STARTING AND DRIVING

Starting and driving

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

The three-way catalytic converter located at the confluence of exhaust pipes looks somewhat like a muffler, but 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 gas 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 gas 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/distributor 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.

**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. If you must drive with the trunk lid open to accommodate a large object, close the windows, open all the dashboard vents and have the heating or cooling system deliver fresh air into the vehicle by turning the fan to high speed with the air intake control button in the OUTSIDE AIR mode.
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, headrest height and steering wheel angle.
3. Adjust 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 key 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 114.

“ON” – Engine on and all accessories on.

This is the normal driving position.

**NOTICE:**

Do not leave the key in the “ON” position if the engine is not running. The battery will discharge and the electronic ignition system/distributor 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.

If, in an emergency, you must turn the engine off while the vehicle is in motion, turn the key only to “ACC”.

CAUTION (for manual transmission): Never remove the key when the vehicle is moving, as this will lock the steering wheel and result in loss of steering control.

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

Manual transmission: To turn the key from “ACC” to the “LOCK” position, you must push in the key.

Automatic transmission: To turn the key from “ACC” to the “LOCK” position, you must put the transmission selector lever in the “P” position.

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.

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

PARKING BRAKE

To set: Pull up the lever.

To release: Pull up the lever slightly, press the thumb button, then lower the lever.

Before leaving your vehicle, firmly apply the parking brake.
HOW TO START THE ENGINE

Before cranking
1. Apply the parking brake firmly.
2. Turn off unnecessary lights and accessories.
3. **Manual transmission:** Press the clutch pedal to the floor and shift the transmission into neutral. Hold the clutch pedal to the floor until the engine is started. A starter safety device will prevent the starter from operating if the clutch pedal is not fully depressed.

**Automatic transmission:** 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. **Automatic transmission only:** Depress the brake pedal and hold it to the floor until you are ready to drive 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 key 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 144.

**NOTICE:**
- Do not crank for more than 15 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.
With the brake pedal depressed, shift while pressing the lock release button in (The ignition switch must be in the “ON” position.)

Shift while pressing the lock release button in

Shift without pressing the button

Parking, engine starting and key removal position

Reverse position

Neutral position

Normal driving position

Position for engine braking

Position for stronger braking than that in “2” position

Shift position indicator Shows the selector lever position. Shift position is also displayed on the instrument cluster.

Lock release button To prevent misshifting

Overdrive switch For selecting either a three-speed or four-speed transmission

ON position (Shifting into overdrive possible)

OFF position (Shifting into overdrive not possible)

Driving pattern selector switch For selecting a driving pattern suitable to existing driving conditions

NORMAL position for general driving conditions

POWER position for powerful acceleration

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 and the lock release button pressed in).

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

(a) Normal driving
(b) Using engine braking
(c) Using the “2” and “L” positions
(d) Backing up
(e) Parking
(f) Good driving practice
(g) If you cannot shift the selector lever out of “P” position
(h) If the “O/D OFF” indicator light flashes

1. Start the engine as instructed in “How to start the engine” on page 114.

   The transmission must be in “P” or “N”. The engine will not start in “R”, “2”, “L” or “D” position even if the ignition key is turned to “START”.

(a) Normal driving
2. Set the driving pattern selector switch to the NORMAL position.

Your transmission has a driving pattern selector switch which allows you to select either “NORM” or “PWR” 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.

4. Set the overdrive switch to the ON position.

Always set the overdrive switch to the ON position to improve fuel economy and quiet driving. (See “(b) Using engine braking” and “(f) Good driving practice” for exceptions.)

5. With your foot holding down the brake pedal, shift the selector lever to “D”.

- Normal position
- Power position
- Brake pedal
- On
- Off
- O/D
- Off
- D (Drive) position
CAUTION: Never put your foot on the accelerator pedal while shifting.

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

The vehicle will start in the first gear and automatically shift to the most suitable gear for the running conditions, such as the vehicle speed, hill climbing, hard towing, etc. However, while the engine coolant temperature is low and the vehicle is traveling at low speed, the transmission will not shift into the overdrive gear even with the overdrive switch on.

In “D” 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:

- Turn off the overdrive switch. (This is effective only when you are driving in the “D” position.) The “O/D OFF” indicator light in the instrument cluster will come on and the transmission will downshift to the third gear.

