Fuel

⚠ CAUTION

Use of a fuel which is low in quality or use of an inappropriate fuel additive may cause damage to the engine and/or fuel system.

■ Fuel requirements

▼ Non-turbo models

The engine is designed to operate using **unleaded gasoline** with an octane rating of **87 AKI (90 RON) or higher**.

▼ Turbo models

The engine is designed to operate at maximum performance using **unleaded gasoline** with an octane rating **of 93 AKI (98 RON) or higher**. Unleaded gasoline with an octane rating of 91 AKI (95 RON) or higher may be used with no detriment to engine durability or driveability. However, you may notice a slight decrease in maximum engine performance while using 91 AKI (95 RON) fuel.

Regular unleaded gasoline with an octane rating of 87 AKI (90 RON) or higher may also be used. Using regular unleaded gasoline will not be detrimental to engine durability, nor will it affect your warranty coverage. However, depending on your driving habits and conditions, you may notice a decrease in maximum engine performance, fuel economy or slight engine vibration or knocking. If you experience any of these conditions while using a lower octane rated fuel, you may want to return to using 91 AKI (95 RON) octane rated fuel as soon as possible. Additionally, if your vehicle knocks heavily or persistently, or if you are driving with heavy loads such as when towing a trailer, the use of 91 AKI (95 RON) or higher grade unleaded gasoline is required.

▼ Fuel octane rating

Using a gasoline with a lower octane rating can cause persistent and heavy knocking, which can damage the engine. Do not be concerned if your vehicle sometimes knocks lightly when you drive up a hill or when you accelerate. Contact your SUBARU dealer if you use a fuel with the specified octane rating and your vehicle knocks heavily or persistently.

▽ RON

This octane rating is the Research Octane Number.

▽ AKI

This octane rating is the average of the Research Octane and Motor Octane numbers and is commonly referred to as the Anti Knock Index (AKI).

▼ Unleaded gasoline

The neck of the fuel filler pipe is designed to accept only an unleaded gasoline filler nozzle. Under no circumstances should leaded gasoline be used because it will damage the emission control system and may impair driveability and fuel economy.

▼ Gasoline for California-certified LEV

If your vehicle was certified to California's low emission vehicle (LEV) standards as indicated on the underhood tune-up label, it is designed to optimize engine and emission performance with gasoline that meets the clean burning low-sulfur California gasoline specifications. If you live in any other state than California, your vehicle will operate on gasoline meeting Federal specifications. Gasoline sold outside California is permitted to have higher sulfur levels, which may affect the performance of your vehicle's catalytic converter and may produce a sulfur exhaust odor or smell. SUBARU recommends that you try a different brand of unleaded gasoline having lower sulfur to determine if the

– CONTINUED –

problem is fuel related before returning your vehicle to an authorized dealer for service.

▼ MMT

Some gasoline contains an octane-enhancing additive called MMT (Methylcyclopentadienyl Manganese Tricarbonyl). If you use such fuels, your emission control system performance may deteriorate and the CHECK ENGINE warning light/Malfunction indicator light may turn on. If this happens, return to your authorized SUBARU Dealer for service. If it is determined that the condition is caused by the type of fuel used, repairs may not be covered by your warranty.

▼ Gasoline for cleaner air

Your use of gasoline with detergent additives will help prevent deposits from forming in your engine and fuel system. This helps keep your engine in tune and your emission control system working properly, and is a way of doing your part for cleaner air. If you continuously use a high quality fuel with the proper detergent and other additives, you should never need to add any fuel system cleaning agents to your fuel tank.

Many gasolines are now blended with materials called oxygenates. Use of these fuels can also help keep the air cleaner. Oxygenated blend fuels, such as ethanol (ethyl or grain alcohol) may be used in your vehicle, but should contain no more than 10% ethanol for the proper operation of your SUBARU.

Do not use any gasoline that contains more than 10% ethanol, including from any pump labeled E15, E30, E50 or E85 (which are only some examples of fuel containing more than 10% ethanol).

In addition, some gasoline suppliers are now producing reformulated gasolines, which are designed to reduce vehicle emissions. SUBARU approves the use of reformulated gasoline.

If you are not sure what the fuel contains, you should ask your service station operators if their gasolines contain detergents and oxygenates and if they have been reformulated to reduce vehicle emissions.

As additional guidance, only use fuels suited for your vehicle as explained in the following description.

- Fuel should be unleaded and have an octane rating no lower than that specified in this manual.
- Methanol (methyl or wood alcohol) is sometimes mixed with unleaded gasoline. Methanol can be used in your vehicle **ONLY** if it does not exceed 5% of the fuel mixture **AND** if it is accompanied by sufficient quantities of the proper cosolvents and corrosion inhibitors required to prevent damage to the fuel system. Do not use fuel containing methanol **EXCEPT** under these conditions.
- If undesirable driveability problems are experienced and you suspect they may be fuel related, try a different brand of gasoline before seeking service at your SUBARU dealer.
- Fuel system damage or driveability problems which result from the use of improper fuel are not covered under the SUBARU Limited Warranty.

⚠ CAUTION

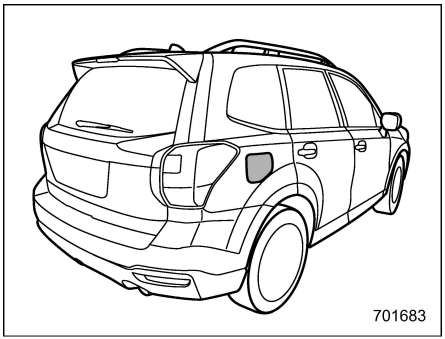
Do not let fuel spill on the exterior surfaces of the vehicle. Because fuel may damage the paint, be sure to wipe off any spilled fuel quickly. Paint damage caused by spilled fuel is not covered under the SUBARU Limited Warranty.

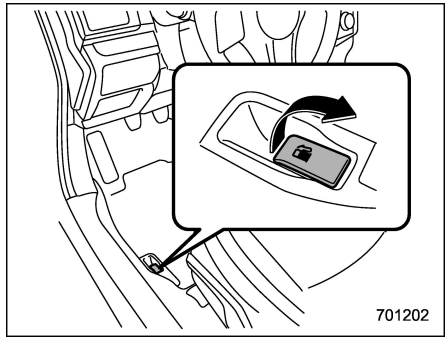
■ Fuel filler lid and cap

▼ Refueling

Only one person should be involved in refueling. Do not allow others to approach the area of the vehicle near the fuel filler pipe while refueling is in progress.

Be sure to observe any other precautions that are posted at the service station.

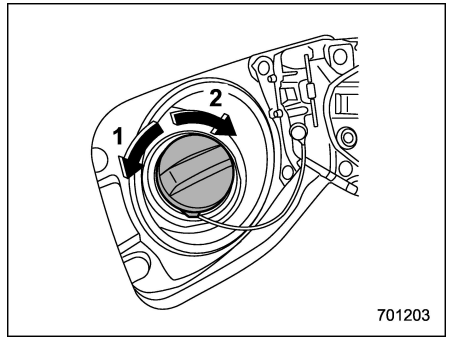




1. To open the fuel filler lid, pull the lid release lever up. The lever is on the floor at the left of the driver's seat.

⚠ WARNING

Before opening the fuel filler cap, first touch the vehicle body or a metal portion of the fuel pump or similar object to discharge any static electricity that may be present on your body. If your body is carrying an electrostatic charge, there is a possibility that an electric spark could ignite the fuel, which could burn you. To avoid acquiring a new static electric charge, do not get back into the vehicle while refueling is in progress.



1) Open
2) Close

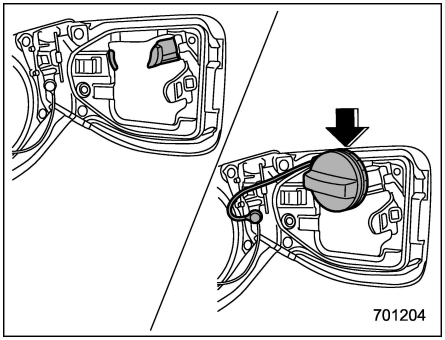
2. Remove the fuel filler cap by turning it slowly counterclockwise.

⚠ WARNING

- **Gasoline vapor is highly flammable. Before refueling, always first stop the engine and close all vehicle doors and windows. Make sure that there are no lighted cigarettes, open flames or electrical sparks in the adjacent area. Only handle fuel outdoors. Quickly wipe up any spilled fuel.**
- **When opening the cap, grasp it firmly and turn it slowly to the left.**

– CONTINUED –

Do not remove the cap quickly. Fuel may be under pressure and spray out of the fuel filler neck, especially in hot weather. If you hear a hissing sound while you are removing the cap, wait for the sound to stop and then slowly open the cap to prevent fuel from spraying out and creating a fire hazard.



3. Set the fuel filler cap on the cap holder inside the fuel filler lid.

⚠ WARNING

- **When refueling, insert the fuel nozzle securely into the fuel filler pipe. If the nozzle is lifted or not fully inserted, its automatic stopping mechanism may not function, causing fuel to overflow the tank and creating a fire hazard.**
- **Stop refueling when the automatic stop mechanism on the fuel nozzle activates. If you continue to add fuel, temperature changes or other conditions may cause fuel to overflow from the tank and create a fire hazard.**

4. Stop filling the tank after the fuel filler pump automatically stops. Do not add any more fuel.
5. Put the cap back on, turn it clockwise until you hear a clicking noise. Be certain not to catch the tether under the cap while tightening.
6. Close the fuel filler lid completely.

If you spill any fuel on the painted surface, rinse it off immediately. Otherwise, the painted surface could be damaged.

NOTE

- **You will see the "⛽▶" sign in the fuel gauge. This indicates that the fuel filler door (lid) is located on the right side of the vehicle.**
- **If the fuel filler cap is not tightened until it clicks or if the tether is caught under the cap, the CHECK ENGINE warning light/malfunction indicator light may illuminate. Refer to "CHECK ENGINE warning light/Malfunction indicator light" ☞3-16.**

⚠ CAUTION

- **Never add any cleaning agents to the fuel tank. The addition of a cleaning agent may cause damage to the fuel system.**
- **After refueling, turn the cap to the right until it clicks to ensure that it is fully tightened. If the cap is not securely tightened, fuel may leak out while the vehicle is being driven or fuel spillage could occur in the event of an accident, creating a fire hazard.**
- **Do not let fuel spill on the exterior surfaces of the vehicle. Because fuel may damage the paint, be sure to wipe off any spilled fuel quickly. Paint damage caused by spilled fuel is not covered under the SUBARU Limited Warranty.**
- **Always use a genuine SUBARU fuel filler cap. If you use the wrong cap, it may not fit or have proper venting and your fuel tank and emission control system may be damaged. It could also**

lead to fuel spillage and a fire.

- **Immediately put fuel in the tank whenever the low fuel warning light illuminates. Engine misfires as a result of an empty tank could cause damage to the engine. Continuing to operate your vehicle at an extremely low fuel level may result in a reduction of engine performance.**

State emission testing (U.S. only)

⚠ WARNING

Only use a four-wheel dynamometer when testing an All-Wheel Drive (AWD) model.

Testing of an AWD model must NEVER be performed on a single two-wheel dynamometer. Attempting to do so will result in uncontrolled vehicle movement and may cause an accident or injuries to persons nearby.

⚠ CAUTION

- **At state inspection time, remember to tell your inspection or service station in advance not to place your SUBARU AWD vehicle on a two-wheel dynamometer. Otherwise, serious transmission damage will result.**
- **Resultant vehicle damage due to improper testing is not covered under the SUBARU Limited Warranty and is the responsibility of the state inspection program or its contractors or licensees.**

California and a number of federal states have Inspection/Maintenance programs to inspect your vehicle's emission control system. If your vehicle does not pass this test, some states may deny renewal of your vehicle's registration.

Your vehicle is equipped with a computer that monitors the performance of the engine's emission control system. Certified emission inspectors will inspect the On-Board Diagnostic (OBDII) system as part of the state emission inspection process. The OBDII system is designed to detect engine and transmission problems that might cause the vehicle emissions to exceed allowable limits. OBDII inspections apply to all 1996 model year and newer passenger cars and trucks. Over 30 states plus the District of Columbia have implemented emission inspection of the OBDII system.

- The inspection of the OBDII system consists of a visual operational check of the "**CHECK ENGINE**" warning light/malfunction indicator light (MIL) and an examination of the OBDII system with an electronic scan tool.
- A vehicle passes the OBDII system inspection if proper operation of the "**CHECK ENGINE**" warning light is ob-

– CONTINUED –

served, there are no stored diagnostic trouble codes, and the OBDII readiness monitors are all complete.

- A vehicle fails the OBDII inspection if the "**CHECK ENGINE**" warning light is not properly operating (light is illuminated or is not working due to a burned out bulb) or there is one or more diagnostic trouble codes stored in the vehicle's computer.
- A state emission inspection may reject (not pass or fail) a vehicle if the number of OBDII system readiness monitors "**NOT READY**" is greater than one. If the vehicle's battery has been recently replaced or disconnected, the OBDII system inspection may indicate that the vehicle is not ready for the emission test. Under this condition, the vehicle driver should be instructed to drive his/her vehicle for a few days to reset the readiness monitors and return for an emission re-inspection.
- Owners of rejected or failing vehicles should contact their SUBARU Dealer for service.

Some states still use dynamometers in their emission inspection program. A dynamometer is a treadmill or roller-like testing device that allows your vehicle's wheels to turn while the vehicle remains in one place. Prior to your vehicle being put on a dynamometer, tell your emission inspector not to place your SUBARU AWD vehicle on a two-wheel dynamometer. **Otherwise, serious transmission damage will result.**

The U.S. Environmental Protection Agency (EPA) and states using two-wheel dynamometers in their emission testing program have EXEMPTED SUBARU AWD vehicles from the portion of the testing program that involves a two-wheel dynamometer. There are some states that use four-wheel dynamometers in their testing program. When properly used, this equipment should not damage a SUBARU AWD vehicle.

Under no circumstances should the rear wheels be jacked off the ground, nor should the driveshaft be disconnected for state emission testing.

Under no circumstances should the rear wheels be jacked off the ground, nor should the driveshaft be disconnected in an attempt to bypass AWD for state emission testing. An AWD vehicle must be tested using an AWD dynamometer with all 4 wheels driven and loaded.

Preparing to drive

You should perform the following checks and adjustments every day before you start driving.

1. Check that all windows, mirrors, and lights are clean and unobstructed.
2. Check the appearance and condition of the tires. Also check tires for proper inflation.
3. Look under the vehicle for any sign of leaks and check that no small animal is under the vehicle.
4. Check that no small animal enters the engine compartment.
5. Check that the hood and rear gate are fully closed.
6. Check the adjustment of the seat.
7. Check the adjustment of the inside and outside mirrors.
8. Fasten your seatbelt. Check that your passengers have fastened their seatbelts.
9. Check the operation of the warning and indicator lights when the ignition switch is turned to the "ON" position.
10. Check the gauges, indicator and warning lights after starting the engine.

CAUTION

Trapping small animals in the cooling fan and belts of the engine may result in a malfunction. Check that no small animal enters the engine compartment and under the vehicle before starting the engine.

NOTE

- Engine oil, engine coolant, brake fluid, washer fluid and other fluid levels should be checked daily, weekly or at fuel stops.
- When towing a trailer, refer to "Trailer hitch (dealer option)" ☞8-16.

Starting and stopping the engine (models without push-button start system)

■ Starting engine

CAUTION

Do not operate the starter motor continuously for more than 10 seconds. If the engine fails to start after operating the starter for 5 to 10 seconds, wait for 10 seconds or more before trying again.

NOTE

It may be difficult to start the engine when the battery has been disconnected and reconnected (for maintenance or other purposes). This difficulty is caused by the electronically controlled throttle's self-diagnosis function. To overcome it, keep the ignition switch in the "ON" position for approximately 10 seconds before starting the engine.

▼ General precautions when starting engine

WARNING

- Never start the engine from outside the vehicle. It may result in an accident.
- Do not leave the engine running in locations with poor ventilation, such as a garage and indoors. The exhaust gas may enter the vehicle or indoors, and it may result in carbon monoxide poisoning.
- Do not start the engine near dry foliage, paper, or other flammable substances. The exhaust pipe and exhaust emissions can create a fire hazard at high temperatures.

CAUTION

- If the engine is stopped during driving, the catalyst may overheat and burn.

– CONTINUED –

- **When starting the engine, be sure to sit in the driver's seat (except when using the remote engine start system).**

NOTE

- **Avoid racing and rapid acceleration immediately after the engine has started.**
- **Until the engine is warmed up sufficiently, the engine speed will be maintained high. The engine speed will decrease as the engine warms up.**
- **On rare occasions, it may be difficult to start the engine depending on the fuel used and the driving condition (repeated short trips when the engine has not warmed up sufficiently). In such cases, it is recommended to switch to a different brand of fuel.**
- **On rare occasions, transient knocking may be heard from the engine when the accelerator is operated rapidly such as a rapid start-up and a rapid acceleration. This is not a malfunction.**
- **The engine starts more easily when the headlights, air conditioner and rear window defogger are turned off.**
- **Do not shift the select lever (CVT models) or shift lever (MT models) while the starter is cranking.**

▼ MT models

1. Apply the parking brake.
2. Turn off unnecessary lights and accessories.
3. Depress the clutch pedal to the floor and shift the shift lever into neutral. Hold the clutch pedal to the floor while starting the engine.

The starter motor will only operate when the clutch pedal is depressed fully to the floor.

4. Turn the ignition switch to the "ON" position and check the operation of the warning and indicator lights. Refer to "Warning and indicator lights" ☞3-13.
5. Turn the ignition switch to the "START" position **without** depressing the accelerator pedal. Release the key immediately after the engine has started.

If the engine does not start, try the following procedure.

(1) Turn the ignition switch to the "OFF" position and wait for at least 10 seconds. After checking that the parking brake is firmly set, turn the ignition switch to the "START" position while depressing the accelerator pedal slightly (approximately a quarter of the full stroke). Release the accelerator pedal as soon as the engine starts.

(2) If this fails to start the engine, turn the ignition switch back to the "OFF" position and wait for at least 10 seconds. Then fully depress the accelerator pedal and turn the ignition switch to the "START" position. If the engine starts, quickly release the accelerator pedal.

(3) If this fails to start the engine, turn the ignition switch again to the "OFF" position. After waiting for 10 seconds or longer, turn the ignition switch to the "START" position without depressing the accelerator pedal.

(4) If the engine still does not start, contact your nearest SUBARU dealer for assistance.

6. Confirm that all warning and indicator lights have turned off after the engine has started. The fuel injection system automatically decreases the idle speed as the engine warms up.

▼ CVT models

1. Apply the parking brake.
2. Turn off unnecessary lights and accessories.
3. Shift the select lever to the "P" or "N" position (preferably the "P" position).

The starter motor will only operate when the select lever is at the "P" or "N" position.

4. Turn the ignition switch to the "ON"

position and check the operation of the warning and indicator lights. Refer to "Warning and indicator lights" ☞3-13.

5. Turn the ignition switch to the "START" position **without** depressing the accelerator pedal. Release the key immediately after the engine has started.

If the engine does not start, try the following procedure.

(1) Turn the ignition switch to the "OFF" position and wait for at least 10 seconds. After checking that the parking brake is firmly set, turn the ignition switch to the "START" position while depressing the accelerator pedal slightly (approximately a quarter of the full stroke). Release the accelerator pedal as soon as the engine starts.

(2) If this fails to start the engine, turn the ignition switch back to the "OFF" position and wait for at least 10 seconds. Then fully depress the accelerator pedal and turn the ignition switch to the "START" position. If the engine starts, quickly release the accelerator pedal.

(3) If this fails to start the engine, turn the ignition switch again to the "OFF" position. After waiting for 10 seconds or longer, turn the ignition switch to the "START" position without depressing the accelerator pedal.

(4) If the engine still does not start, contact your nearest SUBARU dealer for assistance.

6. Confirm that all warning and indicator lights have turned off after the engine has started. The fuel injection system automatically decreases the idle speed as the engine warms up.

While the engine is warming up, make sure that the select lever is at the "P" or "N" position and that the parking brake is applied.

⚠ CAUTION

If you restart the engine while the vehicle is moving, shift the select lever into the "N" position. Do not attempt to place the select lever of a moving vehicle into the "P" position.

■ Stopping the engine

The ignition switch should be turned off only when the vehicle is stopped and the engine is idling.

