

Maintenance schedule	11-3	Recommended fluid	11-21
Maintenance precautions.....	11-3	Front differential gear oil (AT vehicles).....	11-21
Before checking or servicing in the engine compartment.....	11-4	Checking the oil level	11-21
When you do checking or servicing in the engine compartment while the engine is running.....	11-4	Recommended grade and viscosity	11-22
Engine hood	11-5	Rear differential gear oil.....	11-22
Engine compartment overview.....	11-6	Checking the gear oil level.....	11-22
Non-turbo models	11-6	Recommended grade and viscosity	11-23
Turbo models	11-7	Power steering fluid	11-24
Engine oil.....	11-8	Checking the fluid level.....	11-24
Checking the oil level	11-8	Recommended fluid	11-25
Changing the oil and oil filter.....	11-9	Brake fluid.....	11-25
Recommended grade and viscosity	11-11	Checking the fluid level.....	11-25
Recommended grade and viscosity under severe driving conditions	11-12	Recommended brake fluid	11-26
Synthetic oil.....	11-12	Clutch fluid (MT vehicles)	11-26
Cooling system	11-12	Checking the fluid level.....	11-26
Cooling fan, hose and connections.....	11-12	Recommended clutch fluid.....	11-27
Engine coolant.....	11-13	Brake booster	11-27
Air cleaner element.....	11-15	Brake pedal	11-28
Replacing the air cleaner element	11-16	Checking the brake pedal free play	11-28
Spark plugs	11-18	Checking the brake pedal reserve distance.....	11-28
Recommended spark plugs	11-18	Clutch pedal (MT vehicles).....	11-28
Drive belts	11-18	Checking the clutch function.....	11-28
Manual transmission oil	11-19	Checking the clutch pedal free play.....	11-29
Checking the oil level	11-19	Hill start assist system (MT vehicles)	11-29
Recommended grade and viscosity	11-20	Replacement of brake pad and lining	11-29
Automatic transmission fluid	11-20	Breaking-in of new brake pads and linings	11-30
Checking the fluid level	11-20	Parking brake stroke	11-30
		Tires and wheels.....	11-31
		Types of tires.....	11-31

Tire pressure monitoring system (TPMS) (U.S.-spec. models)	11-31
Tire inspection	11-33
Tire pressures and wear	11-33
Wheel balance.....	11-35
Wear indicators	11-35
Tire rotation direction mark	11-36
Tire rotation	11-36
Tire replacement	11-37
Wheel replacement.....	11-37
Aluminum wheels.....	11-38
Windshield washer fluid	11-38
Replacement of wiper blades	11-39
Windshield wiper blade assembly	11-40
Windshield wiper blade rubber	11-40
Rear window wiper blade assembly	11-41
Rear window wiper blade rubber.....	11-41

Battery	11-43
Fuses	11-44
Main fuse.....	11-45
Installation of accessories	11-45
Replacing bulbs	11-46
Headlights (vehicles with HID headlights)	11-47
Headlights (vehicles without HID headlights)	11-48
Position light	11-50
Front turn signal light	11-50
Rear combination lights	11-50
License plate light	11-51
Dome light, map light, cargo area light and door step light	11-51
Other bulbs	11-52

Maintenance schedule

The scheduled maintenance items required to be serviced at regular intervals are shown in the "Warranty and Maintenance Booklet".

For details of your maintenance schedule, read the separate "Warranty and Maintenance Booklet".

Maintenance precautions

When maintenance and service are required, it is recommended that all work be done by an authorized SUBARU dealer.

If you perform maintenance and service by yourself, you should familiarize yourself with the information provided in this section on general maintenance and service for your SUBARU.

Incorrect or incomplete service could cause improper or unsafe vehicle operation. Any problems caused by improper maintenance and service performed by you are not eligible for warranty coverage.



WARNING

- Testing of an All-Wheel Drive vehicle must **NEVER** be performed on a single two-wheel dynamometer or similar apparatus. Attempting to do so will result in transmission damage and in uncontrolled vehicle movement and may cause an accident or injuries to persons nearby.
- Always select a safe area when performing maintenance on your vehicle.

- Always be very careful to avoid injury when working on the vehicle. Remember that some of the materials in the vehicle may be hazardous if improperly used or handled, for example, battery acid.
- Your vehicle should only be serviced by persons fully competent to do so. Serious personal injury may result to persons not experienced in servicing vehicles.
- Always use the proper tools and make certain that they are well maintained.
- Never get under the vehicle supported only by a jack. Always use safety stands to support the vehicle.
- Never keep the engine running in a poorly ventilated area, such as a garage or other closed areas.
- Do not smoke or allow open flames around the fuel or battery. This will cause a fire.
- Because the fuel system is under pressure, replacement of the fuel filter should be performed only by your SUBARU dealer.
- Wear adequate eye protection to

guard against getting oil or fluids in your eyes. If something does get in your eyes, thoroughly wash them out with clean water.

- Do not tamper with the wiring of the SRS airbag system or seatbelt pretensioner system, or attempt to take its connectors apart, as that may activate the system or it can render it inoperative. The wiring and connectors of these systems are yellow for easy identification. NEVER use a circuit tester for this wiring. If your SRS airbag or seatbelt pretensioner needs service, consult your nearest SUBARU dealer.

■ Before checking or servicing in the engine compartment



WARNING

- Always stop the engine and set the parking brake firmly to prevent the vehicle from moving.
- Always let the engine cool down. Engine parts become very hot when the engine is running and remain hot for some time after the engine is stopped.
- Do not spill engine oil, engine coolant, brake fluid or any other fluid on hot engine components. This may cause a fire.
- Always remove the key from the ignition switch. When the ignition switch is in the "ON" position, the cooling fan may operate suddenly even when the engine is stopped.
- Before performing any servicing on a vehicle equipped with a remote engine start system (a dealer option) temporarily place that system in the service mode to prevent it from unexpectedly starting the engine.

■ When you do checking or servicing in the engine compartment while the engine is running



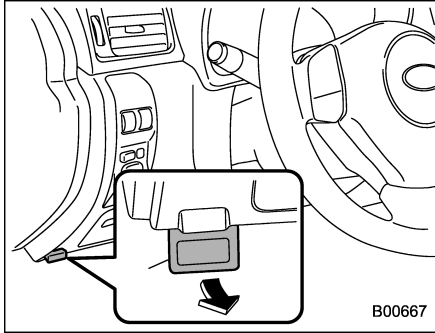
WARNING

A running engine can be dangerous. Keep your fingers, hands, clothing, hair and tools away from the cooling fan, belts and any other moving engine parts. Removing rings, watches and ties is advisable.

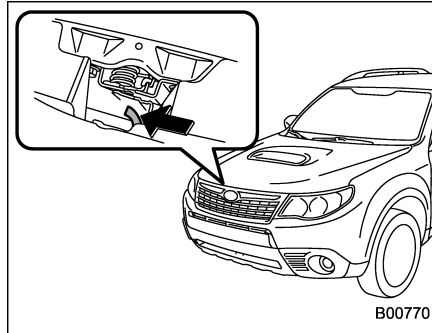
Engine hood

To open the hood:

1. If the wiper blades are lifted off the windshield, return them to their original position.



2. Pull the hood release knob under the instrument panel.



3. Release the secondary hood release by moving the lever between the front grille and the hood toward the left.
4. Lift up the hood.

To close the hood:

1. Lower the hood to a height of approximately 5.9 in (15 cm) above its closed position and then let it drop.
2. After closing the hood, be sure the hood is securely locked.

If this does not close the hood, release it from a slightly higher position. Do not push the hood forcibly to close it. It could deform the metal.

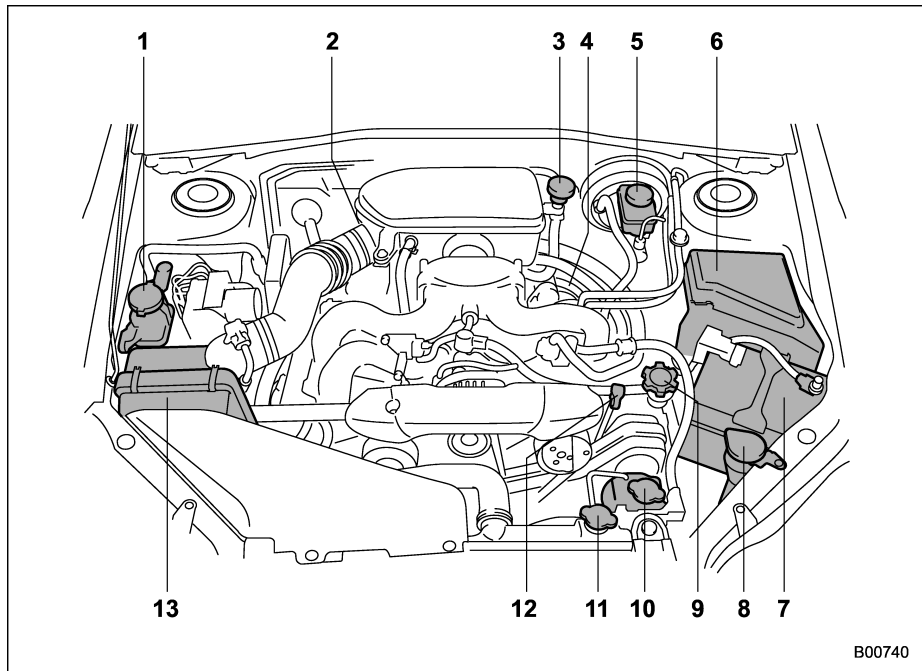


WARNING

Always check that the hood is properly locked before you start driving. If it is not, it might fly open while the vehicle is moving and block your view, which may cause an accident and serious bodily injury.

Engine compartment overview

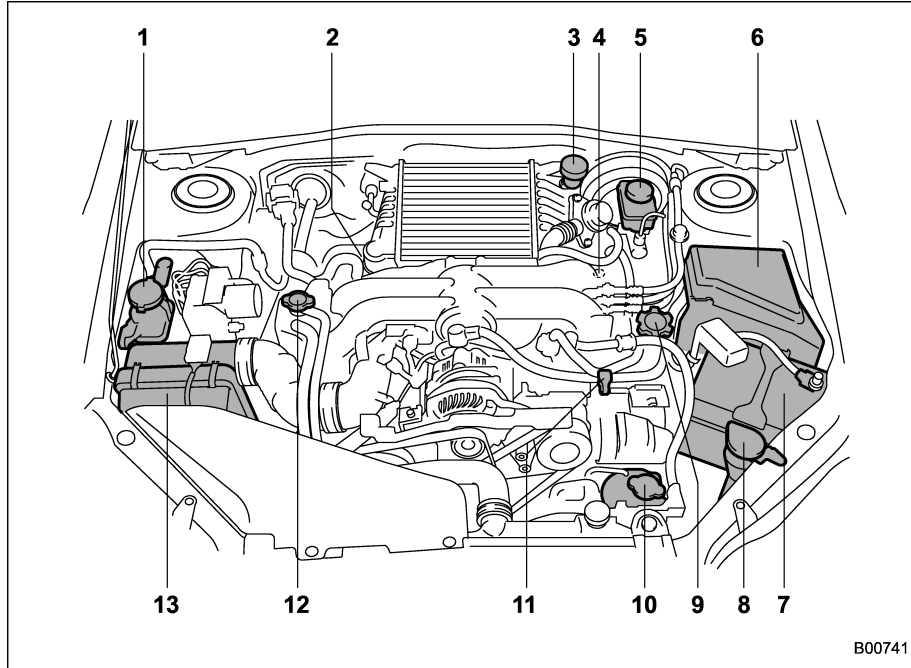
■ Non-turbo models



- 1) Power steering fluid reservoir (page 11-24)
- 2) Manual transmission oil level gauge (MT) (page 11-19) or Differential gear oil level gauge (AT) (page 11-21)
- 3) Clutch fluid reservoir (page 11-26)
- 4) Automatic transmission fluid level gauge (page 11-20)
- 5) Brake fluid reservoir (page 11-25)
- 6) Fuse box (page 11-44)
- 7) Battery (page 11-43)
- 8) Windshield washer tank (page 11-38)
- 9) Engine oil filler cap (page 11-8)
- 10) Engine coolant reservoir (page 11-13)
- 11) Radiator cap (page 11-13)
- 12) Engine oil level gauge (page 11-8)
- 13) Air cleaner element (page 11-15)

B00740

■ Turbo models



- 1) Power steering fluid reservoir (page 11-24)
- 2) Manual transmission oil level gauge (MT) (page 11-19) or differential gear oil level gauge (AT) (page 11-21)
- 3) Clutch fluid reservoir (page 11-26)
- 4) Automatic transmission fluid level gauge (page 11-20)
- 5) Brake fluid reservoir (page 11-25)
- 6) Fuse box (page 11-44)
- 7) Battery (page 11-43)
- 8) Windshield washer tank (page 11-38)
- 9) Engine oil filler cap (page 11-8)
- 10) Engine coolant reservoir (page 11-13)
- 11) Engine oil level gauge (page 11-8)
- 12) Radiator cap (page 11-13)
- 13) Air cleaner element (page 11-15)

Engine oil

NOTE

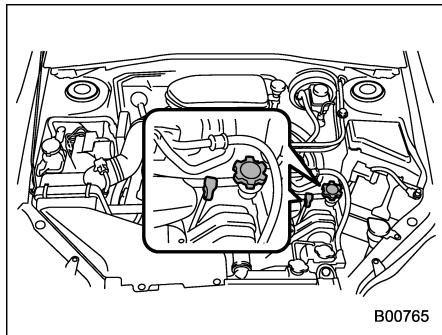
• The engine oil consumption rate is not stabilized, and therefore cannot be determined until the vehicle has traveled at least several thousand miles (kilometers). Even after break-in, when the vehicle is used under severe driving conditions such as those mentioned in the Warranty and Maintenance Booklet, engine oil is consumed or deteriorated more quickly than under normal driving conditions. If you drive your vehicle under these severe conditions, you should check the oil level at least at every second fuel fill-up time, and change the oil more frequently. Please refer to the Warranty and Maintenance Booklet for more details.

• If the oil consumption rate seems abnormally high after the break-in period, for example more than 1 quart per 1,200 miles or 1 liter per 2,000 kilometers, contact your SUBARU dealer.

