



2013 NV1500/NV2500 HD/NV3500 HD

OWNER'S MANUAL

For your safety, read carefully and keep in this vehicle.

Owner's Manual Supplement

The information contained within this supplement replaces and revises the Lane change signal information in the "Instruments and controls" section of the Owner's Manual for the following vehicles:

- 2013 – 2015 NISSAN Titan
- 2013 – 2015 NISSAN Frontier
- 2013 – 2015 NISSAN Armada
- 2013 – 2015 NISSAN NV1500/NV2500 HD/MV 3500 HD and
- 2013 – 2015 NISSAN NV Passenger

Read carefully and keep in vehicle.

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Publication No. SU15EA VARSU0

Lane change signal

② To signal a lane change, move the lever up or down to the point where the indicator light begins to flash, but the lever does not latch.



FOREWORD

Welcome to the growing family of new NISSAN owners. This vehicle is delivered to you with confidence. It was produced using the latest techniques and strict quality control.

This manual was prepared to help you understand the operation and maintenance of your vehicle so that you may enjoy many miles (kilometers) of driving pleasure. Please read through this manual before operating your vehicle.

A separate Warranty Information Booklet explains details about the warranties covering your vehicle. The “NISSAN Service and Maintenance Guide” explains details about maintaining and servicing your vehicle. Additionally, a separate Customer Care/Lemon Law Booklet (U.S. only) will explain how to resolve any concerns you may have with your vehicle, as well as clarify your rights under your state’s lemon law.

Your NISSAN dealership knows your vehicle best. When you require any service or have any questions, they will be glad to assist you with the extensive resources available to them.

In addition to factory installed options, your vehicle may also be equipped with additional accessories installed by NISSAN or by your NISSAN dealer prior to delivery. It is important that you familiarize yourself with all disclosures,

warnings, cautions and instructions concerning proper use of such accessories prior to operating the vehicle and/or accessory. See a NISSAN dealer for details concerning the particular accessories with which your vehicle is equipped.

READ FIRST—THEN DRIVE SAFELY

Before driving your vehicle, please read this Owner's Manual carefully. This will ensure familiarity with controls and maintenance requirements, assisting you in the safe operation of your vehicle.

WARNING

IMPORTANT SAFETY INFORMATION REMINDERS FOR SAFETY!

Follow these important driving rules to help ensure a safe and comfortable trip for you and your passengers!

- **NEVER** drive under the influence of alcohol or drugs.
- **ALWAYS** observe posted speed limits and never drive too fast for conditions.
- **ALWAYS** give your full attention to driving and avoid using vehicle features or taking other actions that could distract you.
- **ALWAYS** use your seat belts and appropriate child restraint systems.
- **ALWAYS** provide information about the proper use of vehicle safety features to all occupants of the vehicle.
- **ALWAYS** review this Owner's Manual for important safety information.

DRIVING

This vehicle will handle and maneuver differently from an ordinary passenger car because it has a higher center of gravity. As with other vehicles with features of this type, failure to operate this vehicle correctly may result in loss of control or an accident.

Be sure to read "Driving precautions", and "Avoiding collision and rollover", and "Driving safety precautions", in the "Starting and driving" section of this manual.

MODIFICATION OF YOUR VEHICLE

WARNING

Any modifications or alterations of this vehicle that do not comply with the Nissan NV2500/3500 Body Builders Guide may affect the safety of the vehicle which may result in a collision, serious personal injury or death. A electronic copy of the Nissan body builders guide is available at www.nissancommercialvehicles.com.

Modifications made to this vehicle by conversion companies or dealers may affect the final certification of the engine, vehicle or equipment. The conversion company or dealer has the responsibility to certify that the altered vehicle and equipment complies or continues to comply with all applicable motor vehicle safety standards and emissions regulations. The conversion company or dealer is responsible for making sure the modifications or installed equipment does not affect the safety of the vehicle.

NISSAN does not assume the responsibility as the final stage manufacturer for modified or altered vehicles. NISSAN is not responsible for the final certification, product liability claims, or warranty claims, resulting from any component, assembly, or system being altered. NISSAN is not responsible for modifications which cause the vehicle to become non-compliant with any of the motor vehicle safety standards, emissions regulations, or modifications that cause the vehicle to be or become defective or unsafe.

Your vehicle's warranty may not cover damage resulting from alterations, modifications, installation of non-approved accessories, or improper installation of accessories. See your 2011 NV 1500/2500/3500 Warranty Information Booklet for complete details.

WHEN READING THE MANUAL

This manual includes information for all options available on this model. Therefore, you may find some information that does not apply to your vehicle.

All information, specifications and illustrations in this manual are those in effect at the time of printing. NISSAN reserves the right to change specifications or design without notice and without obligation.

IMPORTANT INFORMATION ABOUT THIS MANUAL

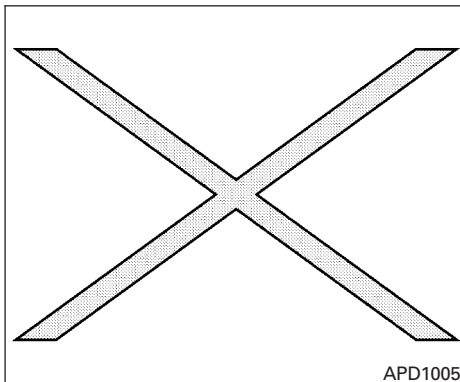
You will see various symbols in this manual. They are used in the following ways:

WARNING

This is used to indicate the presence of a hazard that could cause death or serious personal injury. To avoid or reduce the risk, the procedures must be followed precisely.

CAUTION

This is used to indicate the presence of a hazard that could cause minor or moderate personal injury or damage to your vehicle. To avoid or reduce the risk, the procedures must be followed carefully.



If you see this symbol, it means **“Do not do this”** or **“Do not let this happen.”**



If you see a symbol similar to these in an illustration, it means the arrow points to the front of the vehicle.



Arrows in an illustration that are similar to these indicate movement or action.



Arrows in an illustration that are similar to these call attention to an item in the illustration.

CALIFORNIA PROPOSITION 65 WARNING

WARNING

Engine exhaust, some of its constituents, and certain vehicle components contain or emit chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. In addition, certain fluids contained in vehicles and certain products of component wear contain or emit chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

CALIFORNIA PERCHLORATE ADVISORY

Some vehicle parts, such as lithium batteries, may contain perchlorate material. The following advisory is provided: “Perchlorate Material – special handling may apply, See www.dtsc.ca.gov/hazardouswaste/perchlorate/”.



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NISSAN CUSTOMER CARE PROGRAM

NISSAN CARES . . .

Both NISSAN and your NISSAN dealer are dedicated to serving all your automotive needs. Your satisfaction with your vehicle and your NISSAN dealer are our primary concerns. Your NISSAN dealer is always available to assist you with all your automobile sales and service needs.

However, if there is something that your NISSAN dealer cannot assist you with or you would like to provide NISSAN directly with comments or questions, please contact the NISSAN Consumer Affairs Department using our toll-free number:

For U.S. customers
877-NIS-NCV1
(877-647-6281)

For Canadian customers
1-800-387-0122

The Consumer Affairs Department will ask for the following information:

- Your name, address, and telephone number
- Vehicle identification number (attached to the top of the instrument panel on the driver's side)
- Date of purchase
- Current odometer reading
- Your NISSAN dealer's name
- Your comments or questions

OR

You can write to NISSAN with the information at:

For U.S. customers
Nissan North America, Inc.
Consumer Affairs Department
P.O. Box 685003
Franklin, TN 37068-5003
or via e-mail at:
nnaconsumeraffairs@nissan-usa.com

For Canadian customers
Nissan Canada Inc.
5290 Orbitor Drive
Mississauga, Ontario L4W 4Z5
or via e-mail at:
information.centre@nissancanada.com

If you prefer, visit us at:
www.nissanusa.com (for U.S. customers) or
www.nissan.ca (for Canadian customers)

We appreciate your interest in NISSAN and thank you for buying a quality NISSAN vehicle.

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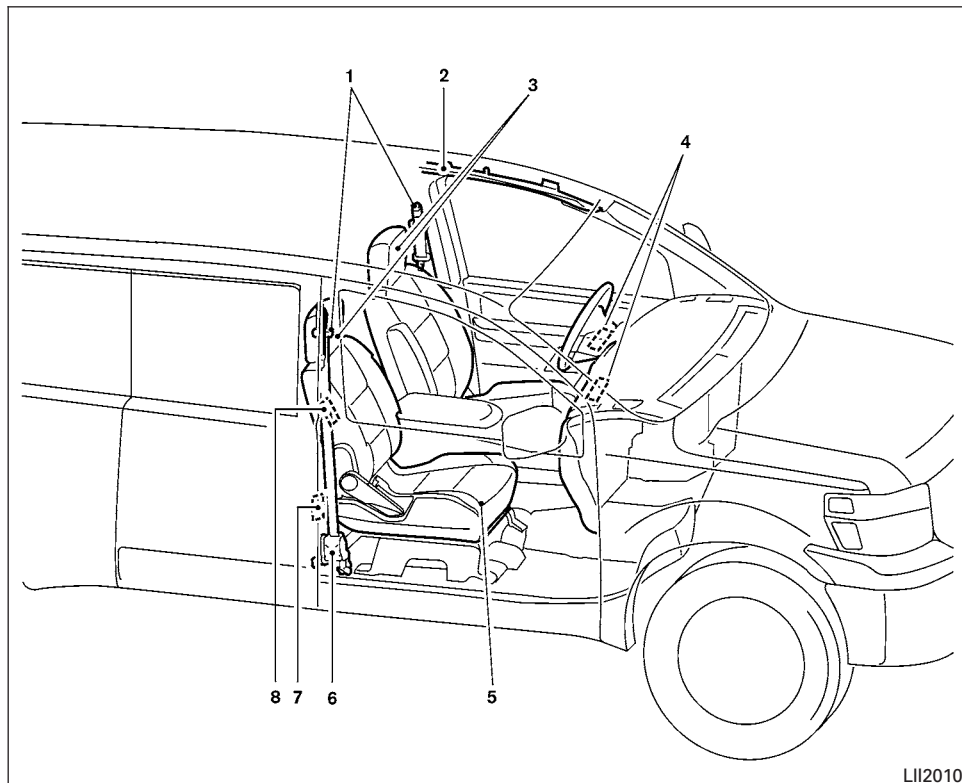
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AIR BAGS, SEAT BELTS AND CHILD RESTRAINTS

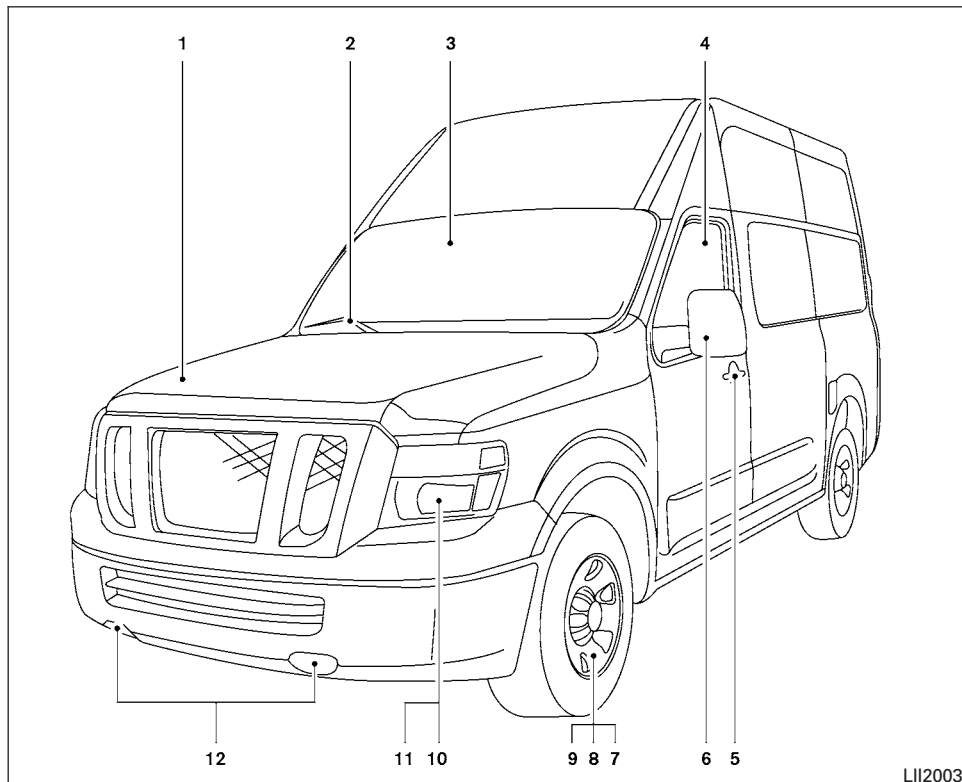


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See the page number indicated in parentheses for operating details.