⚠ WARNING

Do not stop the engine when the vehicle is moving. This will cause loss of power to the power steering and the brake booster, making steering and braking more difficult. It could also result in accidental activation of the "LOCK" position on the ignition switch, causing the steering wheel to lock.

Starting and stopping engine (models with push-button start system)

■ Safety precautions

Refer to “Safety precautions” ☞2-10.

■ Operating range for push-button start system

Refer to “Operating range for push-button start system” ☞3-6.

■ Starting engine

⚠ WARNING

- **There are some general precautions when starting the engine. Carefully read the precautions described in “Starting engine” ☞7-9.**
- **If the indicator on the push-button ignition switch flashes in green after the engine has started, never drive the vehicle. The steering is still locked, and it may result in an accident.**

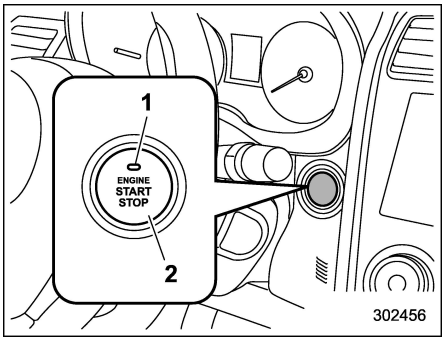
⚠ CAUTION

- **When the operation indicator on the push-button ignition switch is flashing in orange, there may be a malfunction with the vehicle. Contact a SUBARU dealer immediately.**
- **If the indicator on the push-button ignition switch is flashing in green after the engine has started, it means that the steering is still locked. Depress the brake pedal while moving the steering wheel to the right and left, and press the push-button ignition switch.**
- **Do not continue pressing the push-button ignition switch for more than 10 seconds. Doing so could cause a malfunction. If the engine does not start, stop pressing the push-button ignition switch. Instead, press the push-button ignition switch without depressing the brake pedal to switch the power status to “OFF”. Wait 10 seconds, and then press the push-button ignition switch to start the engine.**

NOTE

- **When the push-button ignition switch is pressed while depressing the brake pedal, the engine starter operates for a maximum of 10 seconds and after starting the engine, the starter stops automatically.**
- **When the push-button ignition switch is pressed while depressing the brake pedal, the engine can be started regardless of the status of the push-button ignition switch.**
- **If the security indicator light illuminates when you attempt to start the engine but the engine does not start, press the push-button ignition switch to switch the power to “OFF” and then try to start the engine again.**
- **If the engine does not start, press the push-button ignition switch without depressing the brake pedal to switch the power to “OFF”. Then, while depressing the brake pedal more forcefully, press the push-button ignition switch.**
- **The engine start procedures may not function depending on the radio wave conditions around the vehicle. In such a case, refer to “Starting engine” ☞9-18.**

● If the vehicle battery is discharged, the steering cannot be unlocked. Charge the battery.
● Until the engine is warmed up sufficiently, the engine speed will be maintained high. The engine speed will decrease as the engine warms up.
● Do not shift the select lever while the starter is cranking.



1) Operation indicator
2) Push-button ignition switch

When the push-button ignition switch is pressed while depressing the brake pedal, the engine will start. The starting procedure for the engine is as follows.

1. Carry the access key fob, and sit in the driver's seat.
2. Apply the parking brake.
3. Shift the select lever into the "P" position. The engine can also start when the select lever is in the "N" position, however, for safety reasons, start in the "P" position.
4. Depress the brake pedal until the operation indicator on the push-button ignition switch turns green. When starting with the select lever in the "N" position, the indicator does not turn green.
5. While depressing the brake pedal, press the push-button ignition switch.

NOTE

● While pressing the select lever button in, the indicator on the push-button ignition switch will not turn green even when the select lever is in the "P" position.
● In case the engine does not start by the normal engine start procedure, move the select lever to the "P" position, and switch the power to "ACC". Depress the brake pedal, and press the push-button ignition switch for at least 15 seconds. The engine may start. Only use this engine start procedure in case of emergency.
● When the engine is not started, the brake pedal may feel stiff. In such a case, depress the brake pedal more forcefully than usual. Check that the operation indicator on the push-button ignition switch turns green, and press the push-button ignition switch to start the engine.

■ Stopping engine

1. Stop the vehicle completely.
2. Move the select lever to the "P" position.
3. Press the push-button ignition switch. The engine will stop, and the power will be switched off.

⚠ WARNING

● Do not touch the push-button ignition switch during driving.
When the push-button ignition switch is operated as follows, the engine will stop.
– The switch is pressed and held for 3 seconds or longer.
– The switch is pressed briefly 3 times or more in succession.
When the engine stops, the brake booster will not function. A greater foot pressure will be required on the brake pedal.
The power steering system will not operate either. A greater force

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will be required to steer, and it may result in an accident.

- **If the engine stops during driving, do not operate the push-button ignition switch or open any of the doors until the vehicle is stopped in a safe location. It is dangerous because the steering lock may be activated. Stop the vehicle in a safe location, and contact a SUBARU dealer immediately.**

⚠ CAUTION

- **Do not stop the engine while the select lever is in a position other than the "P" position.**
- **If the engine is stopped while the select lever is in a position other than the "P" position, the power will be in "ACC". If the vehicle is left in this condition, the battery may be discharged.**

NOTE

Although you can stop the engine by operating the push-button ignition switch, do not stop the engine during driving except in an emergency.

■ When access key fob does not operate properly

Refer to "Access key fob – if access key fob does not operate properly" ☞9-17.

Remote engine start system (dealer option)

⚠ WARNING

- **There are some general precautions when starting the engine. Carefully read the precautions described in "General precautions when starting engine" ☞7-9.**
- **Do not remote start a vehicle in an enclosed environment (e.g. closed garage). Prolonged operation of a motor vehicle in an enclosed environment can cause a harmful build-up of Carbon Monoxide. Carbon Monoxide is harmful to your health. Exposure to high levels of Carbon Monoxide can cause headaches, dizziness or in extreme cases unconsciousness and/or death.**
- **Before performing any servicing of the vehicle, temporarily place the remote engine start system in service mode to prevent the system from unexpectedly starting the engine.**

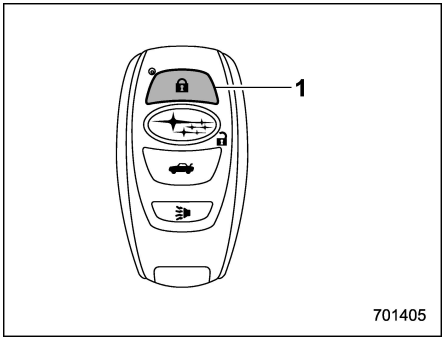
The remote engine start system allows you

to start the engine from outside the vehicle. In addition, the remote engine start system can activate the heater or air conditioner, providing you with a comfortable cabin upon entry.

■ Models with "keyless access with push-button start system"

NOTE

For more details, refer to the Owner's Manual supplement for the remote engine start system.



Access key fob
1) Lock button

An access key fob can be used as the remote engine start transmitter. Operate the lock button to start or stop the engine as follows.

▼ Before starting the engine

Before using the remote engine start system to start the engine, confirm the following conditions.

- The select lever is in the "P" position.
- All doors including the rear gate are closed.
- The engine hood is closed.
- The push-button ignition switch is in the "OFF" position.

▼ Starting the engine

To start the engine with remote engine start system, briefly press the lock button twice within 2 seconds, then press and hold the lock button for 3 seconds.

1. Press the lock button briefly. The hazard warning flashers then flash once.
2. Within 2 seconds, press the lock button briefly again. The hazard warning flashers then flash once again.
3. After step 2, immediately press and hold the lock button. The hazard warning flashers then flash once.
4. Approximately 3 seconds after step 3, release the lock button. The engine will then start successfully.

▼ Stopping the engine

Press and hold the lock button to stop the engine with remote engine start system.

▼ Automatic engine shutdown

The remote engine start system will automatically shut down or will not start the engine under the following conditions.

- The total run-time has exceeded 20 minutes.
- Any door or the rear gate is opened.
- The select lever is moved to any position other than "P".
- The engine hood is opened.
- The push-button ignition switch is pressed.
- The brake pedal is depressed.
- The engine speed is 3,000 rpm or more.

The time setting until the engine automatically stops can be changed. To change it, please contact your SUBARU dealer. Note that some settings may violate state, provincial, or local laws and regulations. Check the laws in your area to determine which setting is permitted.

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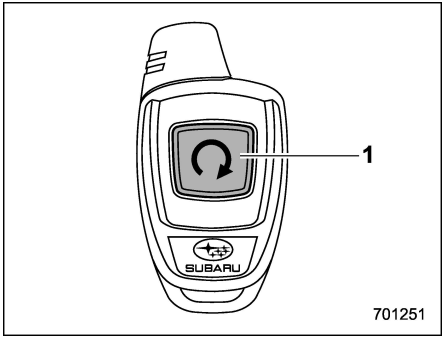
■ Models without “keyless access with push-button start system”



Remote engine starter transceiver (fob)
1) Fob button

▼ Starting the engine

NOTE

All vehicle doors (including rear gate) and the engine hood must be closed prior to activating the remote engine start system. Any open entry point will prevent starting or cause the engine to stop.

The remote engine start system is activated by pressing the fob button on your remote engine starter transceiver (fob) twice within 3 seconds. If the fob is within operating range of the system and the start request is received, the following phenomena will occur.

- The fob flashes and beeps once.
- The horn sounds once.
- The side marker lights, tail lights, and parking lights flash once.

If the fob is not within range (the user is too far away from the vehicle), the fob will indicate two long flashes without beeping.

The system will check certain safety preconditions before starting, and if all conditions are met, the engine will start within 5 seconds. After the engine starts, the following phenomena will occur.

- The fob flashes and beeps twice.
- The horn sounds once.
- The side marker lights, tail lights, and parking lights flash once.

While the engine is idling via the remote engine start system, the following phenomena will occur.

- The side marker lights, tail lights, and parking lights remain illuminated.
- The fob button flashes once every 3 seconds.
- The power windows are disabled.

If the engine turns over but does not start (or starts and stalls) the remote engine start system will power off and then attempt to start the engine 3 additional times. The system will not attempt to restart the engine if it determines a vehicle malfunction is preventing starting. If the engine does not start after 3 additional attempts, the remote engine start request will be aborted.

▼ Stopping the engine

Press and hold the fob button for at least 2 seconds to stop the engine. The fob will flash and beep three times, indicating the engine has stopped. If the stop request is not received (for example, if the user is too far away from the vehicle), the fob will continue to flash once every 3 seconds. The system will automatically stop the engine after 15 minutes.

▼ Remote start safety features

For safety and security reasons, the remote engine start system will prevent starting (or stop the engine if running) and sound the horn twice if any of the following conditions is detected. In addition, the fob will flash and beep 3 times.

- The brake pedal is depressed
- A key is in the ignition switch
- The engine hood is open
- The remote start system “Service mode” is engaged
- The engine idle speed exceeds 3,500

RPM
- The security alarm is triggered
- The select lever is not in the “P” position

If the system detects any door (including the rear gate) open during operation, it will prevent starting or stop the engine, and sound the horn and flash side marker lights, tail lights, and parking lights 6 times.

In addition to the items above, if the vehicle’s engine management system determines there is a safety risk due to a vehicle-related problem, the vehicle will power down and the horn will sound 3 times.

NOTE

- If the alarm system is armed at the time of remote engine starter activation (the security indicator light on the combination meter is flashing), the alarm system will remain armed throughout the remote start run cycle.
- If the alarm system is disarmed at the time of remote engine starter activation (the security indicator light on the combination meter is not flashing), the alarm system will remain disarmed throughout the remote start run cycle.

▼ Remote start operation - fob confirmation

Your remote engine starter fob is a bidirectional transceiver that can confirm system operation with several different visual and audible indications. The fob’s LED-backlit button and internal piezo buzzer will indicate status of the system using the following flash and beep sequences, provided the fob is within operational range of the system.

– CONTINUED –

Precondition	Fob Indication		Meaning
	Flash	Beep	
Fob start button is being pressed	Continuous while button is held down	—	The fob is transmitting an RF signal
User attempts to start engine by pressing fob button twice within 3 sec	1 flash	1 beep	Engine start request received
	2 flashes	2 beeps	Engine started successfully
	1 flash every 3 sec	—	Engine idling
	3 flashes	3 beeps	Vehicle is in range but engine not started
	2 long flashes	—	Vehicle not in range (engine not started)
Engine idling by remote engine start operation	1 flash every 3 sec	—	Engine idling
	3 flashes	3 beeps	Engine stopped by system timeout or for safety reasons (see sections above)
User attempts to stop engine by pressing and holding fob button for at least 2 sec.	3 flashes	3 beeps	Engine stopped by user request
	1 flash every 3 sec	—	Stop request not received. Engine still idling.

■ Entering the vehicle while it is running via remote start

1. Unlock the vehicle doors using the keyless access function (if equipped) or remote keyless entry system. If the vehicle's doors are unlocked manually using the key, the vehicle's alarm system will trigger (if the alarm system is armed prior to activating the remote engine start system) and the engine will turn off. Perform either of the following procedures to disarm the alarm system. Refer to "Alarm system" ☞2-25.
   - Insert the key into the ignition switch and turn it to the "ON" position (models without "keyless access with push-button start system")
   - Turn the push-button ignition switch to the "ACC" or "ON" position (models with "keyless access with push-button start system")
   - Press any button on the access key fob/remote keyless entry transmitter.
2. Enter the vehicle.
3. The engine will shut down when any door or rear gate is opened.
4. For models without "keyless access with push-button start system", insert the key into the ignition switch and turn to the "START" position to restart the engine. For models with "keyless access with push-button start system", press the push-button ignition switch while depressing the brake pedal to restart the engine.

■ Entering the vehicle following remote engine start shut-down

An alarm trigger may occur if the vehicle is opened by the remote keyless entry transmitter within a few seconds immediately following remote engine start shut-down.

■ Pre-heating or pre-cooling the interior of the vehicle

Before exiting the vehicle, set the temperature controls to the desired setting and operation. After the system starts the engine, the heater or air conditioning will activate and heat or cool the interior to your setting.

■ Service mode (models without "keyless access with push-button start system")

In service mode, the remote engine start function is temporarily disabled to prevent the system from unexpectedly starting the engine while being serviced.

To engage or disengage service mode:

1. Enter the vehicle and close all vehicle doors and the rear gate.
2. Verify that the select lever is in the "P" position (CVT models)
3. Depress and hold the brake pedal
4. Turn the ignition switch to the "ON" position
5. Press and release the remote engine start transmitter "Ω" button three times. The system will honk the vehicle's horn each time the button is pressed.
6. The system will pause for 1 second then honk the vehicle's horn three times to indicate that the service mode has been engaged or honk one time to indicate that the service mode has been disengaged.

NOTE

When taking your vehicle in for service, it is recommended that you inform the service personnel that your vehicle is equipped with a remote engine start system.

– CONTINUED –

■ Remote transmitter program (models without "keyless access with push-button start system")

New transmitters can be programmed to the remote engine start system in the event that a transmitter is lost, stolen, damaged or additional transmitters are desired (the system will accept up to eight transmitters). New remote engine start transmitters can be programmed according to the following procedure.

1. Open the driver's door (the driver's door must remain opened throughout the entire process).
2. Depress and hold the brake pedal.
3. Turn the ignition switch to "ON" then "LOCK", back to "ON" then "LOCK", back to "ON" then "LOCK", then back to "ON" again and leave the ignition "ON" throughout the programming process.
4. The system will flash the side marker lights, tail lights and parking lights and honk the horn three times, indicating that the system has entered the transmitter learn mode.
5. Press and release the "⟳" button on the transmitter that you want to program.
6. The system will flash the side marker lights, tail lights and parking lights and honk the horn one time, indicating that the system has learned the transmitter. Upon successful programming, the remote start confirmation transmitter button will flash one time.
7. Repeat step 5 for any additional transmitters (the system will accept up to eight transmitters).
8. The system will exit the transmitter learn mode if the key is turned to the "LOCK" position, the door is closed or after 2 minutes.

■ System maintenance

NOTE

For models without "keyless access with push-button start system":

In the event that the vehicle's battery is replaced, discharged or disconnected, it will be necessary to start the vehicle a minimum of one time using the key prior to activating the remote engine start system. This is required to allow the vehicle electronic systems to re-synchronize.

▼ Changing the battery

⚠ CAUTION

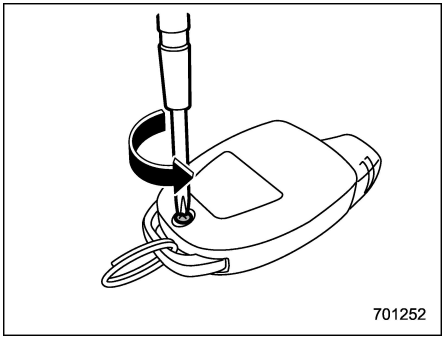
- **Do not let dust, oil or water get on or in the remote engine start transmitter when replacing the battery.**
- **Be careful not to damage the printed circuit board in the remote engine start transmitter when replacing the battery.**
- **Be careful not to allow children to touch the battery and any removed parts; children could swallow them.**
- **There is a danger of explosion if an incorrect replacement battery is used. Replace only with the same or equivalent type of battery.**
- **Batteries should not be exposed to excessive heat such as sunshine, fire or the like.**

For models with "keyless access with push-button start system":

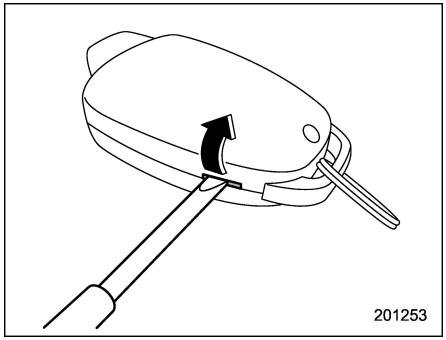
Perform the procedure described in "Replacing battery of access key fob" ☞11-45.

For models without "keyless access with push-button start system":

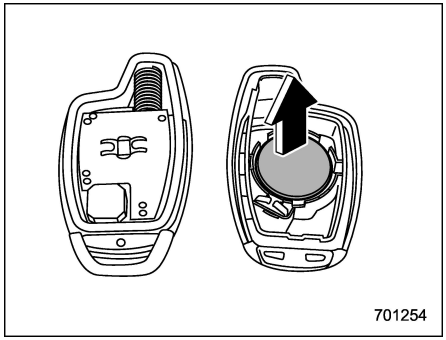
The 3-volt lithium battery (model CR-2032) supplied in your remote engine start transmitter should last approximately one year, depending on usage. When the battery begins to weaken, you will notice a decrease in range (distance from the vehicle that your remote control operates). Follow the instructions below to change the remote engine start transmitter battery.

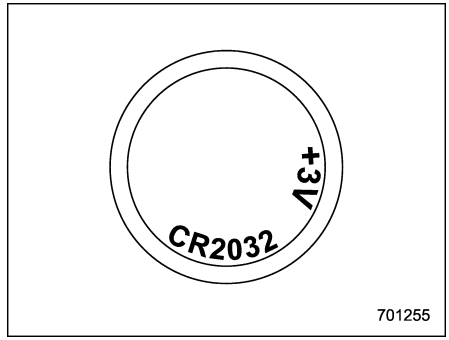


1. Remove the small phillips screw located on the back side of the transmitter.



2. Carefully pry the remote engine start transmitter halves apart using a small flat-head screwdriver.





3. Remove the circuit board from the bottom half of the case and remove the battery and replace with a new one. Be sure to observe the (+) sign on the old battery before removing it to ensure that the new battery is inserted properly (battery "+" should be pointed away from the transmitter circuit board on the battery).

4. Carefully snap the case halves back together, reinstall the phillips screw and test the remote engine start system.

– CONTINUED –

■ Certification for remote engine starter

▼ **U.S.-spec. models**

⚠ CAUTION

FCC WARNING

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

NOTE

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.

▼ **Canada-spec. models**

NOTE

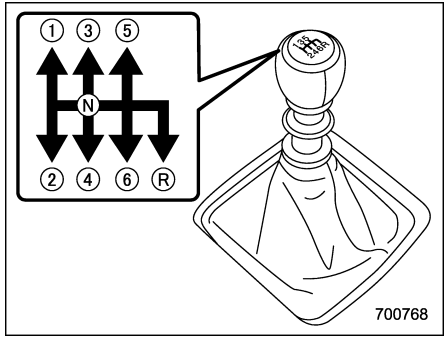
This device complies with Industry Canada's licence-exempt RSSs. Operation is subject to the following two conditions: (1) This device may not cause interference; and (2) This device must accept any interference, including interference that may cause undesired operation of the device.