■ Checking the oil level

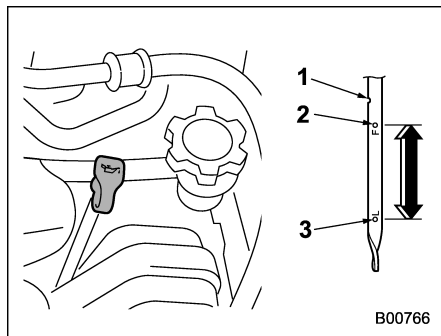
Check the engine oil level at each fuel stop.

1. Park the vehicle on a level surface and stop the engine.



2. Pull out the level gauge that has the "⌵" symbol on top, wipe it clean, and insert it again.

3. Be sure the level gauge is correctly inserted until it stops.



- 1) Notch
- 2) Upper level
- 3) Lower level

4. Pull out the level gauge again and check the oil level on it. If it is below the lower level, add oil to bring the level up to the upper level.

⚠ CAUTION

- Use only engine oil with the recommended grade and viscosity.
- Be careful not to spill engine oil when adding it. If oil touches the exhaust pipe, it may cause a bad smell, smoke, and/or a fire. If engine oil gets on the exhaust

pipe, be sure to wipe it off.

If you check the oil level just after stopping the engine, wait a few minutes for the oil to drain back into the oil pan before checking the level.

Just after driving or while the engine is warm, the engine oil level reading may be in a range between the upper level and the notch mark. This is caused by thermal expansion of the engine oil.

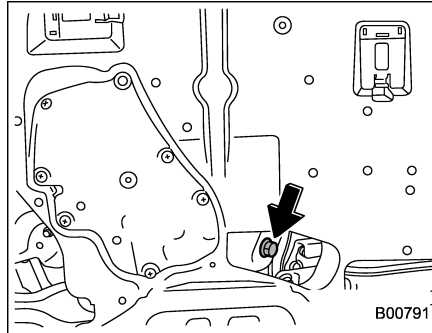
To prevent overfilling the engine oil, do not add any additional oil above the upper level when the engine is cold.

■ Changing the oil and oil filter

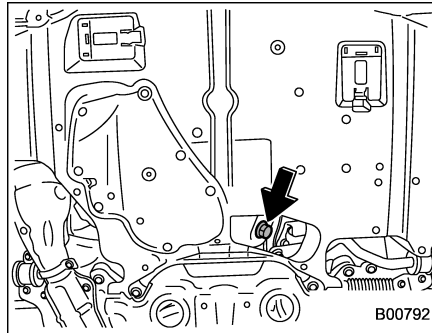
Change the oil and oil filter according to the maintenance schedule in the "Warranty and Maintenance Booklet".

The engine oil and oil filter must be changed more frequently than listed in the maintenance schedule when driving on dusty roads, when short trips are frequently made, or when driving in extremely cold weather.

1. Warm up the engine by letting the engine idle for approximately 10 minutes to ease draining the engine oil.
2. Park the vehicle on a level surface and stop the engine.
3. Remove the oil filler cap.



Turbo models



Non-turbo models

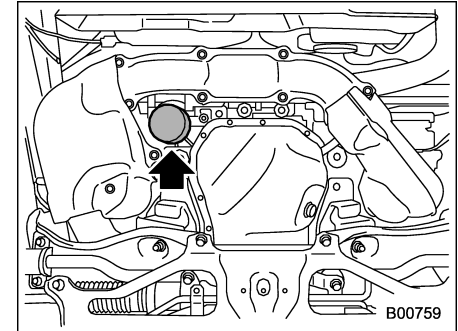
4. Drain out the engine oil by removing the drain plug while the engine is still warm. The used oil should be drained into an appropriate container and disposed of

properly.

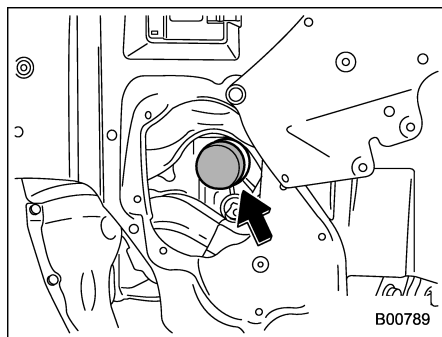
WARNING

Be careful not to burn yourself with hot engine oil.

5. Wipe the seating surface of the drain plug with a clean cloth and tighten it securely with a new sealing washer after the oil has completely drained out.
6. Remove the under cover.



Turbo models



Non-turbo models

7. Remove the oil filter with an oil filter wrench.
8. Before installing a new oil filter, apply a thin coat of engine oil to the seal.
9. Clean the rubber seal seating area of the bottom of engine and install the oil filter by hand turning. Be careful not to twist or damage the seal.
10. Tighten the oil filter by the amount indicated in the following table after the seal makes contact with the bottom of engine.

Oil filter color	Part number	Amount of rotation
Black	15208AA100	1 rotation

! CAUTION

- **Never over tighten the oil filter because that can result in an oil leak.**
- **Thoroughly wipe off any engine oil that has spilled over the exhaust pipe and/or under-cover. If spilled oil is not promptly wiped up, the oil could cause a fire.**

11. Reinstall under cover.
12. Pour engine oil through the filler neck.

Oil capacity (guideline):

4.2 US qt (4.0 liters, 3.5 Imp qt)

The oil quantity indicated above is only guideline.

The necessary quantity of oil depends on the quantity of oil that has been drained. The quantity of drained oil differs slightly depending on the temperature of the oil and the time the oil is left flowing out. After refilling the engine with oil, therefore, you

must use the level gauge to confirm that the level is correct.

13. Start the engine and make sure that no oil leaks appear around the filter's rubber seal and drain plug.

14. Run the engine until it reaches the normal operating temperature. Then stop the engine and wait a few minutes to allow the oil drain back. Check the oil level again and if necessary, add more engine oil.

! CAUTION

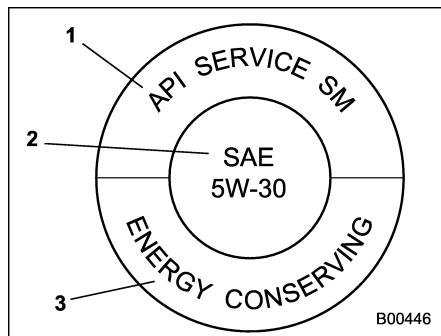
Be careful not to spill engine oil when adding it. If oil touches the exhaust pipe, it may cause a bad smell, smoke, and/or a fire.

■ Recommended grade and viscosity

Oil grade:

ILSAC GF-4, which can be identified with the ILSAC certification mark (Starburst mark) or API classification SM with the words "ENERGY CONSERVING"

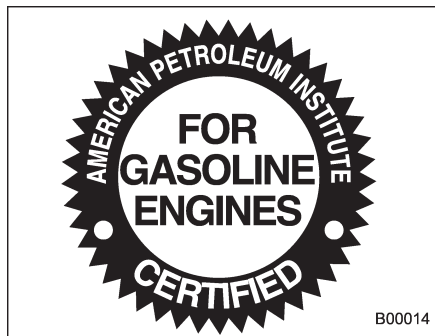
These recommended oil grades can be identified by looking for either or both of the following marks displayed on the oil container.



API Service label

- 1) Indicates the oil quality by API designations
- 2) Indicates the SAE oil viscosity grade
- 3) Indicates that the oil has fuel saving

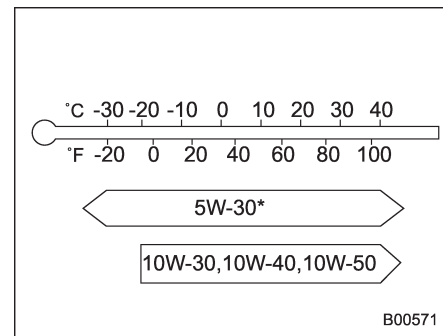
capabilities



ILSAC Certification Mark (Starburst Mark)

In choosing an oil, you want the proper quality and viscosity, as well as one that will add to fuel economy. The following table lists the recommended viscosities and applicable temperatures.

When adding oil, different brands may be used together as long as they are the same API classification and SAE viscosity as those recommended by SUBARU.



SAE viscosity No. and applicable temperature

*: 5W-30 is preferred.

Engine oil viscosity (thickness) affects fuel economy. Oils of lower viscosity provide better fuel economy. However, in hot weather, oil of higher viscosity is required to properly lubricate the engine.



CAUTION

Use only engine oil with the recommended grade and viscosity.

■ Recommended grade and viscosity under severe driving conditions

If the vehicle is used in desert areas, in areas with very high temperatures, or is used for heavy-duty applications, use of oil with the following grade and viscosities is recommended.

API classification SM (or SL):

SAE viscosity No.: 30, 40, 10W-50,
20W-40, 20W-50

■ Synthetic oil

You can use synthetic engine oil that meets the same requirements given for conventional engine oil. When using synthetic oil, you must use oil of the same classification, viscosity and grade shown in this Owner's Manual, and must follow the oil and filter changing intervals shown in the maintenance schedule.

Cooling system



WARNING

Never attempt to remove the radiator cap until the engine has been shut off and has cooled down completely. Since the coolant is under pressure, you may suffer serious burns from a spray of boiling hot coolant when the cap is removed.



CAUTION

- Vehicles are filled at the factory with SUBARU Super Coolant that does not require the first change for 11 years/137,500 miles (11 years/220,000 km). This coolant should not be mixed with any other brand or type of coolant during this period. Mixing with a different coolant will reduce the life of the coolant. Should it be necessary to top up the coolant for any reason, use only SUBARU Super Coolant.

If the SUBARU Super Coolant is diluted with another brand or type, the maintenance interval is

shortened to that of the mixing coolant.

- Do not splash the engine coolant over painted parts. The alcohol contained in the engine coolant may damage the paint surface.

■ Cooling fan, hose and connections

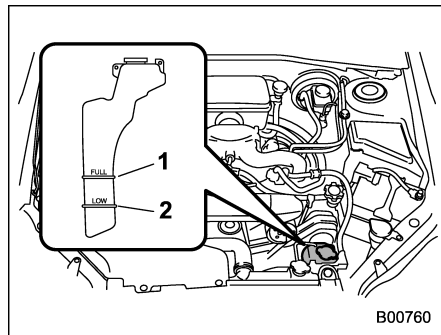
Your vehicle employs an electric cooling fan which is thermostatically controlled to operate when the engine coolant reaches a specific temperature.

If the radiator cooling fan does not operate even when the coolant temperature high warning light illuminates, the cooling fan circuit may be defective. Check the fuse and replace it if necessary. If the fuse is not blown, have the cooling system checked by your SUBARU dealer.

If frequent addition of coolant is necessary, there may be a leak in the engine cooling system. It is recommended that the cooling system and connections be checked for leaks, damage, or looseness.

■ Engine coolant

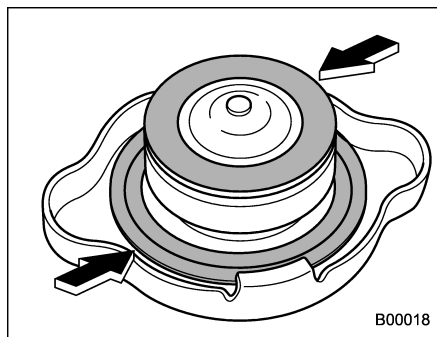
▼ Checking the coolant level



- 1) "FULL" level mark
- 2) "LOW" level mark

Check the coolant level at each fuel stop.

1. Check the coolant level on the outside of the reservoir while the engine is cool.
2. If the level is close to or lower than the "LOW" level mark, add coolant up to the "FULL" level mark. If the reserve tank is empty, remove the radiator cap and refill as required.



3. After refilling the reserve tank and the radiator, reinstall the caps and check that the rubber gaskets inside the radiator cap are in the proper position.

⚠ CAUTION

- **Be careful not to spill engine coolant when adding it. If coolant touches the exhaust pipe, it may cause a bad smell, smoke, and/or a fire. If engine coolant gets on the exhaust pipe, be sure to wipe it off.**
- **Do not splash the engine coolant over painted parts. The alcohol contained in the engine coolant may damage the paint surface.**

▼ Changing the coolant

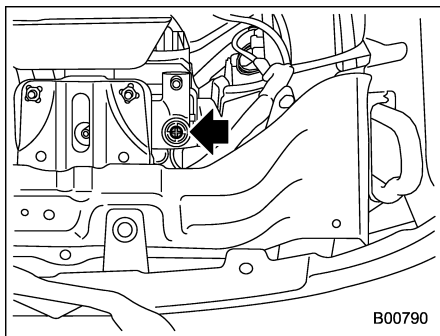
⚠ WARNING

Never attempt to remove the radiator cap until the engine has been shut off and has cooled down completely. Since the coolant is under pressure, you may suffer serious burns from a spray of boiling hot coolant when the cap is removed.

Always add genuine SUBARU cooling system conditioner whenever the coolant is replaced.

Change the engine coolant and add genuine SUBARU cooling system conditioner using the following procedures according to the maintenance schedule.

1. Remove the under cover.

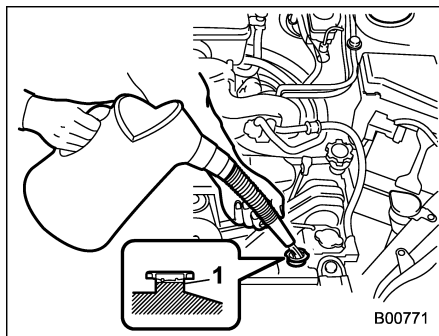


2. Place a proper container under the drain plug and loosen the drain plug.
3. Loosen the radiator cap to drain the coolant from the radiator. Then drain the coolant from the reserve tank. Tighten the drain plug securely.

NOTE (turbo model only)

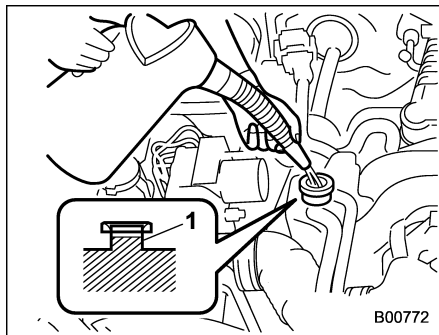
The cap (without tabs) on top of the radiator does not need to be removed. To add coolant, remove the cap (with tabs) on the coolant tank on top of the engine.