LII2010

EXTERIOR FRONT

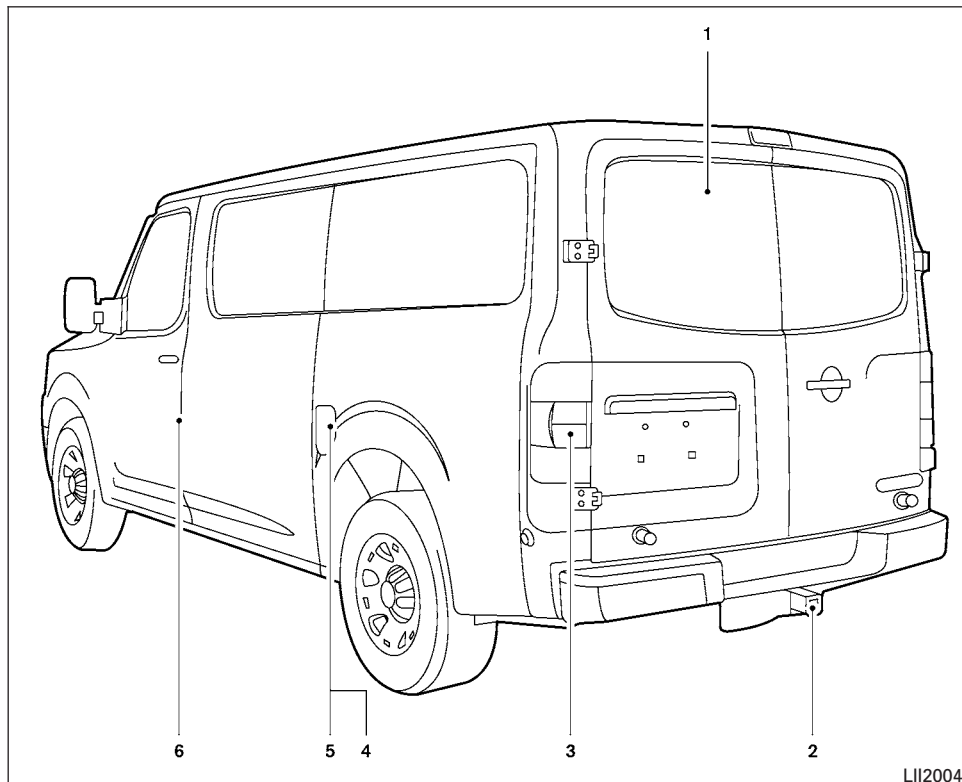


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See the page number indicated in parentheses for operating details.

LII2003

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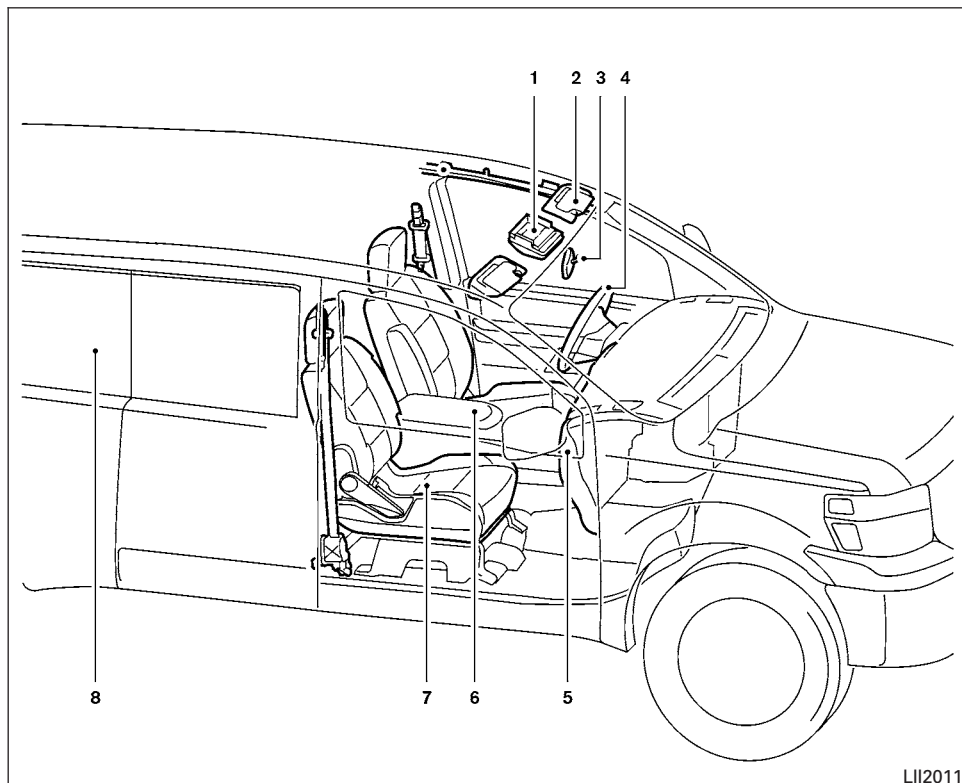


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See the page number indicated in parentheses for operating details.

LII2004

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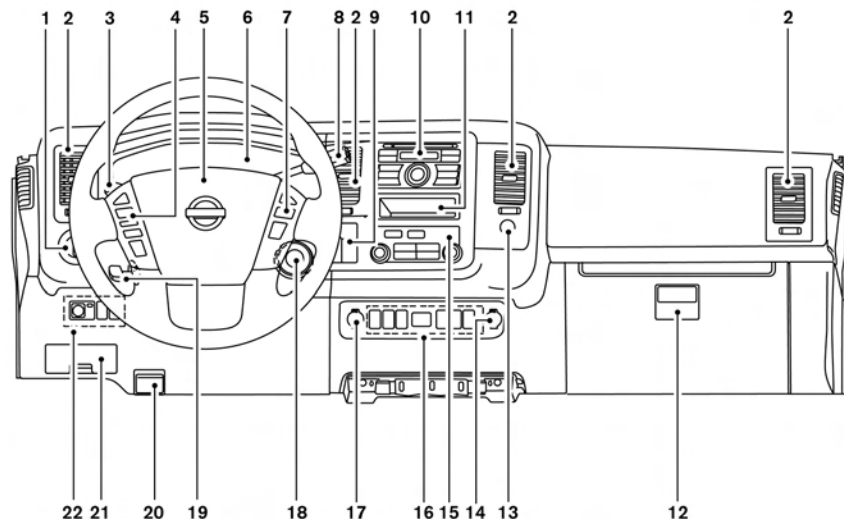


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LII2011

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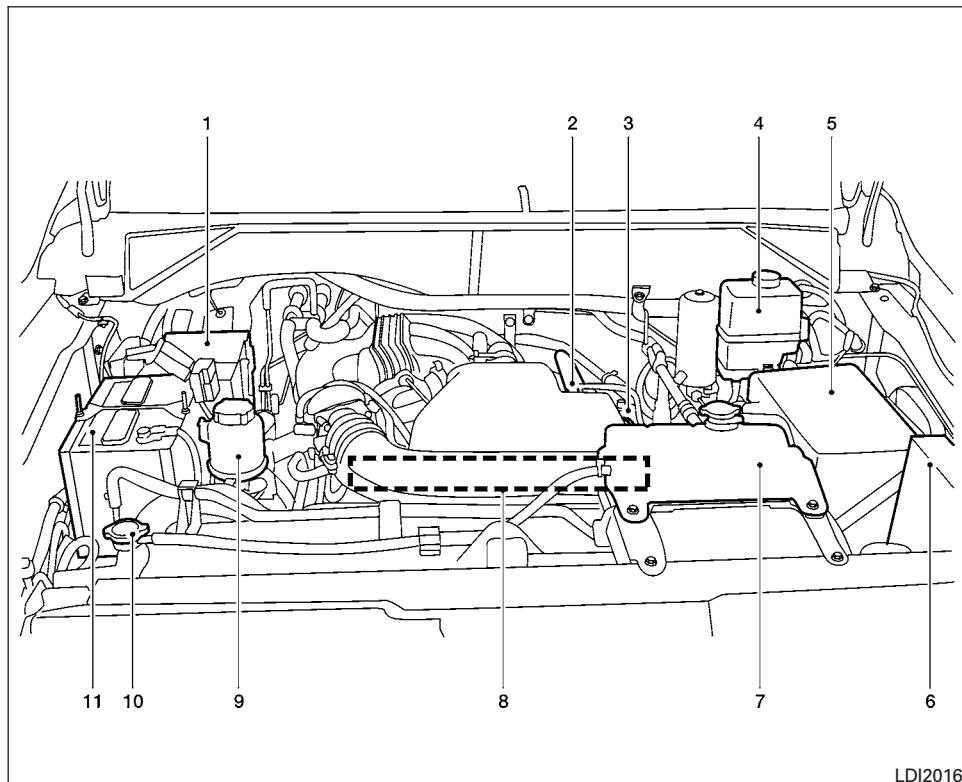
LIC2036

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*: Refer to the separate Navigation System Owner's Manual (if so equipped).

See the page number indicated in parentheses for operating details.

ENGINE COMPARTMENT CHECK LOCATIONS

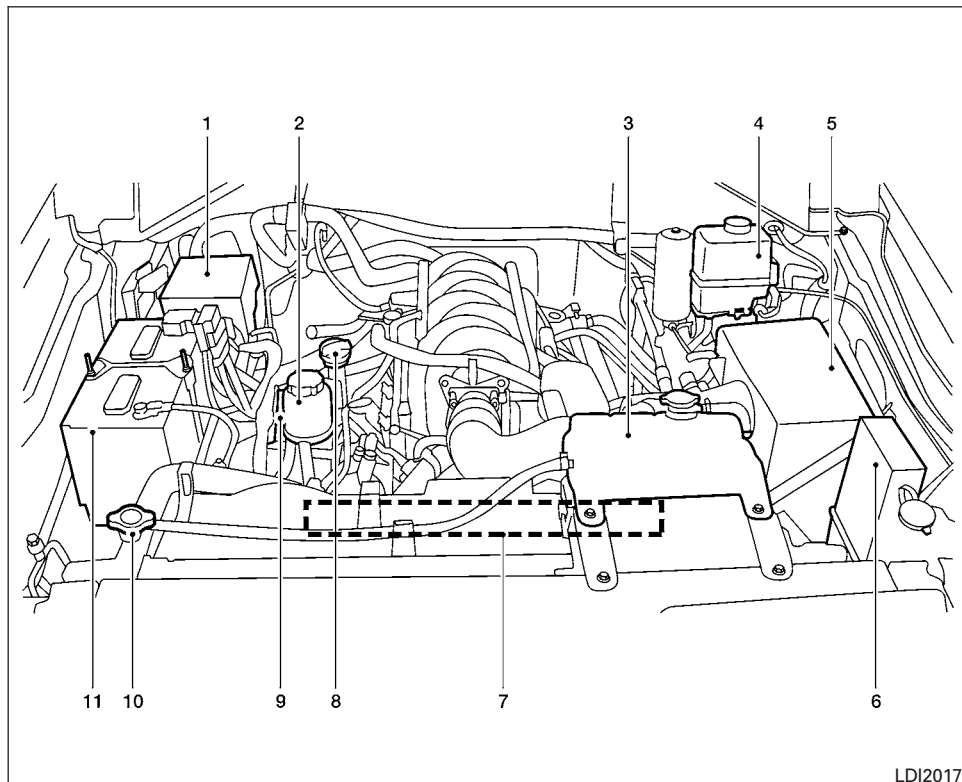


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See the page number indicated in parentheses for operating details.

LDI2016



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See the page number indicated in parentheses for operating details.

LDI2017

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MEMO

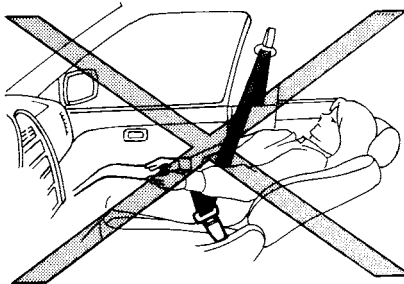
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SEATS



Sit upright and well back.



ARS1152

⚠ WARNING

- Do not ride in a moving vehicle when the seatback is reclined. This can be dangerous. The shoulder belt will not be against your body. In an accident, you could be thrown into it and receive neck or other serious injuries. You could also slide under the lap belt and receive serious internal injuries.

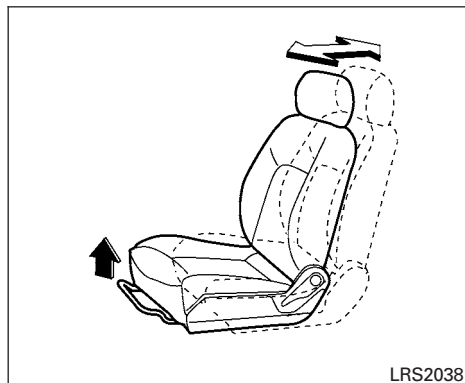
- For the most effective protection when the vehicle is in motion, the seat should be upright. Always sit well back in the seat with both feet on the floor and adjust the seat properly. See "Precautions on seat belt usage" later in this section.
- After adjustment, gently rock in the seat to make sure it is securely locked.
- Do not leave children unattended inside the vehicle. They could unknowingly activate switches or controls. Unattended children could become involved in serious accidents.

- The seatback should not be reclined any more than needed for comfort. Seat belts are most effective when the passenger sits well back and straight up in the seat. If the seatback is reclined, the risk of sliding under the lap belt and being injured is increased.

⚠ CAUTION

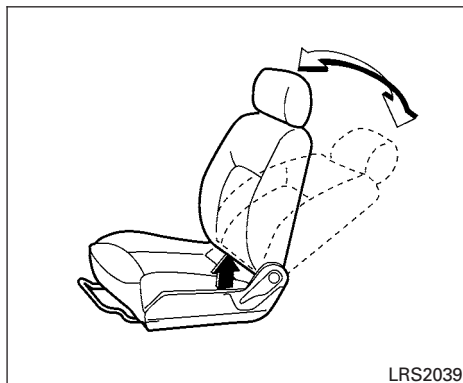
When adjusting the seat positions, be sure not to contact any moving parts to avoid possible injuries and/or damage.

**FRONT MANUAL SEAT
ADJUSTMENT** (for passenger's seat
and if so equipped for driver's seat)



Forward and backward

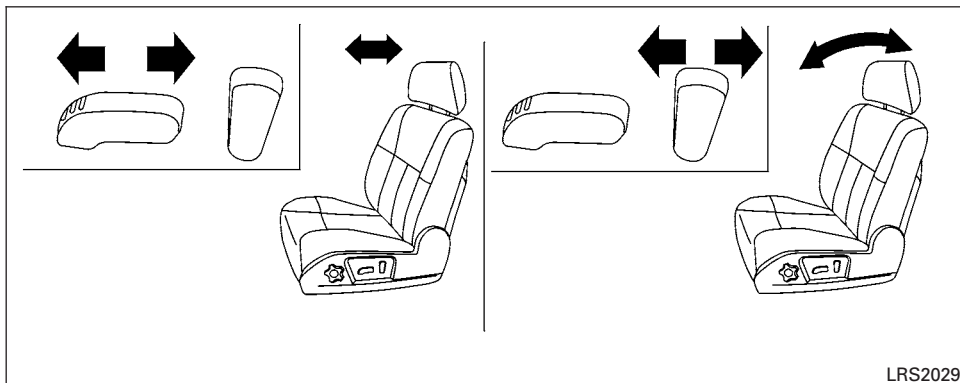
Pull the lever up and hold it while you slide the seat forward or backward to the desired position. Release the lever to lock the seat in position.