REMARQUE

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage; (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

203226

Manual transmission

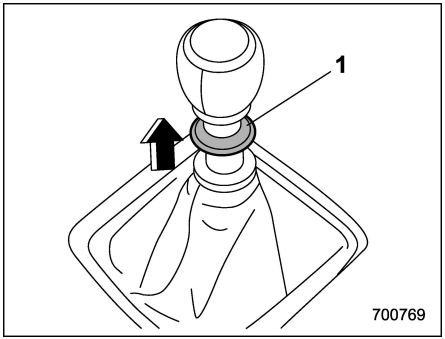


This manual transmission is a completely synchromesh, 6-forward-speed and 1-reverse-speed transmission.

The shift pattern is shown on the shift lever knob.

To change the shift lever position:

1. Depress the clutch pedal.
2. To shift into all positions other than "R", move the shift lever accordingly.



1) Slider

3. To shift into the "R" position, hold up the slider, move the lever to the "R" position, and then release the slider.
4. Gradually release the clutch pedal.

If it is difficult to shift into gear, put the transmission in neutral, release the clutch pedal momentarily, and then try again.

⚠ WARNING

- **Do not drive the vehicle with the clutch disengaged (i.e., when the clutch pedal is depressed) or with the shift lever in the neutral position. Engine braking has no effect in either of these conditions and the risk of an accident is consequently increased.**
- **Do not engage the clutch (i.e., release the clutch pedal) suddenly when starting the vehicle. By doing so the vehicle might unexpectedly accelerate or the transmission could malfunction.**

⚠ CAUTION

Shift into reverse ONLY when the vehicle has completely stopped. It may cause damage to the transmission to try shifting into reverse when the vehicle is moving.

■ Shifting speeds

▼ Recommended shifting speeds

The best compromise between fuel economy and vehicle performance during normal driving is ensured by shifting up at the speeds listed in the following table.

Shift up	mph (km/h)
1st to 2nd	15 (24)
2nd to 3rd	25 (40)
3rd to 4th	40 (64)
4th to 5th	45 (72)
5th to 6th	50 (80)

▼ Maximum allowable speeds

The following table shows the maximum speeds that are possible with each different gear. The tachometer's needle will enter the red area if these speeds are exceeded.

With the exception of cases where sudden acceleration is required, the vehicle should not be driven with the tachometer's needle inside the red area. Failure to observe this precaution can lead to excessive engine wear and poor fuel economy.

– CONTINUED –

Gear	mph (km/h)
1st	29 (48)
2nd	54 (88)

⚠ WARNING

When shifting down a gear, ensure that the vehicle is not travelling at a speed exceeding the Maximum Allowable Speed for the gear which is about to be selected. Failure to observe this precaution can lead to engine over-revving and this in turn can result in engine damage.

In addition, sudden application of engine brakes when the vehicle is travelling on a slippery surface can lead to wheel locking; as a consequence, control of the vehicle may be lost and the risk of an accident increased.

NOTE

Never exceed the posted speed limit.

■ Driving tips

⚠ CAUTION

If the accelerator and brake pedals are depressed at the same time, driving torque may be restrained. This is not a malfunction.

Do not drive with your foot resting on the clutch pedal and do not use the clutch to hold your vehicle at a standstill on an upgrade. Either of those actions may cause clutch damage.

Do not drive with your hand resting on the shift lever. This may cause wear on the transmission components.

When it is necessary to reduce vehicle speed due to slow traffic, turning corners, or driving up steep hills, downshift to a lower gear before the engine starts to labor.

On steep downgrades, downshift the transmission to 5th, 4th, 3rd or 2nd gear as necessary; this helps to maintain a safe speed and to extend brake pad life.

In this way, the engine provides a braking effect. Remember, if you “ride” (over use) the brakes while descending a hill, they may overheat and not work properly.

The engine may, on rare occasions, knock when the vehicle rapidly accelerates or rapidly pulls away from a standstill. This phenomenon is not an indication of a problem in your vehicle.

Continuously variable transmission

The continuously variable transmission is electronically controlled and provides an infinite number of forward speeds and 1 reverse speed. For some models, it also has a manual mode or an "L" position.

⚠ WARNING

Do not shift from the "P" or "N" position into the "D" or "R" position while depressing the accelerator pedal. This may cause the vehicle to jump forward or backward.

⚠ CAUTION

- **Shift into the "P" or "R" position only after the vehicle is completely stopped. Shifting while the vehicle is moving may cause damage to the transmission.**
- **Do not race the engine for more than 5 seconds in any position except the "N" or "P" position when the brake is applied or when chocks are used in the wheels. This may cause the transmission fluid to overheat.**
- **Never move the vehicle rearward by inertia with the select lever set in a forward driving position or move the vehicle forward by inertia with the select lever set in the "R" position. Doing so may result in an unexpected accident or malfunction.**
- **Avoid shifting from one of the forward driving positions into the "R" position or vice versa until the vehicle has completely stopped. Such shifting may cause damage to the transmission.**
- **When parking the vehicle, first securely apply the parking brake and then place the select lever in the "P" position. Avoid parking for a long time with the select lever in any other position as doing so could result in a dead battery.**

NOTE

• When the engine coolant temperature is still low, the transmission will upshift or downshift at higher engine speeds than when the coolant temperature is sufficiently high in order to shorten the warm-up time and improve driveability. The gearshift timing will automatically shift to the normal timing after the engine has warmed up.

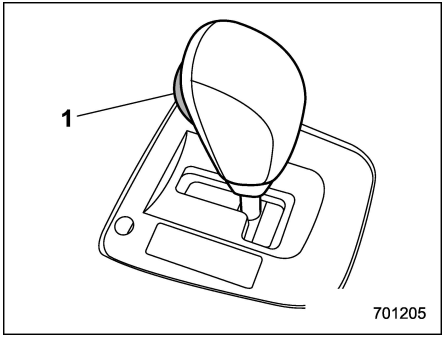
• Immediately after transmission fluid is replaced, you may feel that the transmission operation is somewhat unusual. This results from invalidation of data which the on-board computer has collected and stored in memory to allow the transmission to shift at the most appropriate times for the current condition of your vehicle. Optimized shifting will be restored as the vehicle continues to be driven for a while.

• When driving a CVT model under continuous heavy load conditions such as when towing a camper or climbing a long, steep hill, the engine speed or the vehicle speed may automatically be reduced. This is not a malfunction. This phenomenon results from the engine control function maintaining the cooling performance of the vehicle. The engine and vehicle speed will return to a normal speed when the engine is able to maintain the optimum cooling performance after the heavy load decreases. Driving under a heavy load must be performed with extreme care. Do not try to pass a vehicle in front when driving on an uphill slope while towing.

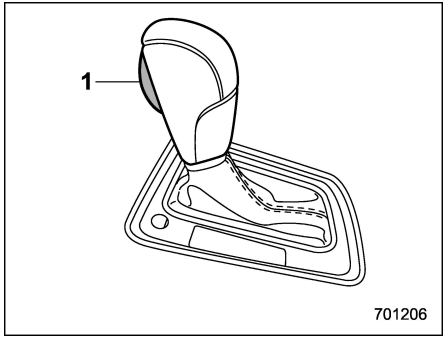
– CONTINUED –

● The continuously variable transmission is a chain type system that provides superior transmission efficiency for maximum fuel economy. At times, depending on varying driving conditions, a chain operating noise may be heard that is characteristic of this type of system.

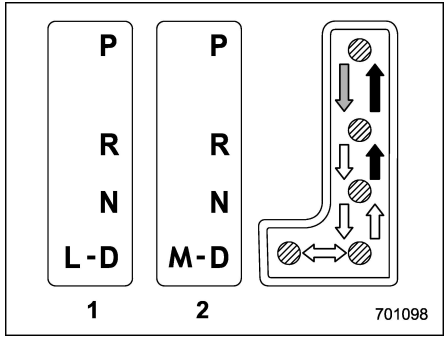
■ Select lever



Type A
1) Select lever button



Type B
1) Select lever button



1) Models with “L” position
2) Models with manual mode

⇨: With the brake pedal depressed, shift while pressing the select lever button in.

➡: Shift while pressing the select lever button in.

⇨: Shift without pressing the select lever button.

The select lever has four positions, “P”, “R”, “N”, “D” and it also has an “L” or “M” gate.

NOTE

For some models, to protect the engine while the select lever is in the “P” or “N” position, the engine is controlled so that the engine speed may not become too high even if the accelerator pedal is

depressed hard.

▼ P (Park)

This position is for parking the vehicle and starting the engine. In this position, the transmission is mechanically locked to prevent the vehicle from rolling freely.

When you park the vehicle, first apply the parking brake firmly, then shift into the “P” position. Do not hold the vehicle with only the mechanical friction of the transmission.

To shift the select lever from the “P” position to any other position, you should depress the brake pedal fully then move the select lever. This prevents the vehicle from lurching when it is started.

▼ R (Reverse)

This position is for backing the vehicle. To shift from the “N” to “R” position, stop the vehicle completely then move the lever to the “R” position while pressing the select lever button in.

When the ignition switch has been turned to the “LOCK”/“OFF” position, movement of the select lever from the “N” to “R” position is possible for a limited time period by depressing the brake pedal, and then it becomes impossible. For details, refer to “Shift lock function” ☞7-30.

▼ N (Neutral)

This position is for restarting a stalled engine. In this position, the transmission is neutral, meaning that the wheels and transmission are not locked. Therefore, the vehicle will roll freely, even on the slightest incline unless the parking brake or foot brake is applied.

Avoid coasting with the transmission in neutral. Engine braking has no effect in this condition.

⚠ WARNING

Do not drive the vehicle with the select lever in the “N” (neutral) position. Engine braking has no effect in this condition and the risk of an accident is consequently increased.

NOTE

If the select lever is in the “N” position when you stop the engine for parking, you may not subsequently be able to move it to the “R” and “P” positions. If this happens, turn the ignition switch to the “ON” position. You will then be able to move the select lever to the “P” position.

▼ D (Drive)

This position is for normal driving. The transmission shifts automatically and continuously into a suitable gear according to the vehicle speed and the acceleration you require. Also, while driving up and down a hill, the transmission assists and controls the driving performance and engine braking while corresponding to the road grade.

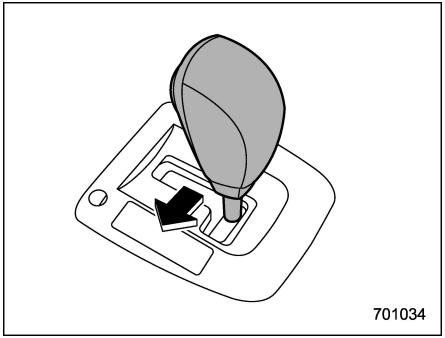
When more acceleration is required in the “D” position, depress the accelerator pedal fully to the floor and hold that position. The transmission will automatically downshift. In this case, the transmission will operate like a conventional automatic transmission. When you release the pedal, the transmission will return to the original gear position.

For models with manual mode, if one of the shift paddles behind the steering wheel is operated while driving in the “D” position,

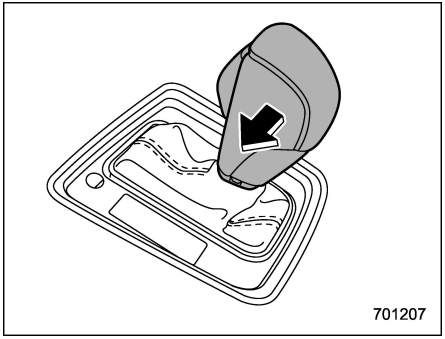
– CONTINUED –

the transmission will temporarily switch to the manual mode. In this mode, you can shift into any gear position using the shift paddles. For details about the manual mode, refer to “Selection of manual mode” ☞7-28. Once the vehicle speed stabilizes, the transmission will switch from the manual mode back to the “D” position for normal driving.

■ Selection of manual mode (if equipped)

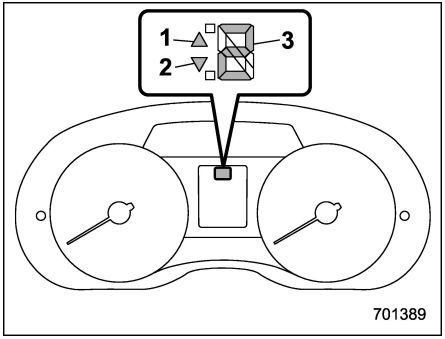


Type A



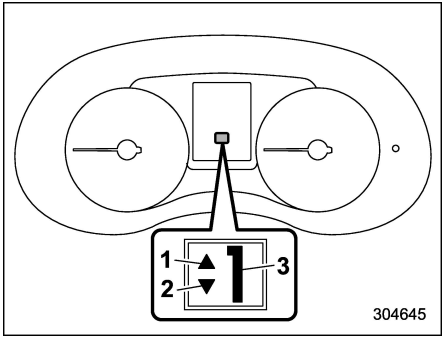
Type B

With the vehicle either moving or stationary, move the select lever from the “D” position to the “M” position to select the manual mode.



Select lever/gear position indicator (type A)

1) Upshift indicator
2) Downshift indicator
3) Gear position indicator



Select lever/gear position indicator (type B)

1) Upshift indicator
2) Downshift indicator
3) Gear position indicator

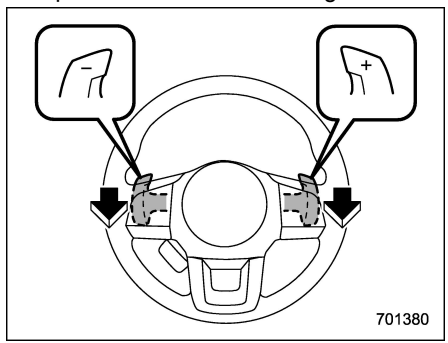
When the manual mode is selected, the gear position indicator and upshift indicator and/or downshift indicator on the combination meter illuminate.

The gear position indicator shows the currently selected gear in the following range.

- 1st-to-8th-gear range (when the Sport Sharp (S#) mode is selected (if equipped))
- 1st-to-6th-gear range (in other situations)

The upshift and downshift indicators show when a gear shift is possible. When the upshift indicator "▲" illuminates, upshifting is possible. When the downshift indicator "▼" illuminates, downshifting is possible. When both indicators illuminate, upshifting and downshifting are both possible. When the vehicle stops (for example, at traffic signals), the downshift indicator turns off.

Gearshifts can be performed using the shift paddle behind the steering wheel.



To upshift to the next higher gear position, pull the shift paddle that has "**+**" indicated on it. To downshift to the next lower gear position, pull the shift paddle that has "**–**" indicated on it.

To deselect the manual mode, return the select lever to the "D" position from the "M" position.

⚠ CAUTION

Do not place or hang anything on the shift paddles. Doing so may result in accidental gear shifting.

NOTE

Please read the following points carefully and bear them in mind when using the manual mode.

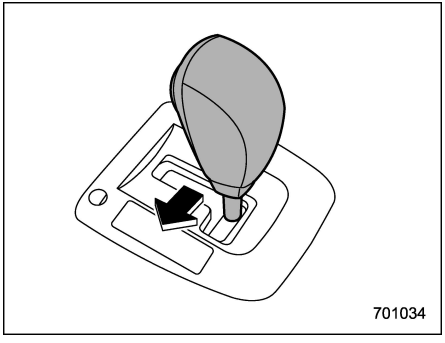
- **If you attempt to shift down when the engine speed is too high, i.e., when a downshift would push the tachometer needle beyond the red zone, beeps will be emitted to warn you that the downshift is not possible.**
- **If you attempt to shift up when the vehicle speed is too low, the transmission will not respond.**
- **You can perform a skip-shift (for example, from 4th to 2nd) by operating the shift paddle twice in rapid succession.**
- **The transmission automatically selects 1st gear when the vehicle stops moving.**
- **If the temperature of the transmission fluid becomes too high, the "AT OIL TEMP" warning light on the combination meter will illuminate. Immediately stop the vehicle in a safe location**

– CONTINUED –

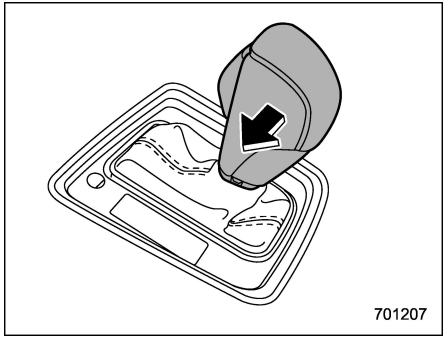
and let the engine idle until the warning light turns off.

- **For models with SI-DRIVE, by selecting Sport Sharp (S#) mode, upshifting will not occur automatically. According to the road conditions, shift change manually so that the tachometer needle does not enter the red zone. Also, if the engine revolutions reach the specified number, the fuel supply will be cut. In this case, perform shift up operation.**

■ Selection of “L” (if equipped)

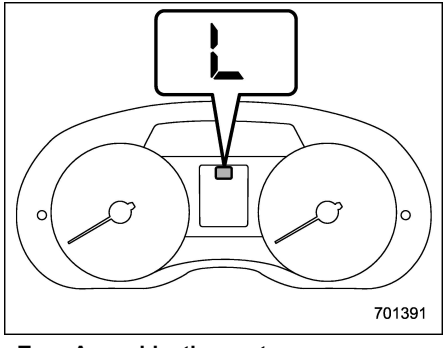


Type A

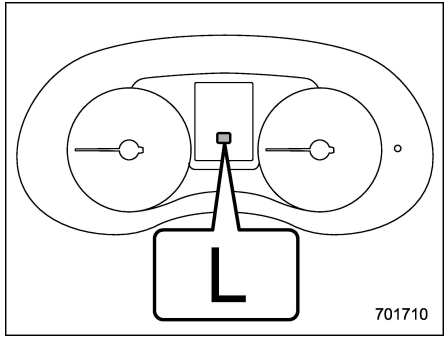


Type B

“L” is for using engine braking when going down a hill, etc. To select this mode, move the select lever from the “D” position to the “L” position.



Type A combination meter



Type B combination meter

When selected, the indicator “L” will illuminate on the combination meter.

To deselect “L”, move the select lever to the “D” position.

■ Shift lock function

The shift lock function helps prevent the improper operation of the select lever.

- The select lever cannot be operated unless the ignition switch is turned to the “ON” position and the brake pedal is depressed.
- The select lever cannot be moved from the “P” position to any other position before the brake pedal is depressed. Depress the brake pedal first, and then operate the select lever.

● Only the “P” position allows you to turn the ignition switch from the “ACC” position to the “LOCK”/“OFF” position and remove the key from the ignition switch.

● If the ignition switch is turned to the “LOCK”/“OFF” position while the select lever is in the “N” position, the select lever may not be moved to the “P” position after a period of time. Therefore, move the select lever to the “P” position with the brake pedal depressed soon after the ignition switch is turned to the “LOCK”/“OFF” position.

▼ Shift lock release

If the select lever cannot be operated, turn the ignition switch back to the “ON” position then move the select lever to the “P” position with the select lever button pressed and brake pedal depressed.

If the select lever does not move after performing the above procedure, perform the following steps.

● When the select lever cannot be shifted from “P” to “N”:

Refer to “Shift lock release using the shift lock release button” ☞7-31.

● When the select lever cannot be shifted from “N” to “R”, “P”:

Within 60 seconds after placing the ignition switch in the “ACC” position, move the select lever to the “P” position with the select lever button pressed and brake pedal depressed.

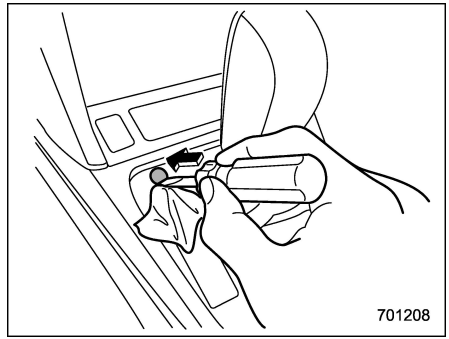
If you must perform the above procedure, the shift lock system (or the vehicle control system) may be malfunctioning. Contact a SUBARU dealer for an inspection as soon as possible.

If the select lever does not move after performing the above procedure, refer to “Shift lock release using the shift lock release button” ☞7-31.

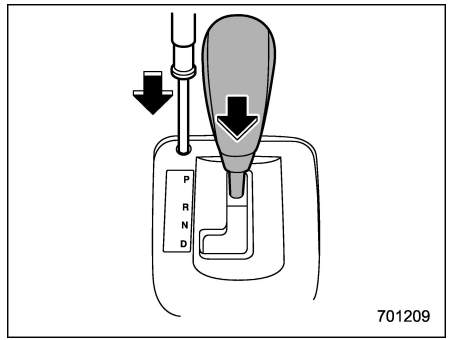
▼ Shift lock release using the shift lock release button

Perform the following procedure to release the shift lock.