4. Install the under cover.



Non-turbo models

- 1) Fill up to this level



Turbo models

- 1) Fill up to this level

5. Slowly pour the coolant and fill up to just below the filler neck, allowing enough

room to add genuine SUBARU cooling system conditioner in the radiator. Add genuine SUBARU cooling system conditioner until the coolant level reaches the filler neck. Do not pour the coolant too quickly, as this may lead to insufficient air bleeding and trapped air in the system.

Guideline of coolant quantity (including coolant in reservoir tank):

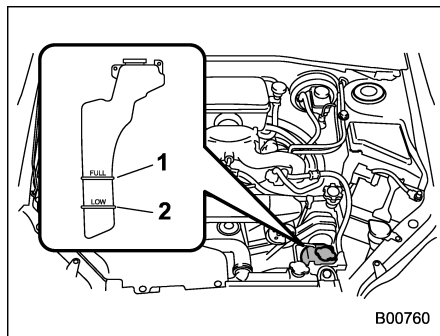
Non-turbo models:

MT: 7.2 US qt (6.8 liters, 6.0 Imp qt)

AT: 7.1 US qt (6.7 liters, 5.9 Imp qt)

Turbo models:

8.5 US qt (8.0 liters, 7.0 Imp qt)

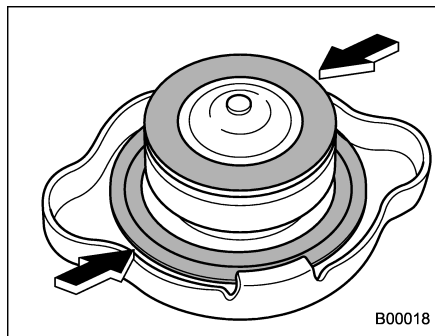


- 1) "FULL" level mark
- 2) "LOW" level mark

CAUTION

- Be careful not to spill engine coolant when adding it. If coolant touches the exhaust pipe, it may cause a bad smell, smoke, and/or a fire. If engine coolant gets on the exhaust pipe, be sure to wipe it off.
- Do not splash the engine coolant over painted parts. The alcohol contained in the engine coolant may damage the paint surface.

6. Pour the coolant and fill to the reservoir tank's "FULL" level mark.



7. Put the radiator cap back on and tighten firmly. At this time, make sure that the rubber gasket in the radiator cap is correctly in place.

8. Start and run the engine for more than 5 minutes at 2,000 to 3,000 rpm.

9. Stop the engine and wait until the coolant cools down (122 to 140°F [50 to 60°C]). If there is any loss of coolant, add coolant to the radiator's filler neck and to the reserve tank's "FULL" level.

10. Put the radiator cap and reservoir cap back on and tighten firmly.

Air cleaner element

WARNING

Do not operate the engine with the air cleaner element removed. The air cleaner element not only filters intake air but also stops flames if the engine backfires. If the air cleaner element is not installed when the engine backfires, you could be burned.

CAUTION

When replacing the air cleaner element, use a genuine SUBARU air cleaner element. If it is not used, there is the possibility of causing a negative effect to the engine.

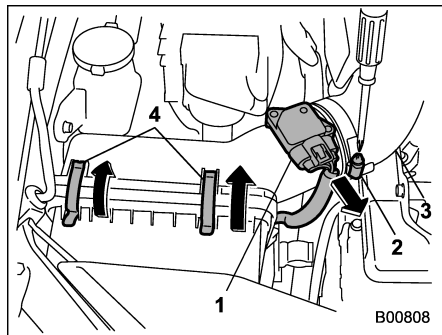
The air cleaner element functions as a filter screen. When the element is perforated or removed, engine wear will be excessive and engine life shortened.

The air cleaner element is a dry type. It is unnecessary to clean or wash the element.

■ Replacing the air cleaner element

Replace the air cleaner element according to the maintenance schedule in the "Warranty and Maintenance Booklet". Under extremely dusty conditions, replace it more frequently. It is recommended that you always use genuine SUBARU parts.

▼ Non-turbo models



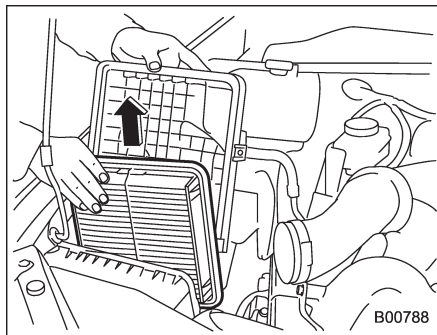
- 1) Connector
- 2) Clamp
- 3) Air intake boot
- 4) Clip

1. Unplug the connector that is attached to the top of the air cleaner case.

2. Loosen the screw of the clamp and pull the air intake boot out of the air

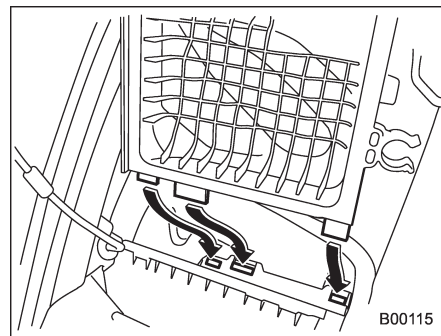
cleaner case.

3. Unsnap the two clips holding the air cleaner case cover.

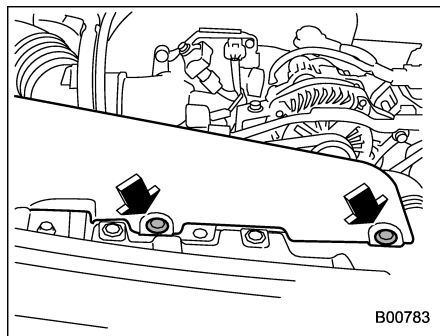


4. Open the air cleaner case cover and remove the air cleaner element.

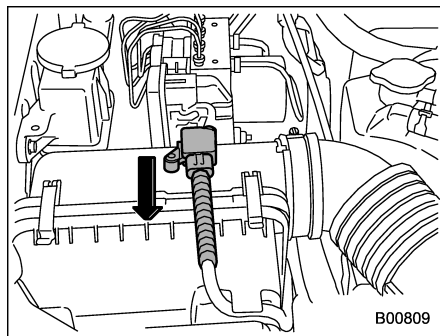
5. Clean the inside of the air cleaner cover and case with a damp cloth and install a new air cleaner element.



6. To install the air cleaner case cover, insert the three projections on the air cleaner case cover into the slits on the air cleaner case and then snap the two clips on the air cleaner case cover.

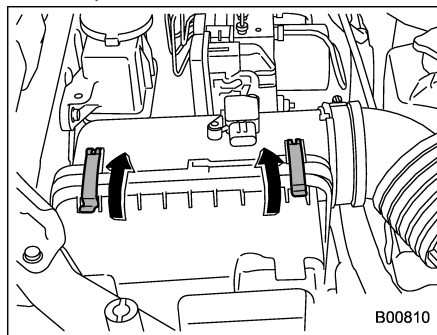
▼ **Turbo models**

1. Use a screwdriver to undo the clips on the air intake duct, then remove the air intake duct.

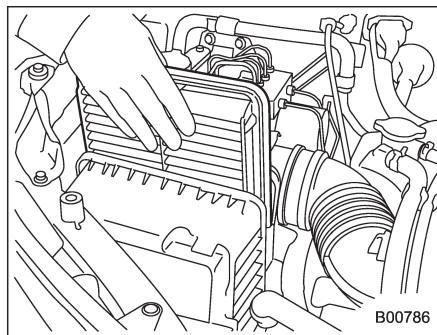


2. Unplug the connector that is attached

to the top of the air cleaner case.



3. Unsnap the two clips holding the air cleaner case cover.

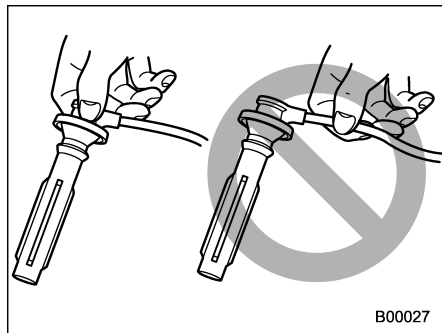


4. Open the air cleaner case cover and remove the air cleaner element.

5. Clean the inside of the air cleaner

cover and case with a damp cloth and install a new air cleaner element.

Spark plugs



It may be difficult to replace the spark plugs. It is recommended that you have the spark plugs replaced by your SUBARU dealer.

The spark plugs should be replaced according to the maintenance schedule in the "Warranty and Maintenance Booklet".



CAUTION

- When disconnecting the spark plug cables, always grasp the spark plug cap, not the cables.
- Make sure the cables are replaced in the correct order.

Recommended spark plugs

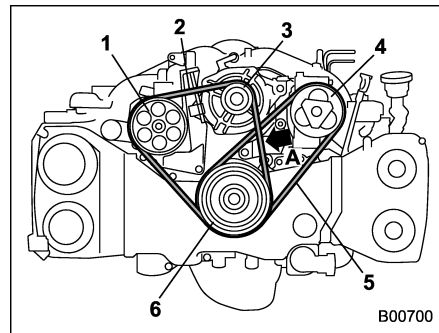
Non-turbo models:

FR5AP-11 (NGK)

Turbo models:

SILFR6A (NGK)

Drive belts



- 1) Power steering pump pulley
 - 2) Front side belt
 - 3) Alternator
 - 4) Air conditioner compressor pulley
 - 5) Rear side belt
 - 6) Crank pulley
- A) 98 N (10 kgf, 22 lbf)

The alternator, power steering pump, and air conditioner compressor depend on drive belts. Satisfactory performance requires that belt tension be correct.

To check the tension of the front side belt, place a straightedge (ruler) across two adjacent pulleys (alternator and crank pulley) and apply a force of 22 lbs (98 N, 10 kg) midway between the pulleys by

using a spring scale. Belt deflection should be the amount specified. If the front side belt is loose, cracked, or worn, contact your SUBARU dealer.

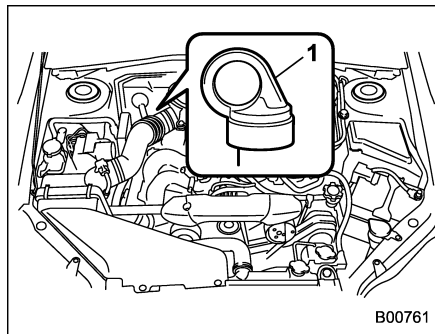
in (mm)

	Deflection	
	New belt	Used belt
A	0.28 – 0.35 (7.0 – 9.0)	0.35 – 0.43 (9.0 – 11.0)

The rear side belt is a stretch-type belt, and the deflection and tension do not need to be checked. If there are cracks or wear confirmed on the belts and a squeaking sound is heard from them, contact your SUBARU dealer.

Manual transmission oil

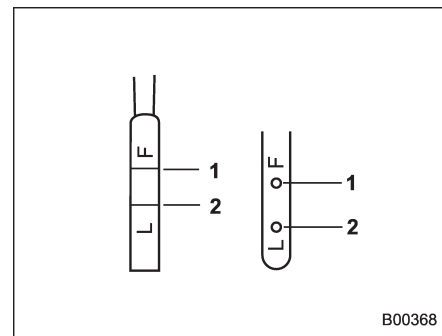
■ Checking the oil level



1) Yellow handle

Check the oil level monthly.

1. Park the vehicle on a level surface and stop the engine.
2. Pull out the level gauge, wipe it clean, and insert it again.



- 1) Upper level
- 2) Lower level

3. Pull out the level gauge again and check the oil level on it. If it is below the lower level, add oil through the level gauge hole to bring the level up to the upper level.



CAUTION

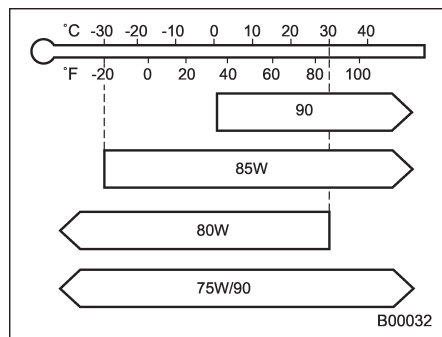
Be careful not to spill manual transmission oil when adding it. If oil touches the exhaust pipe, it may cause a bad smell, smoke, and/or a fire. If oil gets on the exhaust pipe, be sure to wipe it off.

Recommended grade and viscosity

Each oil manufacturer has its own base oils and additives. Never use different brands together.

Oil grade:

API classification GL-5



SAE viscosity No. and applicable temperature

Automatic transmission fluid

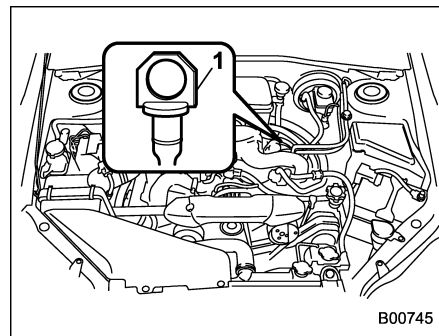
Checking the fluid level

The automatic transmission fluid expands largely as its temperature rises; the fluid level differs according to fluid temperature. Therefore, there are two different scales for checking the level of hot fluid and cold fluid on the level gauge.

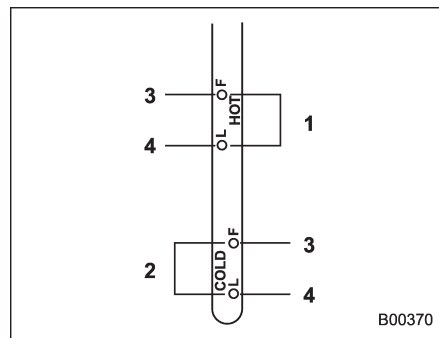
Though the fluid level can be checked without warming up the fluid on the "COLD" range, it is recommended to check the fluid level when the fluid is at operating temperature.

Checking the fluid level when the fluid is hot

1. Drive the vehicle several miles to raise the temperature of the transmission fluid up to normal operating temperature; 158 to 176°F (70 to 80°C) is normal.
2. Park the vehicle on a level surface and set the parking brake.
3. First shift the selector lever in each position. Then shift it in the "P" position, and run the engine at idling speed.