Reclining

To recline the seatback, pull the lever up and lean back. To bring the seatback forward, pull the lever up and lean your body forward. Release the lever to lock the seatback in position.

The reclining feature allows adjustment of the seatback for occupants of different sizes for added comfort and to help obtain proper seat belt fit. See "Precautions on seat belt usage" later in this section. Also, the seatback can be reclined to allow occupants to rest when the vehicle is stopped and the transmission is in the P (Park) position.



LRS2029

FRONT POWER SEAT ADJUSTMENT (if so equipped for driver's seat)

Operating tips

- The power seat motor has an auto-reset overload protection circuit. If the motor stops during operation, wait 30 seconds, then reactivate the switch.
- Do not operate the power seat switch for a long period of time when the engine is off. This will discharge the battery.

See "Automatic drive positioner" in "Pre-driving checks and adjustments" for automatic drive positioner operation.

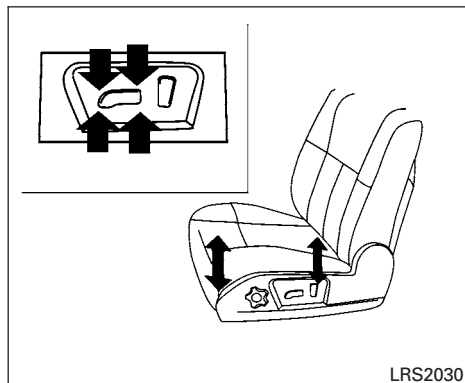
Forward and backward

Moving the switch forward or backward will slide the seat forward or backward to the desired position.

Reclining

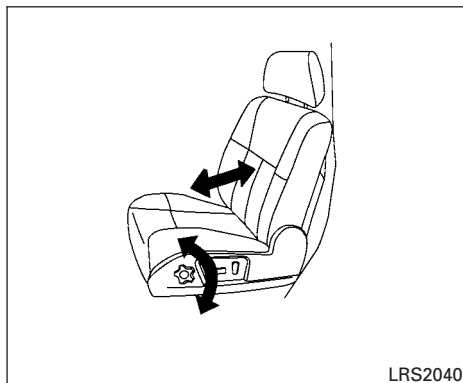
Move the recline switch backward until the desired angle is obtained. To bring the seatback forward again, move the switch forward and move your body forward. The seatback will move forward.

The reclining feature allows adjustment of the seatback for occupants of different sizes for added comfort and to help obtain proper seat belt fit. See "Precautions on seat belt usage" later in this section. Also, the seatback can be reclined to allow occupants to rest when the vehicle is stopped and the shift selector is in P (Park).



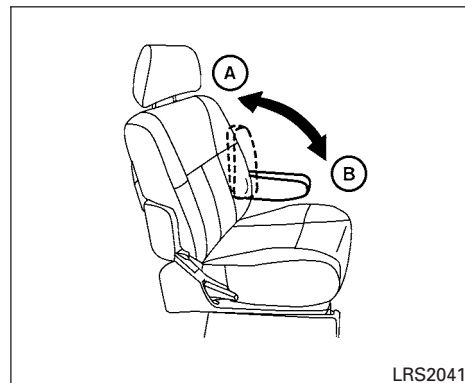
Seat lifter (driver's seat)

Push the front or rear end of the switch up or down to adjust the angle and height of the seat cushion.



Lumbar support (driver's seat)

The lumbar support feature provides lower back support to the driver. Turn the dial to adjust the seat lumbar area.



ARMRESTS (if so equipped)

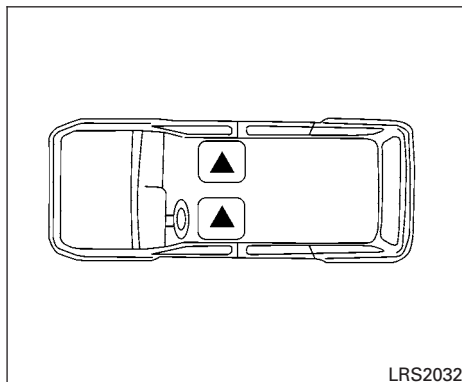
To use the armrests, pull them down to the resting position.

- Ⓐ Stowed position
- Ⓑ Resting position

HEAD RESTRAINTS

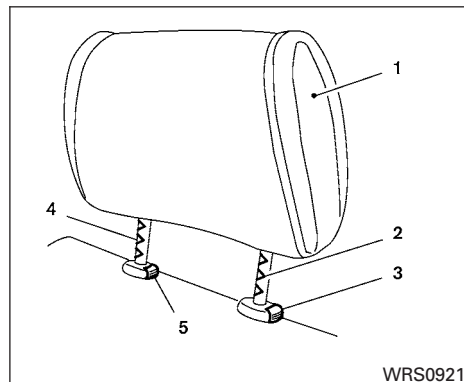
WARNING

Head restraints supplement the other vehicle safety systems. They may provide additional protection against injury in certain rear end collisions. Adjust the head restraints properly, as specified in this section. Check the adjustment after someone else uses the seat. Do not attach anything to the head restraint stalks or remove the head restraint. Do not use the seat if the head restraint has been removed. If the head restraint was removed, reinstall and properly adjust the head restraint before an occupant uses the seating position. Failure to follow these instructions can reduce the effectiveness of the head restraints. This may increase the risk of serious injury or death in a collision.



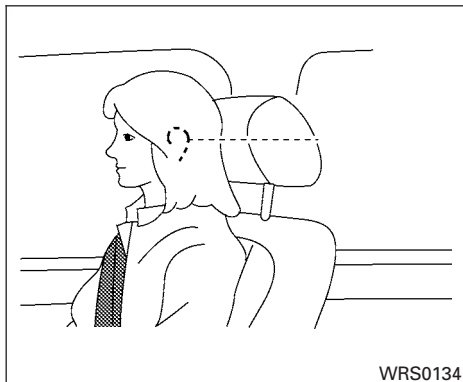
The illustration shows the seating positions equipped with head restraints. All of the head restraints are adjustable.

▲ Indicates the seating position is equipped with a head restraint.



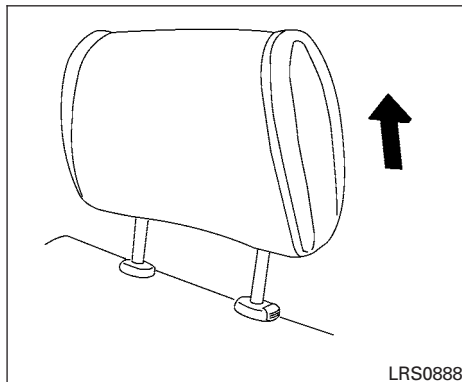
Components

1. Head restraint
2. Adjustment notches
3. Lock knob
4. Stalks
5. Release knob

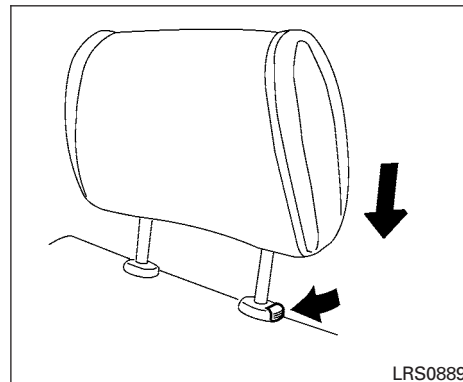


Adjustment

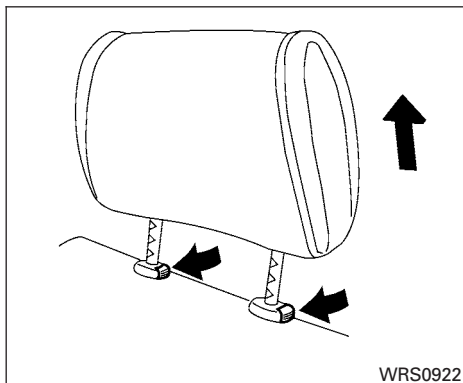
Adjust the head restraint so the center is level with the center of the seat occupant's ears.



To raise the head restraint, pull it up.



To lower, push and hold the lock knob and push the head restraint down.

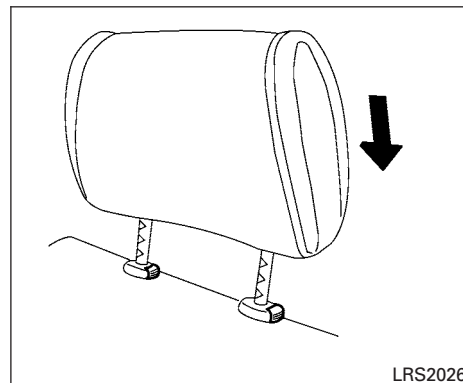


Removal

Use the following procedure to remove the adjustable head restraints.

1. Pull the head restraint up to the highest position.
2. Push and hold the lock knob and release knob.
3. Remove the head restraint from the seat.
4. Store the head restraint properly so it is not loose in the vehicle.

5. Reinstall and properly adjust the head restraint before an occupant uses the seating position.



Install

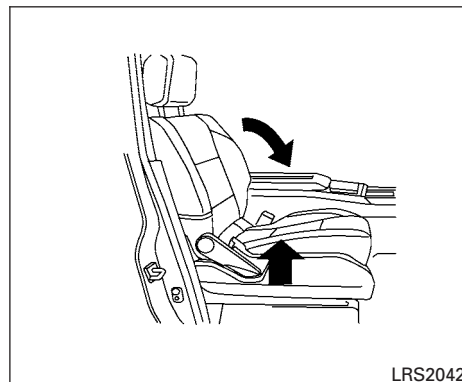
1. Align the head restraint stalks with the holes in the seat. Make sure the head restraint is facing the correct direction.
2. Push and hold the lock knob and push the head restraint down.
3. Properly adjust the head restraint before an occupant uses the seating position.

FLEXIBLE SEATING

WARNING

- Do not allow people to ride in any area of your vehicle that is not equipped with seats and seat belts. Be sure everyone in your vehicle is in a seat and using a seat belt properly.
- Head restraints should be adjusted properly as they may provide significant protection against injury in an accident. Always replace and adjust them properly if they have been removed for any reason.
- If the head restraints are removed for any reason, they should be securely stored to prevent them from causing injury to passengers or damage to the vehicle in case of sudden braking or an accident.
- When returning the seatbacks to the upright position, be certain they are completely secured in the latched position. If they are not completely secured, passengers may be injured in an accident or sudden stop.

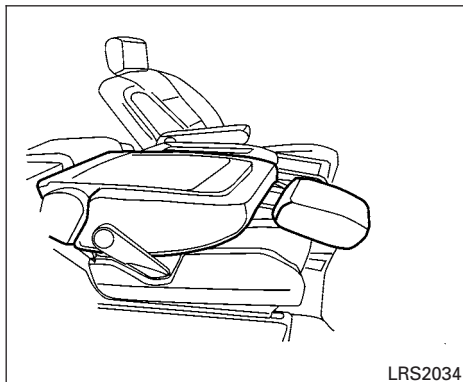
- Properly secure all cargo to help prevent it from sliding or shifting. Do not place cargo higher than the seatbacks. In a sudden stop or collision, unsecured cargo could cause personal injury.



Folding the front passenger's seatback

To fold the front passenger's seatback flat for extra storage length when transporting long items:

1. Slide the seat to the rearmost position. Lift up on the recline lever, located on the outside edge of the seat, and allow the seatback to fold forward as far as it will go.

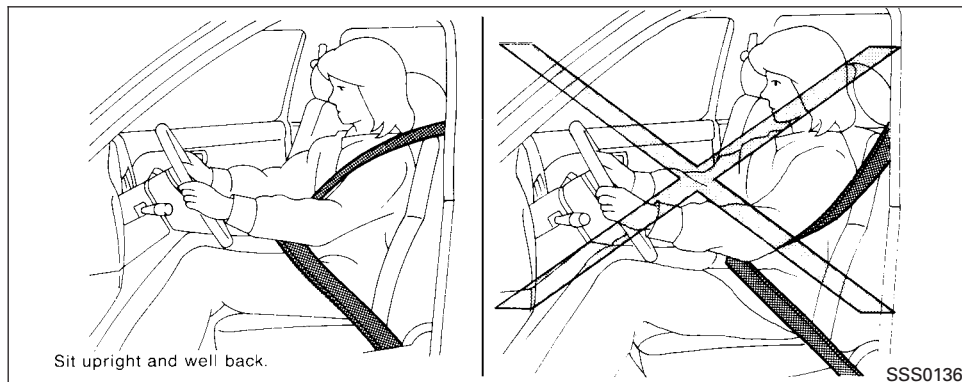


2. Once the seatback is released, it will enable you to fold the front passenger seatback flat over the seat cushion.
3. To return the front passenger's seat to a seating position, lift up on the seatback and push it up to an upright position. Then pull up on the recline lever and lean the seatback to a proper seating position. Release the lever to lock the seatback in position.

WARNING

- If you fold the front passenger's seatback flat forward to carry longer objects, be sure this cargo is properly secured and not near an air bag. In a crash, an inflating air bag might force that object toward a person. This could cause severe injury or even death. Secure objects away from the area in which an air bag would inflate. See "Precautions on supplemental restraint system" later in this section.
- Never allow anyone to ride in the cargo area or on the front passenger's seat when it is in the fold-down position. Use of these areas by passengers could result in serious injury in an accident or sudden stop.