1. Apply the parking brake and stop the engine.



2. Wrap the tip of a flat-head screwdriver with vinyl tape or a cloth and use it to remove the shift lock cover. The shift lock release button is located under the shift lock cover.



3. While depressing the brake pedal,

– CONTINUED –

insert a screwdriver into the hole, press the shift lock release button using a screwdriver, and then move the select lever.

If the select lever does not move after performing the above procedure, the shift lock system may be malfunctioning. Contact a SUBARU dealer for an inspection as soon as possible.

■ Driving tips

⚠ CAUTION

If the accelerator and brake pedals are depressed at the same time, driving torque may be restrained. This is not a malfunction.

- Always apply the foot or parking brake when the vehicle is stopped in the “D” or “R” position.
- Make sure to apply the parking brake when parking your vehicle. Do not hold the vehicle with only the mechanical friction of the transmission.
- Do not keep the vehicle in a stationary position on an uphill grade by using the “D” position. Use the brake instead.
- The engine may, on rare occasions, knock when the vehicle rapidly accelerates or rapidly pulls away from a standstill. This phenomenon does not indicate a malfunction.

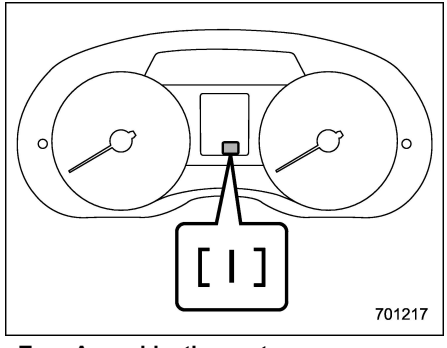
SI-DRIVE (if equipped)

SI-DRIVE (SUBARU Intelligent Drive) works to maximize engine performance, control and efficiency.

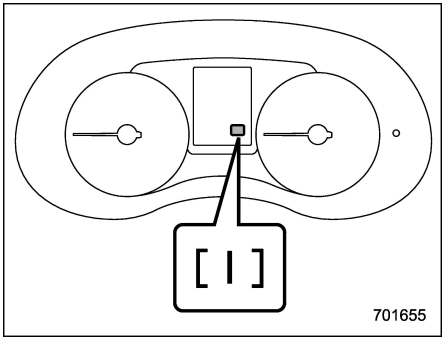
This system consists of three modes: Intelligent (I), Sport (S), and Sport Sharp (S#). By operating the SI-DRIVE switches, the character of the power unit changes.

■ Intelligent (I) mode

▼ **For smooth, efficient performance driving**



Type A combination meter



Type B combination meter

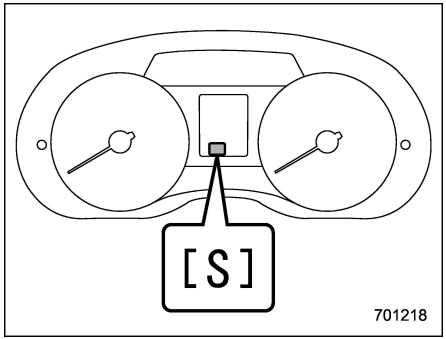
The linear acceleration characteristic of the Intelligent (I) mode is ideal for normal driving usage.

The Intelligent (I) mode provides well-balanced performance with greater fuel efficiency and smooth driveability without stress. Power delivery is moderate during acceleration for maximum fuel efficiency.

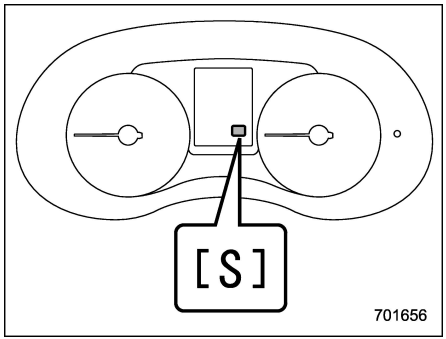
This is ideal for around-town driving and situations that do not require full power output. It provides better control in difficult driving conditions, such as slippery roads or loose surfaces, due to gentler throttle response.

■ Sport (S) mode

▼ For all-around performance driving



Type A combination meter

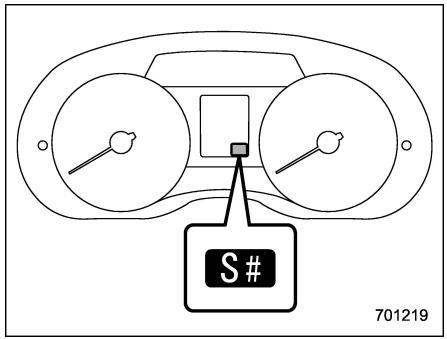


Type B combination meter

The Sport (S) mode provides the engine power desired by those who want to make the driving experience their own personal adventure.

■ Sport Sharp (S#) mode

▼ For maximum performance driving



Type A combination meter

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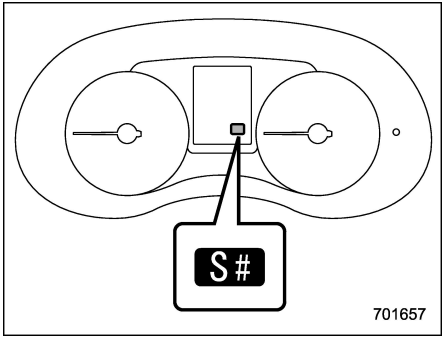


Type B combination meter

For sports-minded drivers, the Sport Sharp (S#) mode offers an exhilarating level of engine performance and control. The throttle becomes more responsive regardless of the engine speed. Delivering maximum driving enjoyment, this mode is ideal for tackling twisting roads and for merging or overtaking other vehicles on the freeway with confidence.

When you select the Sport Sharp (S#) mode while the select lever is in the “D” position, the transmission gear ratio will shift from variable speed to eight-speed. The select lever/gear position indicator display will change from “D” to the gear position.

When selecting Sport Sharp (S#) mode, the following controls will be applied.

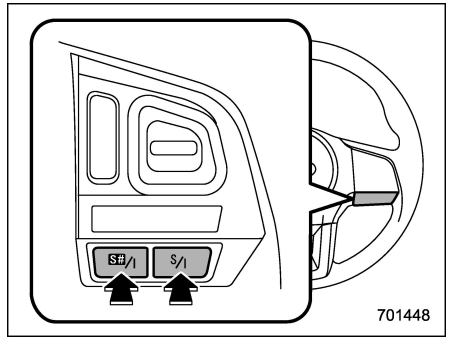
Uphill control: Prevents unnecessary shift-up/shift-down during ascent.

Cornering control: While turning, if there is a large centrifugal force, shift-up will not occur: during re-acceleration.

Braking control: At the beginning of corners etc., heavy application of the brake pedal will cause automatic down-shift and gently re-accelerate.

Sudden acceleration return control: During acceleration, if acceleration pedal is returned suddenly (for example, at corners etc.), shift-up will not be applied.

■ SI-DRIVE switches



SI-DRIVE switches

To select the Intelligent (I) mode, perform either of the following procedures.

- Press the “S/I” switch when the Sport (S) mode is selected
- Press the “S#/I” switch when the Sport Sharp (S#) mode is selected

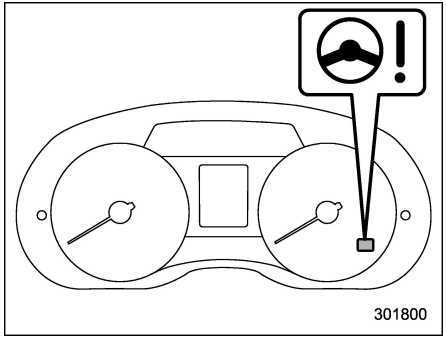
To select the Sport (S) mode, press the “S/I” switch when any mode other than Sport (S) mode is selected.

To select the Sport Sharp (S#) mode, press the “S#/I” switch when any mode other than Sport Sharp (S#) mode is selected.

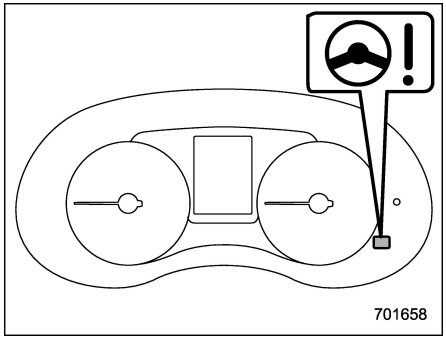
NOTE

- **While the engine is cool, you cannot change to Sport Sharp (S#) mode.**
- **The next time you turn on the engine, after you turned off the engine in the Sport (S) mode or Sport Sharp (S#) mode, the SI-DRIVE mode changes to the Intelligent (I) mode.**
- **While the engine is running, if the CHECK ENGINE warning light/malfunction indicator light illuminates, the SI-DRIVE mode changes to the Sport (S) mode. In this case, it is not possible to change to another mode.**
- **If there is a possibility that the engine could overheat because of a temperature increase of the engine coolant, it is not possible to change to the Sport Sharp (S#) mode. While the vehicle is in the Sport Sharp (S#) mode, it changes to the Sport (S) mode when the engine coolant temperature increases.**
- **If any of the SI-DRIVE indicators blink, the SI-DRIVE system may be malfunctioning. Contact your SUBARU dealer.**

Power steering



Power steering warning light (type A)



Power steering warning light (type B)

The vehicle is equipped with an electric power steering system. When the ignition switch is turned to the “ON” position, the power steering warning light on the combination meter illuminates to inform the driver that the warning system is functioning properly. Then, if the engine started, the warning light turns off to inform the driver that the steering power assist is operational.

⚠ CAUTION

When the power steering warning light is illuminated, there may be more resistance when the steering wheel is operated. Drive carefully to the nearest SUBARU dealer and have the vehicle inspected immediately.

NOTE

If the steering wheel is operated in the following ways, the power steering control system may temporarily limit the power assist in order to prevent the system components, such as the control computer and drive motor, from overheating.

- **The steering wheel is operated frequently and turned sharply while the vehicle is maneuvered at extremely low speeds, such as while frequently turning the steering wheel during parallel**

– CONTINUED –

parking.

• The steering wheel remains in the fully turned position for a long period of time.

At this time, there will be more resistance when steering. However this is not a malfunction. Normal steering force will be restored after the steering wheel is not operated for a while and the power steering control system has an opportunity to cool down. However, if the power steering is operated in a non-standard way which causes power assist limitation to occur too frequently, this may result in a malfunction of the power steering control system.

Braking

■ Braking tips

⚠ WARNING

Never rest your foot on the brake pedal while driving. This can cause dangerous overheating of the brakes and needless wear on the brake pads and linings.

▼ When the brakes get wet

When driving in rain or after washing the vehicle, the brakes may get wet. As a result, brake stopping distance will be longer. To dry the brakes, drive the vehicle at a safe speed while lightly depressing the brake pedal to heat up the brakes.

▼ Use of engine braking

Remember to make use of engine braking in addition to foot braking. When descending a grade, if only the foot brake is used, the brakes may start working improperly because of brake fluid overheating, caused by overheated brake pads. To help prevent this, shift into a lower gear to get stronger engine braking.

▼ Braking when a tire is punctured

Do not depress the brake pedal suddenly when a tire is punctured. This could cause a loss of control of the vehicle. Keep driving straight ahead while gradually reducing speed. Then slowly pull off the road to a safe location.

■ Brake system

▼ Two separate circuits

Your vehicle has two separate circuit brake systems. Each circuit works diagonally across the vehicle. If one circuit of the brake system should fail, the other half of the system still works. If one circuit fails, the brake pedal will go down much closer to the floor than usual and you will need to press it down much harder. And a much longer distance will be needed to stop the vehicle.

▼ Brake booster

The brake booster uses engine manifold vacuum to assist braking force. Do not turn off the engine while driving because that will turn off the brake booster, resulting in poor braking power.

The brakes will continue to work even when the brake booster completely stops functioning. If this happens, however, you will have to depress the pedal much harder than normal and the braking distance will increase.

▼ **Brake assist system**

⚠ WARNING

Do not be overconfident about the brake assist. It is not a system that brings more braking ability to the vehicle beyond its braking capability. Always use the utmost care when driving regarding vehicle speed and safe distance.

⚠ CAUTION

When you need to brake suddenly, continue depressing the brake pedal strongly to bring the effect of the brake assist.

Brake assist is a driver assistance system. It assists the brake power when the driver cannot depress the brake pedal strongly and the brake power is insufficient.

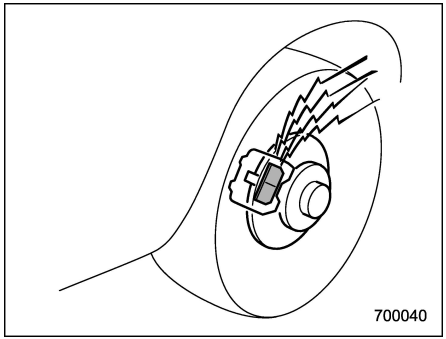
Brake assist generates the brake power according to the speed at which the driver depresses the brake pedal.

NOTE

When you depress the brake pedal strongly or suddenly, the following phenomena occur. However, even though these occur, they do not indicate any malfunctions, and the brake assist system is operating properly.

- **You might feel that the brake pedal is applied by lighter force and generates a greater braking force.**
- **You might hear an ABS operating noise from the engine compartment.**

■ Disc brake pad wear warning indicators



The disc brake pad wear warning indicators on the disc brakes give a warning noise when the brake pads are worn.

If a squeaking or scraping noise is heard from the disc brakes while braking, immediately have your vehicle checked by your SUBARU dealer.

ABS (Anti-lock Brake System)

The ABS prevents the lock-up of wheels which may occur during sudden braking or braking on slippery road surfaces. This helps prevent the loss of steering control and directional stability caused by wheel lock-up.

When the ABS is operating, you may hear a chattering noise or feel a slight vibration in the brake pedal. This is normal when the ABS operates.

The ABS will not operate when the vehicle speed is below approximately 6 mph (10 km/h).

⚠ WARNING

Always use the utmost care in driving – overconfidence because you are driving a vehicle with the ABS could easily lead to a serious accident.

⚠ CAUTION

- **The ABS does not always decrease stopping distance. You should always maintain a safe**

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following distance from other vehicles.

- **When driving on badly surfaced roads, gravel roads, icy roads, or over deep newly fallen snow, stopping distances may be longer for a vehicle with the ABS than one without. When driving under these conditions, therefore, reduce your speed and leave ample distance from other vehicles.**
- **When tire chains are installed, stopping distances may be longer for a vehicle with the ABS than one without. Be sure to reduce your speed and maintain a safe distance from the vehicle in front.**
- **When you feel the ABS operating, you should maintain constant brake pedal pressure. Do not pump the brake pedal since doing so may defeat the operation of the ABS.**

■ ABS self-check

Just after the vehicle is started, you may feel on the brake pedal a vibration similar to when the ABS operates, and you may also hear the sound of the ABS working from the engine compartment. This is caused by an automatic functional test of the ABS being carried out and does not indicate a malfunction.

■ ABS warning light

Refer to “ABS warning light” ☞3-21.

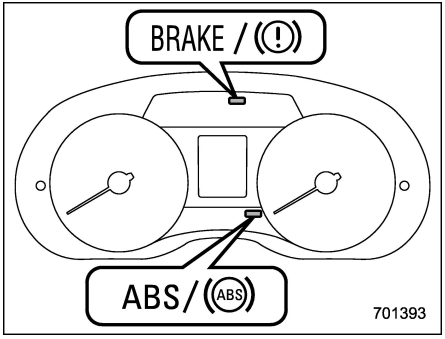
Electronic Brake Force Distribution (EBD) system

The EBD system maximizes the effectiveness of the brakes by allowing the rear brakes to supply a greater proportion of the braking force. It functions by adjusting the distribution of braking force to the rear wheels in accordance with the vehicle’s loading condition and speed.

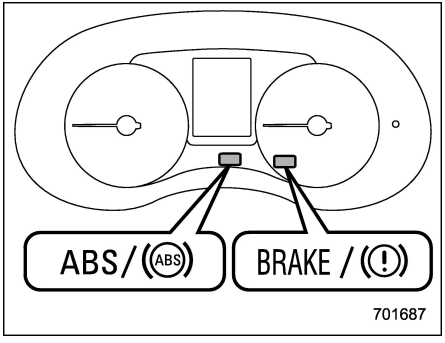
The EBD system is an integral part of the ABS and uses some of the ABS components to perform its function of optimizing the distribution of braking force. If any of the ABS components used by the EBD system malfunction, the EBD system also stops working.

When the EBD system is operating, you may hear a chattering noise or feel a slight vibration in the brake pedal. This is normal and does not indicate a malfunction.

■ Steps to take if EBD system malfunctions



Brake and ABS warning light (type A)



Brake and ABS warning light (type B)

If a malfunction occurs in the EBD system, the system stops working and the brake system warning light and ABS warning light illuminate simultaneously.

The EBD system may be malfunctioning if the brake system warning light and ABS warning light illuminate simultaneously during driving.

Even if the EBD system malfunctions, the conventional braking system will still function. However, the rear wheels will be more prone to locking when the brakes are applied harder than usual and the vehicle's motion may therefore become somewhat harder to control.

If the brake system warning light and ABS warning light illuminate simultaneously, take the following steps.

1. Stop the vehicle in the nearest safe, flat location.
2. Apply the parking brake and turn off the engine.
3. Restart the engine.
4. Release the parking brake.

Even if both warning lights turn off:

The EBD system may be malfunctioning. Drive carefully to the nearest SUBARU dealer and have the system inspected.

If both warning lights illuminate again and remain illuminated after restarting the engine:

1. Turn off the engine again.
2. Apply the parking brake.
3. Check the brake fluid level. For details about checking the brake fluid level, refer to "Checking the fluid level" ☞11-18.

- If the brake fluid level is not below the "MIN" mark, the EBD system may be malfunctioning. Drive carefully to the nearest SUBARU dealer and have the system inspected.
- If the brake fluid level is below the "MIN" mark, DO NOT drive the vehicle. Instead, have the vehicle towed to the nearest SUBARU dealer for repair.

⚠ WARNING

- **Driving with the brake system warning light illuminated is dangerous. This indicates your brake system may not be working properly. If the light remains illuminated, have the brakes inspected by a SUBARU dealer immediately.**
- **If at all in doubt about whether the brakes are operating properly, do not drive the vehicle. Have your vehicle towed to the nearest SUBARU dealer for repair.**

Vehicle Dynamics Control system

⚠ WARNING

Always use the utmost care in driving – overconfidence because you are driving a vehicle with the Vehicle Dynamics Control system could easily lead to a serious accident.

⚠ CAUTION

- **Even if your vehicle is equipped with Vehicle Dynamics Control system, winter tires should be used when driving on snow-covered or icy roads; in addition, vehicle speed should be reduced considerably. Simply having a Vehicle Dynamics Control system does not guarantee that the vehicle will be able to avoid accidents in any situation.**
- **Activation of the Vehicle Dynamics Control system is an indication that the road being travelled on has a slippery surface; since having Vehicle Dynamics Control is no guarantee that full vehicle control will be maintained at all times and under all conditions, its activation should be seen as a sign that the speed of the vehicle should be reduced considerably.**
- **Whenever suspension components, steering components, or an axle are removed from a vehicle, have an inspection of that system performed by an authorized SUBARU dealer.**
- **The following precautions should be observed in order to ensure that the Vehicle Dynamics Control system is operating properly:**
  - **All four wheels should be fitted with tires of the same size, type, and brand. Furthermore, the amount of wear should be the same for all four tires.**
  - **Keep the tire pressure at the proper level as shown on the vehicle placard attached to the driver's side door pillar.**
  - **Use only the specified temporary spare tire to replace a flat tire. With a temporary spare tire, the effectiveness of the Vehicle Dynamics Control system is reduced and this should be taken into account when driving the vehicle in such a condition.**
- **If non-matching tires are used, the Vehicle Dynamics Control system may not operate correctly.**
- **The Vehicle Dynamics Control system helps prevent unstable vehicle motion such as skidding using control of the brakes and engine power. Do not turn off the Vehicle Dynamics Control system unless it is absolutely necessary. If you must turn off the Vehicle Dynamics Control system, drive very carefully according to the road surface condition.**

In the event of wheelspin and/or skidding on a slippery road surface and/or during cornering and/or an evasive maneuver, the Vehicle Dynamics Control system adjusts the engine's output and the wheels' respective braking forces to help maintain traction and directional control.