- Shift into the “2” position. The transmission will downshift to the second gear when the vehicle speed is or becomes lower than the speed listed below and more powerful engine braking will be obtained.
• Shift into the “L” position. The transmission will downshift to the first gear when the vehicle speed is or becomes lower than the speed listed below and maximum engine braking will be obtained.

<table>
<thead>
<tr>
<th></th>
<th>SC400</th>
<th>SC300</th>
</tr>
</thead>
<tbody>
<tr>
<td>“2”</td>
<td>121 (75)</td>
<td>111 (69)</td>
</tr>
<tr>
<td>“L”</td>
<td>69 (43)</td>
<td>69 (43)</td>
</tr>
</tbody>
</table>

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

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

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

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

NOTICE:
• Be careful not to overrev 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:

<table>
<thead>
<tr>
<th></th>
<th>SC400</th>
<th>SC300</th>
</tr>
</thead>
<tbody>
<tr>
<td>“2”</td>
<td>121 km/h (75 mph)</td>
<td>111 km/h (69 mph)</td>
</tr>
<tr>
<td>“L”</td>
<td>69 km/h (43 mph)</td>
<td>69 km/h (43 mph)</td>
</tr>
</tbody>
</table>

• Do not continue hill climbing or hard towing for a long time in the “2” or “L” position. This may cause severe automatic transmission damage from overheating. To prevent such damage, “D” position should be used in hill climbing or hard towing.
(d) Backing up

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 in motion.

(e) Parking

1. Bring the vehicle to a complete stop.
2. Pull the parking brake lever up fully to securely apply the parking brake.
3. With the brake pedal held down with your foot, shift the selector lever to the “P” position.

**CAUTION:**
While the vehicle is in motion, never attempt to move the selector lever into “P” under any circumstances. Serious mechanical damage and loss of vehicle control may result.
(f) Good driving practice

- If the transmission repeatedly upshifts and downshifts between the third and overdrive gears when climbing a gentle slope, turn off the overdrive switch. Be sure to turn the switch on immediately after climbing the slope.
- When towing a trailer, in order to maintain efficient engine braking and electrical charging performance, do not use overdrive.

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) If you cannot shift the selector lever out of “P” position

If you cannot shift the selector lever from “P” position 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 159.

(h) If the “O/D OFF” indicator light flashes

If the “O/D OFF” indicator light flashes, contact your Lexus dealer as soon as possible. There may be trouble in the transmission system.

MANUAL TRANSMISSION

The shift pattern is the conventional pattern shown above.

Press the clutch pedal down fully while shifting, and then release it slowly. Do not rest your foot on the pedal while driving, because it will cause needless wear. And do not slightly release the pedal to hold the vehicle when stopped on an uphill grade – use the parking brake.
Recommended shifting speeds
The transmission is fully synchronized and upshifting or downshifting is easy.

For the best compromise between fuel economy and vehicle performance, you should upshift or downshift at the following speeds:

<table>
<thead>
<tr>
<th>gear</th>
<th>km/h (mh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 to 2 or 2 to 1</td>
<td>24 (15)</td>
</tr>
<tr>
<td>2 to 3 or 3 to 2</td>
<td>40 (25)</td>
</tr>
<tr>
<td>3 to 4 or 4 to 3</td>
<td>65 (40)</td>
</tr>
<tr>
<td>4 to 5 or 5 to 4</td>
<td>72 (45)</td>
</tr>
</tbody>
</table>

Downshift to the appropriate gear if acceleration is needed when you are cruising below the above downshifting speeds.

Upshifting too soon or downshifting too late will cause lugging and, possibly, pinging. Regularly revving the engine to maximum speed in each gear will cause excessive engine wear and high fuel consumption.

Maximum allowable speeds
To get on a highway or to pass slower traffic, maximum acceleration may be necessary. Make sure you observe the following maximum allowable speeds in each gear:

<table>
<thead>
<tr>
<th>gear</th>
<th>km/h (mh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>55 (34)</td>
</tr>
<tr>
<td>2</td>
<td>95 (59)</td>
</tr>
<tr>
<td>3</td>
<td>142 (88)</td>
</tr>
</tbody>
</table>

NOTICE:
Do not downshift if you are going faster than the maximum allowable speed for the next lower gear.

Good driving practice

- If it is difficult to shift into reverse, put the transmission in neutral, release the clutch pedal momentarily, and then try again.
- When towing a trailer, in order to maintain efficient engine braking and electrical charging performance, do not use the fifth gear.