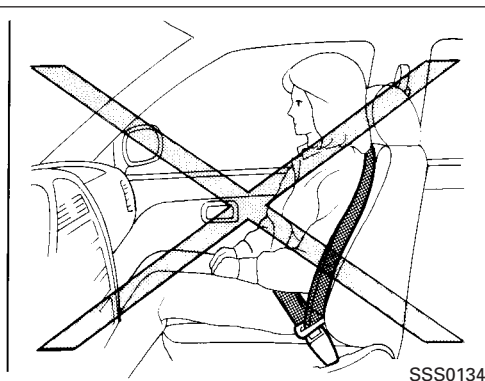
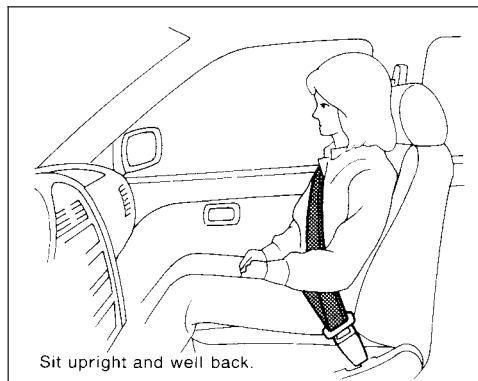
SEAT BELTS



PRECAUTIONS ON SEAT BELT USAGE

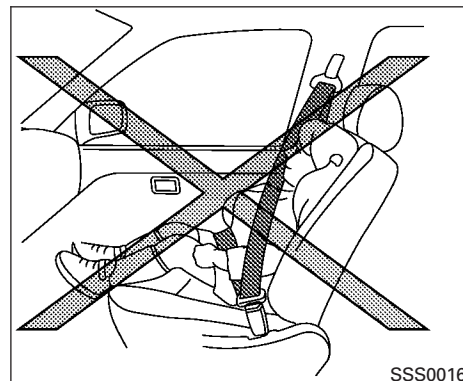
If you are wearing your seat belt properly adjusted and you are sitting upright and well back in your seat with both feet on the floor, your chances of being injured or killed in an accident and/or the severity of injury may be greatly reduced. NISSAN strongly encourages you and all of your passengers to buckle up every time you drive, even if your seating position includes a supplemental air bag.

Most U.S. states and Canadian provinces or territories specify that seat belts be worn at all times when a vehicle is being driven.



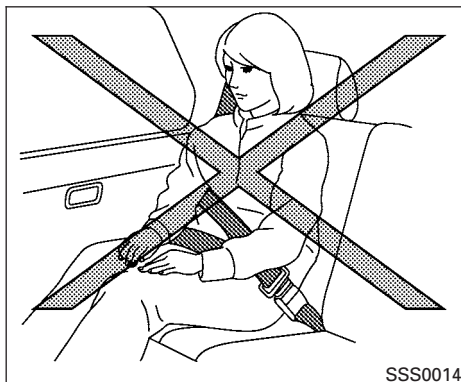
⚠ WARNING

- Every person who drives or rides in this vehicle should use a seat belt at all times.



⚠ WARNING

- The seat belt should be properly adjusted to a snug fit. Failure to do so may reduce the effectiveness of the entire restraint system and increase the chance or severity of injury in an accident. Serious injury or death can occur if the seat belt is not worn properly.



⚠ WARNING

- Always route the shoulder belt over your shoulder and across your chest. Never put the belt behind your back, under your arm or across your neck. The belt should be away from your face and neck, but not falling off your shoulder.
- Position the lap belt as low and snug as possible **AROUND THE HIPS, NOT THE WAIST**. A lap belt worn too high could increase the risk of internal injuries in an accident.

- Be sure the seat belt tongue is securely fastened to the proper buckle.
- Do not wear the seat belt inside out or twisted. Doing so may reduce its effectiveness.
- Do not allow more than one person to use the same seat belt.
- Never carry more people in the vehicle than there are seat belts.
- If the seat belt warning light glows continuously while the ignition is turned ON with all doors closed and all seat belts fastened, it may indicate a malfunction in the system. Have the system checked by a NISSAN dealer.
- No changes should be made to the seat belt system. For example, do not modify the seat belt, add material, or install devices that may change the seat belt routing or tension. Doing so may affect the operation of the seat belt system. Modifying or tampering with the seat belt system may result in serious personal injury.

- Once a seat belt pretensioner has activated, it cannot be reused and must be replaced together with the retractor. See your NISSAN dealer.
- Removal and installation of pretensioner system components should be done by a NISSAN dealer.
- All seat belt assemblies, including retractors and attaching hardware, should be inspected after any collision by a NISSAN dealer. NISSAN recommends that all seat belt assemblies in use during a collision be replaced unless the collision was minor and the belts show no damage and continue to operate properly. Seat belt assemblies not in use during a collision should also be inspected and replaced if either damage or improper operation is noted.
- All child restraints and attaching hardware should be inspected after any collision. Always follow the restraint manufacturer's inspection instructions and replacement recommendations. The child restraints should be replaced if they are damaged.

PREGNANT WOMEN

NISSAN recommends that pregnant women use seat belts. The seat belt should be worn snug and always position the lap belt as low as possible around the hips, not the waist. Place the shoulder belt over your shoulder and across your chest. Never run the lap/shoulder belt over your abdominal area. Contact your doctor for specific recommendations.

INJURED PERSONS

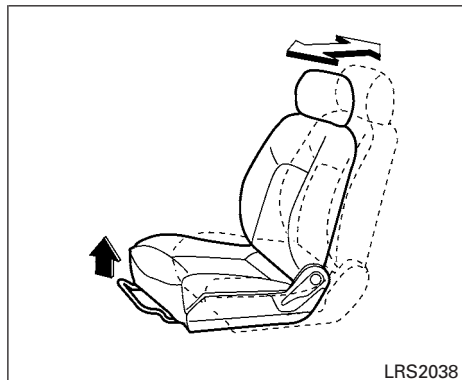
NISSAN recommends that injured persons use seat belts. Check with your doctor for specific recommendations.

THREE-POINT TYPE SEAT BELT WITH RETRACTOR

WARNING

- **Every person who drives or rides in this vehicle should use a seat belt at all times.**

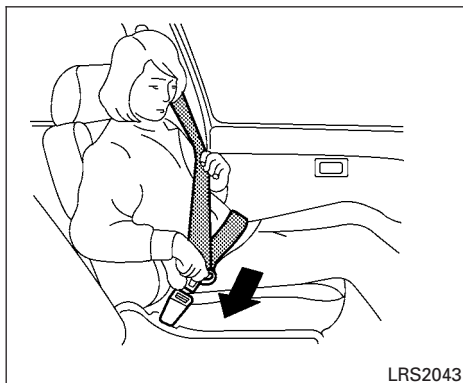
- **Do not ride in a moving vehicle when the seatback is reclined. This can be dangerous. The shoulder belt will not be against your body. In an accident, you could be thrown into it and receive neck or other serious injuries. You could also slide under the lap belt and receive serious internal injuries.**
- **For the most effective protection when the vehicle is in motion, the seat should be upright. Always sit well back in the seat with both feet on the floor and adjust the seat belt properly.**
- **Do not allow children to play with the seat belts. Most seating positions are equipped with Automatic Locking Retractor (ALR) mode seat belts. If the seat belt becomes wrapped around a child's neck with the ALR mode activated, the child can be seriously injured or killed if the seat belt retracts and becomes tight. This can occur even if the vehicle is parked. Unbuckle the seat belt to release the child. If the seat belt cannot be unbuckled or is already unbuckled, release the child by cutting the seat belt with a suitable tool (such as a knife or scissors) to release the seat belt.**



Manual front seat shown

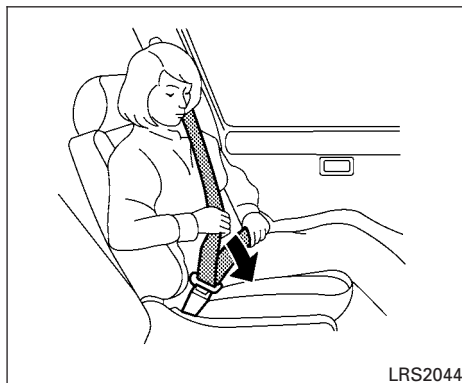
Fastening the seat belts

1. Adjust the seat. See "Seats" earlier in this section.



LRS2043

2. Slowly pull the seat belt out of the retractor and insert the tongue into the buckle until you hear and feel the latch engage.
 - **The retractor is designed to lock during a sudden stop or on impact. A slow pulling motion permits the seat belt to move, and allows you some freedom of movement in the seat.**
 - **If the seat belt cannot be pulled from its fully retracted position, firmly pull the belt and release it. Then smoothly pull the belt out of the retractor.**



LRS2044

3. Position the lap belt portion **low and snug on the hips** as shown.
4. Pull the shoulder belt portion toward the retractor to take up extra slack. Be sure the shoulder belt is routed over your shoulder and across your chest.

The front passenger seat three-point seat belt has two modes of operation:

- Emergency Locking Retractor (ELR)
- Automatic Locking Retractor (ALR)

The Emergency Locking Retractor (ELR) mode allows the seat belt to extend and retract to allow the driver and passengers some freedom of movement in the seat. The ELR locks the seat belt when the vehicle slows down rapidly or during certain impacts.

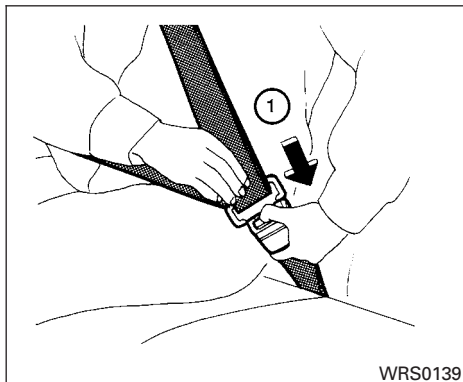
The Automatic Locking Retractor (ALR) mode (child restraint mode) locks the seat belt for child restraint installation.

When the ALR mode is activated, the seat belt cannot be extended again until the seat belt tongue is detached from the buckle and fully retracted. The seat belt returns to the ELR mode after the seat belt fully retracts. See “Child restraints” later in this section for more information.

The ALR mode should be used only for child restraint installation. During normal seat belt use by a passenger, the ALR mode should not be activated. If it is activated it may cause uncomfortable seat belt tension.

WARNING

When fastening the seat belts, be certain that the seatbacks are completely secured in the latched position. If they are not completely secured, passengers may be injured in an accident or sudden stop.



Unfastening the seat belts

- ① To unfasten the seat belt, press the button on the buckle. The seat belt automatically retracts.

Checking seat belt operation

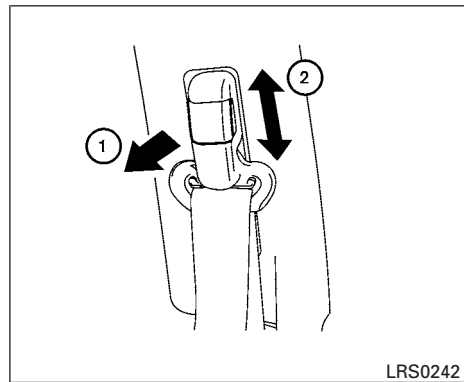
Seat belt retractors are designed to lock seat belt movement by two separate methods:

- When the seat belt is pulled quickly from the retractor.
- When the vehicle slows down rapidly.

To increase your confidence in the seat belts, check the operation as follows:

- Grasp the shoulder belt and pull forward quickly. The retractor should lock and restrict further belt movement.

If the retractor does not lock during this check or if you have any questions about seat belt operation, see a NISSAN dealer.



Front seats

Shoulder belt height adjustment (front outboard seats)

The shoulder belt anchor height should be adjusted to the position best for you. (See "Precautions on seat belt usage" earlier in this section.) To adjust, pull out ① the adjustment button and move the shoulder belt anchor ② to the desired position, so the belt passes over the center of the shoulder. The belt should be away from your face and neck, but not falling off your shoulder. Release the adjustment button to lock the shoulder belt anchor into position.

WARNING

- After adjustment, release the adjustment button and try to move the shoulder belt anchor up and down to make sure it is securely fixed in position.
- The shoulder belt anchor height should be adjusted to the position best for you. Failure to do so may reduce the effectiveness of the entire restraint system and increase the chance or severity of injury in an accident.

SEAT BELT EXTENDERS

If, because of body size or driving position, it is not possible to properly fit the lap/shoulder belt and fasten it, an extender that is compatible with the installed seat belts is available that can be purchased. The extender adds approximately 8 in (200 mm) of length and may be used for either the driver or front passenger seating position. See a NISSAN dealer for assistance with purchasing an extender if an extender is required.

WARNING

- Only NISSAN seat belt extenders, made by the same company which made the original equipment seat belts, should be used with NISSAN seat belts.

- Adults and children who can use the standard seat belt should not use an extender. Such unnecessary use could result in serious personal injury in the event of an accident.
- Never use seat belt extenders to install child restraints. If the child restraint is not secured properly, the child could be seriously injured in a collision or a sudden stop.

SEAT BELT MAINTENANCE

- To clean the seat belt webbing, apply a mild soap solution or any solution recommended for cleaning upholstery or carpet. Then wipe with a cloth and allow the seat belts to dry in the shade. Do not allow the seat belts to retract until they are completely dry.
- If dirt builds up in the shoulder belt guide of the seat belt anchors, the seat belts may retract slowly. Wipe the shoulder belt guide with a clean, dry cloth.
- Periodically check to see that the seat belt and the metal components, such as buckles, tongues, retractors, flexible wires and anchors, work properly. If loose parts, deterioration, cuts or other damage on the webbing is found, the entire seat belt assembly should be replaced.

CHILD SAFETY

Children need adults to help protect them. They need to be properly restrained.

In addition to the general information in this manual, child safety information is available from many other sources, including doctors, teachers, government traffic safety offices, and community organizations. Every child is different, so be sure to learn the best way to transport your child.

There are three basic types of child restraint systems:

- Rear-facing child restraint
- Forward-facing child restraint
- Booster seat

WARNING

- Never put a rear-facing child seat in the front seat.
- Never let an infant who requires the use of a rear-facing child restraint ride in this vehicle. Do not attempt to hold a child in your lap or arms.