- **Traction Control Function**

The traction control function is designed to prevent spinning of the driving wheels on slippery road surfaces, thereby helping to

maintain traction and directional control. Activation of this function is shown by flashing the Vehicle Dynamics Control operation indicator light.

- **Skid Suppression Function**

The skid suppression function is designed to help maintain directional stability by suppressing the wheels' tendency to slide sideways during steering operations. Activation of this function is shown by flashing of the Vehicle Dynamics Control operation indicator light.

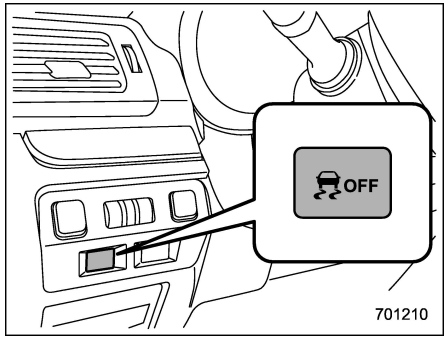
NOTE

- **The Vehicle Dynamics Control system may be considered normal when the following conditions occur.**
  - **– Slight twitching of the brake pedal is felt.**
  - **– The vehicle or steering wheel shakes to a small degree.**
  - **– An operating sound from the engine compartment is heard briefly when starting the engine and when driving off after starting the engine.**
  - **– The brake pedal seems to jolt when driving off after starting the engine.**
- **In the circumstances shown in the following list, the vehicle may be less stable than it feels to the driver. The Vehicle Dynamics Control System may therefore operate. Such operation does not indicate a system malfunction.**
  - **– on gravel-covered or rutted roads**
  - **– on unfinished roads**
  - **– when the vehicle is towing a trailer**
  - **– when the vehicle is fitted with snow tires or winter tires**
- **Activation of the Vehicle Dynamics Control system will cause operation of the steering wheel to feel slightly different compared to that for normal conditions.**
- **It is always important to reduce speed when approaching a corner, even if your vehicle is equipped with the Vehicle Dynamics Control system.**
- **Always turn off the engine before replacing a tire. Failure to do so may render the Vehicle Dynamics Control system unable to operate correctly.**

■ Vehicle Dynamics Control system monitor

Refer to "Vehicle Dynamics Control warning light/Vehicle Dynamics Control operation indicator light" ☞3-24 and "Vehicle Dynamics Control OFF indicator light" ☞3-25.

■ Vehicle Dynamics Control OFF switch



Vehicle Dynamics Control OFF switch (models with power rear gate)

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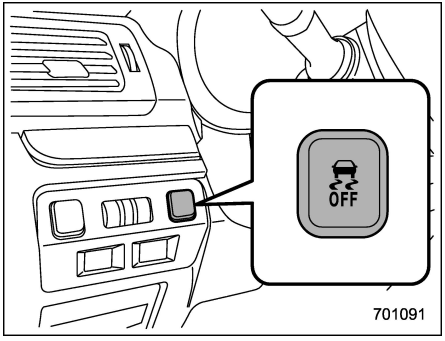
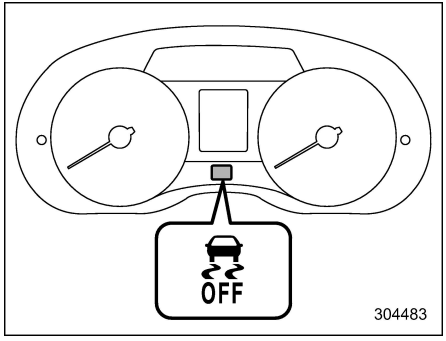


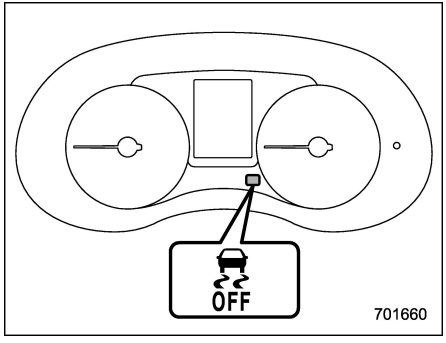
Vehicle Dynamics Control OFF switch (models without power rear gate)

Use this switch in the following special situations. Creating an adequate driving wheel slip by deactivating the Vehicle Dynamics Control system may help to recover from the loss of traction. Use the Vehicle Dynamics Control OFF switch as necessary.

- a standing start on a steeply sloping road with a snowy or gravel-covered surface
- extrication of the vehicle when its wheels are stuck in mud or deep snow



Vehicle Dynamics Control OFF indicator light (type A)



Vehicle Dynamics Control OFF indicator light (type B)

When the switch is pressed during engine operation, the Vehicle Dynamics Control OFF indicator light "OFF" on the combination meter illuminates. The Vehicle Dynamics Control system will be deactivated and the vehicle will behave like a model not equipped with the Vehicle Dynamics Control system. When the switch is pressed again to reactivate the Vehicle Dynamics Control system, the Vehicle Dynamics Control OFF indicator light turns off.

With the Vehicle Dynamics Control system deactivated, traction and stability enhancement offered by Vehicle Dynamics Control system is unavailable. Therefore you should not deactivate the Vehicle Dynamics Control system except under above-mentioned situations.

NOTE

- When the switch has been pressed to deactivate the Vehicle Dynamics Control system, the Vehicle Dynamics Control system automatically reactivates itself the next time the ignition switch is turned to the "LOCK"/"OFF" position and the engine is restarted.

- If the switch is held down for 30 seconds or longer, the indicator light turns off, the Vehicle Dynamics Control system is activated, and the system ignores any further pressing of the switch. To make the switch usable again, turn the ignition switch to the

"LOCK"/"OFF" position and restart the engine.

- **When the switch is pressed to deactivate the Vehicle Dynamics Control system, the vehicle's running performance is comparable with that of a vehicle that does not have a Vehicle Dynamics Control system. Do not deactivate the Vehicle Dynamics Control system except when absolutely necessary.**
- **Even when the Vehicle Dynamics Control system is deactivated, components of the brake control system may still activate. When the brake control system is activated, the Vehicle Dynamics Control operation indicator light flashes.**

X-mode (if equipped)

⚠ WARNING

- **Always use the utmost care in driving – overconfidence because you are driving a vehicle with X-mode could easily lead to a serious accident.**
- **Always use the utmost care in driving – overconfidence because you are driving a vehicle with hill descent control function could easily lead to a serious accident. Be especially careful, and depress the brake pedal if necessary when driving on extremely steep downhill, frozen, muddy or sandy roads. Failure to control the vehicle's speed may cause a loss of control and result in a serious accident.**

⚠ CAUTION

- **Even if your vehicle is equipped with X-mode, winter tires or snow chains should be used when driving on snow-covered or icy roads; in addition, vehicle speed should be reduced considerably.**

Simply having X-mode does not guarantee that the vehicle will be able to avoid accidents in any situation.

- **Activating the X-mode should be done when you encounter a very slippery surface at low speed. However, having X-mode is no guarantee that full vehicle control will be maintained at all times and under all conditions. When activating X-mode, the speed of the vehicle should be reduced considerably.**
- **Whenever suspension components, steering components, or an axle are removed from a vehicle, have the system inspected by an authorized SUBARU dealer.**
- **The following precautions should be observed in order to ensure that the X-mode is operating properly:**
  - **All four wheels should be fitted with tires of the same size, type, and brand. Furthermore, the amount of wear should be the same for all four tires.**
  - **Keep the tire pressure at the**

– CONTINUED –

proper level as shown on the label attached to the vehicle's door pillar.

– Use only the special temporary spare tire to replace a flat tire. With a normal temporary spare tire, the effectiveness of the X-mode is reduced and this should be taken into account when driving the vehicle in such a condition.

- **If the hill descent control function has operated continuously for a long time, the temperature of the brake disc may increase and the hill descent control function may be temporarily disabled. In this case, the hill descent control indicator light will turn off. When the hill descent control indicator light turns off, the hill descent control function is disabled.**

X-mode is the integrated control system of the engine, AWD and Vehicle Dynamics Control system, etc. for driving with bad road conditions. Using X-mode, you can drive more comfortably even in slippery road conditions including uphill and downhill.

X-mode has the following functions.

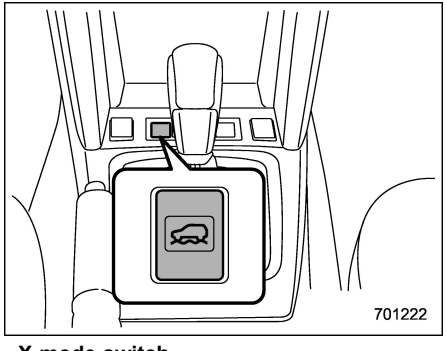
- **Hill descent control function:**

Using the hill descent control function, you can keep the vehicle at a consistent speed driving downhill. If the vehicle speed is likely to increase, the brake control system will be activated to adjust the vehicle speed.

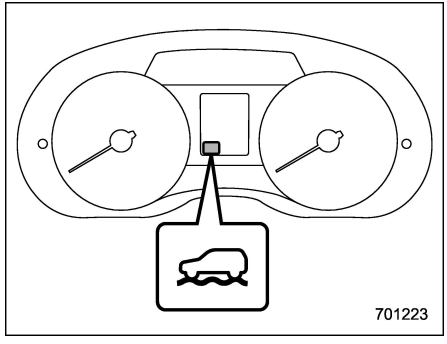
- **Driving ability control:**

This mode increases the hill-climbing ability and driving ability as well as enabling smooth application of torque for easier control of the steering wheel.

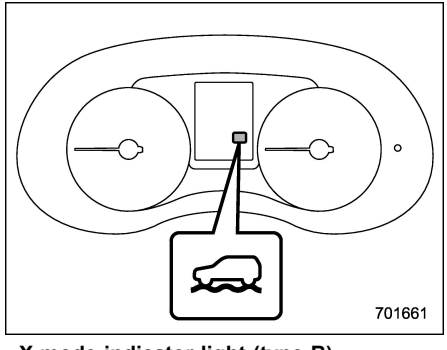
■ To activate/deactivate the X-mode



X-mode switch



X-mode indicator light (type A)



X-mode indicator light (type B)

To activate:

Press the X-mode switch. While the X-mode is activated, the X-mode indicator

light illuminates.

To deactivate:
Press the X-mode switch again. The X-mode indicator light will turn off when the X-mode is deactivated.

NOTE

• Even if you try to activate the X-mode by pressing the X-mode switch when the vehicle speed is 12 mph (20 km/h) or more, the X-mode will not be activated. At this time, a buzzer will sound twice.
• If the vehicle speed reaches 25 mph (40 km/h) or more while the X-mode is activated, a buzzer will sound once and the X-mode will be deactivated.

NOTE

For models with SI-DRIVE:
• The SI-DRIVE mode will change to the Intelligent (I) mode when the X-mode is deactivated.
• The SI-DRIVE mode cannot be changed while the X-mode is activated. At this time, a buzzer will sound twice.
• While the engine is running, if any of the following conditions is met, the X-mode will be deactivated. In this case, it is not possible to activate the X-mode. Also, for models with SI-DRIVE, the mode will change to the Sport (S) mode and it will not be possible to change to the other modes.
– The CHECK ENGINE warning light/malfunction indicator light illuminates.
– The AT OIL TEMP warning light flashes.
– The ABS warning light illuminates.
– The Vehicle Dynamics Control warning light illuminates.
• If there is a possibility that the engine could overheat because of a temperature increase of the engine coolant, it is not possible to change to the X-mode. While the vehicle is in the X-mode, it changes to the Sport (S) mode when the engine coolant temperature increases.
• It is not possible to activate the X-mode when the engine is not running, because the hill descent control function is not activated.

■ Hill descent control function

The hill descent control function will be in standby mode when the X-mode is activated and the vehicle speed is less than approximately 12 mph (20 km/h).
The function will operate when the vehicle speed is less than approximately 12 mph (20 km/h) and the accelerator ratio is less than approximately 10%.
The function will turn off when the vehicle speed is more than approximately 12 mph (20 km/h) and the accelerator pedal is depressed.

⚠ CAUTION

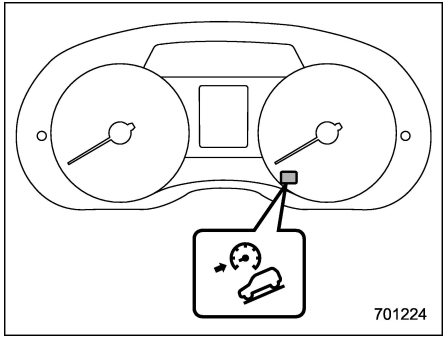
The braking power of the hill descent control function may not be sufficient when strong braking power is needed (e.g., when towing a trailer).

– CONTINUED –

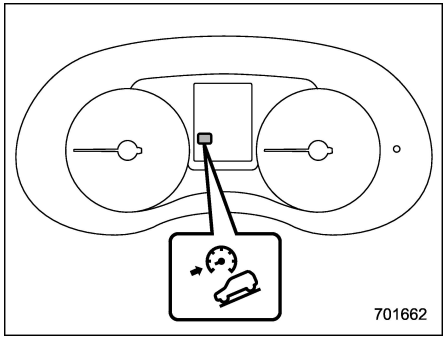
NOTE

- **Even while the hill descent control function is operating, you can vary the vehicle speed by using the brake pedal or accelerator pedal.**
- **During braking by the hill descent control function, the brake system warning light will illuminate.**
- **The hill descent control function may also operate on a flat road.**
- **The hill descent control function may be considered normal when the following conditions occur.**
  - **– An operating sound is heard briefly from the engine compartment while the hill descent control function is operating.**
  - **– The sensation of depressing the brake pedal is different, (harder than usual etc.) when the brake pedal is depressed during hill descent control function operation.**

▼ **Hill descent control indicator light**



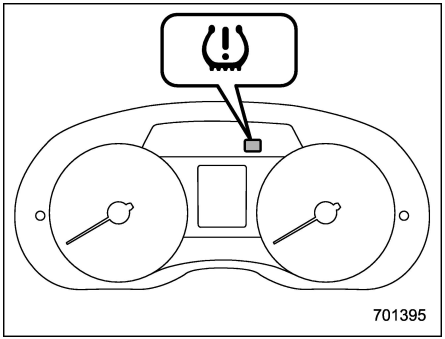
Hill descent control indicator light (type A)



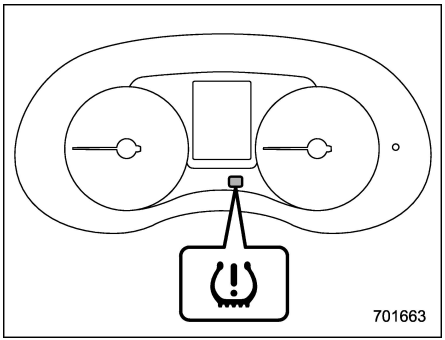
Hill descent control indicator light (type B)

This light illuminates while the hill descent control function is in the standby mode. It flashes while the function is operating. It will turn off when the function is in the disabled mode. When this function is changed from operational to non-operational, it will turn off when the vehicle speed reaches more than approximately 18 mph (30 km/h).

Tire pressure monitoring system (TPMS) (U.S.-spec. models)



Low tire pressure warning light (type A)



Low tire pressure warning light (type B)

The tire pressure monitoring system provides the driver with a warning message.

The tire pressure monitoring system will activate only when the vehicle is driven at speeds above 25 mph (40 km/h). Also, this system may not react immediately to a sudden drop in tire pressure (for example, a blow-out caused by running over a sharp object).

⚠ WARNING

- **If the low tire pressure warning light illuminates while driving, never brake suddenly. Instead, perform the following procedure. Otherwise, an accident involving serious vehicle damage and serious personal injury could occur.**
  (1) Keep driving straight ahead while gradually reducing speed.
  (2) Slowly pull off the road to a safe location.
  (3) Check the pressure for all four tires and adjust the pressure to the COLD tire pressure shown on the tire placard. The tire placard is located on the door pillar on the driver's side.
  Even when the vehicle is driven a very short distance, the tires get warm and their pressures increase accordingly. Be sure to let the tires cool thoroughly before adjusting their pressures to the standard values shown on the tire placard. Refer to "Tires and wheels" ☞11-23. The tire pressure monitoring system does not function when the vehicle is stationary. After adjusting the tire pressures, increase the vehicle speed to at least 25 mph (40 km/h) to start the TPMS rechecking of the tire inflation pressures. If the tire pressures are now above the severe low pressure threshold, the low tire pressure warning light should turn off a few minutes later.
  If this light still illuminates while driving after adjusting the tire pressure, a tire may have significant damage and a fast leak that causes the tire to lose air rapidly. If you have a flat tire, replace it with a spare tire as soon as possible.
- **When a spare tire is mounted or a wheel rim is replaced without the original pressure sensor/transmitter being transferred, the low**

– CONTINUED –

tire pressure warning light will illuminate steadily after blinking for approximately one minute. This indicates the TPMS is unable to monitor all four road wheels. Contact your SUBARU dealer as soon as possible for tire and sensor replacement and/or system resetting.

- **Do not inject any tire liquid or aerosol tire sealant into the tires, as this may cause a malfunction of the tire pressure sensors. If the light illuminates steadily after blinking for approximately one minute, promptly contact a SUBARU dealer to have the system inspected.**

⚠ CAUTION

- **Do not place metal film or any metal parts in the cargo area. This may cause poor reception of the signals from the tire pressure sensors, and the tire pressure monitoring system will not function properly.**
- **FCC WARNING**

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

- **U.S.-spec. models**

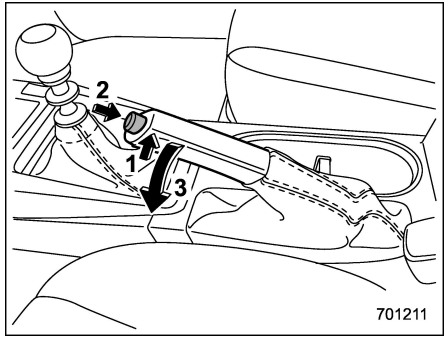
NOTE

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.

Parking your vehicle

■ Parking brake

To set the parking brake, depress the brake pedal firmly and hold it down until the parking brake lever is fully pulled up.



To release the parking brake, perform the following procedure.

1. Pull the lever up slightly.
2. Press the release button.
3. Lower the lever while keeping the button pressed.

When the parking brake is set while the engine is running, the parking brake warning light illuminates. After starting the vehicle, be sure that the warning light has turned off before the vehicle is driven. Refer to "Brake system warning light" ☞3-

21.

CAUTION

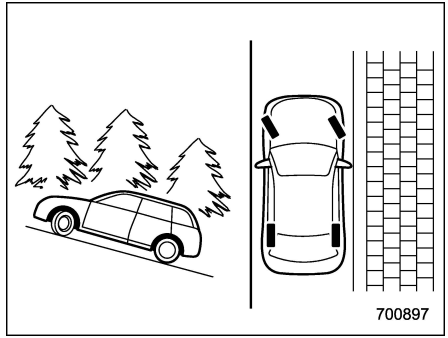
- **Never drive while the parking brake is set because this will cause unnecessary wear on the brake linings. Before starting to drive, always make sure that the parking brake has been fully released.**
- **The braking power of the parking brake may not be sufficient when stronger braking power is needed (e.g., when parking on a steep slope while towing a trailer).**

■ Parking tips

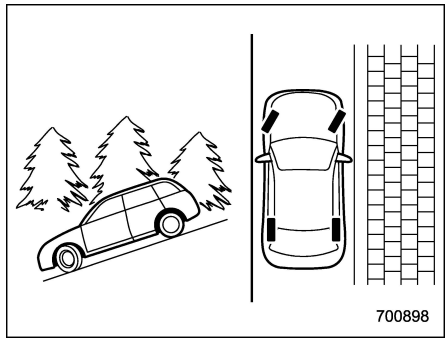
When parking your vehicle, always perform the following items.

- Apply the parking brake firmly.
- For MT models, put the shift lever in the "1" (1st) for upgrade or "R" (Reverse) for a downgrade.
- For CVT models, put the select lever in the "P" (Park) position.

Never rely on the mechanical friction of the transmission alone to hold the vehicle.



When parking on a hill, always turn the steering wheel. When the vehicle is headed up the hill, the front wheels should be turned away from the curb.



When facing downhill, the front wheels should be turned into the curb.