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

NOTICE:
Make sure the vehicle is completely stopped before shifting into reverse.
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. Use engine braking by downshifting the transmission.

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 key 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 at a desired 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.

CAUTION (for manual transmission): When driving with the cruise control on, do not shift to neutral without depressing the clutch pedal, as this may cause engine racing or overrevving. If this happens, depress the clutch pedal or turn the main switch off immediately.

Cancelling the preset speed

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

a. Pulling the control lever in the “CANCEL” direction.
b. Depressing the brake pedal.
c. Depressing the clutch pedal (manual transmission).

If the vehicle speed falls below 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.

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.

**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.

**Resuming the preset speed**
Press the control lever upward in the “RES/ACC” direction. The vehicle will resume the speed set prior to cancellation unless the vehicle speed is less than 40 km/h (25 mph) or is 16 km/h (10 mph) below the preset speed.

**Cruise control failure warning**
If the “CRUISE” indicator light in the instrument cluster flashes five times and then goes out when using the cruise control, it means that there is trouble in the cruise control system. Contact your Lexus dealer.
TRACTION CONTROL SYSTEM
(Vehicles with automatic transmission only)

The traction control system automatically controls spinning of the rear wheels which may occur when accelerating on slippery road surfaces, thus maintaining vehicle stability and driving power to the rear wheels. 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 “TRAC” indicator/warning light blinks.

You can turn off the traction control system by pushing the “TRAC-OFF-” switch. The “TRAC OFF” indicator/warning light will then come on. Pushing the “TRAC-OFF-” switch a second time turns the system back on and extinguishes the “TRAC OFF” indicator/warning light.

You may hear a slight clicking noise in the engine compartment when the engine 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 operate to prevent the wheels from spinning. Even though the accelerator pedal is fully depressed, the engine speed will be restrained to a certain level.

CAUTION:
Under certain slippery road conditions, full stability of the vehicle and power to the rear wheels cannot be maintained, even though the traction control system is in operation. In situations where the road surface is covered with ice or snow, your vehicle should be fitted with snow tires or tire chains and driven at a more cautious pace.
BRAKE SYSTEM

The tandem master cylinder brake system is a hydraulic system with two separate sub-systems. If either sub-system 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 rely on a single brake system. Have your brakes fixed immediately.

Brake booster

The brake booster uses engine vacuum to power-assist the brakes. If the engine should quit while you are driving, you can bring the vehicle to a stop with normal pedal pressure. There is enough reserve vacuum for one or two stops but no more!

CAUTION:
- Do not pump the brake pedal if the engine stalls. Each push on the pedal uses up your vacuum 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 prevent lock-up of the wheels during sudden braking or braking on slippery surfaces. This helps the vehicle remain steerable and stable under these circumstances.

The system functions with normal pedal operation. When the anti-lock function is in action, pulsation of the brake pedal may occur, together with a characteristic noise. This indicates that the system is functioning properly.

The anti-lock brake system comes into operation when the vehicle is accelerating and the vehicle speed reaches approximately 10 km/h (6 mph). It stops operating when the vehicle is decelerating and the vehicle speed falls below approximately 5 km/h (3 mph).

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

Even though the anti-lock brake system is operating, full stability of the vehicle cannot be maintained for certain slippery road conditions or high speed driving when cornering. Even with the anti-lock brake system installed, it is still important, to drive with all due care.

Always maintain a safe distance from the vehicle in front of you. Compared with vehicles not fitted with an anti-lock brake system, your vehicle requires a longer stopping distance in the following cases:
Driving on rough, gravel or snow-covered roads.
Driving with tire chains installed.
Driving on roads where the road surface is pitted or has other differences in surface height.

Avoid high speeds on wet roads. The anti-lock brake system cannot eliminate the risk of aquaplaning.

“ABS” warning light

This light comes on when the ignition key is turned to the “ON” position. After a few seconds, the light will go off.

If either of the following conditions occurs, 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 as described above, or remains on.
- The light comes on while driving.

Even if the anti-lock brake system should fail, the brake system will still operate conventionally. Have your vehicle checked by your Lexus dealer as soon as possible.

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 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.

TYPES OF TIRES

Make sure 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.

Summer tires are, however, 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, fall short in acceleration and handling performance compared with Summer tires in highway driving. Snow tires have better snow traction than All Season tires.

CAUTION:
Do not mix Summer and All Season tires on your vehicle as this can cause dangerous handling characteristics, resulting in loss of control.