- **Infants and children need special protection. The vehicle's seat belts may not fit them properly. The shoulder belt may come too close to the face or neck. The lap belt may not fit over their small hip bones. In an accident, an improperly fitting seat belt could cause serious or fatal injury. Always use appropriate child restraints.**
- **Never let a child stand or kneel on any seat and do not allow a child in the cargo area. The child could be seriously injured or killed in a sudden stop or collision.**

Your vehicle is equipped with a supplemental front-impact air bag system for the front passenger. See "Supplemental restraint system" later in this section. The passenger seat is not suitable for use with a rear-facing child restraint needed for infants. Therefore, infants should not be transported in this vehicle.

All U.S. states and Canadian provinces or territories require the use of approved child restraints for infants and small children. See "Child restraints" later in this section.

A child restraint may be secured in the vehicle by using the vehicle seat belt. See the "Child restraints" section for more information.

This is especially important because your vehicle has a supplemental restraint system (air bag system) for the front passenger. See "Supplemental restraint system" later in this section.

INFANTS

Infants up to at least 1 year old should be placed in a rear-facing child restraint. Because a rear-facing child restraint is not suitable for use in this vehicle, infants should not be transported in it.

SMALL CHILDREN

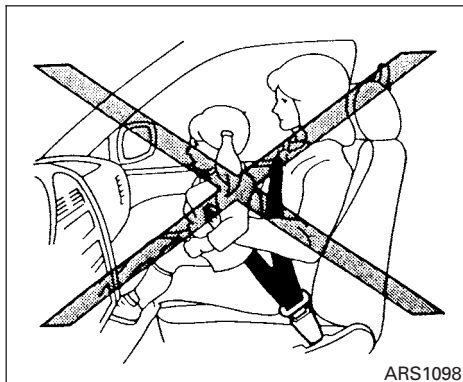
Children that are over 1 year old and weigh at least 20 lbs (9 kg) should remain in a rear-facing child restraint as long as possible up to the height or weight limit of the child restraint. Children who outgrow the height or weight limit of the rear-facing child restraint and are at least 1 year old should be secured in a forward-facing child restraint with a harness. Refer to the manufacturer's instructions for minimum and maximum weight and height recommendations. NISSAN recommends that small children be placed in child restraints that comply with Federal Motor Vehicle Safety Standards or Canadian Motor Vehicle Safety Standards. You should choose a child restraint that fits your vehicle and always follow the manufacturer's instructions for installation and use.

LARGER CHILDREN

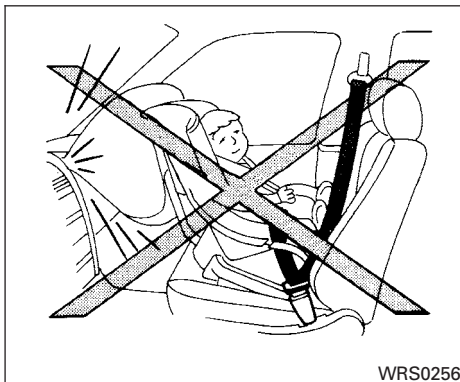
Children should remain in a forward-facing child restraint with a harness until they reach the maximum height or weight limit allowed by the child restraint manufacturer.

Once a child outgrows the height or weight limit of the harness-equipped forward-facing child restraint, NISSAN recommends that the child be placed in a commercially available booster seat to obtain proper seat belt fit. For a seat belt to fit properly, the booster seat should raise the child so that the shoulder belt is properly positioned across the chest and the top, middle portion of the shoulder. The shoulder belt should not cross the neck or face and should not fall off the shoulder. The lap belt should lie snugly across the lower hips or upper thighs, not the abdomen. A booster seat can only be used in seating positions that have a three-point type seat belt. The booster seat should fit the vehicle seat and have a label certifying that it complies with Federal Motor Vehicle Safety Standards or Canadian Motor Vehicle Safety Standards. Once the child has grown so the shoulder belt is no longer on or near the face and neck, and the lap belt can be positioned properly across the lower hips or upper thighs, use the seat belt without the booster seat.

CHILD RESTRAINTS



PRECAUTIONS ON CHILD RESTRAINTS



WARNING

- Failure to follow the warnings and instructions for proper use and installation of child restraints could result in serious injury or death of a child or other passengers in a sudden stop or collision:
 - The child restraint must be used and installed properly. Always follow all of the child restraint manufacturer's instructions for installation and use.

- Infants and children should never be held on anyone's lap. Even the strongest adult cannot resist the forces of a collision.
- Do not put a seat belt around both a child and another passenger.
- Never install a rear-facing child restraint in the front seat. An inflating supplemental air bag could seriously injure or kill your child.
- Never let an infant who requires the use of a rear-facing child restraint ride in this vehicle.
- Be sure to purchase a child restraint that will fit the child and vehicle. Some child restraints may not fit properly in your vehicle.
- Keep seatbacks as upright as possible after fitting the child restraint.
- Infants and children should always be placed in an appropriate child restraint while in the vehicle.
- When the child restraint is not in use, keep it secured with a seat belt. In a sudden stop or collision, loose objects can injure occupants or damage the vehicle.

⚠ CAUTION

A child restraint in a closed vehicle can become very hot. Check the seating surface and buckles before placing a child in the child restraint.

Several manufacturers offer child restraints for infants and children of various sizes. When selecting any child restraint, keep the following points in mind:

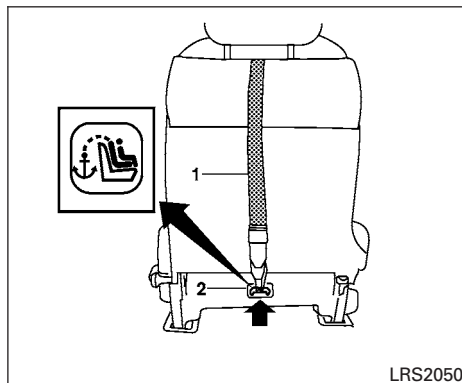
- Choose only a restraint with a label certifying that it complies with Federal Motor Vehicle Safety Standard 213 or Canadian Motor Vehicle Safety Standard 213.
- Check the child restraint in your vehicle to be sure it is compatible with the vehicle's seat and seat belt system.
- If the child restraint is compatible with your vehicle, place your child in the child restraint and check the various adjustments to be sure the child restraint is compatible with your child. Choose a child restraint that is designed for your child's height and weight. Always follow all recommended procedures.

All U.S. states and Canadian provinces or territories require that infants and small children be restrained in an approved child restraint at all times while the vehicle is being operated. Canadian law requires the top tether strap on forward-facing child restraints be secured to the designated anchor point on the vehicle.

TOP TETHER ANCHOR

⚠ WARNING

Do not allow cargo to contact the top tether strap when it is attached to the top tether anchor. Properly secure the cargo so it does not contact the top tether strap. Cargo that is not properly secured or cargo that contacts the top tether strap may damage it during a collision. A child could be seriously injured or killed in a collision if the top tether strap is damaged.

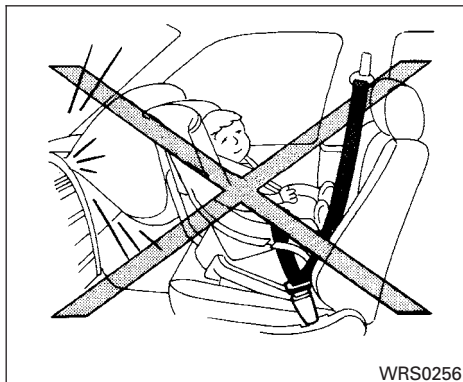


1. Top tether strap

2. Anchor point

Top tether anchor point location

The anchor point is located on the front passenger seatback as shown.



REAR-FACING CHILD RESTRAINT INSTALLATION USING THE SEAT BELTS

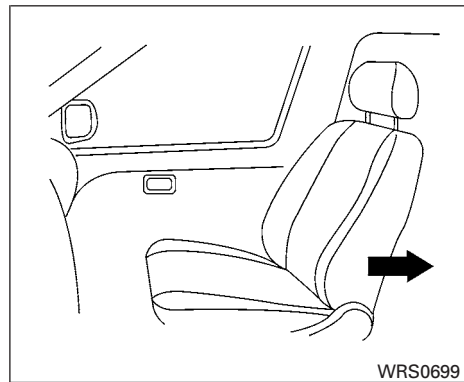
⚠ WARNING

- **Never install a rear-facing child restraint in the front seat. An inflating supplemental air bag could seriously injure or kill your child.**
- **Never let an infant who requires the use of a rear-facing child restraint ride in this vehicle.**

FORWARD-FACING CHILD RESTRAINT INSTALLATION USING THE SEAT BELTS — FRONT PASSENGER SEAT

⚠ WARNING

The three-point seat belt with Automatic Locking Retractor (ALR) must be used when installing a child restraint. Failure to use the ALR mode will result in the child restraint not being properly secured. The restraint could tip over or be loose and cause injury to a child in a sudden stop or collision.



Forward-facing (front passenger seat) – step 1

Refer to all Warnings and Cautions in the “Child Safety” and “Child Restraints” sections before installing a child restraint.

Follow these steps to install a forward-facing child restraint using the vehicle seat belt in the front passenger seat:

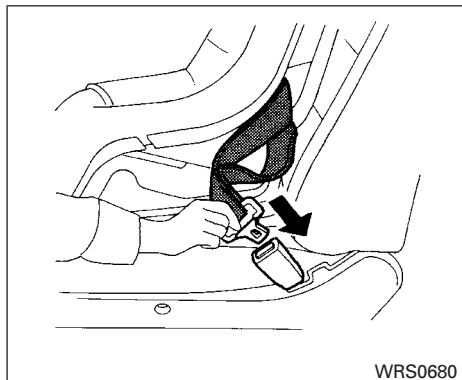
1. **If you must install a child restraint in the front seat, it should be placed in a forward-facing direction only. Move the seat to the rearmost position. Child restraints for infants must be used in the rear-facing direction and therefore must not be used in the front seat.**

2. Position the child restraint on the seat. Always follow the child restraint manufacturer's instructions.

The back of the child restraint should be secured against the vehicle seatback.

If necessary, adjust or remove the head restraint to obtain the correct child restraint fit. If the head restraint is removed, store it in a secure place. **Be sure to reinstall the head restraint when the child restraint is removed.** See "Head restraints" in this section for head restraint adjustment, removal and installation information.

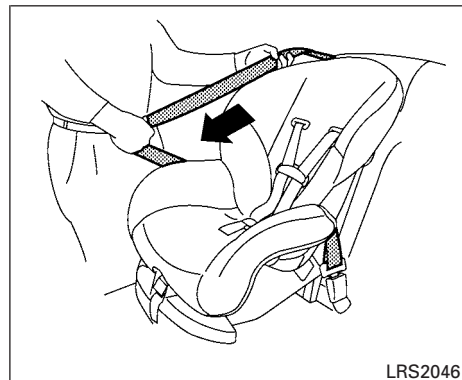
If the seating position does not have an adjustable head restraint and it is interfering with the proper child restraint fit, try another seating position or a different child restraint.



Forward-facing – step 3

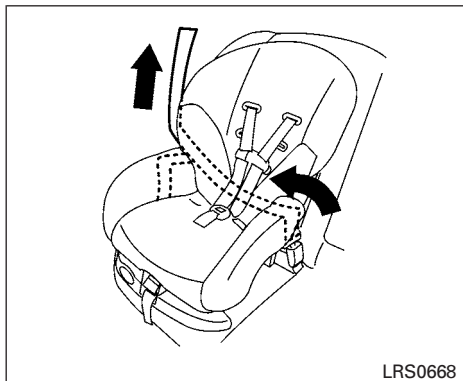
3. Route the seat belt tongue through the child restraint and insert it into the buckle until you hear and feel the latch engage. Be sure to follow the child restraint manufacturer's instructions for belt routing.

If the child restraint is equipped with a top tether strap, route the top tether strap and secure the tether strap to the tether anchor point. See "Installing top tether strap" in this section.



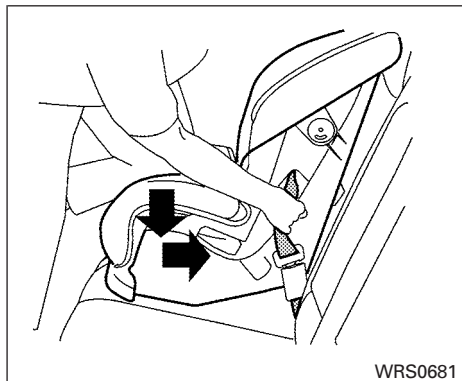
Forward-facing – step 4

4. Pull the shoulder belt until the belt is fully extended. At this time, the seat belt retractor is in the Automatic Locking Retractor (ALR) mode (child restraint mode). It reverts to Emergency Locking Retractor (ELR) mode when the seat belt is fully retracted.



Forward-facing – step 5

5. Allow the seat belt to retract. Pull up on the shoulder belt to remove any slack in the belt.



Forward-facing – step 6

6. Remove any additional slack from the seat belt; press downward and rearward firmly in the center of the child restraint with your knee to compress the vehicle seat cushion and seatback while pulling up on the seat belt.
7. Tighten the tether strap according to the manufacturer's instructions to remove any slack.

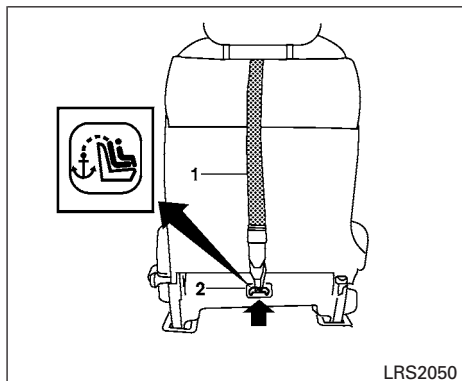


Forward-facing – step 8

8. After attaching the child restraint, test it before you place the child in it. Push it from side to side while holding the child restraint near the seat belt path. The child restraint should not move more than 1 inch (25 mm), from side to side. Try to tug it forward and check to see if the seat belt holds the restraint in place. If the restraint is not secure, tighten the seat belt as necessary and test it again. You may need to try a different child restraint. Not all child restraints fit in all types of vehicles.

9. Check to make sure the child restraint is properly secured prior to each use. If the seat belt is not locked, repeat steps 3 through 8.