WARNING

- **Never leave unattended children or pets in the vehicle. They could accidentally injure themselves or others through inadvertent operation of the vehicle. Also, on hot or sunny days, the temperature in a closed vehicle could quickly become high enough to cause severe or possibly fatal injuries to people.**
- **Do not park the vehicle over flammable materials such as dry grass, waste paper or rags, as they may burn easily if they come near hot engine or exhaust system parts.**
- **Be sure to stop the engine if you take a nap in the vehicle. If engine exhaust gas enters the passenger compartment, occupants in the vehicle could die from carbon monoxide (CO) contained in the exhaust gas.**

CAUTION

If your vehicle has a front underspoiler and rear underspoiler (both optional), pay attention to blocks

– CONTINUED –

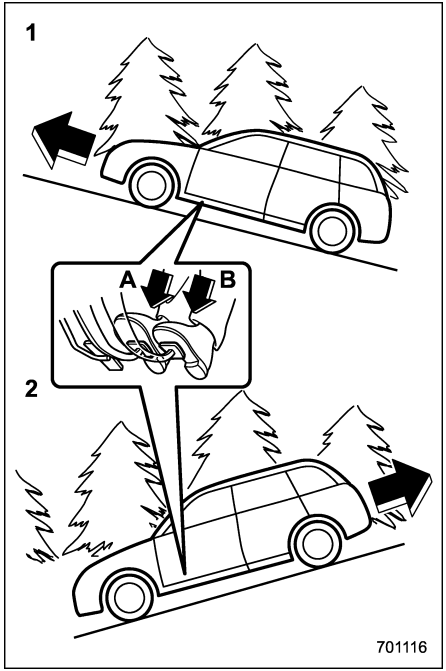
and other obstructions on the ground when parking. The underspoilers could be damaged by contact with them.

Hill start assist system

⚠ WARNING

- **The Hill start assist system is a device only for helping the driver to START the vehicle on an uphill grade. To prevent accidents when the vehicle is parked on a slope, be sure to firmly set the parking brake. When setting the parking brake, make sure that the vehicle remains stationary when the clutch pedal (MT models) and brake pedal (both MT and CVT models) are released.**
- **Do not turn the ignition switch to the "LOCK"/"OFF" position while the Hill start assist system is operating. The Hill start assist system will be deactivated and may lead to an accident.**

The Hill start assist system is a device to make the following vehicle operations easier.



1) Starting forward facing uphill
2) Starting backward facing downhill
A) Brake pedal (both MT models and CVT models)
B) Clutch pedal (MT models only)

In both these cases, the Hill start assist system operates under the following con-

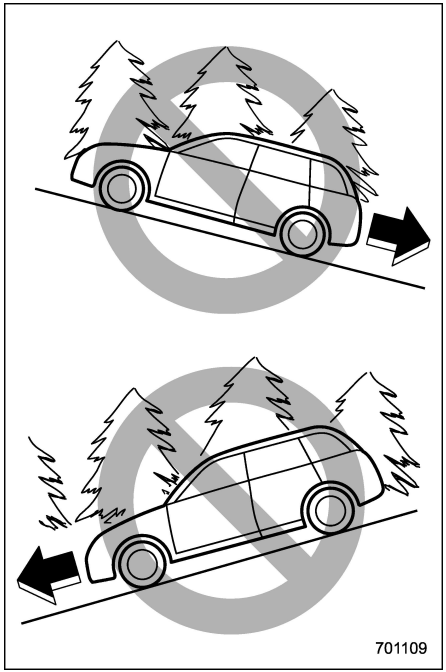
ditions.

- when the clutch pedal is depressed while the brake pedal is also depressed (MT models)
- when the vehicle has stopped with the brake pedal depressed (CVT models)

Braking power is maintained temporarily (for approximately 2 seconds) by the Hill start assist system after the brake pedal is released. The driver is therefore able to start the vehicle in the same way as on a level grade, just using the clutch pedal (MT models only) and accelerator pedal (all models).

If the braking power of the Hill start assist system is insufficient after the brake pedal is released, apply more braking power by depressing the brake pedal again.

The Hill start assist system may not operate on slight grades. Also, the Hill start assist system does not operate in the following cases.



- when starting backward facing uphill
- when starting forward facing downhill
- while the parking brake is applied
- while the ignition switch is in the “ACC” or “LOCK”/“OFF” position
- while the Hill start assist warning light/ Hill start assist OFF indicator light is illuminated

When using the Hill start assist system, a braking effect may be felt even after the brake pedal has been released. However, this braking effect should disappear once the clutch pedal is released.

⚠ CAUTION

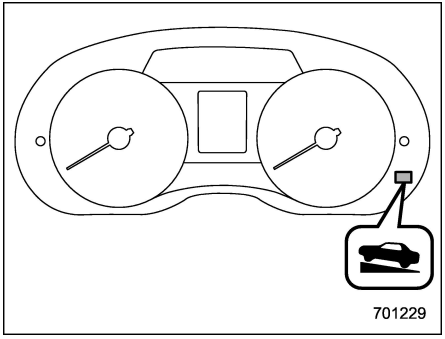
The braking power of the Hill start assist system may not be sufficient when strong braking power is needed (e.g., when towing a trailer).

NOTE

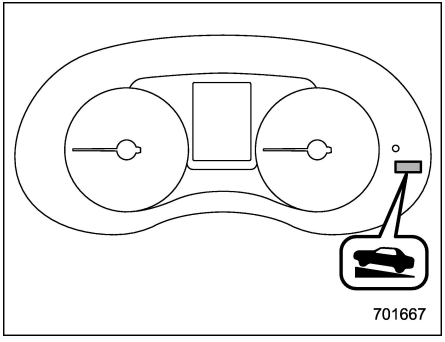
A slight jolt may be felt when the vehicle begins to move forward after being reversed.

– CONTINUED –

■ To activate/deactivate the Hill start assist system



Hill start assist OFF indicator light (type A)



Hill start assist OFF indicator light (type B)

⚠ CAUTION

When starting on an up hill grade, make sure the Hill start assist OFF indicator light is off.

If the Hill start assist OFF indicator light is on, make sure the parking brake is applied.

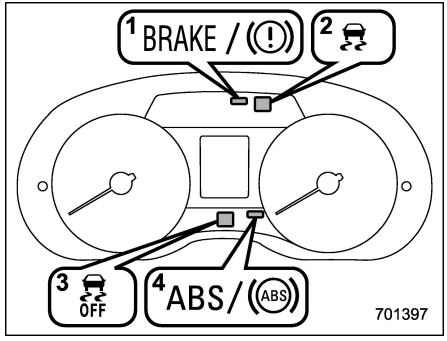
To activate or deactivate the Hill start assist system, perform the following steps.

NOTE

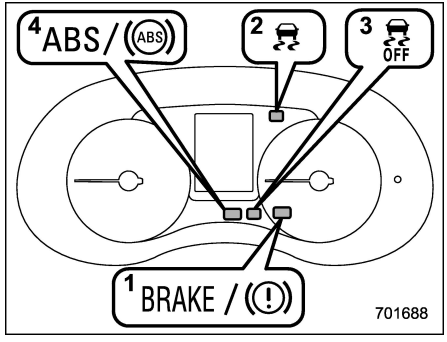
If you make an error when performing any steps in the following procedure, place the ignition switch in the "LOCK"/ "OFF" position once and then start over again.

▼ To deactivate

1. Park your vehicle in a flat and safe location and apply the parking brake.
2. Turn the ignition switch to the "LOCK"/ "OFF" position.
3. Restart the engine.



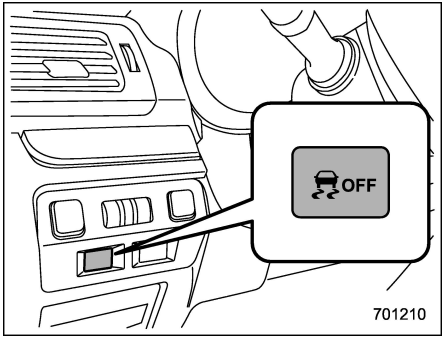
Type A combination meter



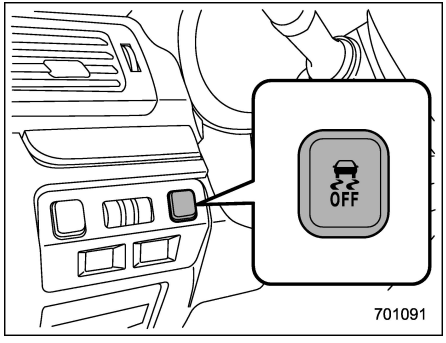
Type B combination meter

4. Confirm the following items.
   (1) The Brake system warning light illuminates.
   (2) The Vehicle Dynamics Control

warning light turns off.
(3) The Vehicle Dynamics Control OFF indicator light turns off.
(4) The ABS warning light turns off.



Vehicle Dynamics Control OFF switch (models with power rear gate)



Vehicle Dynamics Control OFF switch (models without power rear gate)

5. Press and hold the Vehicle Dynamics Control OFF switch for 30 seconds until the Vehicle Dynamics Control OFF indicator light on the combination meter turns on and off.
6. Within 5 seconds, release the Vehicle Dynamics Control OFF switch.
7. Within 2 seconds, press back the Vehicle Dynamics Control OFF switch.

The Hill start assist OFF indicator light turns on and off.

8. Turn the ignition switch to the "LOCK"/"OFF" position. Hill start assist is deactivated.

NOTE

When the Hill start assist system is deactivated, the Hill start assist OFF indicator light illuminates continuously.

▼ To reactivate

To reactivate Hill start assist system, repeat steps 1 to 8. When the Hill start assist system is activated, the Hill start assist OFF indicator light turns off.

■ Hill start assist warning light/ Hill start assist OFF indicator light

Refer to "Hill start assist warning light/Hill start assist OFF indicator light" ☞3-23.

Cruise control (if equipped)

NOTE

For models with the EyeSight system: Refer to the Owner's Manual supplement for the EyeSight system.

Cruise control enables you to maintain a constant vehicle speed without holding your foot on the accelerator pedal and it is operative when the vehicle speed is 25 mph (40 km/h) or more.

⚠ WARNING

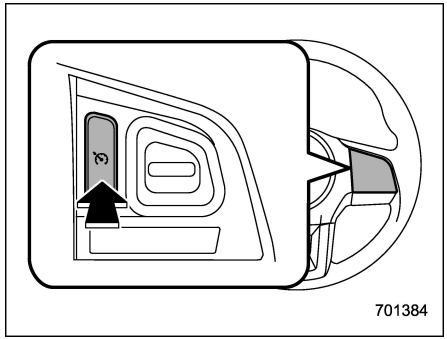
Do not use the cruise control under any of the following conditions. These may cause loss of vehicle control.

- **driving up or down a steep grade**
- **driving on slippery or winding roads**
- **driving in heavy traffic**
- **towing a trailer**

NOTE

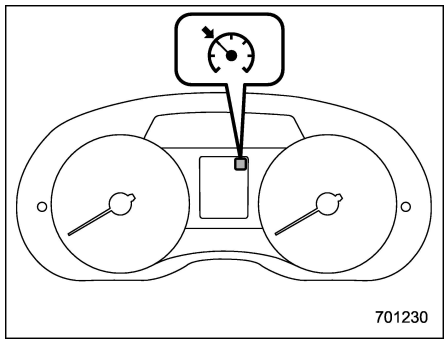
- **On uphill and downhill slopes, depending on the degree of the slope and the load of the vehicle, there may be cases when a constant speed cannot be guaranteed.**
- **If the cruise control indicator light does not illuminate even after pressing the cruise control main button, it is possible that there is a malfunction in the system. We recommend that you contact your SUBARU dealer for an inspection.**
- **Make sure the cruise control system is turned off when the cruise control is not in use to avoid unintentionally setting the cruise control.**

■ To set cruise control

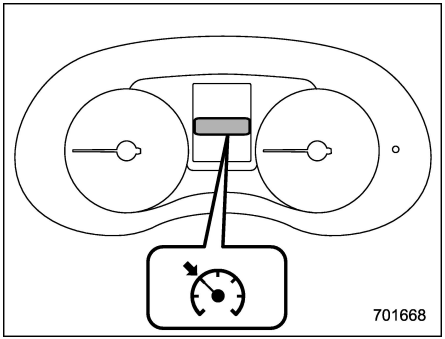


Cruise control main button

1. Press the cruise control main button.



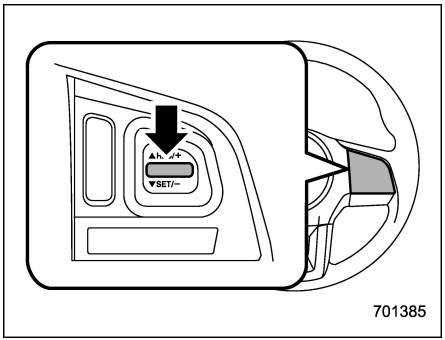
Cruise control indicator light (type A)



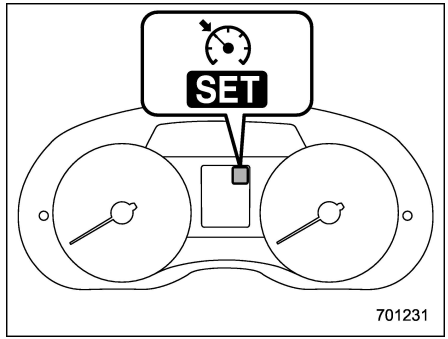
Cruise control indicator light (type B)

The cruise control indicator light on the combination meter will illuminate.

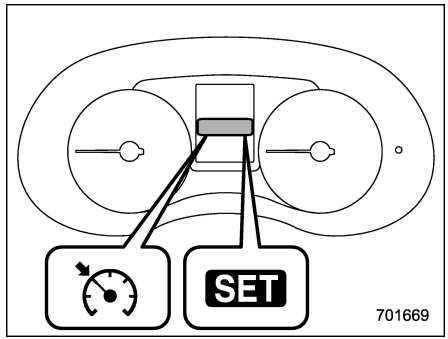
2. Depress the accelerator pedal until the vehicle reaches the desired speed.



3. Press the “RES/SET” switch to the “SET” side and release it. Then release the accelerator pedal.



Cruise control set indicator light (type A)



Cruise control set indicator light (type B)

At this time, the cruise control set indicator light is illuminated in the combination meter.

The vehicle will maintain the desired speed.

Vehicle speed can be temporarily increased while driving with the cruise control activated. Simply depress the accelerator pedal to accelerate the vehicle. When the accelerator pedal is released, the vehicle will return to and maintain the previous cruising speed.

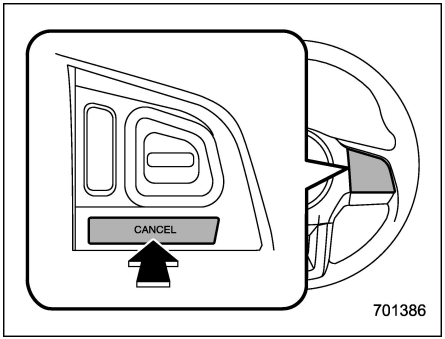
NOTE

For turbo models, when you set the desired speed while the Sport Sharp (S#) mode is selected, the select lever/gear position indicator will change from the current gear position indication to the “D” indication.

– CONTINUED –

■ To temporarily cancel the cruise control

The cruise control can be temporarily canceled in the following ways.

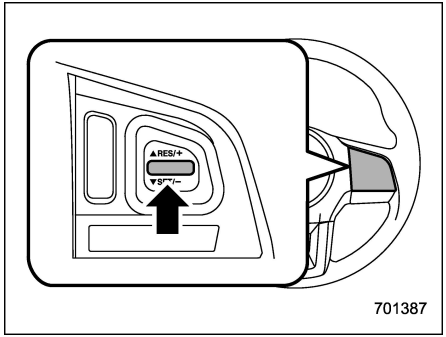


- Press the “CANCEL” button.
- Press the X-mode switch to activate the X-mode (models with X-mode).
- Depress the brake pedal.
- Depress the clutch pedal (MT models only).

⚠ WARNING

For CVT models, you can cancel the cruise control by shifting the select lever into the “N” position. However, do not shift the lever into the “N” position while driving except in case of emergency. If the select lever is shifted into the “N” position, the engine brake will no longer work. This could result in an accident.

The cruise control set indicator light in the combination meter turns off when the cruise control is canceled.



To resume the cruise control after it has been temporarily canceled and with vehicle speed of approximately 20 mph (30 km/h) or more, press the “RES/SET” switch to the “RES” side to return to the original cruising speed automatically.

The cruise control set indicator light in the combination meter will automatically illuminate at this time.

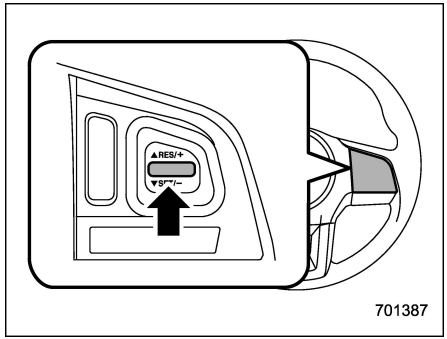
■ To turn off the cruise control

There are two ways to turn off the cruise control:

- Press the cruise control main button again.
- Turn the ignition switch to the “ACC” or “LOCK”/“OFF” position (but only when the vehicle is completely stopped).

■ To change the cruising speed

▼ To increase the speed (by the “RES/SET” switch)



Press the “RES/SET” switch to the “RES” side and hold it until the vehicle reaches the desired speed. Then, release the switch. The vehicle speed at that moment will be memorized and treated as the new set speed.

U.S.-spec. models

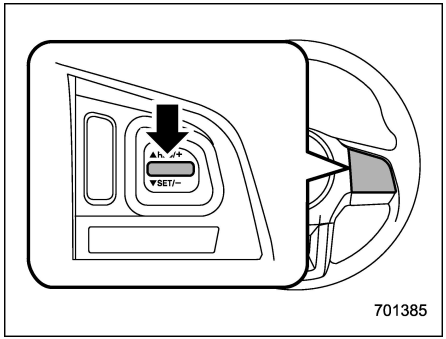
When the difference between the actual vehicle speed and the set speed is small, the set speed can be increased 1 mph (1.6 km/h) each time by pressing the “RES/SET” switch to the “RES” side quickly.

Except U.S.-spec. models

When the difference between the actual vehicle speed and the set speed is small, the set speed can be increased 1 km/h each time by pressing the “RES/SET” switch to the “RES” side quickly.

▼ To increase the speed (by accelerator pedal)

1. Depress the accelerator pedal to accelerate the vehicle to the desired speed.



2. Press the “RES/SET” switch to the “SET” side once. Now the desired speed is set and the vehicle will keep running at that speed without depressing the accelerator pedal.

NOTE

- **U.S.-spec. models**

If the difference between the actual vehicle speed when the switch is pressed and the speed last time you set is small, the vehicle speed will be lowered by 1 mph (1.6 km/h). This occurs because the cruise control system regards this operation as that intended to decrease the vehicle speed.

- **Except U.S. spec. models**

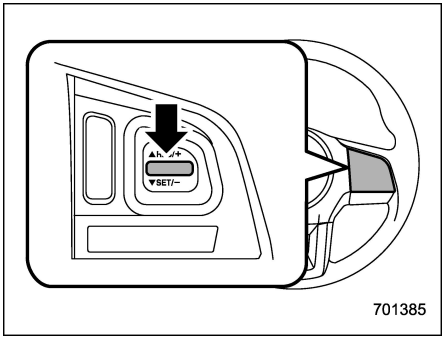
If the difference between the actual vehicle speed when the switch is pressed and the speed last time you set is small, the vehicle speed will be lowered by 1 km/h. This occurs because the cruise control system regards this operation as that intended to decrease the vehicle speed.

- **Turbo models**

If you depress the accelerator pedal while the Sport Sharp (S#) mode is selected, the select lever/gear position indicator may change from the “D” indication to the current gear position indication.

– CONTINUED –

▼ **To decrease the speed (by the "RES/SET" switch)**



Press the "RES/SET" switch to the "SET" side and hold it until the vehicle reaches the desired speed. Then, release the switch. The vehicle speed at that moment will be memorized and treated as the new set speed.

U.S.-spec. models

When the difference between the actual vehicle speed and the set speed is small, the set speed can be lowered 1 mph (1.6 km/h) each time by pressing the "RES/SET" switch to the "SET" side quickly.