1) Yellow handle



- 1) HOT range
- 2) COLD range
- 3) Upper level
- 4) Lower level

4. Pull out the level gauge and check the fluid level on the gauge. If it is below the lower level on the "HOT" range, add the recommended automatic transmission fluid up to the upper level.

▼ Checking the fluid level when the fluid is cold

When the fluid level has to be checked without time to warm up the automatic transmission, check to see that the fluid level is between the lower level and upper level on the "COLD" range. If it is below that range, add fluid up to the upper level. Be careful not to overfill.



CAUTION

Be careful not to spill automatic transmission fluid when adding it. If automatic transmission fluid touches the exhaust pipe, it may cause a bad smell, smoke, and/or a fire. If automatic transmission fluid gets on the exhaust pipe, be sure to wipe it off.

■ Recommended fluid

Use one of the following types of automatic transmission fluid.

SUBARU ATF Type-HP

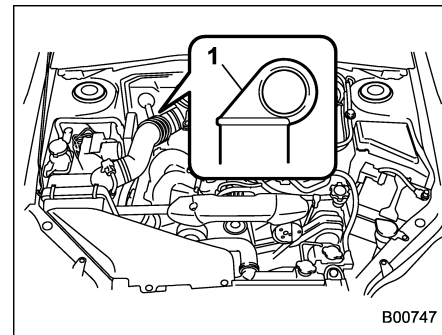
IDEMITSU ATF HP

NOTE

Using any non-specified type of automatic transmission fluid could result in damage inside the transmission. When replacing the automatic transmission fluid, be sure to use the kind specified.

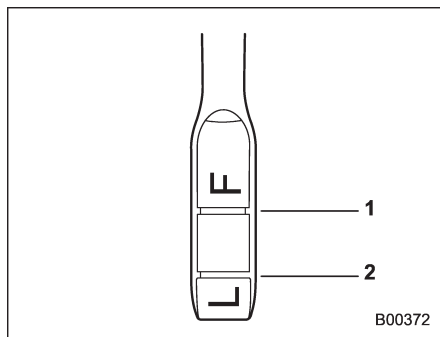
Front differential gear oil (AT vehicles)

■ Checking the oil level



1) Yellow handle

1. Park the vehicle on a level surface and stop the engine.
2. Pull out the level gauge, wipe it clean, and insert it again.



- 1) Upper level
- 2) Lower level

3. Pull out the level gauge again and check the oil level on it. If it is below the lower level, add oil to bring the level up to the upper level.

CAUTION

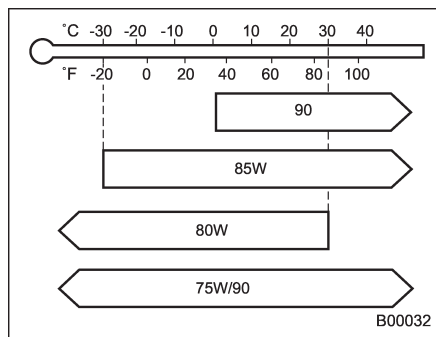
Be careful not to spill front differential gear oil when adding it. If oil touches the exhaust pipe, it may cause a bad smell, smoke, and/or a fire. If oil gets on the exhaust pipe, be sure to wipe it off.

Recommended grade and viscosity

Each oil manufacturer has its own base oils and additives. Never use different brands together.

Oil grade:

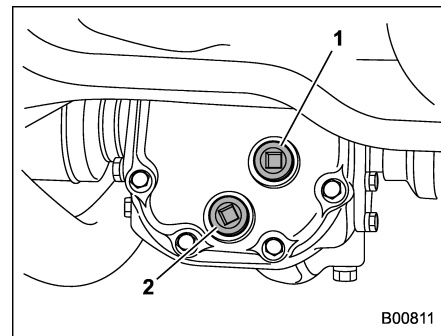
API classification GL-5



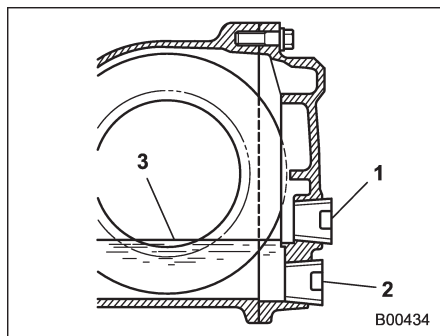
SAE viscosity No. and applicable temperature

Rear differential gear oil

Checking the gear oil level



- 1) Filler plug
- 2) Drain plug



- 1) Filler hole
- 2) Drain hole
- 3) Oil level

Remove the plug from the filler hole and check the oil level. The oil level should be kept even with the bottom of the filler hole. If the oil level is below the bottom edge of the hole, add oil through the filler hole to raise the level.



CAUTION

- Be careful not to spill rear differential gear oil when adding it. If rear differential gear oil touches the exhaust pipe, it may cause a bad smell, smoke, and/or a fire. If rear differential gear oil gets on the exhaust pipe, be sure to wipe

it off.

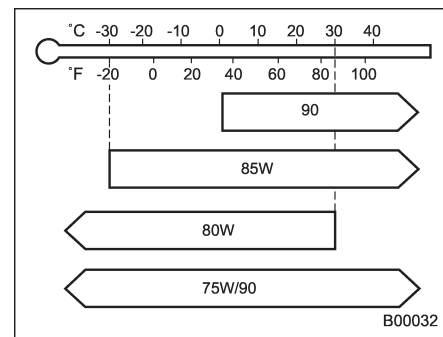
- If the vehicle requires frequent refilling, there may be an oil leak. If you suspect a problem, have the vehicle checked at your SUBARU dealer.

■ Recommended grade and viscosity

Each oil manufacturer has its own base oils and additives. Never use different brands together.

Oil grade:

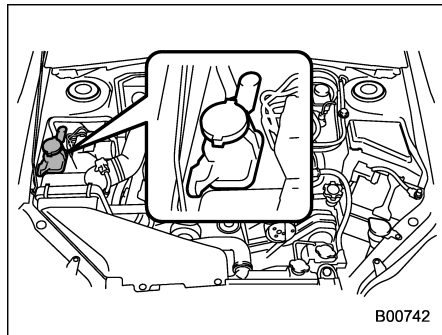
API classification GL-5



SAE viscosity No. and applicable temperature

Power steering fluid

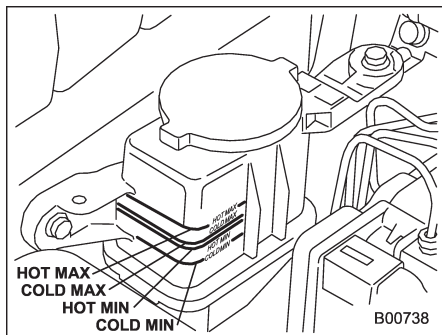
■ Checking the fluid level



The power steering fluid expands greatly as its temperature rises; the fluid level differs according to fluid temperature. Therefore, the reservoir tank has two different checking ranges for hot and cold fluids.

Check the power steering fluid level monthly.

1. Park the vehicle on a level surface, and stop the engine.



2. Check the fluid level of the reservoir tank.

When the fluid is hot after the vehicle has been run: Check that the oil level is between "HOT MIN" and "HOT MAX" on the surface of the reservoir tank.

When the fluid is cool before the vehicle is run: Check that the oil level is between "COLD MIN" and "COLD MAX" on the surface of the reservoir tank.

3. If the fluid level is lower than the applicable "MIN" line, add the recommended fluid as necessary to bring the level between the "MIN" and "MAX" line.

If the fluid level is extremely low, it may indicate possible leakage. Consult your SUBARU dealer for an inspection.



WARNING

Be careful not to burn yourself because the fluid may be hot.



CAUTION

- When power steering fluid is being added, use only clean fluid, and be careful not to allow any dirt into the tank. And never use different brands together.
- Avoid spilling fluid when adding it in the tank.
- Be careful not to spill power steering fluid when adding it. If power steering fluid touches the exhaust pipe, it may cause a bad smell, smoke, and/or a fire. If power steering fluid gets on the exhaust pipe, be sure to wipe it off.

■ Recommended fluid

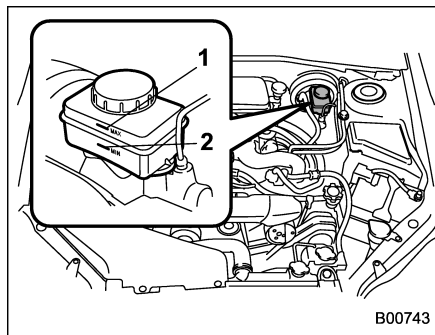
Use one of the following types of automatic transmission fluid.

SUBARU ATF Type-HP

IDEMITSU ATF HP

Brake fluid

■ Checking the fluid level



- 1) "MAX" level mark
- 2) "MIN" level mark

Check the fluid level monthly.

Check the fluid level on the outside of the reservoir. If the level is below "MIN", add the recommended brake fluid to "MAX".

Use only brake fluid from a sealed container.



WARNING

- Never let brake fluid contact your eyes because brake fluid can be harmful to your eyes. If brake fluid gets in your eyes, immediately flush them thoroughly with

clean water. For safety, when performing this work, wearing eye protection is advisable.

- Brake fluid absorbs moisture from the air. Any absorbed moisture can cause a dangerous loss of braking performance.
- If the vehicle requires frequent refilling, there may be a leak. If you suspect a problem, have the vehicle checked at your SUBARU dealer.



CAUTION

- Never use different brands of brake fluid together. Also, avoid mixing DOT 3 and DOT 4 brake fluids even if they are of the same brand.
- When adding brake fluid, be careful not to allow any dirt into the reservoir.
- Never splash the brake fluid over painted surfaces or rubber parts. Alcohol contained in the brake fluid may damage them.
- Be careful not to spill brake fluid when adding it. If brake fluid touches the exhaust pipe, it may

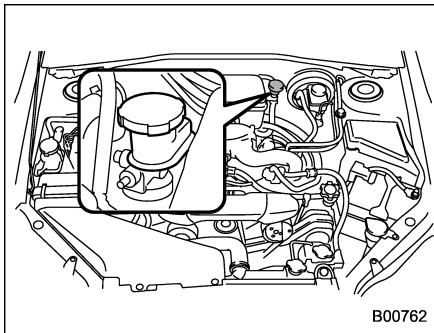
cause a bad smell, smoke, and/or a fire. If brake fluid gets on the exhaust pipe, be sure to wipe it off.

■ Recommended brake fluid

FMVSS No. 116, fresh DOT 3 brake fluid

Clutch fluid (MT vehicles)

■ Checking the fluid level



Check the fluid level on the outside of the reservoir. If the level is below “MIN” level mark, add the recommended clutch fluid to “MAX” level mark.

Use only clutch fluid from a sealed container.



WARNING

Never let clutch fluid contact your eyes because clutch fluid can be harmful to your eyes. If clutch fluid gets in your eyes, immediately flush them thoroughly with clean water. For safety, when performing this work, wearing eye protection is

advisable.



CAUTION

- Clutch fluid absorbs moisture from the air. Any absorbed moisture can cause improper clutch operation.
- If the vehicle requires frequent refilling, there may be a leak. If you suspect a problem, have the vehicle checked at your SUBARU dealer.
- Never use different brands of clutch fluid together.
- When clutch fluid is added, be careful not to allow any dirt into the tank.
- Never splash the clutch fluid over painted surfaces or rubber parts. Alcohol contained in the clutch fluid may damage them.
- Be careful not to spill clutch fluid when adding it. If clutch fluid touches the exhaust pipe, it may cause a bad smell, smoke, and/or a fire. If clutch fluid gets on the exhaust pipe, be sure to wipe it off.

■ Recommended clutch fluid

FMVSS No. 116, fresh DOT 3 brake fluid

Brake booster

If the brake booster does not operate as described in the following, have it checked by your SUBARU dealer.

1. With the engine off, depress the brake pedal several times, applying the same pedal force each time. The distance the pedal travels should not vary.
2. With the brake pedal depressed, start the engine. The pedal should move slightly down to the floor.
3. With the brake pedal depressed, stop the engine and keep the pedal depressed for 30 seconds. The pedal height should not change.
4. Start the engine again and run for approximately 1 minute then turn it off. Depress the brake pedal several times to check the brake booster. The brake booster operates properly if the pedal stroke decreases with each depression.

NOTE

For vehicles equipped with the brake assist system, 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 prop-

erly.

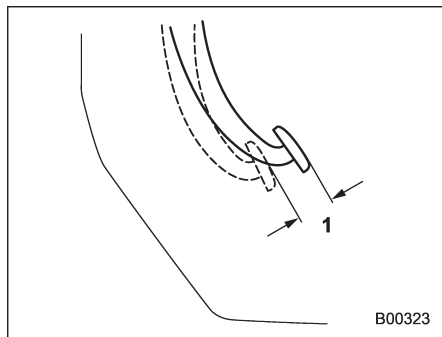
- You might feel that the brake pedal is applied by lighter force and generates a greater braking force.
- You might hear clicking (knocking) sounds around brake pedal.

Brake assist is not a system that brings more braking ability to the vehicle beyond its breaking capability.

Brake pedal

Check the brake pedal free play and reserve distance according to the maintenance schedule in the "Warranty and Maintenance Booklet".

■ Checking the brake pedal free play

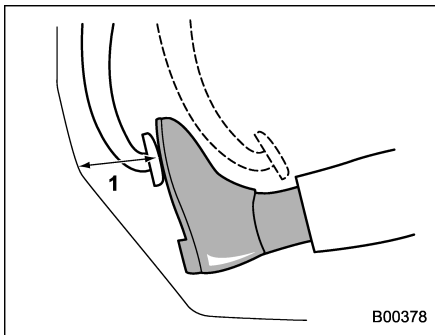


- 1) 0.02 – 0.08 in (0.5 – 2.0 mm)

Stop the engine and firmly depress the brake pedal several times. Lightly pull the brake pedal up with one finger to check the free play with a force of less than 2 lbs (10 N, 1 kg).

If the free play is not within proper specification, contact your SUBARU dealer.

■ Checking the brake pedal reserve distance



- 1) More than 2.56 in (65 mm)

Depress the pedal with a force of approximately 66 lbs (294 N, 30 kg) and measure the distance between the upper surface of the pedal pad and the floor.

When the measurement is smaller than the specification, or when the pedal does not operate smoothly, contact with your SUBARU dealer.