After the child restraint is removed and the seat belt is fully retracted, the ALR mode (child restraint mode) is canceled.



Front passenger seat

1. Top tether strap
2. Anchor point

INSTALLING TOP TETHER STRAP (Front passenger seat)

Before securing the child restraint with the seat belt,

1. If necessary, raise or remove the head restraint to position the top tether strap ① over the top of the seatback. If the head restraint is removed, store it in a secure place. Be sure to reinstall the head restraint when the child restraint is removed. **See**

“Head restraints” in this section for head restraint adjustment, removal and installation information.

2. Route the top tether strap ① between the head restraint and the top of the seatback.
3. Secure the tether strap to the tether anchor point ② on the seatback.
4. Refer to the appropriate child restraint installation procedure steps in this section before tightening the tether strap.

If you have any questions when installing a top tether strap, consult your NISSAN dealer for details.

BOOSTER SEATS

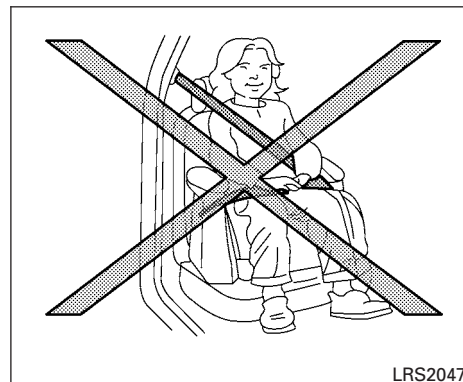
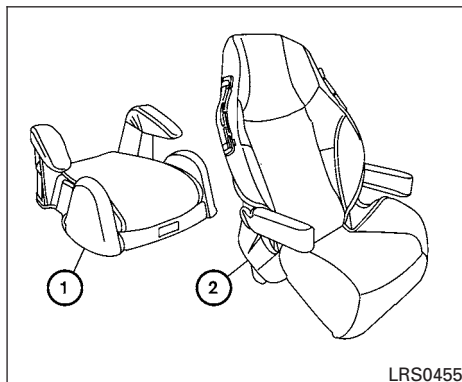
Precautions on booster seats

⚠ WARNING

If a booster seat and seat belt are not used properly, the risk of a child being injured in a sudden stop or collision greatly increases:

- **Make sure the shoulder portion of the belt is away from the child’s face and neck and the lap portion of the belt does not cross the stomach.**

- Make sure the shoulder belt is not behind the child or under the child's arm.
- A booster seat must only be installed in a seating position that has a lap/shoulder belt.





Booster seats of various sizes are offered by several manufacturers. When selecting any booster seat, keep the following points in mind:

- Choose only a booster seat with a label certifying that it complies with Federal Motor Vehicle Safety Standard 213 or Canadian Motor Vehicle Safety Standard 213.
- Check the booster seat in your vehicle to be sure it is compatible with the vehicle's seat and seat belt system.

- Make sure the child's head will be properly supported by the booster seat or vehicle seat. The seatback must be at or above the center of the child's ears. For example, if a low back booster seat ① is chosen, the vehicle seatback must be at or above the center of the child's ears. If the seatback is lower than the center of the child's ears, a high back booster seat ② should be used.
- If the booster seat is compatible with your vehicle, place the child in the booster seat and check the various adjustments to be sure the booster seat is compatible with the child. Always follow all recommended procedures.

All U.S. states and Canadian provinces or territories require that infants and small children be restrained in an approved child restraint at all times while the vehicle is being operated.

The instructions in this section apply to booster seat installation in the front passenger seat.

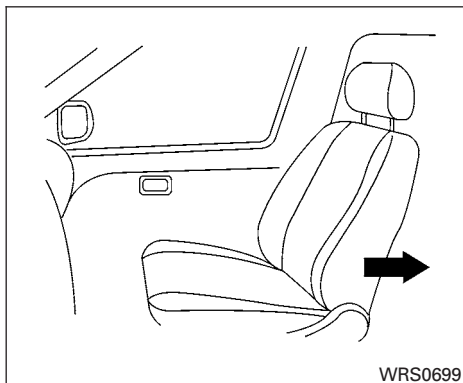
Booster seat installation on front passenger seat

⚠ CAUTION

Do not use the lap/shoulder belt in the Automatic Locking Retractor mode when using a booster seat with the seat belts.

Refer to all Warnings and Cautions in the "Child Safety", "Child Restraints" and "Booster Seats" sections before installing a child restraint.

Follow these steps to install a booster seat in the front passenger seat:



1. **If you must install a booster seat in the front seat, move the seat to the rear-most position.**
2. Position the booster seat on the seat. Only place it in a front-facing direction. Always follow the booster seat manufacturer's instructions.



Front passenger position

3. The booster seat should be positioned on the vehicle seat so that it is stable.

If necessary, adjust or remove the head restraint to obtain the correct booster seat fit. If the head restraint is removed, store it in a secure place. **Be sure to reinstall the head restraint when the booster seat is removed.** See "Head restraints" in this section for head restraint adjustment, removal and installation information.

If the seating position does not have an adjustable head restraint and it is interfering with the proper booster seat fit, try another seating position or a different booster seat.

4. Position the lap portion of the seat belt low and snug on the child's hips. Be sure to follow the booster seat manufacturer's instructions for adjusting the seat belt routing.
5. Pull the shoulder belt portion of the seat belt toward the retractor to take up extra slack. Be sure the shoulder belt is positioned across the top, middle portion of the child's shoulder. Be sure to follow the booster seat manufacturer's instructions for adjusting the seat belt routing.
6. Follow the warnings, cautions and instructions for properly fastening a seat belt shown in "Three-point type seat belt with retractor" earlier in this section.

SUPPLEMENTAL RESTRAINT SYSTEM

PRECAUTIONS ON SUPPLEMENTAL RESTRAINT SYSTEM

This Supplemental Restraint System (SRS) section contains important information concerning the following systems:

- Driver and passenger supplemental front-impact air bag
- Front seat-mounted side-impact supplemental air bag
- Roof-mounted curtain side-impact supplemental air bag
- Seat belt with pretensioner

Supplemental front-impact air bag system:

This system can help cushion the impact force to the head and chest of the driver and front passenger in certain frontal collisions.

Front seat-mounted side-impact supplemental air bag system (if so equipped):

This system can help cushion the impact force to the chest and pelvic area of the driver and front passenger in certain side impact collisions. The side air bags are designed to inflate on the side where the vehicle is impacted.

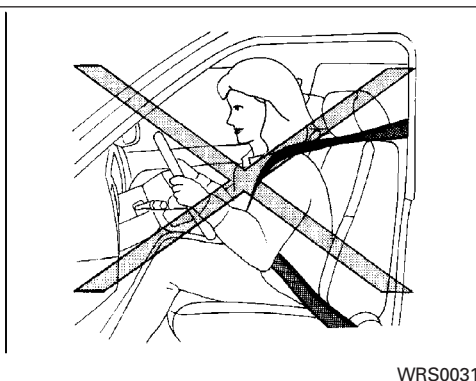
Roof-mounted curtain side-impact supplemental air bag system (if so equipped):

This system can help cushion the impact force to the head of occupants in front seating positions in certain side-impact collisions. The curtain air bags are designed to inflate on the side where the vehicle is impacted.

This supplemental restraint system is designed to **supplement** the crash protection provided by the driver and front passenger seat belts and is **not a substitute** for them. Seat belts should always be correctly worn and the occupant seated a suitable distance away from the steering wheel, instrument panel and door finishers. (See "Seat belts" earlier in this section for instructions and precautions on seat belt usage.)

The supplemental air bags operate only when the ignition switch is placed in the ON or START position.

After placing the ignition switch in the ON position, the supplemental air bag warning light illuminates. The supplemental air bag warning light will turn off after about 7 seconds if the system is operational.

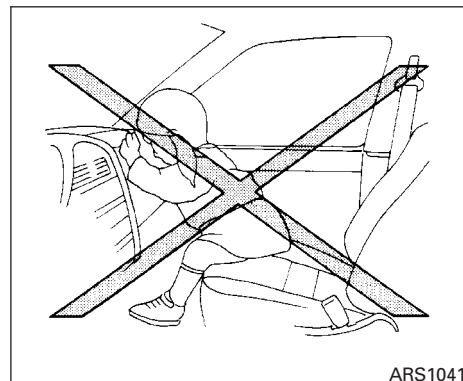
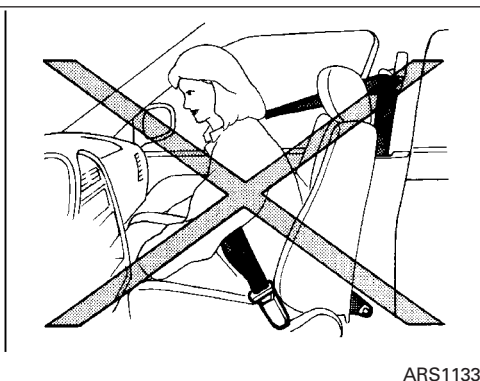
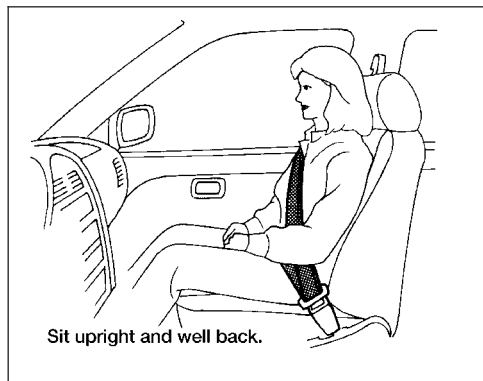


⚠ WARNING

- The front air bags ordinarily will not inflate in the event of a side impact, rear impact, rollover, or lower severity frontal collision. Always wear your seat belts to help reduce the risk or severity of injury in various kinds of accidents.

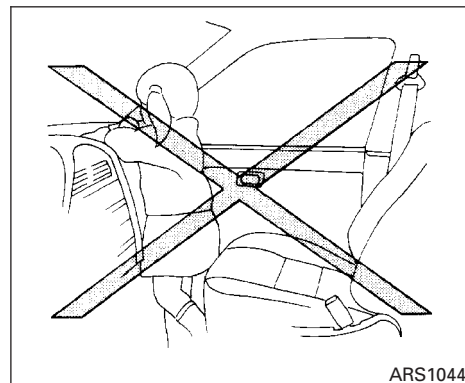
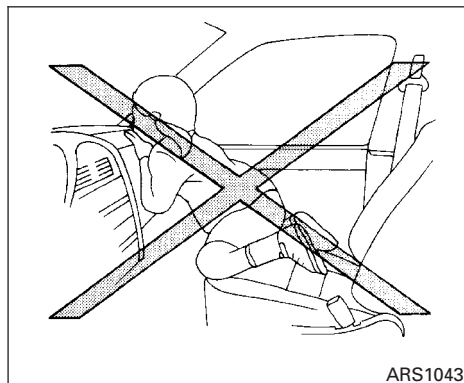
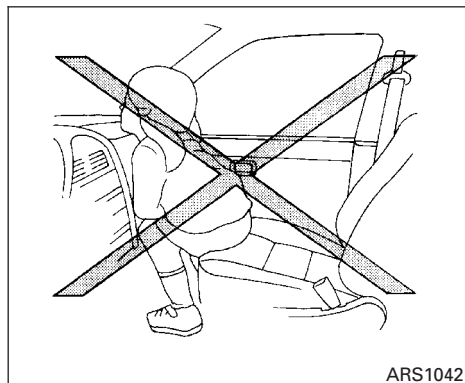
- The seat belts and the front air bags are most effective when you are sitting well back and upright in the seat. The front air bags inflate with great force. If you are unrestrained, leaning forward, sitting sideways or out of position in any way, you are at greater risk of injury or death in a crash. You may also receive serious or fatal injuries from the front air bag if you are up against it when it inflates. Always sit back against the seatback and as far away as practical from the steering wheel or instrument panel. Always use the seat belts.

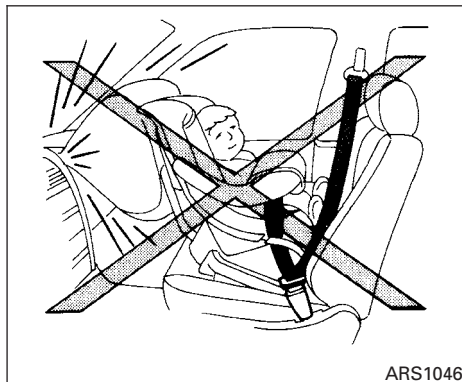
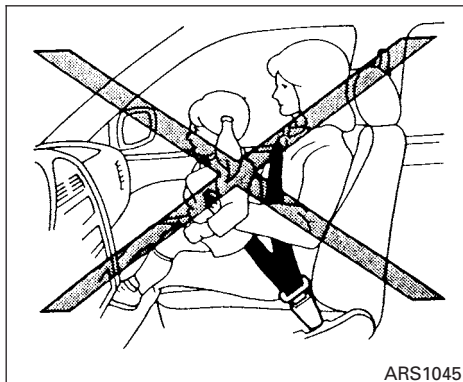
- Keep hands on the outside of the steering wheel. Placing them inside the steering wheel rim could increase the risk that they are injured when the front air bag inflates.
- The driver and front passenger seat belt buckles are equipped with sensors that detect if the seat belts are fastened. The air bag system monitors the severity of a collision and then inflates the air bags as needed based on belt usage. Failure to properly wear seat belts can increase the risk or severity of injury in an accident.



⚠ WARNING

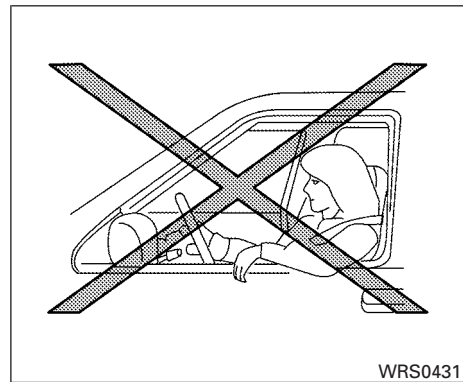
- **Never let children ride unrestrained or extend their hands or face out of the window. Do not attempt to hold them in your lap or arms. Some examples of dangerous riding positions are shown in the illustrations.**





⚠ WARNING

- Children may be severely injured or killed when the front air bags, side air bags or curtain air bags inflate if they are not properly restrained.
- Never install a rear-facing child restraint in the front seat. An inflating front air bag could seriously injure or kill your child. See “Child restraints” earlier in this section for details.