Except U.S.-spec. models

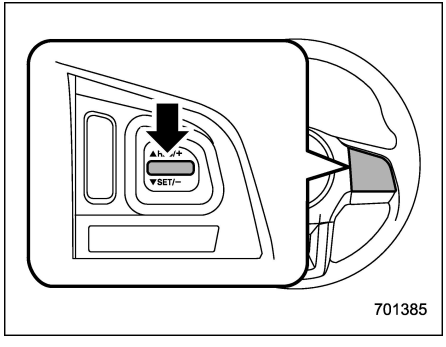
When the difference between the actual vehicle speed and the set speed is small, the set speed can be lowered 1 km/h each time by pressing the "RES/SET" switch to the "SET" side quickly.

NOTE

If the "RES/SET" switch is repeatedly operated quickly to the "SET" side, the set vehicle speed displayed in the combination meter becomes the low speed setting. However, when the set vehicle speed is set to a speed much lower than the actual vehicle speed, the set speed may be reset to the actual vehicle speed.

▼ **To decrease the speed (by brake pedal)**

1. Depress the brake pedal to release cruise control temporarily.



2. When the speed decreases to the desired speed, press the "RES/SET" switch to the "SET" side once. Now the desired speed is set and the vehicle will keep running at that speed without depressing the accelerator pedal.

■ Cruise control indicator light

Refer to "Cruise control indicator light" ☞3-32.

■ Cruise control set indicator light

Refer to "Cruise control set indicator light" ☞3-32.

BSD/RCTA (if equipped)

The BSD/RCTA consists of rear radar with Blind Spot Detection and Rear Cross Traffic Alert.

These functions enable the system to detect objects or vehicles to the rear, drawing attention to the driver when changing a lane or when driving in reverse.

⚠ WARNING

The driver is responsible for driving safely. Always be sure to check the surroundings with your eyes when changing lanes or reversing the vehicle.

The system is designed to assist the driver by monitoring the rear and side areas of the vehicle during a lane change or reversing. However, you cannot rely on this system alone in assuring the safety during a lane change or reversing. Overconfidence in this system could result in an accident and lead to serious injury or death. Since the system operation has various limitations, the flashing or illumination of the BSD/RCTA approach indicator light may be delayed or it may not operate at all even when a vehicle is present in a neighboring lane or approaching from either side.

The driver is responsible for paying attention to the rear and side areas of the vehicle.

■ System features

BSD/RCTA consists of the following functions.

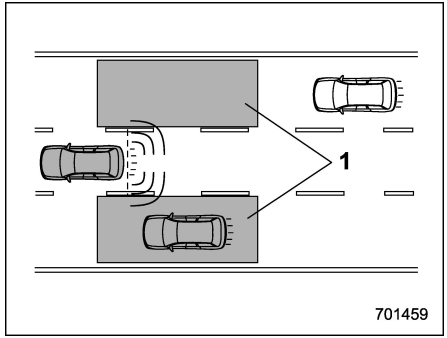
- To detect a vehicle in a blind spot on an adjacent lane or a vehicle approaching at high speed while driving the vehicle (Blind Spot Detection)
- To detect a vehicle approaching from the right or left while reversing the vehicle (Rear Cross Traffic Alert)

The system uses radar sensors for the above functions.

NOTE

The BSD/RCTA radar sensor has been certified by the radio wave related laws of the U.S. When driving in other countries, certification of the country where the vehicle is driven must be obtained. For certification in the U.S., refer to "Certification for the BSD/RCTA" ☞7-66.

▼ Blind Spot Detection (BSD)

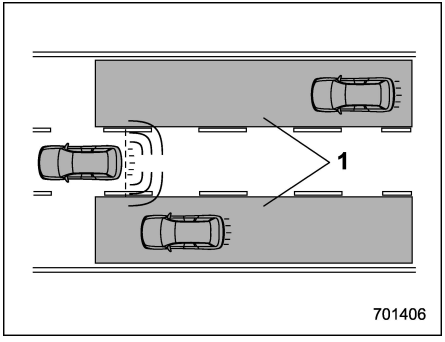


1) Operating range

The system notifies the driver of vehicles existing in the blind area. If the system detects a vehicle existing in the blind area, it warns the driver of dangers by illuminating the BSD/RCTA approach indicator light (s) on the outside mirror(s). If the driver operates the turn signal lever in the direction where the BSD/RCTA approach indicator light is illuminating, the system warns the driver of dangers by flashing the BSD/RCTA approach indicator light.

– CONTINUED –

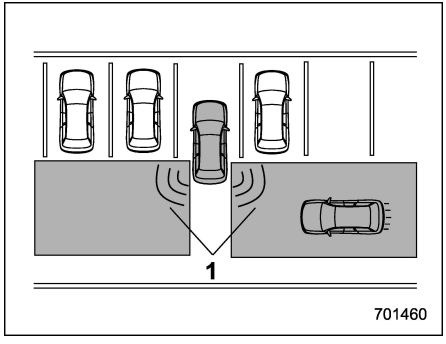
▽ Lane Change Assist (LCA)



1) Operating range

The system notifies the driver of vehicles approaching at a high speed in the neighboring lanes. If the system detects a vehicle approaching at a high speed in the neighboring lanes, it warns the driver of dangers by illuminating the BSD/RCTA approach indicator light(s) on the outside mirror(s). If the driver operates the turn signal lever in the direction where the BSD/RCTA approach indicator light is illuminating, the system warns the driver of dangers by flashing the BSD/RCTA approach indicator light.

▼ Rear Cross Traffic Alert (RCTA)

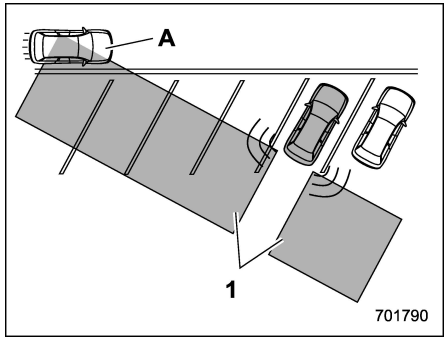


1) Operating range

The system notifies the driver of another vehicle approaching from either side when driving in reverse. This feature helps the driver check the rear and side areas of the vehicle when moving backward.

If the system detects a vehicle approaching from either side while moving backward, it warns the driver of dangers in the following way.

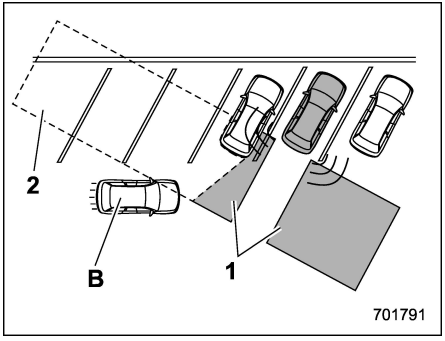
- The BSD/RCTA approach indicator light(s) on the outside mirror(s) flashes.
- A warning buzzer sounds.



1) The detection range of the radar sensors
A) Vehicle that may be detected

⚠ WARNING

In angled parking as indicated in the illustration above, the system may detect a vehicle (A) that is coming across the front of your vehicle in some cases. Always be sure to check the surroundings with your eyes when reversing the vehicle, because the detectability of RCTA is limited.



1) The detection range of the radar sensors
2) The out of detection range of the radar sensors

B) Vehicle that may not be detected

⚠ WARNING

The approaching vehicle (B) may not be detected because the vehicle reversing is blocked by a parked vehicle. Always be sure to check the surroundings with your eyes when reversing the vehicle, because the detectability of RCTA is limited.

■ System operation

▼ Operating conditions

The BSD/RCTA will operate when all of the following conditions are met.

- The ignition switch is in the "ON" position.
- The BSD/RCTA warning indicator and BSD/RCTA OFF indicator are turned off.
- The vehicle is driven at speeds above 6 mph (10 km/h) (except when reversing).
- The shift lever/select lever is in the "R" position (RCTA only).

The BSD/RCTA will not operate in the following situations.

- The BSD/RCTA OFF indicator is on.
- The vehicle speed is below 6 mph (10 km/h) even when the BSD/RCTA OFF indicator remains off (except when reversing).

NOTE

• In the following case, the BSD/RCTA will stop operating and the BSD/RCTA warning indicator will appear. If the BSD/RCTA warning indicator appears, have your vehicle inspected at a SUBARU dealer as soon as possible.

– When a malfunction occurs in the system, including the BSD/RCTA approach indicator light

• In the following cases, the BSD/RCTA will temporarily stop operating (or may stop operating) and the BSD/RCTA warning indicator will appear.

– When the radar sensor becomes significantly misaligned (If the orientation of the radar sensor is shifted for any reason, readjustment is required. Have the sensor adjusted at a SUBARU dealer.)

– When a large amount of snow or ice sticks to the rear bumper surface around the radar sensors

– When the vehicle is driven on a snow-covered road or in an environment in which there are no objects around (such as in a desert) for a long time

– When the temperature around the radar sensors increased excessively due to long driving on uphill grades in summer, etc.

– When the temperature around the radar sensors becomes extremely low

– When the vehicle battery voltage lowers

– When the vehicle battery becomes overvoltage

When the above conditions are corrected, the BSD/RCTA will resume op-

– CONTINUED –

eration and the BSD/RCTA warning indicator will disappear. However, if the BSD/RCTA warning indicator has appeared for a prolonged time, have the system inspected at a SUBARU dealer as soon as possible.

• The detectability of the radar sensors is restricted. The BSD/RCTA detection may be impaired and the system may not operate properly under the following conditions.

– When the rear bumper around the radar sensors is distorted

– When ice, snow or mud adheres to the rear bumper surface around the radar sensors

– When stickers, etc. are affixed on the areas of the radar sensors on the rear bumper

– During adverse weather conditions such as rain, snow or fog

– When driving on wet roads such as snow-covered roads and through puddles

• The radar sensors may not detect or may have difficulty detecting the following.

– Small motorcycles, bicycles, pedestrians, stationary objects on the road or road side, etc.

– Vehicles with body shapes that the radar may not reflect (vehicles with a low body height such as sports cars or a trailer with no cargo)

– Vehicles that are not approaching your vehicle even though they are in the detection area (either on a neighboring lane to the rear or beside your vehicle when reversing) (The system determines the presence of approaching vehicles based on data detected by the radar sensors.)

– Vehicles traveling at significantly different speeds

– Vehicles driving in parallel at almost the same speed as your vehicle for a prolonged time

– Oncoming vehicles

– Vehicles in a lane beyond the neighboring lane

– Vehicles travelling at a significantly lower speed that you are trying to overtake

• On a road with extremely narrow lanes, the system may detect vehicles driving in a lane next to the neighboring lane.

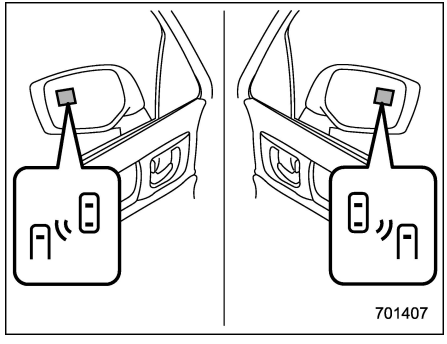
■ BSD/RCTA approach indicator light/warning buzzer

While the BSD/RCTA is active, the following item(s) will operate to alert the driver.

• The BSD/RCTA approach indicator light (when there are vehicles in the neighboring lanes)

• The BSD/RCTA approach indicator light and warning buzzer (when a vehicle is approaching from the left or right side while reversing)

▼ BSD/RCTA approach indicator light



BSD/RCTA approach indicator light

It is mounted in each side of the outside mirrors and will illuminate when a vehicle approaching from behind is detected. If an indicator light is illuminated and the turn

signal lever is operated toward the side in which this light turned on, the indicator light flashes to warn the driver of dangers. When reversing the vehicle, the indicator light flashes when the system detects a vehicle approaching from either side.

▽ **BSD/RCTA approach indicator light dimming function**

When the headlights are turned on, the brightness of the BSD/RCTA approach indicator light will be reduced.

NOTE

• When affected by direct sunlight, you may have difficulty recognizing the BSD/RCTA approach indicator light.
• When affected by the headlight beams from the vehicles behind, you may have difficulty recognizing the BSD/RCTA approach indicator light.
• While the illumination brightness control dial is in the fully upward position, even if the headlights are turned on, the brightness of the BSD/RCTA approach indicator light will not be reduced. For details about the illumination brightness control dial, refer to "Illumination brightness control" ☞3-101.

▼ **BSD/RCTA approach warning buzzer (only when reversing)**

A warning buzzer sounds along with flashing of the BSD/RCTA approach indicator light to warn the driver of dangers.

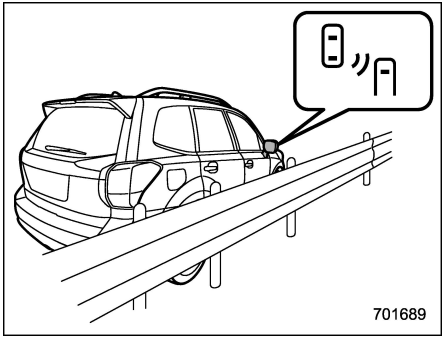
The setting of the warning buzzer volume can be changed by operating the multi information display of the combination meter. For details, refer to "BSD/RCTA" ☞3-44.

▼ **Safety tips regarding the BSD/RCTA approach indicator light/warning buzzer**

• In the following cases, operation of the BSD/RCTA approach indicator light and the warning buzzer may be delayed or the system may fail to issue these warnings.
– When a vehicle moves to the neighboring lane from a lane next to the neighboring lane
– When driving on a steep incline or on repeated sharp uphill and downhill grades
– When going beyond a pass
– When both your vehicle and a vehicle driving on a neighboring lane are driving on the far side of each lane.
– When several narrowly-spaced vehicles are approaching in a row
– In low radius bends (tight bends or when making turns at an intersection)
– When there is a difference in height between your lane and the neighboring lane
– Immediately after the BSD/RCTA is activated by pressing the BSD/RCTA OFF switch
– Immediately after the shift lever/select lever is shifted to the "R" position
– When extremely heavy cargo is loaded in the trunk or cargo area

• During reversing, operation of the BSD/RCTA approach indicator light and the warning buzzer may be delayed or the system may fail to issue these warnings under the following conditions.
– When backing out of an angled parking space
– When a large-sized vehicle is parked next to your vehicle (That vehicle prevents the propagation of radar waves.)
– When reversing on sloped roads
– When reversing at a high speed

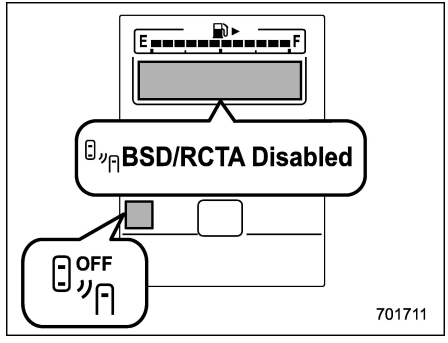
– CONTINUED –



- The BSD/RCTA approach indicator light may illuminate when driving close to solid objects on the road or road side (such as guardrails, tunnels and sidewalls).
- The BSD/RCTA approach indicator light may flash when turning at an intersection in urban areas or a multilane intersection.
- The BSD/RCTA approach indicator light may flash and the warning buzzer may sound if a building or a wall exists in the reversing direction.
- In the following cases, the system may detect a vehicle driving two lanes away from your vehicle.
  - When you are driving on the near side of its lane from the corresponding vehicle
  - When the vehicle driving two lanes away is driving on the near side of its lane from your vehicle

■ BSD/RCTA warning indicator

▼ System temporary stop indicator



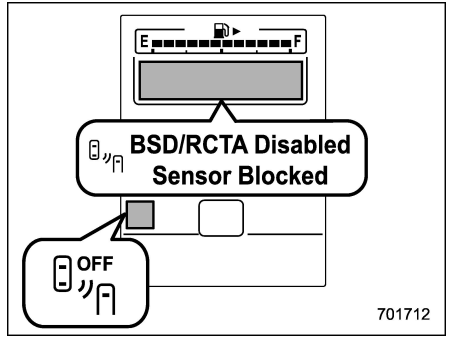
System temporary stop indicator

This indicator appears when the system is used under the following conditions.

- Extremely high or low temperatures
- When abnormal voltage exists for the vehicle battery
- When the radar sensor is significantly misaligned

Once the above conditions are corrected, the system will recover from the temporary stop condition and the indicator will disappear. If the indicator remains displayed for a prolonged time, have the system inspected at a SUBARU dealer.

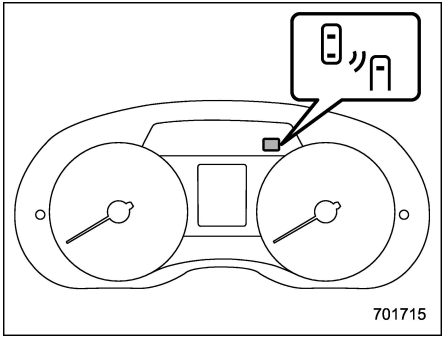
▼ System temporary stop indicator due to reduced radar sensitivity



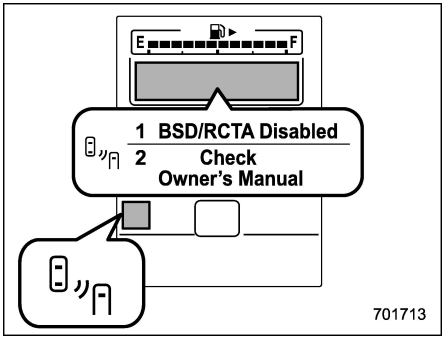
System temporary stop indicator due to reduced radar sensitivity

This indicator appears when the detectability of the radar sensors is reduced. Once the condition is corrected, the system will recover from the temporary stop condition and the indicator will disappear. If the indicator remains displayed for a prolonged time, have the system inspected at a SUBARU dealer.

▼ **System malfunction indicator**



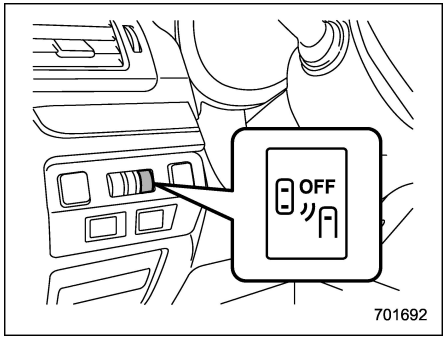
System malfunction indicator (type A)



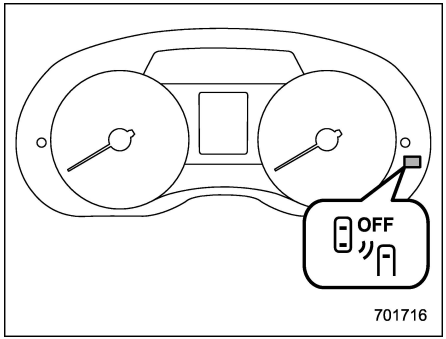
System malfunction indicator (type B)
1) At first, this message will appear
2) Then this message will appear

This indicator appears when a malfunction occurs in the system. Contact a SUBARU dealer and have the system inspected.

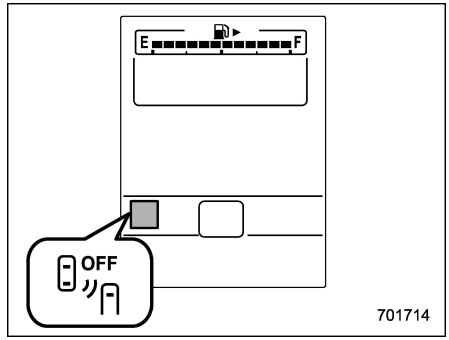
■ BSD/RCTA OFF switch



BSD/RCTA OFF switch



BSD/RCTA OFF indicator (type A)



BSD/RCTA OFF indicator (type B)

If the BSD/RCTA OFF switch is pressed, the BSD/RCTA OFF indicator appears on the multi information display of the combination meter, and the BSD/RCTA is deactivated.

Press the switch again to activate the BSD/RCTA. The BSD/RCTA OFF indicator will disappear.

NOTE

• In the following cases, the system may not operate properly due to blocked radar waves. Press the BSD/RCTA OFF switch to deactivate the system.

– When towing a trailer

– When a bicycle carrier or other item is fitted to the rear of the

– CONTINUED –

vehicle
– When using a chassis dynamometer or free roller device, etc.
– When running the engine and making the wheels rotate while lifting up the vehicle

- **If the ignition switch is turned to the "LOCK"/"OFF" position, the last known status of the system is maintained. For example, if the ignition switch is turned to the "LOCK"/"OFF" position with the BSD/RCTA deactivated, the BSD/RCTA will remain deactivated the next time the ignition switch is turned to the "ON" position.**

■ Certification for the BSD/RCTA

▼ U.S.-spec. models

FCC ID: OAYSRR2A

⚠ CAUTION

FCC WARNING

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

NOTE

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.

