of the dents in the road because deflated tire pressure affects tire cushion performance. The wheels, tires, body, suspension and other components could be damaged.***
- ***Your ground clearance is reduced if the run–flat tire goes flat so avoid driving over obstacles and drive slowly on rough, unpaved roads and speed bumps. Also, do not attempt to go through an automatic car wash as the vehicle may get caught, resulting in damage.***
- ***When the tires must be replaced, have them replaced by the nearest Lexus dealer or authorized tire dealer. The tire pressure sensor will be affected by the installation or removal of tires.***
- ***When the tires must be replaced, replace the grommets for air pressure sensors as well.***

Vehicles with standard tires:

If the warning light is on, the tire pressure is lower than specified.

Stop your vehicle at a safe place as soon as possible and check that the tire pressure is as specified on the tire pressure label. The air pressure gauge is located in the tool bag. If the warning light comes on or blinks even after tire pressure adjustment, it is probable that you may be a flat tire. If the tire goes flat, change to the spare tire. (See page 241).

The spare tire is not equipped with the tire pressure sensor. So, the warning light remains on even if the spare tire is mounted.

If the warning light does not go off more than 15 minutes after air is put in the deflated tire, the system might be malfunctioning. Consult your Lexus dealer.

If you drive over about 180 km/h (112 mph) with the tires not inflated at the designated pressure for high speed driving, the warning light may turn on. If the tires are at the designated pressure for ordinary speed driving, decreasing the speed will turn off the warning light. (For the designated pressure for high speed driving, see “Specifications” on page 306.)

⚠ CAUTION

If the warning light comes on, observe the following instructions:

- **Decelerate as soon as possible to the most appropriate speed that conditions permit.**
- **Avoid abrupt steering wheel maneuvering and braking. If the vehicle tires deteriorate, you could lose control of the steering wheel or the brakes, causing death or serious injury.**

If the warning light blinks and chimes sound every few minutes, the tire pressure is very low.

Immediately stop your vehicle and check that the tire pressure is as specified on the tire pressure label. The air pressure gauge is located in the tool bag. Locate the deflated tire and change to the spare tire. For the procedure for changing the tire, see “If you have a flat tire (Vehicles with standard tires)” on page 241.

The spare tire is not equipped with the tire pressure sensor. So, the warning light remains on even if the spare tire is mounted.

⚠ CAUTION

If the warning light blinks and chimes sound, observe the following instructions:

- **Decelerate as soon as possible to the most appropriate speed that conditions permit.**
- **Avoid abrupt steering wheel maneuvering and braking. If the vehicle tires deteriorate, you could lose control of the steering wheel or the brakes, causing death or serious injury.**
- **The warning system may not activate immediately if bursts or sudden air leakage should occur.**

NOTICE

- ***Do not use liquid sealants for a flat tire as air pressure sensors will be damaged.***
- ***When the tires must be repaired or replaced, have them repaired or replaced by the nearest Lexus dealer or authorized tire dealer. The tire pressure sensors will be affected by the installation or removal of tires.***
- ***When the tires must be replaced, replace the grommets for air pressure sensors as well.***

System malfunction

The warning light comes on if the system does not work properly.

The system will be disabled in the conditions below:

- Electric devices or facilities using similar radio wave frequencies are nearby.
- If a radio set at similar frequencies is in use.
- Much snowflakes or ice gets on the vehicle, in particular, around the wheels or wheel housings.
- The sensor battery is expired.
- The tires not equipped with air pressure sensor are used.
- Although the tires are equipped with air pressure sensors, the selector switch (see page 224) is set to other tire setting.

⚠ CAUTION

- **The use of non–genuine wheels will cause the air pressure sensors to transmit the electronic code in different manner, resulting in the failure of the system.**
- **The use of different type of tires with genuine wheels may also cause the malfunction of the system.**

INFORMATION

If the chains are installed, the air pressure warning system may not operate properly.

For vehicles sold in U.S.A.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTICE:
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio / TV technician for help.

FCC WARNING:
Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

For vehicles sold in Canada

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Replacing tires and wheels

As you might have difficulty in locating a flat or deflated tire, an air pressure warning system should be installed on the tires of this vehicle.

When replacing the wheels, be sure to install air pressure sensors on the wheels.

There are 3 ways to set up the air pressure sensors:

a. Remove the sensor from the old wheel and install it to the new wheel.

b. Keep the same wheel with air pressure sensor and replace the tire alone.

c. Use a new wheel and sensor.

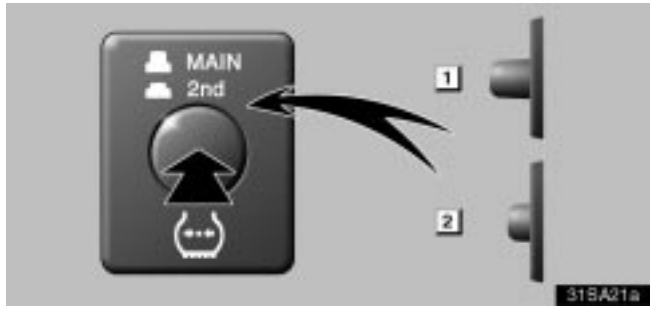
You have to register an ID code for a new sensor. Up to 2 sets of codes can be registered. As one ID for the originally installed sensor is registered at “MAIN” of the selector switch, use the “2nd” position to register an ID for the new sensor.

You do not need to re–register the ID code for any other replacements. For the use of the originally installed tires, put the selector switch at “MAIN” and for the use of tires set purchased later, put the switch at “2nd”. For the sensor selector switch, see page 224.

CAUTION

- **Have the tires, wheels or sensors replaced and ID codes registered by Lexus dealer. If you need sensors, purchase from Lexus dealer.**
- **The use of non–genuine wheels will cause the air pressure sensors to transmit the electronic code in different manner, resulting in the failure of the system.**

Selector switch



▶ 1 *Main position* 2 *2nd position*

The selector switch is located on the right side in the glove box.

The ID code is given in the sender built in the air pressure sensor. To activate the air pressure warning system, it is necessary to register the ID code of the sender on the selector switch in the vehicle.

2 sets of ID codes can be registered. The code of the tires originally installed on the vehicle is registered on the switch at “MAIN”. Have a new tires set with new air pressure sensors registered at “2nd” by Lexus dealer.

ID codes should be registered by Lexus dealer. Once registered, change the setting position each time you purchase tires and wheels. Re–registration is not required.

When purchasing new tires, consult your Lexus dealer.

⚠ CAUTION

When the tires whose ID code is registered at “MAIN” are used, the system does not work properly with the selector switch set at “2nd”. If the tires whose ID code is registered at “2nd” are stored nearby, the system will detect their tire pressure (and vice versa).

Liquid sealants for flat tires

NOTICE

Do not use liquid sealants for flat tires as the air pressure sensors will be damaged.

TYPES OF TIRES

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

1. 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.

2. 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.

⚠ 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 tires other than the manufacturer's designated tires, and never mix tires or wheels of the sizes different from the originals.**