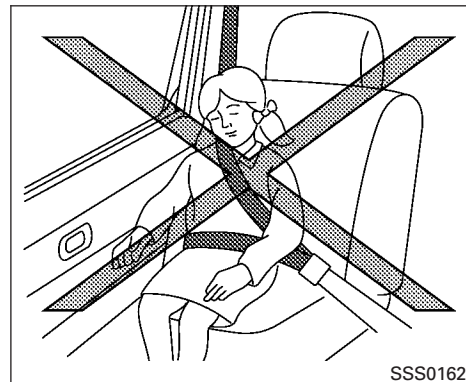
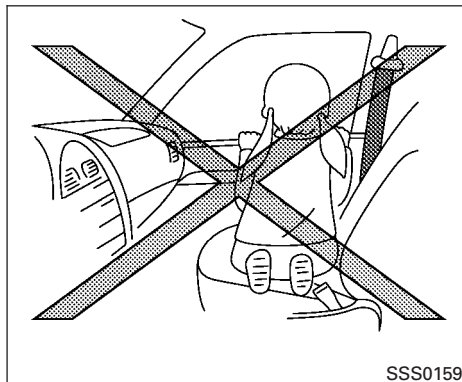
Do not lean against doors or windows.

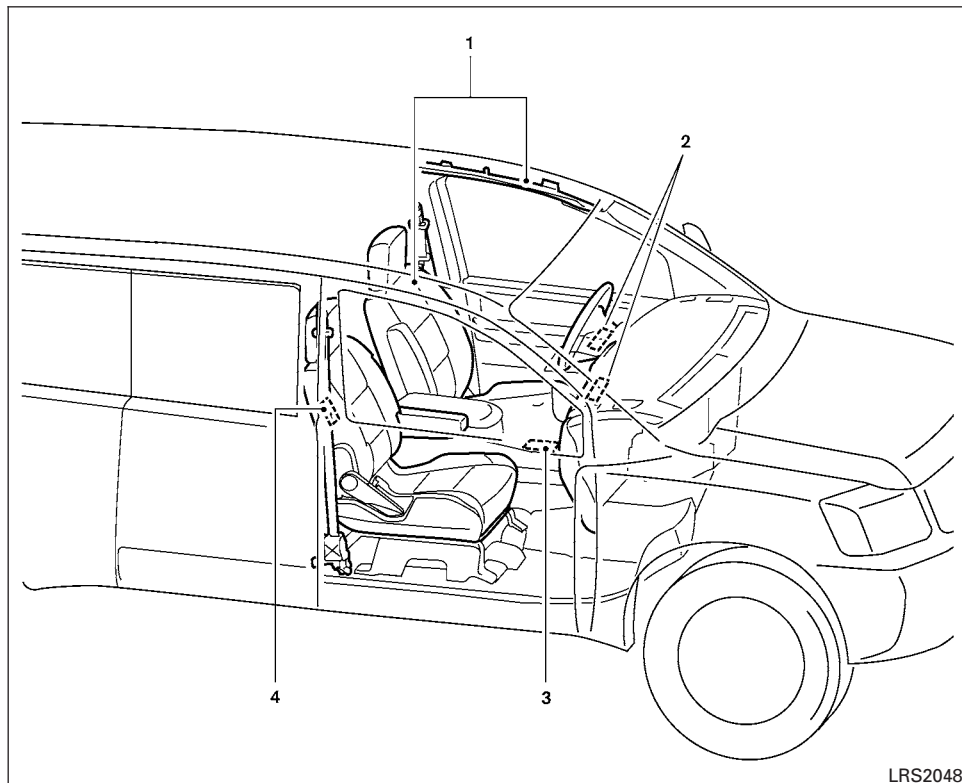
⚠ WARNING

Front seat-mounted side-impact supplemental air bags (if so equipped) and roof-mounted curtain side-impact supplemental air bags (if so equipped):

- The side air bags and curtain air bags ordinarily will not inflate in the event of a frontal impact, rear impact, rollover or lower severity side collision. Always wear your seat belts to help reduce the risk or severity of injury in various kinds of accidents.

- The seat belts, the side air bags and curtain air bags are most effective when you are sitting well back and upright in the seat with both feet on the floor. The side air bag and curtain air bag inflate with great force. Do not allow anyone to place their hand, leg or face near the side air bag on the side of the seatback of the front seat or near the side roof rails. Do not allow anyone sitting in the front seats to extend their hand out of the window or lean against the door. Some examples of dangerous riding positions are shown in the previous illustrations.
- Do not use seat covers on the front seatbacks. They may interfere with side air bag inflation.





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1. Roof-mounted curtain side-impact supplemental air bags (if so equipped)
2. Supplemental front-impact air bag modules
3. Air bag Control Unit (ACU)
4. Front seat-mounted side-impact supplemental air bag modules (if so equipped)

Supplemental front-impact air bag system

The driver supplemental front-impact air bag is located in the center of the steering wheel. The passenger supplemental front-impact air bag is mounted in the dashboard above the glove box. The front air bags are designed to inflate in higher severity frontal collisions, although they may inflate if the forces in another type of collision are similar to those of a higher severity frontal impact. They may not inflate in certain frontal collisions. Vehicle damage (or lack of it) is not always an indication of proper front air bag system operation.

If you have any questions about your air bag system, please contact NISSAN or your NISSAN dealer. If you are considering modification of your vehicle due to a disability, you may also contact NISSAN. Contact information is contained in the front of this Owner's Manual.

When a front air bag inflates, a fairly loud noise may be heard, followed by the release of smoke. This smoke is not harmful and does not indicate a fire. Care should be taken not to inhale it, as it may cause irritation and choking. Those with a history of a breathing condition should get fresh air promptly.

Front air bags, along with the use of seat belts, help to cushion the impact force on the face and chest of the front occupants. They can help save lives and reduce serious injuries. However, an inflating front air bag may cause facial abrasions or other injuries. Front air bags do not provide restraint to the lower body.

Seat belts should be correctly worn and the driver and passenger seated upright as far as practical away from the steering wheel or instrument panel. The front air bags inflate quickly in order to help protect the front occupants. Because of this, the force of the front air bag inflating can increase the risk of injury if the occupant is too close to, or is against, the front air bag module during inflation.

The front air bags deflate quickly after a collision.

The front air bags operate only when the ignition switch is placed in the ON or START position.

After placing the ignition switch in the ON position, the supplemental air bag warning light illuminates. The supplemental air bag warning light will turn off after about 7 seconds if the system is operational.

Other supplemental front-impact air bag precautions

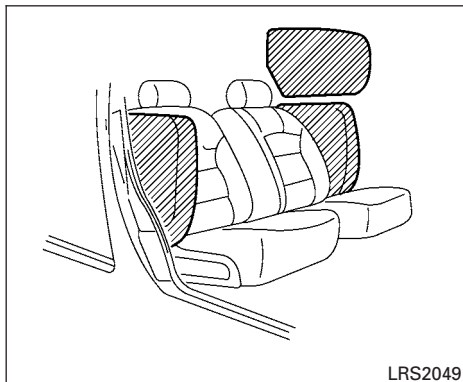
WARNING

- **Do not place any objects on the steering wheel pad or on the instrument panel. Also, do not place any objects between any occupant and the steering wheel or instrument panel. Such objects may become dangerous projectiles and cause injury if the front air bags inflate.**
- **Immediately after inflation, several front air bag system components will be hot. Do not touch them; you may severely burn yourself.**
- **Do not make unauthorized changes to your vehicle's electrical system or suspension system this could affect proper operation of the air bag system.**

- **Tampering with the front air bag system may result in serious personal injury. Tampering includes changes to the steering wheel and the instrument panel assembly by placing material over the steering wheel pad and above the instrument panel or by installing additional trim material around the air bag system.**

- **Work on and around the front air bag system should be done by a NISSAN dealer. Installation of electrical equipment should also be done by a NISSAN dealer. The Supplemental Restraint System (SRS) wiring should not be modified or disconnected. Unauthorized electrical test equipment and probing devices should not be used on the air bag system.**
- **A cracked windshield should be replaced immediately by a qualified repair facility. A cracked windshield could affect the function of the supplemental air bag system.**

*** The SRS wiring harness connectors are yellow and orange for easy identification.**



Front seat-mounted side-impact supplemental air bag (if so equipped) and roof-mounted curtain side-impact supplemental air bag (if so equipped) systems

The side air bags are located in the outside of the seatback of the front seats. The curtain air bags are located in the side roof rails. These systems are designed to meet voluntary guidelines to help reduce the risk of injury to out-of-position occupants. **However, all of the information, cautions and warnings in this manual still apply and must be followed.** The side air bags and curtain air bags are designed to inflate in

higher severity side collisions, although they may inflate if the forces in another type of collision are similar to those of a higher severity side impact. They are designed to inflate on the side where the vehicle is impacted. They may not inflate in certain side collisions.

Vehicle damage (or lack of it) is not always an indication of proper side air bag and curtain air bag operation.

When the side air bags and curtain air bags inflate, a fairly loud noise may be heard, followed by release of smoke. This smoke is not harmful and does not indicate a fire. Care should be taken not to inhale it, as it may cause irritation and choking. Those with a history of a breathing condition should get fresh air promptly.

Side air bags, along with the use of seat belts, help to cushion the impact force on the chest and pelvic area of the front occupants. Curtain air bags help to cushion the impact force to the head of occupants in the front seating positions. They can help save lives and reduce serious injuries. However, an inflating side air bag and curtain air bag may cause abrasions or other injuries. Side air bags and curtain air bags do not provide restraint to the lower body.

The seat belts should be correctly worn and the driver and passenger seated upright as far as practical away from the side air bag. The side air

bags and curtain air bags inflate quickly in order to help protect the occupants. Because of this, the force of the side air bag and curtain air bag inflating can increase the risk of injury if the occupant is too close to, or is against, these air bag modules during inflation. The side air bags and curtain air bag will deflate quickly after the collision is over.

The side air bags and curtain air bags operate only when the ignition switch is placed in the ON position.

After placing the ignition switch in the ON position, the supplemental air bag warning light illuminates. The supplemental air bag warning light will turn off after about 7 seconds if the system is operational.

⚠ WARNING

- **Do not place any objects near the seat-back of the front seats. Also, do not place any objects (an umbrella, bag, etc.) between the front door finisher and the front seat. Such objects may become dangerous projectiles and cause injury if a side air bag inflates.**

- Right after inflation, several side air bag and curtain air bag system components will be hot. Do not touch them; you may severely burn yourself.
- No unauthorized changes should be made to any components or wiring of the side air bag and curtain air bag systems. This is to prevent damage to or accidental inflation of the side air bag and curtain air bag or damage to the side air bag and curtain air bag systems.
- Do not make unauthorized changes to your vehicle's electrical system, suspension system or side panel. This could affect proper operation of the side air bag and curtain air bag systems.
- Tampering with the side air bag system may result in serious personal injury. For example, do not change the front seats by placing material near the seat-backs or by installing additional trim material, such as seat covers, around the side air bag.

- Work around and on the side air bag and curtain air bag system should be done by a NISSAN dealer. Installation of electrical equipment should also be done by a NISSAN dealer. The SRS wiring harnesses* should not be modified or disconnected. Unauthorized electrical test equipment and probing devices should not be used on the side air bag or curtain air bag system.

*** The SRS wiring harness connectors are yellow and orange for easy identification.**

When selling your vehicle, we request that you inform the buyer about the side air bag and curtain air bag systems and guide the buyer to the appropriate sections in this Owner's Manual.

Seat belts with pretensioners (Front seats)

WARNING

- The pretensioners cannot be reused after activation. They must be replaced together with the retractor and buckle as a unit.

- If the vehicle becomes involved in a collision but a pretensioner is not activated, be sure to have the pretensioner system checked and, if necessary, replaced by your NISSAN dealer.
- No unauthorized changes should be made to any components or wiring of the pretensioner system. This is to prevent damage to or accidental activation of the pretensioners. Tampering with the pretensioner system may result in serious personal injury.
- Work around and on the pretensioner system should be done by a NISSAN dealer. Installation of electrical equipment should also be done by a NISSAN dealer. Unauthorized electrical test equipment and probing devices should not be used on the pretensioner system.
- If you need to dispose of a pretensioner or scrap the vehicle, contact a NISSAN dealer. Incorrect disposal procedures could cause personal injury.

The pretensioner system may activate with the supplemental air bag system in certain types of collisions. Working with the seat belt retractor, the pretensioner helps tighten the seat belt when

the vehicle becomes involved in certain types of collisions, helping to restrain front seat occupants.

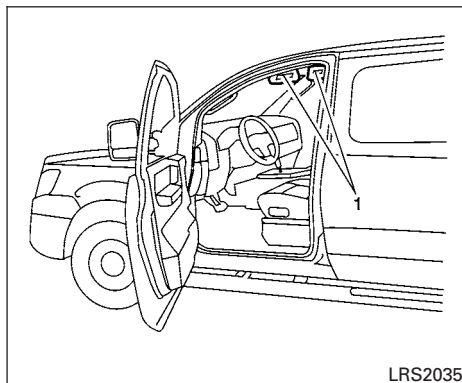
The pretensioner is encased with the seat belt retractor. These seat belts are used the same way as conventional seat belts.

When a pretensioner activates, smoke is released and a loud noise may be heard. This smoke is not harmful and does not indicate a fire. Care should be taken not to inhale it, as it may cause irritation and choking. Those with a history of a breathing condition should get fresh air promptly.

After pretensioner activation, load limiters allow the seat belt to release webbing (if necessary) to reduce forces against the chest.