Clutch pedal (MT vehicles)

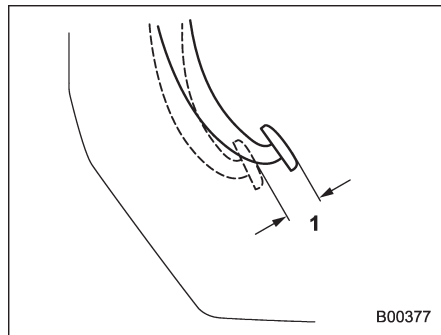
Check the clutch pedal free play and reserve distance according to the maintenance schedule in the "Warranty and Maintenance Booklet".

■ Checking the clutch function

Check the clutch engagement and disengagement.

1. With the engine idling, check that there are no abnormal noises when the clutch pedal is depressed, and that shifting into 1st or reverse feels smooth.
2. Start the vehicle by releasing the pedal slowly to check that the engine and transmission smoothly couple without any sign of slippage.

■ Checking the clutch pedal free play



B00377

1) 0.16 – 0.51 in (4.0 – 13.0 mm)

Lightly press the clutch pedal down with your finger until you feel resistance, and check the free play.

If the free play is not within proper specification, contact your SUBARU dealer.

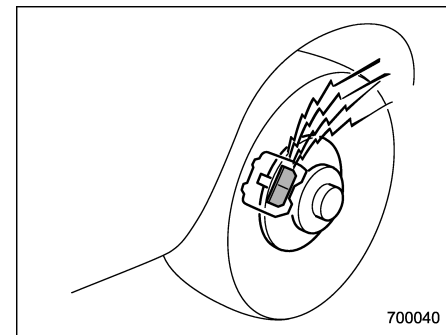
Hill start assist system (MT vehicles)

Ensure that the Hill start assist system operates properly under the following circumstances:

1. Stop the vehicle on an uphill grade by depressing the brake pedal and clutch pedal, with the engine running.
2. Make sure that the vehicle does not move backward even after the brake pedal is released.
3. Then make sure the vehicle starts climbing the grade by following the normal starting procedures.

If the Hill start assist system does not operate as described above, contact with your SUBARU dealer.

Replacement of brake pad and lining



700040

The right front disc brake and the right rear disc brake have audible wear indicators on the brake pads. If the brake pads wear close to their service limit, the wear indicator makes a very audible scraping noise when the brake pedal is applied.

If you hear this scraping noise each time you apply the brake pedal, have the brake pads serviced by your SUBARU dealer as soon as possible.



CAUTION

If you continue to drive despite the scraping noise from the audible brake pad wear indicator, it will

– CONTINUED –

result in the need for costly brake rotor repair or replacement.

■ Breaking-in of new brake pads and linings

When replacing the brake pad or lining, use only genuine SUBARU parts. After replacement, the new parts must be broken in as follows:

▼ Brake pad and lining

While maintaining a speed of 30 to 40 mph (50 to 65 km/h), step on the brake pedal lightly. Repeat this five or more times.

▼ Parking brake lining

1. Drive the vehicle at a speed of approximately 22 mph (35 km/h).
2. With the parking brake release button pushed in, pull the parking brake lever SLOWLY and GENTLY. (Pulling with a force of approximately 33 lbs [147 N, 15 kg].)
3. Drive the vehicle for approximately 220 yards (200 meters) in this condition.
4. Wait 5 to 10 minutes for the parking brake to cool down. Repeat this procedure.
5. Check the parking brake stroke. If the parking brake stroke is out of the specified

range, adjust it by turning the adjusting nut located on the parking brake lever.

Parking brake stroke:

7 – 8 notches / 44 lbs (196 N, 20 kg)



WARNING

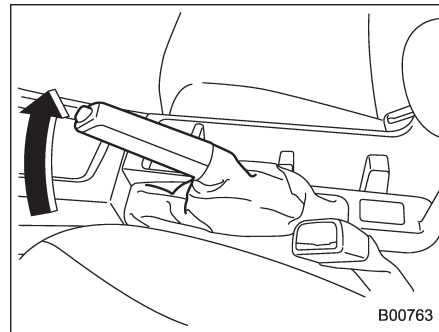
A safe location and situation should be selected for break-in driving.



CAUTION

Pulling the parking brake lever too forcefully may cause the rear wheels to lock. To avoid this, be certain to pull the lever up slowly and gently.

Parking brake stroke



Check the parking brake stroke according to the maintenance schedule in the "Warranty and Maintenance Booklet". When the parking brake is properly adjusted, braking power is fully applied by pulling the lever up seven to eight notches gently but firmly (approximately 44 lbs [196 N, 20 kg]). If the parking brake lever stroke is not within the specified range, have the brake system checked and adjusted at your SUBARU dealer.

Tires and wheels

■ Types of tires

You should be familiar with type of tires present on your vehicle.

The factory-fitted tires are all-season tires.

▼ All season tires

All season tires are designed to provide an adequate measure of traction, handling and braking performance in year-round driving including snowy and icy road conditions. However all season tires do not offer as much traction performance as winter (snow) tires in heavy or loose snow or on icy roads.

All season tires are identified by "ALL SEASON" and/or "M+S" (Mud & Snow) on the tire sidewall.

▼ Summer tires

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

Summer tires are inadequate for driving on slippery roads such as on snow-covered or icy roads.

If you drive your vehicle on snow-covered or icy roads, we strongly recommend the use of winter (snow) tires.

When installing winter tires, be sure to replace all four tires.

▼ Winter (snow) tires

Winter tires are best suited for driving on snow-covered and icy roads. However winter tires do not perform as well as summer tires and all season tires on roads other than snow-covered and icy roads.

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

The tire pressure monitoring system provides the driver with a warning message by sending a signal from a sensor that is installed in each wheel when tire pressure is severely low. The tire pressure monitoring system will activate only when the vehicle is driven. 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).

If you adjust the tire pressures in a warm garage and will then drive the vehicle in cold outside air, the resulting drop in tire pressures may cause the low tire pressure warning light to illuminate. To avoid this problem when adjusting the tire pressures in a warm garage, inflate the tires to pressures higher than those shown on the tire placard. Specifically, inflate them by an extra 1 psi (6.9 kPa, 0.07 kgf/cm²) for every difference of 10°F (5.6°C) between

the temperature in the garage and the temperature outside. By way of example, the following table shows the required tire pressures that correspond to various outside temperatures when the temperature in the garage is 60°F (15.6°C).

Example:

Tire size: P215/65R16 96H

Standard tire pressures:

Front: 30 psi (210 kPa, 2.1 kgf/cm²)

Rear: 29 psi (200 kPa, 2.0 kgf/cm²)

Garage temperature: 60°F (15.6°C)

Outside temperature	Adjusted pressure [psi (kPa, kgf/cm ²)]	
	front	rear
30°F (-1°C)	33 (230, 2.3)	32 (220, 2.2)
10°F (-12°C)	35 (240, 2.4)	34 (235, 2.35)
-10°F (-23°C)	37 (255, 2.55)	36 (250, 2.5)

Example:

Tire size: P225/55R17 95H

Standard tire pressures:

Front: 32 psi (220 kPa, 2.2 kgf/cm²)

Rear: 30 psi (210 kPa, 2.1 kgf/cm²)

Garage temperature: 60°F (15.6°C)

Outside temperature	Adjusted pressure [psi (kPa, kgf/cm ²)]	
	front	rear
30°F (−1°C)	35 (240, 2.4)	33 (230, 2.3)
10°F (−12°C)	37 (255, 2.55)	35 (240, 2.4)
−10°F (−23°C)	39 (270, 2.7)	37 (255, 2.55)

If the low tire pressure warning light illuminates when you drive the vehicle in cold outside air after adjusting the tire pressures in a warm garage, re-adjust the tire pressures using the method described above. Then, increase the vehicle speed to at least 20 mph (32 km/h) and check to see that the low tire pressure warning light turns off a few minutes later. If the low tire pressure warning light does not turn off, the tire pressure monitoring system may not be functioning normally. In this event, go to a SUBARU dealer to have the system inspected as soon as possible.

While the vehicle is driven, friction between tires and the road surface causes the tires to warm up. After illumination of the low tire pressure warning light, any increase in the tire pressures caused by an increase in the outside air temperature or by an increase in the temperature in the

tires can cause the low tire pressure warning light to turn off.

System resetting is necessary when the wheels are changed (for example, a switch to snow tires) and new TPMS valves are installed on the newly fitted wheels. Have this work performed by a SUBARU dealer following wheel replacement.

It may not be possible to install TPMS valves on certain wheels that are on the market. Therefore, if you change the wheels (for example, a switch to snow tires), use wheels that have the same part number as the standard-equipment wheels. Without four operational TPMS valve/sensors on the wheels, the TPMS will not fully function and the warning light in the instrument panel will illuminate steadily after blinking for approximately one minute.

When a tire is replaced, adjustments are necessary to ensure continued normal operation of the tire pressure monitoring system. As with wheel replacement, therefore, you should have the work performed by a SUBARU dealer.



WARNING

If the low tire pressure warning light does not illuminate briefly after the ignition switch is turned ON or the light illuminates steadily after blinking for approximately one minute, you should have your Tire Pressure Monitoring System checked at a SUBARU dealer as soon as possible.

If this light illuminates while driving, never brake suddenly and keep driving straight ahead while gradually reducing speed. Then slowly pull off the road to a safe place. Otherwise an accident involving serious vehicle damage and serious personal injury could occur.

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 tire pressure warning light will illuminate steadily after blinking for approxi-

mately 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. If the light illuminates steadily after blinking for approximately one minute, promptly contact a SUBARU dealer to have the system inspected.

■ Tire inspection

Check on a daily basis that the tires are free from serious damage, nails, and stones. At the same time, check the tires for abnormal wear.

Contact your SUBARU dealer immediately if you find any problem.

NOTE

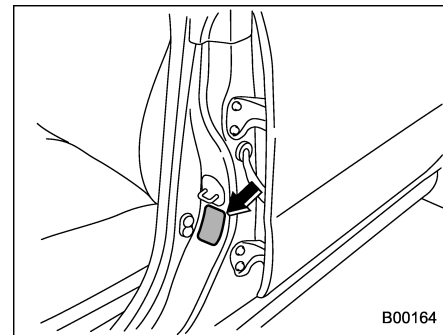
- When the wheels and tires strike curbs or are subjected to harsh treatment as when the vehicle is driven on a rough surface, they can suffer damage that cannot be seen with the naked eye. This type of damage does not become evident until time has passed. Try not to drive over curbs, potholes or on other rough surfaces. If doing so is unavoidable, keep the vehicle's speed down to a walking pace or less, and

approach the curbs as squarely as possible. Also, make sure the tires are not pressed against the curb when you park the vehicle.

- If you feel unusual vibration while driving or find it difficult to steer the vehicle in a straight line, one of the tires and/or wheels may be damaged. Drive slowly to the nearest authorized SUBARU dealer and have the vehicle inspected.

■ Tire pressures and wear

Maintaining the correct tire pressures helps to maximize the tires' service lives and is essential for good running performance. Check and, if necessary, adjust the pressure of each tire (including the spare) at least once a month (for example, during a fuel stop) and before any long journey.



Check the tire pressures when the tires are cold. Use a pressure gauge to adjust the tire pressures to the values shown on the tire placard. The tire placard is located on the door pillar on the driver's side.

Driving even a short distance warms up the tires and increases the tire pressures. Also, the tire pressures are affected by the outside temperature. It is best to check tire pressure outdoors before driving the vehicle.

When a tire becomes warm, the air inside it expands, causing the tire pressure to increase. Be careful not to mistakenly release air from a warm tire to reduce its pressure.

NOTE

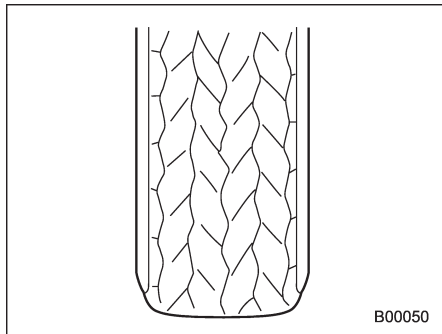
- The air pressure in a tire increases by approximately 4.3 psi (30 kPa, 0.3 kgf/cm²) when the tire becomes warm.
- The tires are considered cold when the vehicle has been parked for at least 3 hours or has been driven less than 1 mile (1.6 km).

**WARNING**

Do not let air out of warm tires to adjust pressure. Doing so will result in low tire pressure.

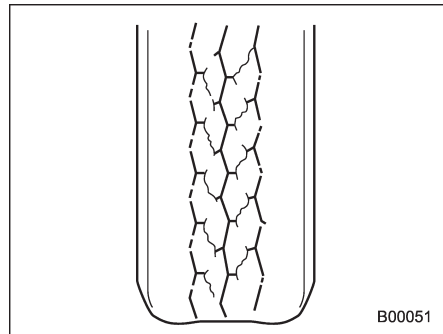
Incorrect tire pressures detract from controllability and ride comfort, and they cause the tires to wear abnormally.

- **Correct tire pressure** (tread worn evenly)



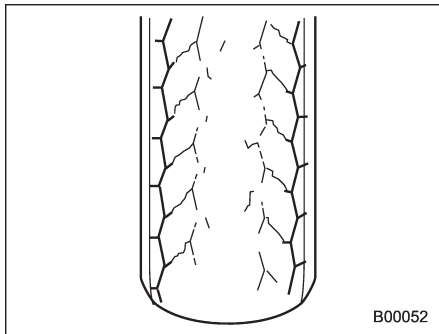
Roadholding is good, and steering is responsive. Rolling resistance is low, so fuel consumption is also lower.

- **Abnormally low tire pressure** (tread worn at shoulders)



Rolling resistance is high, so fuel consumption is also higher.

- **Abnormally high tire pressure** (tread worn in center)



Ride comfort is poor. Also, the tire magnifies the effects of road-surface bumps and dips, possibly resulting in vehicle damage.

If the tire placard shows tire pressures for the vehicle when fully loaded, adjust the tire pressures to the values that match current loading conditions.



WARNING

Driving at high speeds with excessively low tire pressures can cause the tires to deform severely and to rapidly become hot. A sharp increase in temperature could cause tread separation, and destruction of

the tires. The resulting loss of vehicle control could lead to an accident.