▼ Canada-spec. models

NOTE

This device complies with Industry Canada's licence-exempt RSSs. 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.

REMARQUE

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage; (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

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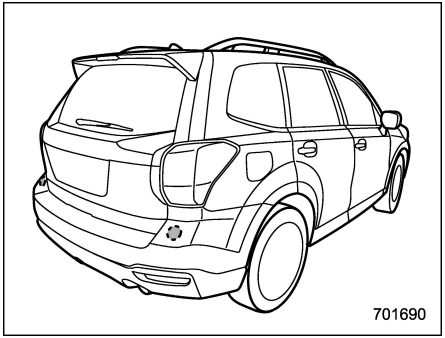
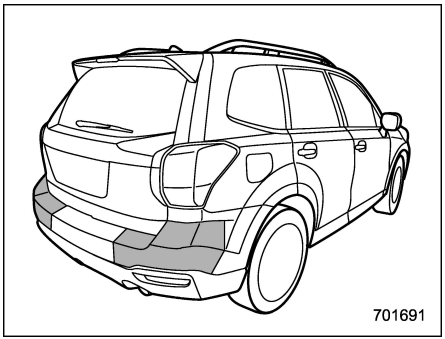
■ Handling of radar sensors



Radar sensors

The radar sensors, one on each side of the vehicle, are mounted inside the rear bumper.



NOTE

● To ensure correct operation of the BSD/RCTA, observe the following precautions.

– Always keep the bumper surface near the radar sensors clean.

– Do not affix any stickers or other items on the bumper surface near the radar sensors.

– Do not modify the bumper near the radar sensors.

– Do not paint the bumper near the radar sensors.

– Do not expose the bumper near the radar sensors to strong impacts. If a sensor becomes misaligned, a system malfunction may occur, including the inability to detect vehicles entering the detection areas. If any strong shock is applied to the bumper, be sure to contact your SUBARU dealer for inspection.

– Do not disassemble the radar sensors.

● If the radar sensors require repair or replacement, or the bumper area around the radar sensors requires repair, paintwork or replacement, contact your SUBARU dealer for assistance.

Reverse Automatic Braking System (if equipped)

Reverse Automatic Braking is a system designed to help avoid collisions or reduce collision damage when reversing the vehicle. If a wall or an obstacle is detected in the reversing direction, the system will notify the driver with a warning sound and may activate the vehicle's brakes automatically.

⚠ WARNING

- **Reverse Automatic Braking is not a system intended to replace the driver's responsibility to check surrounding areas for vehicles or obstacles to avoid a collision.**
- **The driver is responsible for driving safely. Always be sure to check the surroundings visually when reversing the vehicle.**
- **Since the system operation has various limitations, the warning sound or automatic braking may be delayed or may not operate at all even when an obstacle is present in the reversing direction.**
- **The system is not designed to**

– CONTINUED –

detect people (including children), animals or other moving objects.

- **Depending on the vehicle condition or the surrounding environment, the sonar sensor's ability to detect objects may become unstable.**

NOTE

The Reverse Automatic Braking System records and stores the following data when automatic braking operates. It does not record conversations, personal information or other audio data.

- **Distance from the object**
- **Vehicle speed**
- **Accelerator pedal operation status**
- **Brake pedal operation status**
- **Select lever position**
- **Outside temperature**
- **The sensitivity setting of the sonar sensors**

SUBARU and third parties contracted by SUBARU may acquire and use the recorded data for the purpose of vehicle research and development. SUBARU and third parties contracted by SUBARU will not disclose or provide the acquired data to any other third party except under the following conditions.

– The vehicle owner has given his/her consent.

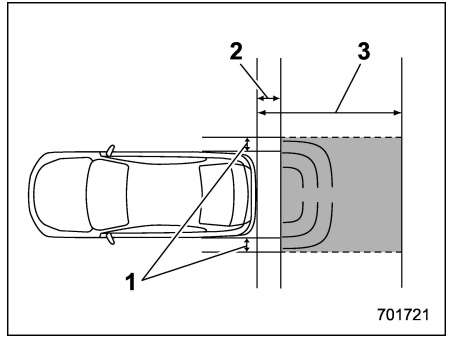
– The disclosure/provision is based on a court order or other legally enforceable request.

– Data that has been modified so that the user and vehicle cannot be identified is provided to a research institution for statistical processing or similar purposes.

■ Reverse Automatic Braking System overview

The system detects objects using sonar sensors installed in the rear bumper. If the system determines a possible collision with an object in the reversing direction, automatic deceleration will be activated. Also, beeping sounds will activate. If the vehicle is further reversed, automatic hard braking will be applied and a continuous beeping sound will activate.

▼ **Detecting range**



1) Detecting range (width): Approximately 6 in (15 cm) outside of the vehicle width
2) Range that the system cannot detect: Approximately 20 in (50 cm) behind the rear of the vehicle
3) Detecting range (length): Approximately 5 ft (1.5 m) from the rear of the vehicle

⚠ WARNING

If your vehicle is trapped on a railroad crossing and you are trying to escape by reversing through the crossing gate, the system may recognize the crossing gate as an obstacle and the brakes may activate. In this case, remain calm and either continue to depress the accelerator pedal or cancel the system. To

cancel the system, refer to "Canceling the Reverse Automatic Braking system operation" ☞7-74.

■ Operating conditions

The Reverse Automatic Braking system will operate when all of the following conditions are met.

- The ignition switch is in the "ON" position
- The EyeSight warning indicator is off
- The Reverse Automatic Braking fail indicator is off
- HALT (Reverse Automatic Braking system OFF) indicator is off
- The Reverse Automatic Braking system is set to on
- The select lever is in the "R" position
- The vehicle speed is between 1 to 9 mph (1.5 to 15 km/h)

NOTE

- When the Reverse Automatic Braking fail indicator is illuminated, the Reverse Automatic Braking system cannot be operated. Promptly contact a SUBARU dealer to have the system inspected.

- When the Reverse Automatic Braking system OFF indicator is illuminated, the Reverse Automatic Braking system cannot be operated.

- In the following cases, the system may not be able to properly detect an obstacle. Promptly contact a SUBARU dealer to have the system inspected.

– A sticker, paint, or a chemical is applied to the rear bumper near the sonar sensor

– The rear bumper is modified

– The rear bumper has been removed and reattached

– The ground clearance is changed due to the vehicle's loading condition or modification

– Ice, snow or mud is adhered to the rear bumper near the sonar sensor

– The rear bumper is exposed to strong impact, or the rear bumper is deformed

- On a steep hill, the system's automatic braking ability will be reduced.

- The system is designed to avoid collisions by automatic hard braking when the vehicle's reversing speed is less than approximately 3 mph (5 km/h). However, the system does not guarantee that the vehicle will be able to avoid collisions in any situation.

- If the vehicle is reversed at an extremely slow speed, the driver's operation may be prioritized. In this case, automatic braking will not operate.

- The system may not be able to detect the following objects

– Sharp or thin objects such as poles, fences and ropes which may not reflect the sound wave emitted from the sonar sensor

– Objects that are too close to the rear bumper when the select lever is set to the "R" position

– Objects with a surface which may not reflect the sound wave emitted from the sonar sensor such as a chain link fence.

- Objects the system is not designed to detect

– Pedestrians

– Moving objects including moving vehicles

– Objects which absorb sound waves such as cloth or snow

– Objects whose surface has a diagonal angle

– Objects that are low to the ground such as parking blocks

– Objects that are high above the ground such as objects hanging from above

- The system may not be able to properly detect objects or may cause

– CONTINUED –

a system malfunction when the following conditions exist

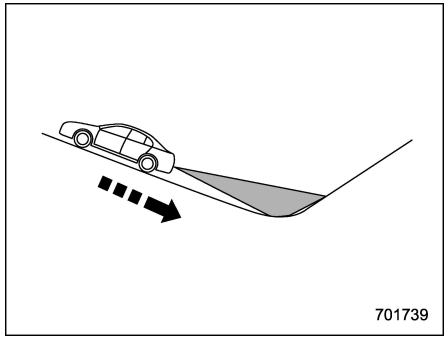
High frequency sound from other sources are nearby
– Horn sound from another vehicle
– Engine sound from other vehicles
– Sound of an air brake
– Vehicle detection equipment or a sonar from another vehicle
– A sound wave with a frequency similar to the vehicle's system is transmitted nearby
– A vehicle equipped with the same system is reversing toward your reversing direction

Weather conditions
– Extremely high or extremely low temperatures in which the area near the sonar sensor becomes too hot or too cold to operate
– The rear bumper near the sonar sensors is exposed to heavy rain or a significant amount of water
– Fog, snow or sandstorm, etc.
– Air is moving rapidly such as when a strong wind is blowing

Parts attached to the rear bumper near the sonar sensor
– Commercial electronic parts (fog light, fender pole, radio antenna) or commercial attachment parts (trailer hitch, bicycle carrier, bumper guard) are attached
– Parts that emit high frequency sound, such as a horn or speaker, are attached

Vehicle conditions
– The vehicle is significantly inclined
– The ground clearance is significantly reduced due to the vehicle's loading condition, etc.
– When the sonar sensor is misaligned due to a collision or an accident

Surrounding environment
– A cloth banner, flag, hanging branch or railroad crossing bars are present in the reversing direction
– When reversing on a gravel or grassy area
– When reversing in an area where objects or walls are adjacent to the vehicle such as narrow tunnels, narrow bridges, narrow roads or narrow garages
– Wheel tracks or a hole is present in the ground of the reversing direction
– When reversing over a drainage cover (grate cover)



– The path of the reversing direction is inclined such as on a steep uphill
– A curb is present in the reversing direction
– When reversing downhill

■ Reverse Automatic Braking System operation

When the Reverse Automatic Braking System is in operation, the range between the vehicle and the detected object will be indicated on the multi function display. Also, warning sounds will activate in 3 levels to warn the driver of a potential collision.

Guideline of detecting range

Alert level	Range of detected object*	Distance indicator	Alarm pattern
Long proximity (object detected)	35 inches (90 cm) or more	Green	No warning sound
Medium proximity alert (approaching the object)	28 to 35 inches (70 to 90 cm)	Yellow + Green	Short beeps
Close proximity alert (approaching closer to the object)	20 to 28 inches (50 to 70 cm)	Orange + Yellow + Green	Rapid short beeps
Closest proximity alert (too close to the object)	20 inches (50 cm) or less	Red + Orange + Yellow + Green	Continuous beep

*: Range of detection may vary depending on the environmental condition.

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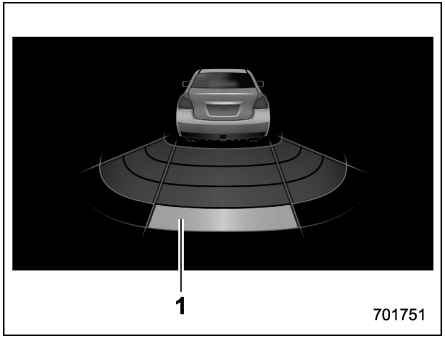
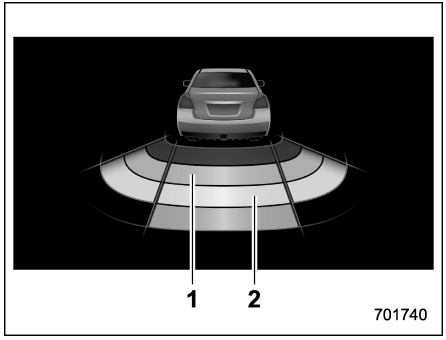
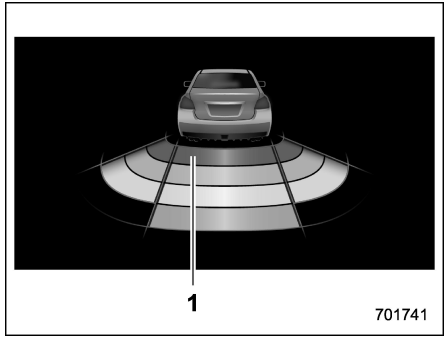
▼ Obstacle detected and alert level



Long proximity alert (object detected)
1) Green: 35 inches (90 cm) or more



Medium and close proximity alert (approaching the object and approaching closer to the object)
1) Orange: 20 to 28 inches (50 to 70 cm)
2) Yellow: 28 to 35 inches (70 to 90 cm)

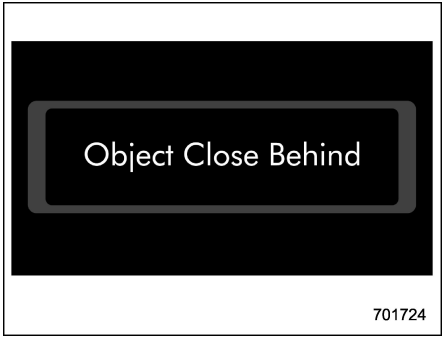


Closest proximity alert (too close to the object)
1) Red: 20 inches (50 cm) or less

When an object is detected in the reversing direction, the range of detected object will be shown on the multi function display.

A warning alarm will sound and, depending on the speed, either torque control to generate engine braking or automatic braking will be applied.

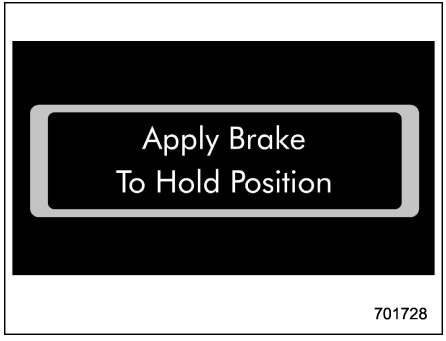
▼ Object close behind warning



Automatic braking warning

If the vehicle continues to go in reverse, the system may determine the risk of collision with the object. In this case, short warning beeps or continuous warning beeps will sound and either strong automatic braking or torque control will be applied to prevent collision.

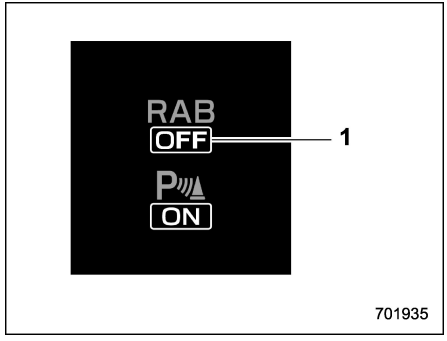
▼ When the vehicle is being stopped by the system



Depress brake pedal warning

Make sure to depress the brake pedal once the vehicle has been stopped by automatic braking. Until the brake pedal is depressed, a message will be displayed on the multi function display and the continuous beep will remain sounding.

▼ After the vehicle is stopped by the system



1) Reverse Automatic Braking system OFF indicator

After the brake pedal is depressed, the Reverse Automatic Braking system OFF indicator will illuminate and the system will temporarily stop operating. The Reverse Automatic Braking system OFF indicator will turn off when the select lever is shifted to a position other than the “R” position.

The system will operate again the next time the select lever is shifted to “R” position.

– CONTINUED –

NOTE

Automatic braking only holds the vehicle for 2 seconds. Before the automatic brake is released, a warning sound (3 short beeps followed by a long beep) will activate to alert the driver that the automatic brake will be released.

■ Canceling the Reverse Automatic Braking system operation

The Reverse Automatic Braking system can be temporarily cancelled by any of the following operations.

- While the vehicle is stopped by the operation of automatic braking, the brake pedal is depressed.
- While the vehicle is stopped by the operation of automatic braking, the accelerator pedal is depressed.
- The accelerator pedal is depressed hard (In this case, limited acceleration will be canceled and the vehicle will continue reversing.).
- The select lever is shifted to a position other than the “R” position.

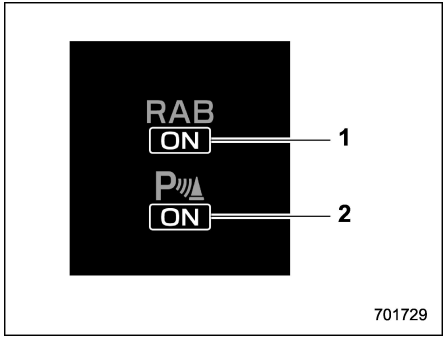
NOTE

The system will be cancelled if the object is no longer detected.

■ Reverse Automatic Braking system ON/OFF setting

While the select lever is shifted to the “R” position, the below functions of the Reverse Automatic Braking system can be set by operating the multi function display.

For details about how to operate the multi function display, refer to “Basic operation” ☞3-45.



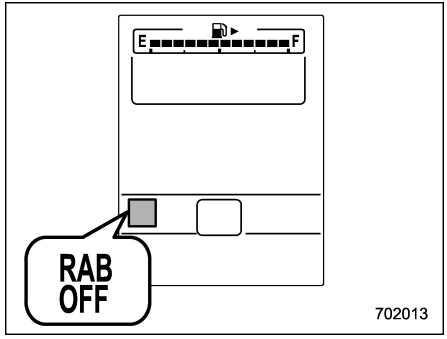
1) ON/OFF setting of Reverse Automatic Braking
2) ON/OFF setting of the object detection warning sound

⚠ CAUTION

When towing a trailer, turn the Reverse Automatic Braking OFF switch to deactivate the system.

Consult your SUBARU dealer for additional information about towing a trailer.

When the Reverse Automatic Braking system is turned OFF, the following indicator will illuminate.



RAB OFF indicator: illuminates when the Reverse Automatic Braking system is turned OFF.

RAB OFF indicator will turn off when the Reverse Automatic Braking system is turned ON.

NOTE

- **When the settings cannot be changed, the ON/OFF setting key will be grayed out.**
- **The ON/OFF setting key may be**

greyed out if the Reverse Automatic Braking system malfunctions. In this case, turn the ignition switch to the "LOCK"/"OFF" position and then turn it to the "ON" position again. If the setting cannot be changed even after turning the ignition switch to the "ON" position again, consult your SUBARU dealer.

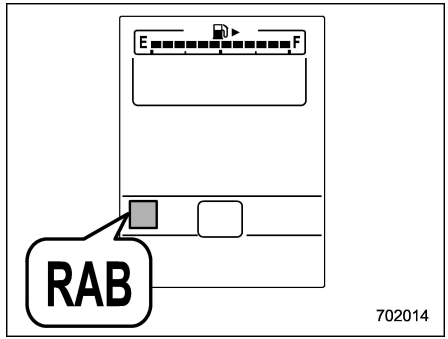
- **The settings will be restored as follows when the select lever is shifted to the "R" position next time.**
  - **– Reverse Automatic Braking system settings: default (ON setting)**
  - **– Object detection warning beeping sound: the setting selected by operating the combination meter display (type B combination meter)**

Also, the following settings can be changed by operating the combination meter display (type B combination meter).

- Warning volume
- Sonar audible alarm ON/OFF

For details, refer to "Menu screens" ☞3-42.

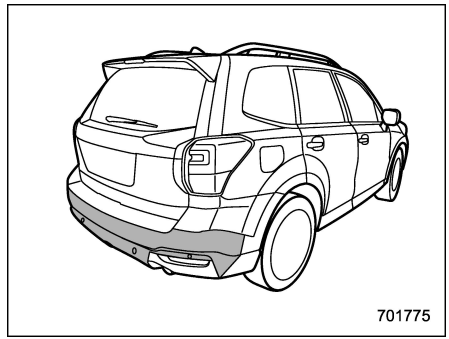
■ RAB warning indicator



If the Reverse Automatic Braking System malfunctions, the above indicator illuminates in the combination meter. Contact the nearest SUBARU dealer for details.

■ Handling of the sonar sensors

The 4 sonar sensors are located in the rear bumper. To ensure the proper operation of the Reverse Automatic Braking system, observe the following precautions.



- Do not affix any stickers or other items on the bumper surface near the sonar sensors.
- Always keep the rear bumper surface near the sonar sensors clean.
- Do not modify the rear bumper.
- Do not paint the bumper near the sonar sensors.
- Do not apply strong impacts to the rear bumper near the sonar sensors. If a sensor becomes misaligned, a system malfunction may occur, including inability to detect

– CONTINUED –

objects in the reversing direction. If any strong impact is applied to the rear bumper, contact a SUBARU dealer to have the system inspected.

- Do not disassemble the sonar sensors.

NOTE

If the sonar sensors require repair or replacement, or if the area of the rear bumper near the sonar sensors requires repair, paintwork or replacement, contact your SUBARU dealer for assistance.