■ **Wheel balance**

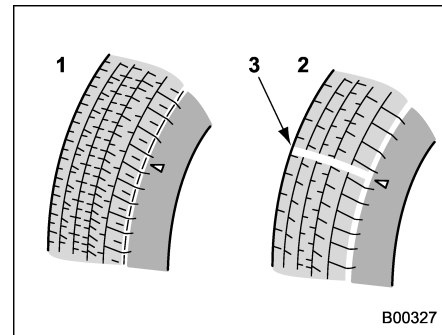
Each wheel was correctly balanced when your vehicle was new, but the wheels will become unbalanced as the tires become worn during use. Wheel imbalance causes the steering wheel to vibrate slightly at certain vehicle speeds and detracts from the vehicle's straight-line stability. It can also cause steering and suspension system problems and abnormal tire wear. If you suspect that the wheels are not correctly balanced, have them checked and adjusted by your SUBARU dealer. Also have them adjusted after tire repairs and after tire rotation.

NOTE

Loss of correct wheel alignment* causes the tires to wear on one side and reduces the vehicle's running stability. Contact your SUBARU dealer if you notice abnormal tire wear.

*: The suspension system is designed to hold each wheel at a certain alignment (relative to the other wheels and to the road) for optimum straight-line stability and cornering performance.

■ **Wear indicators**



- 1) New tread
- 2) Worn tread
- 3) Tread wear indicator

Each tire incorporates a tread wear indicator, which becomes visible when the depth of the tread grooves decreases to 0.063 in (1.6 mm). A tire must be replaced when the tread wear indicator appears as a solid band across the tread.



WARNING

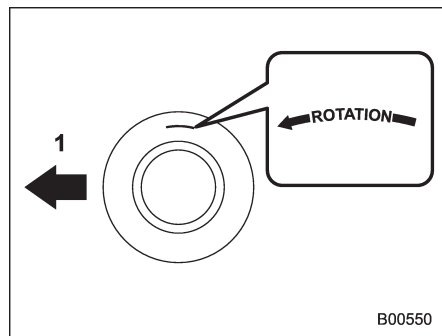
When a tire's tread wear indicator becomes visible, the tire is worn beyond the acceptable limit and must be replaced immediately. With a tire in this condition, driving at high speeds in wet weather can

cause the vehicle to hydroplane. The resulting loss of vehicle control can lead to an accident.

NOTE

For safety, inspect tire tread regularly and replace the tires before their tread wear indicators become visible.

■ Tire rotation direction mark



Example of tire rotation direction mark

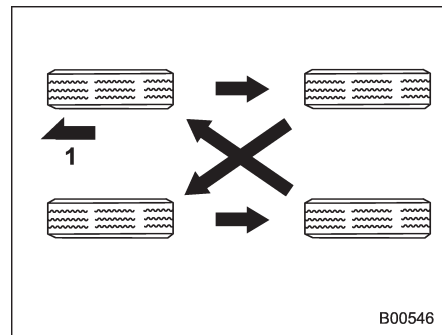
1) Front

If the tire has the rotation direction specification, the tire rotation direction mark is placed on its sidewall.

When you install a tire that has the tire rotation direction mark, install the tire with

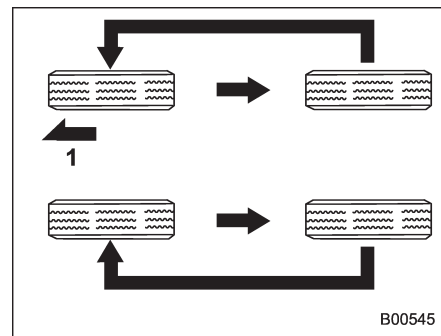
the direction mark facing forward.

■ Tire rotation



Vehicles equipped with 4 non-unidirectional tires

1) Front



Vehicles equipped with unidirectional tires

1) Front

Tire wear varies from wheel to wheel. To maximize the life of each tire and ensure that the tires wear uniformly, it is best to rotate the tires every 7,500 miles (12,500 km). Move the tires to the positions shown in the illustration each time they are rotated.

Replace any damaged or unevenly worn tires at the time of rotation. After tire rotation, adjust the tires pressures and make sure the wheel nuts are correctly tightened.

After driving approximately 600 miles (1,000 km), check the wheel nuts again and retighten any nut that has become loose.

■ Tire replacement

The wheels and tires are important and integral parts of your vehicle's design; they cannot be changed arbitrarily. The tires fitted as standard equipment are optimally matched to the characteristics of the vehicle and were selected to give the best possible combination of running performance, ride comfort, and service life. It is essential for every tire to have a size and construction matching those shown on the tire placard and to have a speed symbol and load index matching those shown on the tire placard.

Using tires of a non-specified size detracts from controllability, ride comfort, braking performance, speedometer accuracy and odometer accuracy. It also creates incorrect body-to-tire clearances and inappropriately changes the vehicle's ground clearance.

All four tires must be the same in terms of manufacturer, brand (tread pattern), construction, and size. You are advised to replace the tires with new ones that are identical to those fitted as standard equipment.

For safe vehicle operation, SUBARU recommends replacing all four tires at the same time.



WARNING

- **All four tires must be the same in terms of manufacturer, brand (tread pattern), construction, degree of wear, speed symbol, load index and size. Mixing tires of different types, sizes or degrees of wear can result in damage to vehicle's powertrain. Use of different types or sizes of tires can also dangerously reduce controllability and braking performance and can lead to an accident.**
- **Use only radial tires. Do not use radial tires together with belted bias tires and/or bias-ply tires. Doing so can dangerously reduce controllability, resulting in an accident.**

■ Wheel replacement

When replacing wheels due, for example, to damage, make sure the replacement wheels match the specifications of the wheels that are fitted as standard equipment. Replacement wheels are available from SUBARU dealers.



WARNING

Use only those wheels that are specified for your vehicle. Wheels not meeting specifications could interfere with brake caliper operation and may cause the tires to rub against the wheel well housing during turns. The resulting loss of vehicle control could lead to an accident.

NOTE

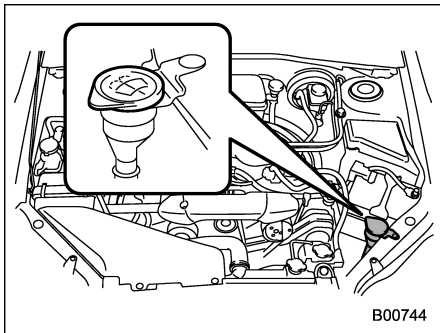
When any of the wheels are removed and replaced for tire rotation or to change a flat tire, always check the tightness of the wheel nuts after driving approximately 600 miles (1,000 km). If any nut is loose, tighten it to the specified torque.

Aluminum wheels

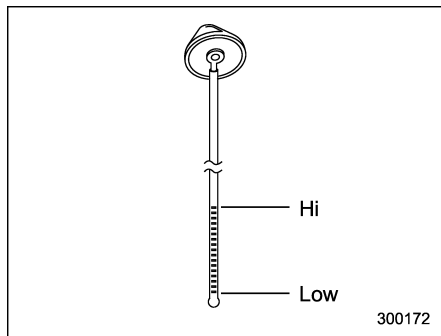
Aluminum wheels can be scratched and damaged easily. Handle them carefully to maintain their appearance, performance, and safety.

- When any of the wheels are removed and replaced for tire rotation or to change a flat tire, always check the tightness of the wheel nuts after driving approximately 600 miles (1,000 km). If any nut is loose, tighten it to the specified torque.
- Never apply oil to the threaded parts, wheel nuts, or tapered surface of the wheel.
- Never let the wheel rub against sharp protrusions or curbs.
- Be sure to fit tire chains on uniformly and completely around the tire, otherwise the chains may scratch the wheel. Remember that tire chains should be placed on the front wheels only.
- When wheel nuts, balance weights, or the center cap is replaced, be sure to replace them with genuine SUBARU parts designed for aluminum wheels.

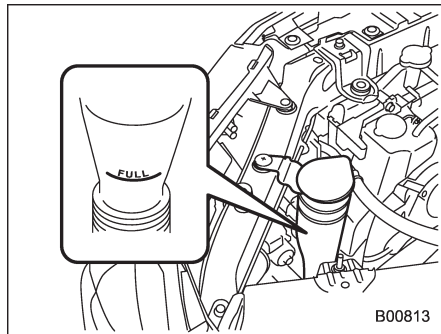
Windshield washer fluid



If you spray washer fluid on the windshield but the supply of washer fluid appears to diminish, check the level of washer fluid in the tank.



Washer fluid level gauge



Remove the washer tank filler cap, then check the fluid level indicated by the level gauge (attached to the inside of the cap). If the level is near the “Low” mark, add fluid until it reaches the “Hi” level on the

level gauge or the "FULL" mark on the tank.

Use windshield washer fluid. If windshield washer fluid is unavailable use clean water.

In areas where water freezes in winter, use an anti-freeze type windshield washer fluid. SUBARU Windshield Washer Fluid contains 58.5% methyl alcohol and 41.5% surfactant, by volume. Its freezing temperature varies according to how much it is diluted, as indicated in the following table.

Washer Fluid Concentration	Freezing Temperature
30%	10.4°F (-12°C)
50%	-4°F (-20°C)
100%	-49°F (-45°C)



CAUTION

Never use engine coolant as washer fluid because it could cause paint damage.

In order to prevent freezing of washer fluid, check the freezing temperatures in the table above when adjusting the fluid concentration to the outside temperature.

If you fill the reservoir tank with a fluid with

a different concentration from the one used previously, purge the old fluid from the piping between the reservoir tank and washer nozzles by operating the washer for a certain period of time. Otherwise, if the concentration of the fluid remaining in the piping is too low for the outside temperature, it may freeze and block the nozzles.



CAUTION

Adjust the washer fluid concentration appropriately for the outside temperature. If the concentration is inappropriate, sprayed washer fluid may freeze on the windshield and obstruct your view, and the fluid may freeze in the reservoir tank.

Replacement of wiper blades

Grease, wax, insects, or other material on the windshield or the wiper blade results in jerky wiper operation and streaking on the glass. If you cannot remove the streaks after operating the windshield washer or if the wiper operation is jerky, clean the outer surface of the windshield (or rear window) and the wiper blades using a sponge or soft cloth with a neutral detergent or mild-abrasive cleaner. After cleaning, rinse the windshield and wiper blades with clean water. The windshield is clean if beads do not form when you rinse the windshield with water.



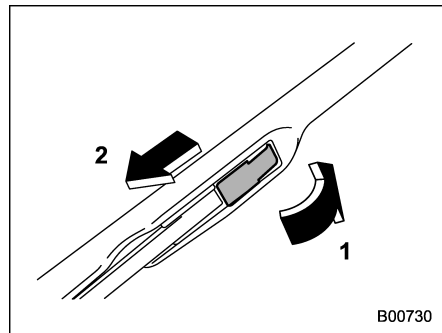
CAUTION

Do not clean the wiper blades with gasoline or a solvent, such as paint thinner or benzene. This will cause deterioration of the wiper blades.

If you cannot eliminate the streaking even after following this method, replace the wiper blades using the following procedures:

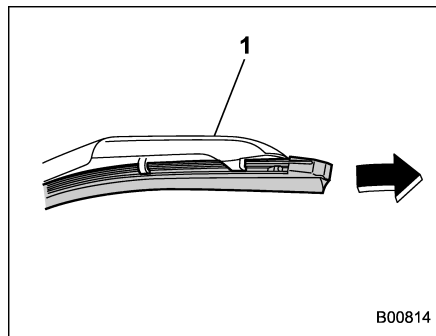
■ Windshield wiper blade assembly

1. Raise the wiper arm off the windshield.

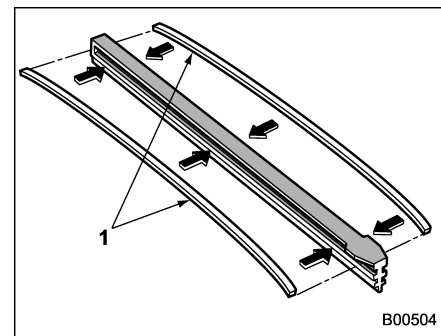


- 1) Open the cover
 - 2) Pull down the wiper blade
2. Remove the wiper blade assembly by opening the cover and pulling it down in the direction shown in the illustration.
 3. Install the wiper blade assembly to the wiper arm. Make sure that it locks in place.
 4. Hold the wiper arm by hand and slowly lower it in position.

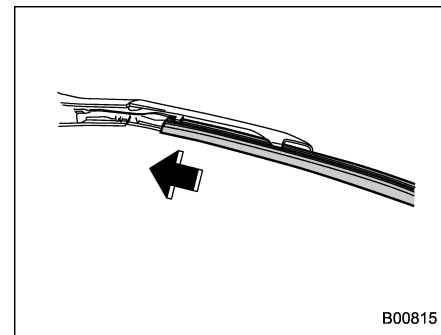
■ Windshield wiper blade rubber



- 1) Support
1. Grasp the locked end of the blade rubber assembly and pull it firmly until the stoppers on the rubber are free of the support.

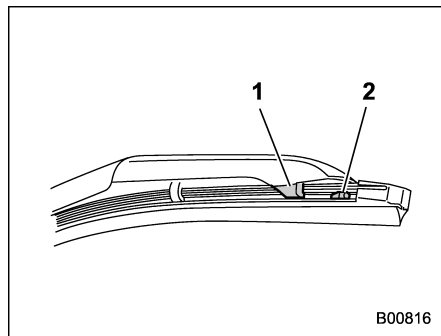


- 1) Metal spines
2. If the new blade rubber is not provided with two metal spines, remove the metal spines from the old blade rubber and install them in the new blade rubber.



3. Align the claws of the support with the

grooves in the rubber and slide the blade rubber assembly into the support until it locks.

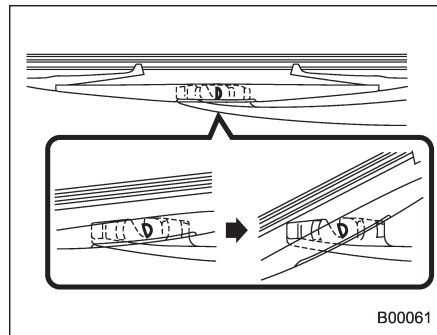


- 1) Claw
- 2) Stopper

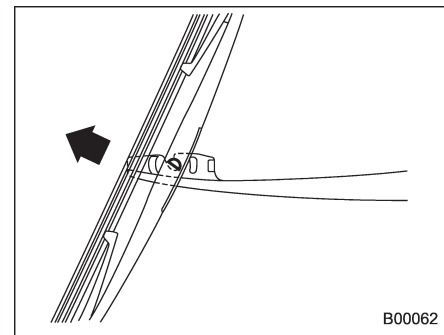
4. Be sure to position the claws at the end of the support between the stoppers on the rubber as shown. If the rubber is not retained properly, the wiper blade may scratch the windshield.

■ Rear window wiper blade assembly

1. Raise the wiper arm off the rear window.

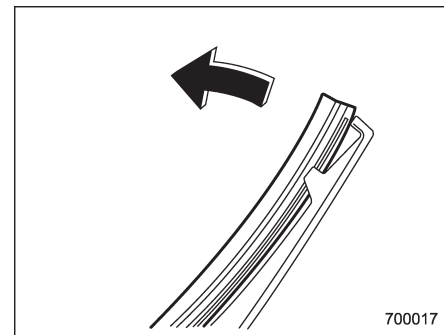


2. Turn the wiper blade assembly counterclockwise.

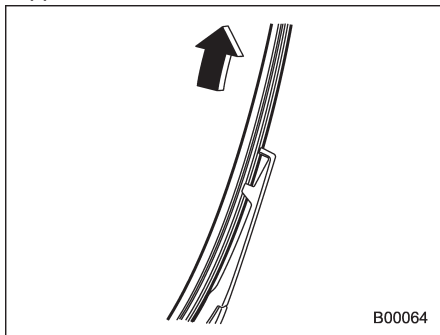


3. Pull the wiper blade assembly toward you to remove it from the wiper arm.

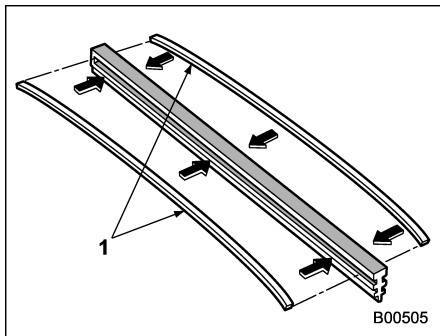
■ Rear window wiper blade rubber



1. Pull out the end of the blade rubber assembly to unlock it from the plastic support.

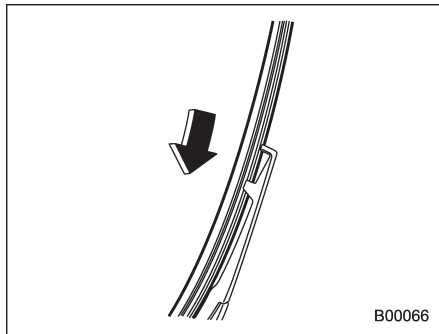


2. Pull the blade rubber assembly out of the plastic support.

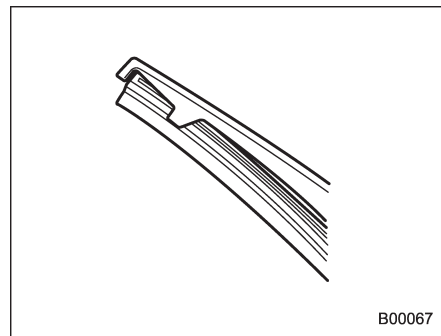


1) Metal spines

3. If the new blade rubber is not provided with two metal spines, remove the metal spines from the old blade rubber and install them in the new blade rubber.



4. Align the claws of the plastic support with the grooves in the blade rubber assembly, then slide the blade rubber assembly into place.



Securely retain both ends of the rubber with the stoppers on the plastic support ends. If the rubber is not retained properly, the wiper may scratch the rear window glass.

5. Install the wiper blade assembly to the wiper arm. Make sure that it locks in place.
6. Hold the wiper arm by hand and slowly lower it in position.

Battery

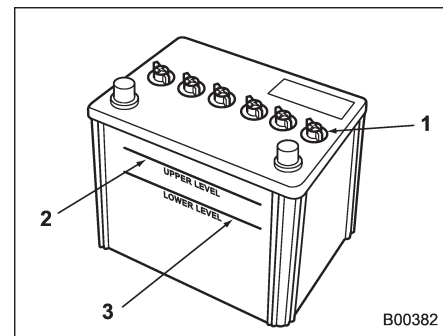
WARNING

- Before beginning work on or near any battery, be sure to extinguish all cigarettes, matches, and lighters. Never expose a battery to an open flame or electric sparks. Batteries give off a gas which is highly flammable and explosive.
- For safety, in case an explosion does occur, wear eye protection or shield your eyes when working near any battery. Never lean over a battery.
- Do not let battery fluid contact eyes, skin, fabrics, or paint because battery fluid is a corrosive acid. If battery fluid gets on your skin or in your eyes, immediately flush the area with water thoroughly. Seek medical help immediately if acid has entered the eyes.

If battery fluid is accidentally swallowed, immediately drink a large amount of milk or water, and seek medical attention immediately.
- To lessen the risk of sparks,

remove rings, metal watchbands, and other metal jewelry. Never allow metal tools to contact the positive battery terminal and anything connected to it **WHILE** you are at the same time in contact with any other metallic portion of the vehicle because a short circuit will result.

- Keep everyone including children away from the battery.
- Charge the battery in a well-ventilated area.
- Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Batteries also contain other chemicals known to the State of California to cause cancer. *Wash hands after handling.*



- 1) Cap
- 2) Upper level
- 3) Lower level

It is unnecessary to periodically check the battery fluid level or periodically refill with distilled water.

However, if the battery fluid level is below the lower level, remove the cap. Fill to the upper level with distilled water.

CAUTION

Never use more than 10 amperes when charging the battery because it will shorten battery life.

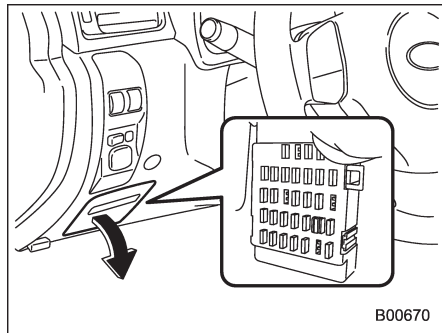
Fuses



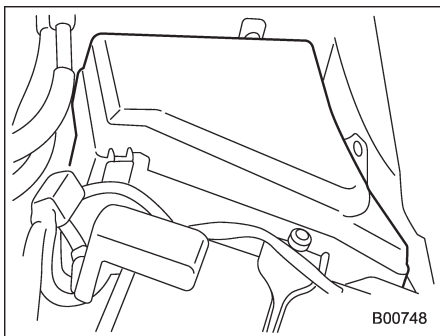
CAUTION

Never replace a fuse with one having a higher rating or with material other than a fuse because serious damage or a fire could result.

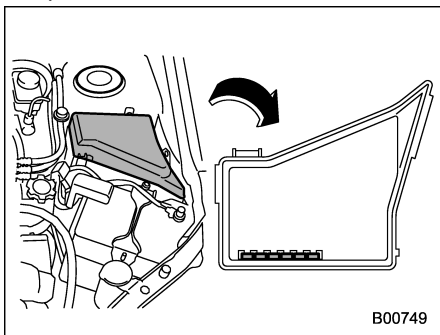
The fuses are designed to melt during an overload to prevent damage to the wiring harness and electrical equipment. The fuses are located in two fuse boxes.



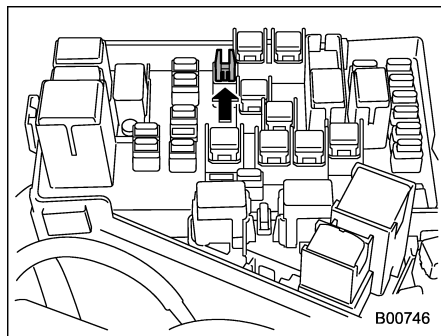
One is located under the instrument panel behind the fuse box cover on the driver's seat side. To remove the cover, pull it out.



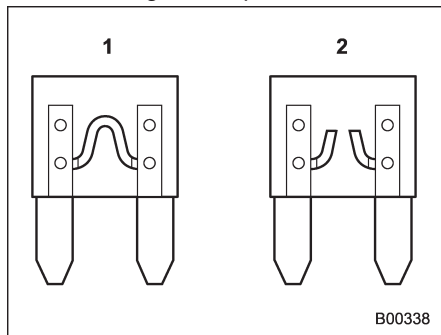
The other one is housed in the engine compartment.



The spare fuses are stored in the main fuse box cover in the engine compartment.



The fuse puller is stored in the main fuse box in the engine compartment.

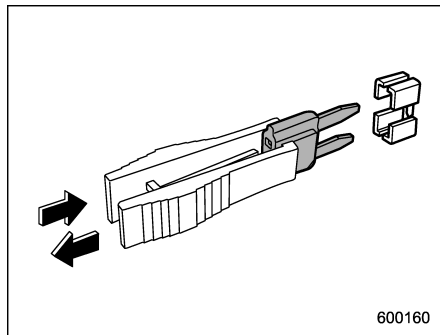


- 1) Good
- 2) Blown

If any lights, accessories or other electrical controls do not operate, inspect the

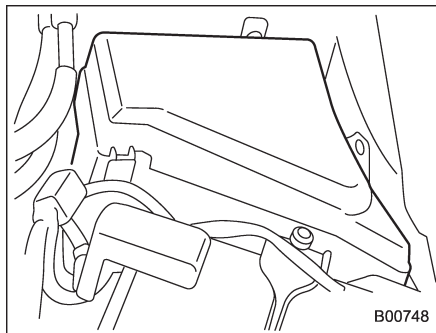
corresponding fuse. If a fuse has blown, replace it.

1. Turn the ignition switch to the "LOCK" position and turn off all electrical accessories.
2. Remove the cover.
3. Determine which fuse may be blown. The back side of each fuse box cover and the "Fuses and circuits" section in chapter 12 show the circuit for each fuse.



4. Pull out the fuse with the fuse puller.
5. Inspect the fuse. If it has blown, replace it with a spare fuse of the same rating.
6. If the same fuse blows again, this indicates that its system has a problem. Contact your SUBARU dealer for repairs.

Main fuse



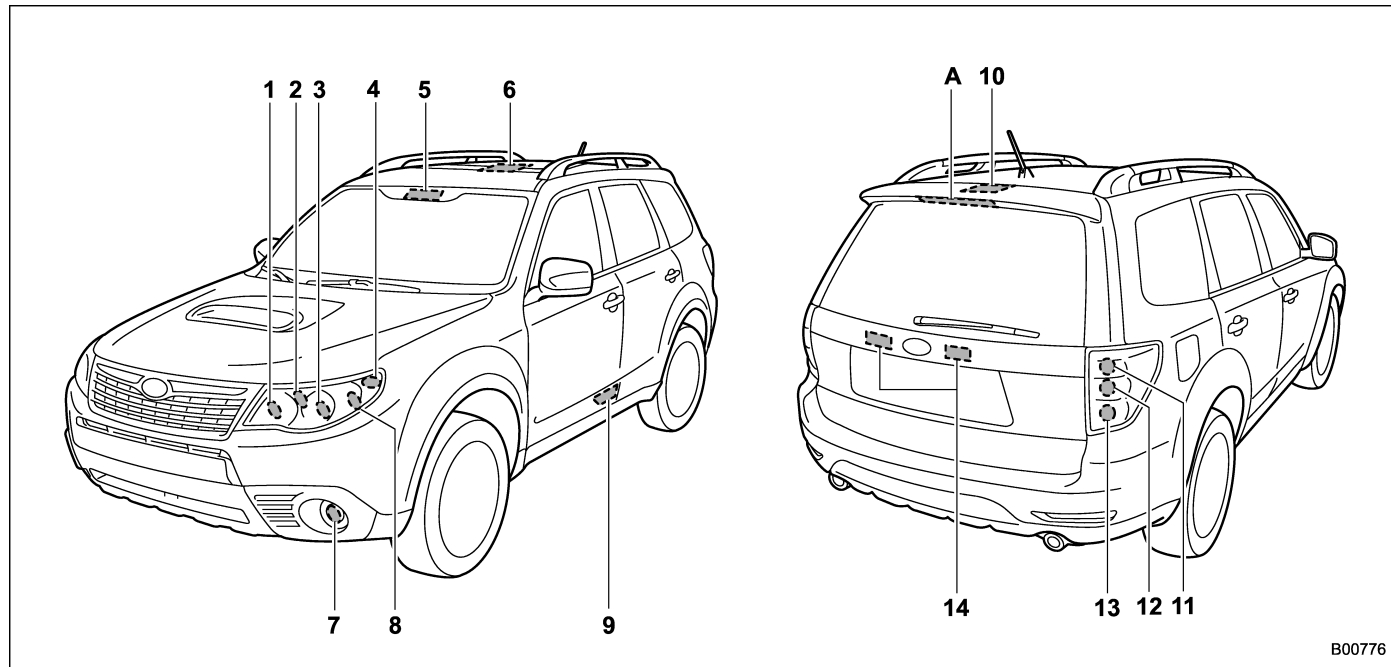
Main fuse box

The main fuses are designed to melt during an overload to prevent damage to the wiring harness and electrical equipment. Check the main fuses if any electrical component fails to operate (except the starter motor) and other fuses are good. A melted main fuse must be replaced. Use only replacements with the same specified rating as the melted main fuse. If a main fuse blows after it is replaced, have the electrical system checked by your nearest SUBARU dealer.

Installation of accessories

Always consult your SUBARU dealer before installing fog lights or any other electrical equipment in your vehicle. Such accessories may cause the electronic system to malfunction if they are incorrectly installed or if they are not suited for the vehicle.

Replacing bulbs



B00776

A: The high mount stop light is the LED (Light Emitting Diode) type. Consult your SUBARU dealer for replacement.

	Wattage	Bulb No.
1) High beam headlight	12V-60W	9005 (HB3)
2) Position light	12V-5W	168 (W5W)
3) Low beam headlight	12V-55W	H11
4) Front side marker light	12V-5W	168 (W5W)
5) Map light	12V-8W	—
6) Dome light	12V-8W	—
7) Front fog light	12V-51W	9006 (HB4)
8) Front turn signal light	12V-21W	(WY21W)
9) Door step light	12V-5W	—
10) Cargo area light	12V-13W	—
11) Brake/tail light	12V-21W/5W	7443
12) Rear turn signal light	12V-21W	(WY21W)
13) Back-up light	12V-21W	7440
14) Licence plate light	12V-5W	168 (W5W)

**CAUTION**

Replace any bulb only with a new bulb of the specified wattage. Using a bulb of different wattage could result in a fire.

■ Headlights (vehicles with HID headlights)

**WARNING**

High-intensity-discharge (HID) bulbs are used for the low beams of the headlights. These HID bulbs use an extremely high voltage. To avoid the risk of an electric shock and resulting serious injury, you should not attempt to replace them. Neither should you attempt to replace the high-beam bulbs, remove/refit the headlight assemblies, or remove any headlight-assembly components. For replacement of the headlight bulbs (low-beam and high-beam), removal and installation of the headlight assemblies, and removal of headlight-assembly components, contact your SUBARU dealer.

■ Headlights (vehicles without HID headlights)



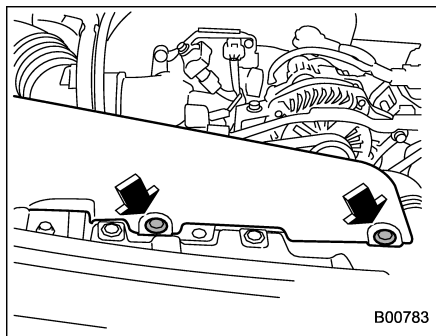
CAUTION

Halogen headlight bulbs become very hot while in use. If you touch the bulb surface with bare hands or greasy gloves, fingerprints or grease on the bulb surface will develop into hot spots, causing the bulb to break. If there are finger prints or grease on the bulb surface, wipe them away with a soft cloth moistened with alcohol.

NOTE

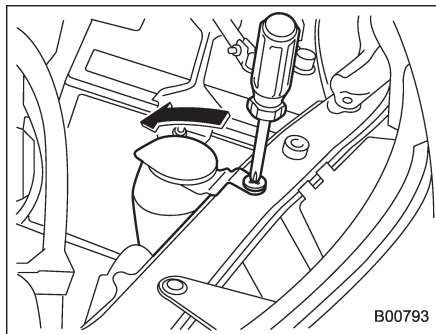
- If headlight aiming is required, consult your SUBARU dealer for proper adjustment of the headlight aim.
- It may be difficult to replace the bulbs. Have the bulbs replaced by your SUBARU dealer if necessary.

▼ Low beam light bulbs



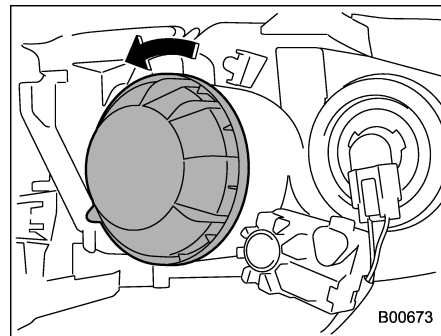
Right-hand side

1. Use a screwdriver to undo the clips on the air intake duct, then remove the air intake duct (right-hand side).

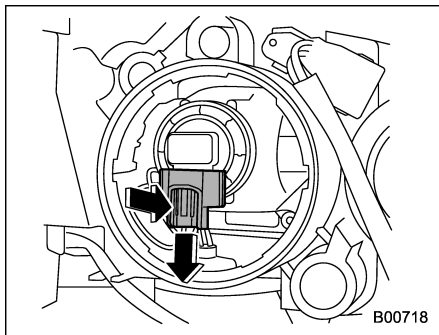


Left-hand side

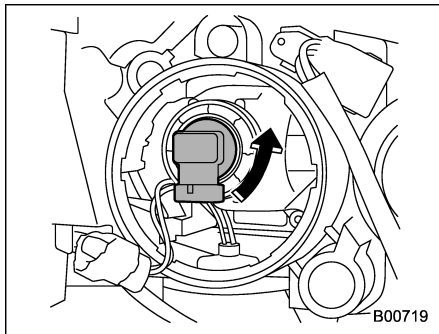
2. Use a screwdriver to remove the secured clip of the washer tank. To make it easy to access the bulb, move the washer tank to the horizontal direction (left-hand side).



3. Remove the bulb cover, by turning it counterclockwise.



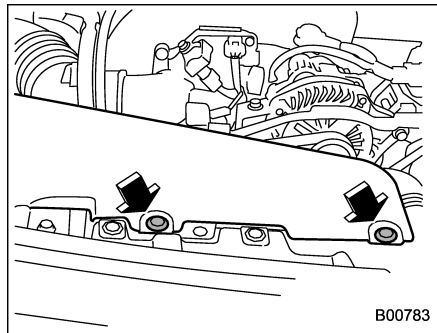
4. Disconnect the electrical connector from the bulb.



5. Remove the bulb from the headlight assembly by turning it counterclockwise.
6. Replace the bulb with a new one. At this time, do not touch the bulb surface.

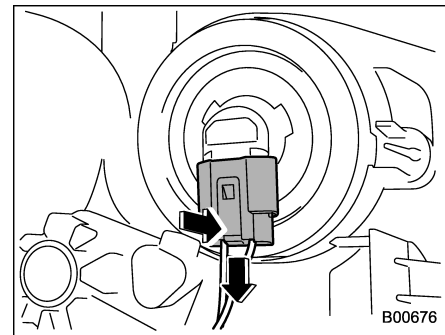
7. To install the bulb to the headlight assembly, turn it clockwise until it clicks.
8. Reconnect the electrical connector.
9. Install the bulb cover.
10. Install the air intake duct with clips (right-hand side).
11. Set the washer tank to the original place and secure it by clip (left-hand side).

▼ High beam light bulbs

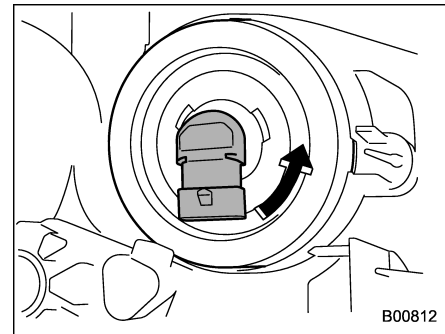


Right-hand side

1. Use a screwdriver to undo the clips on the air intake duct, then remove the air intake duct (right-hand side).



2. Disconnect the electrical connector from the bulb.



3. Remove the bulb from the headlight assembly by turning it counterclockwise.
4. Replace the bulb with new one. At this time, use care not to touch the bulb

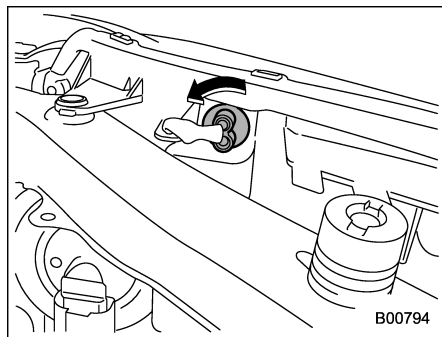
surface.

5. To install the bulb to the headlight assembly, turn it clockwise until it clicks.

6. Reconnect the electrical connector.

7. Install the air intake duct with clips (right-hand side).

Position light



1. Turn the bulb socket counterclockwise and pull out the socket.

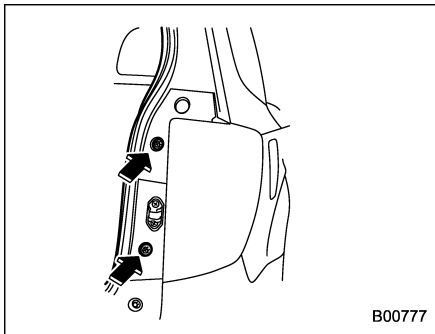
2. Pull the bulb out of the socket. Install a new bulb.

3. Install the bulb socket by turning it clockwise.

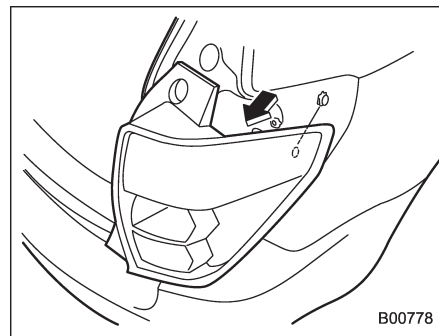
Front turn signal light

It may be difficult to replace the bulbs. Have the bulbs replaced by your SUBARU dealer if necessary.

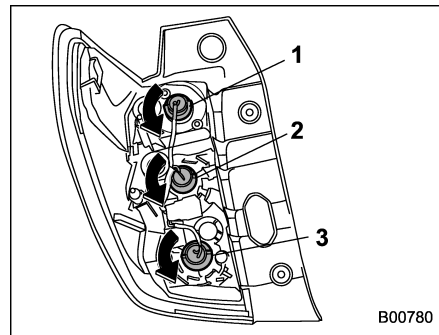
Rear combination lights



1. Using a Phillips screwdriver, remove the upper and lower screws that secure the rear combination light assembly.

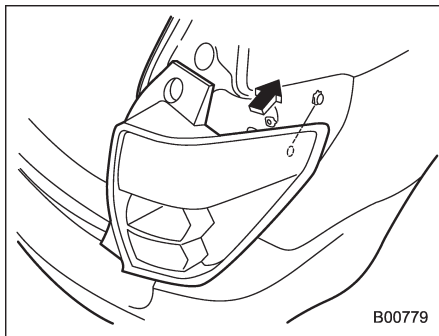


2. Slide the rear combination light assembly rearward and remove it from the vehicle.

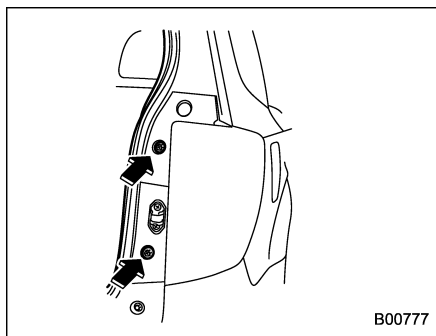


- 1) Brake/tail light
- 2) Rear turn signal light
- 3) Back-up light

3. Remove the bulb socket from the rear combination light assembly by turning it counterclockwise.
4. Pull the bulb out of the bulb socket and replace it with a new one.
5. Set the bulb socket into the rear combination light assembly and turn it clockwise until it locks.

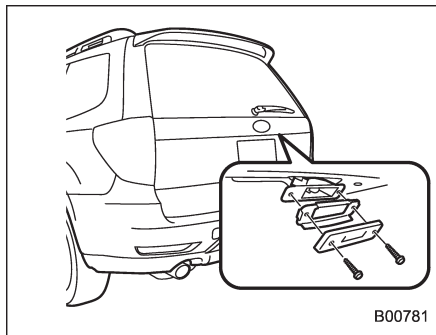


6. Put the rear combination light assembly into place while aligning the clip with the guide on the vehicle.



7. Tighten the upper and lower screws.

■ License plate light



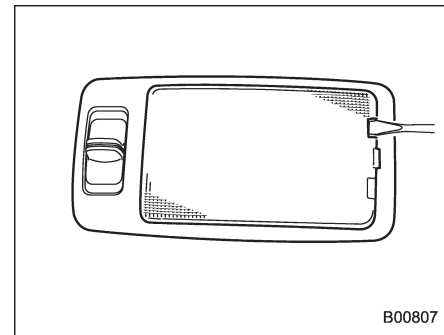
1. Remove the mounting screws using a Phillips screwdriver.

2. Remove the cover and lens.
3. Pull the bulb out of the socket. Install a new bulb.
4. Reinstall the lens and cover.
5. Tighten the mounting screws.

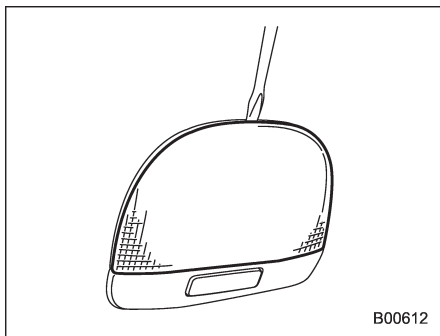
■ Dome light, map light, cargo area light and door step light

CAUTION

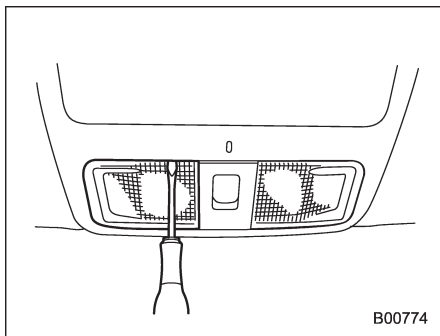
When the door is opened, the map light illuminates and becomes very hot. When replacing the map light bulb, close the door and be careful not to burn yourself.



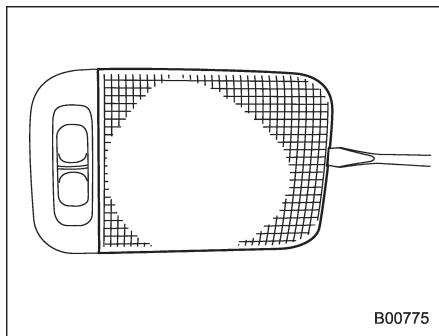
Dome light (vehicles with moonroof)



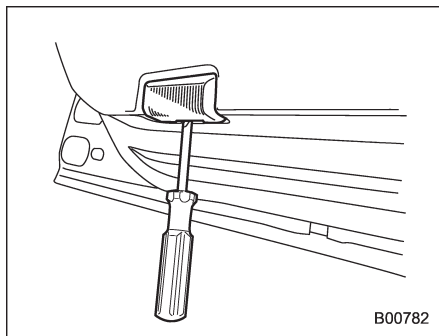
Dome light (vehicles without moonroof)



Map light



Cargo area light



Door step light

1. Remove the lens by prying the edge of the lens with a flat-head screwdriver.
2. Pull the bulb out of the socket. Install a new bulb.

3. Reinstall the lens.

■ Other bulbs

Other bulbs may be difficult to replace. Have the bulbs replaced by your SUBARU dealer if necessary.