The supplemental air bag warning light  is used to indicate malfunctions in the pretensioner system. (See "SUPPLEMENTAL AIR BAG WARNING LIGHT" in this section for more details.) If the operation of the supplemental air bag warning light indicates there is a malfunction, have the system checked by a NISSAN dealer.

When selling your vehicle, we request that you inform the buyer about the pretensioner system and guide the buyer to the appropriate sections in this Owner's Manual.



1. SRS Air bag warning labels

The warning labels are located on the surface of the sun visor.

SUPPLEMENTAL AIR BAG WARNING LABELS

Warning labels about the supplemental front-impact air bag system are placed in the vehicle as shown in the illustration.



SUPPLEMENTAL AIR BAG WARNING LIGHT

The supplemental air bag warning light, displaying  in the instrument panel, monitors the circuits for the air bag systems, pretensioners and all related wiring.

When the ignition switch is placed in the ON or START position, the supplemental air bag warning light illuminates for about 7 seconds and then turns off. This means the system is operational.

If any of the following conditions occur, the front air bag, side air bag and curtain air bag and pretensioner systems need servicing:

- The supplemental air bag warning light remains on after approximately 7 seconds.
- The supplemental air bag warning light flashes intermittently.
- The supplemental air bag warning light does not come on at all.

Under these conditions, the front air bag, side air bags and curtain air bag or pretensioner systems may not operate properly. They must be checked and repaired. Take your vehicle to the nearest NISSAN dealer.

WARNING

If the supplemental air bag warning light is on, it could mean that the front air bag, side air bags, curtain air bag and/or pretensioner systems will not operate in an accident. To help avoid injury to yourself or others, have your vehicle checked by a NISSAN dealer as soon as possible.

Repair and replacement procedure

The front air bags, side air bags, curtain air bags and pretensioners are designed to inflate on a one-time-only basis. As a reminder, unless it is damaged, the supplemental air bag warning light remains illuminated after inflation has occurred. Repair and replacement of these supplemental air bag systems should be done only by a NISSAN dealer.

When maintenance work is required on the vehicle, the front air bags, side air bags, curtain air bags, pretensioners and related parts should be pointed out to the person performing the maintenance. The ignition switch should always be in the LOCK position when working under the hood or inside the vehicle.

WARNING

- **Once a front air bag, side air bag, or curtain air bag has inflated, the air bag module will not function again and must be replaced. Additionally, the activated pretensioners must also be replaced. The air bag module and pretensioners should be replaced by a NISSAN dealer. The air bag module and pretensioners cannot be repaired.**

- **The front air bag, side air bag, curtain air bag systems and the pretensioner system should be inspected by a NISSAN dealer if there is any damage to the front end or side portion of the vehicle.**
- **If you need to dispose of the supplemental air bag, pretensioners or scrap the vehicle, contact a NISSAN dealer. Incorrect disposal procedures could cause personal injury.**

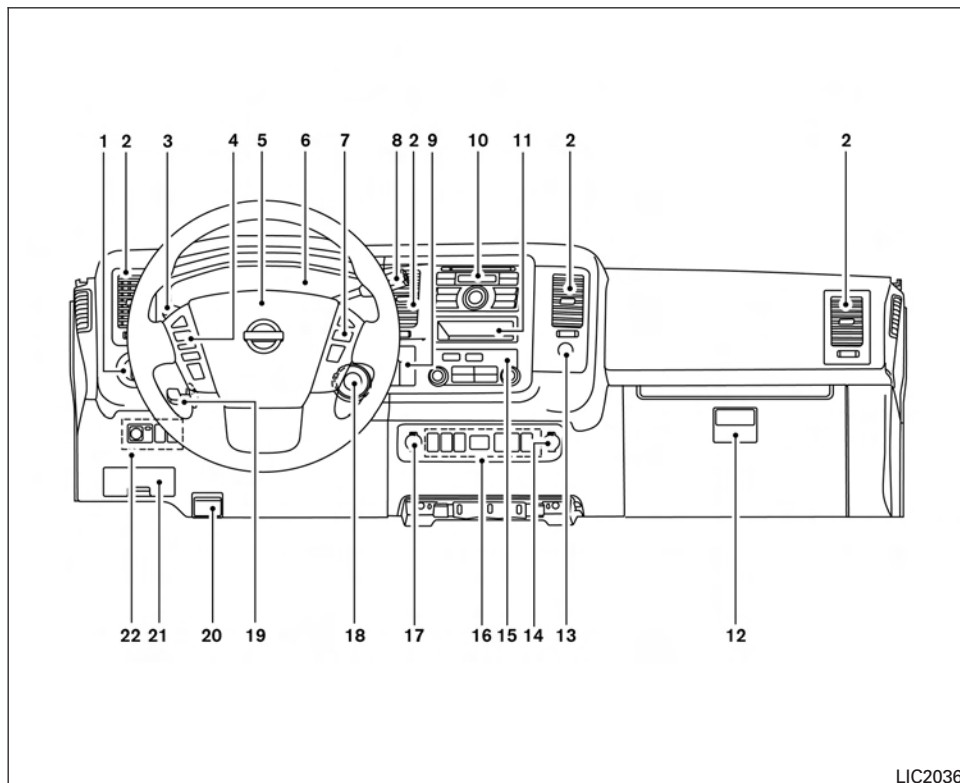
2 Instruments and controls

Instrument panel	2-2	Rear window and outside mirror (if so equipped)	
Meters and gauges	2-3	defroster switch	2-24
Speedometer and odometer	2-4	Headlight and turn signal switch	2-25
Tachometer	2-5	Headlight control switch	2-25
Engine coolant temperature gauge	2-5	Daytime running light system	2-26
Fuel gauge	2-6	Instrument brightness control	2-26
Engine oil pressure gauge	2-6	Turn signal switch	2-26
Voltmeter	2-7	Horn	2-27
Automatic transmission fluid temperature gauge	2-7	Vehicle Dynamic Control (VDC) off switch	2-27
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Checking bulbs	2-9	Rear sonar system off switch (if so equipped)	2-28
Warning lights	2-10	Tow mode switch (if so equipped)	2-29
Indicator lights	2-14	Power outlets	2-29
Audible reminders	2-16	12v outlets (if so equipped)	2-29
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Windshield wiper and washer switch	2-23	Cup holders	2-34
Switch operation	2-23	Glove box	2-34
		Seat pocket (if so equipped)	2-35
		Overhead console (if so equipped)	2-35

Console box (if so equipped)	2-36
D-Rings	2-39
Grocery hooks (if so equipped)	2-39
Rear door storage (if so equipped)	2-40
Windows	2-40

Power windows (if so equipped)	2-40
Manual windows (if so equipped)	2-42
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INSTRUMENT PANEL



1. Headlight switch (P. 2-25)
2. Vents (P. 4-13)
3. Windshield wiper/washer/turn signal switch (P. 2-23, 2-26)
4. Steering wheel switch for audio control/Bluetooth® Hands-Free Phone System (if so equipped) (P. 4-50, P. 4-52)
5. Driver supplemental air bag/horn (P. 1-28, P. 2-27)
6. Meters, gauges and warning/indicator lights (P. 2-3, 2-9)
7. Cruise control main/set switches (if so equipped) (P. 5-17)
8. Shift selector (P. 5-13)
9. Storage tray (P.2-32)
10. Audio system controls (P. 4-22/Navigation system* (if so equipped) (P. 4-39)
11. Storage tray (P.2-32)
12. Glove box (P. 2-34)
13. Hazard warning flasher switch (P. 6-2)
14. iPod® player/USB input jack (if so equipped) (P.4-47)
15. Climate controls (P. 4-13)

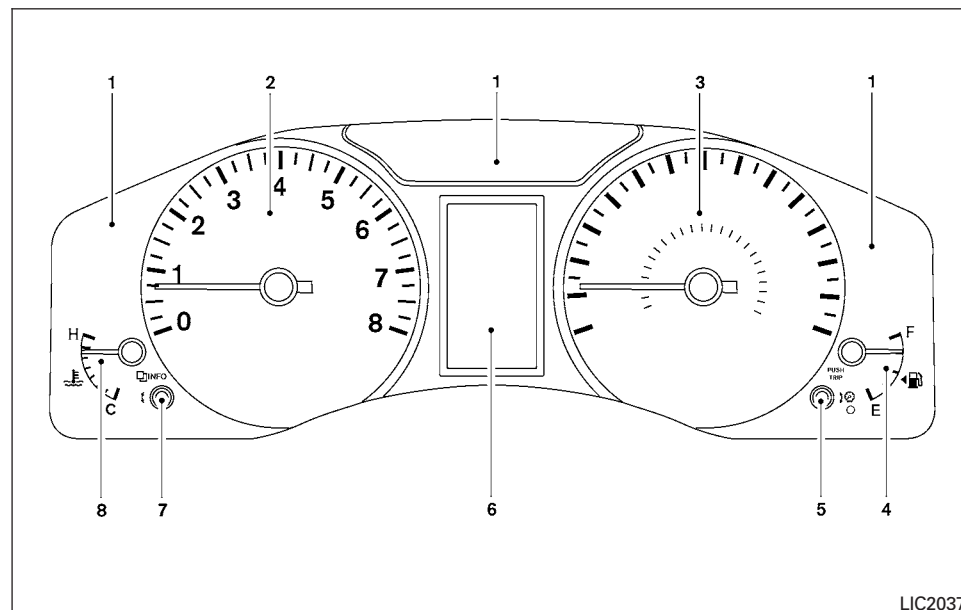
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METERS AND GAUGES

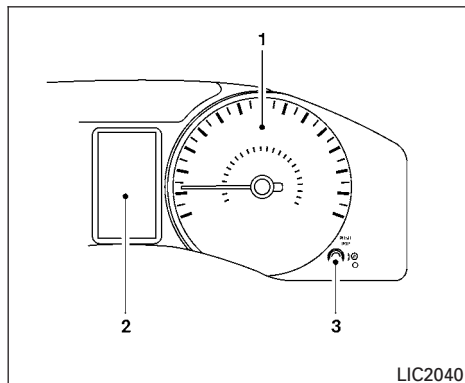
16. Rear sonar system off switch
(if so equipped) (P.2-28)
Tow mode ON switch (if so equipped)
(P.2-29)
Power inverter switch (if so equipped)
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17. 12v power outlet (P. 2-29)
18. Ignition switch (P. 5-8)
19. Tilt steering wheel control (P. 3-15)
20. Hood release switch (P. 3-12)
21. Fuse box (P. 8-22)
22. Outside power mirror switch
(if so equipped) (P. 3-17)
Vehicle Dynamic Control (VDC) OFF
switch (P.2-27)

*: Refer to the separate Navigation System Owner's Manual (if so equipped).

See the page number indicated in parentheses for operating details.



1. Warning/indicator lights	6. Odometer/Twin trip odometer/Vehicle Information Display/Automatic Transmission position indicator
2. Tachometer	7. Vehicle information/digital gauge change knob
3. Speedometer	8. Engine coolant temperature gauge
4. Fuel gauge	
5. Twin trip /instrument brightness control knob	



1. Speedometer
2. Odometer/twin trip display
3. Change knob

SPEEDOMETER AND ODOMETER

Speedometer

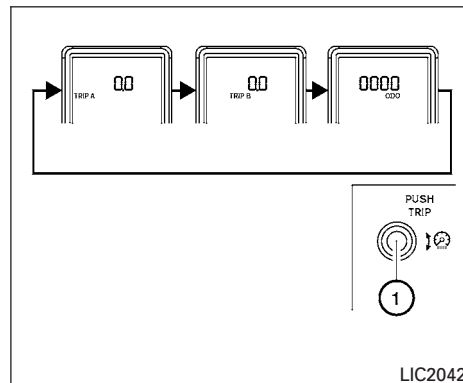
The speedometer indicates vehicle speed.

Odometer/Twin trip odometer

The odometer/twin trip odometer is displayed when the ignition switch is placed in the ON position.

The odometer records the total distance the vehicle has been driven.

The twin trip odometer records the distance of individual trips.



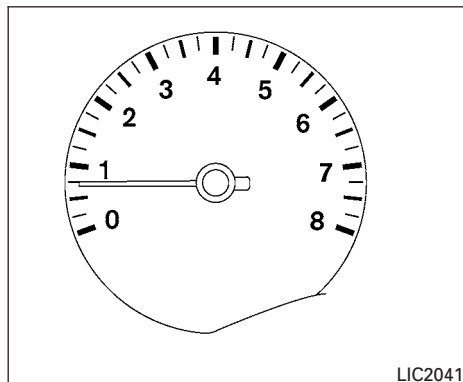
Changing the display:

Rotating ① counterclockwise changes the display as follows:

Odometer only → Trip **A** → Trip **B** → Odometer only

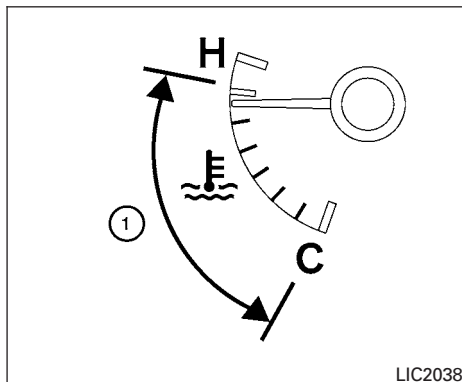
Resetting the trip odometer:

Press the PUSH TRIP knob ① for more than 1 second to reset the currently displayed trip odometer to zero.



TACHOMETER

The tachometer indicates engine speed in revolutions per minute (rpm).



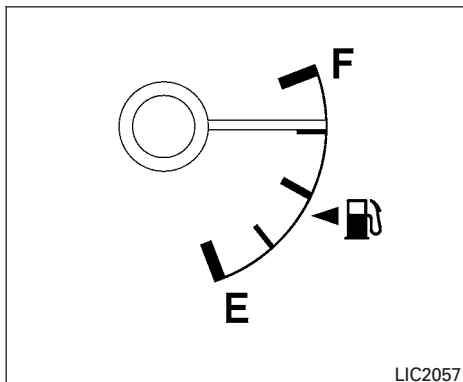
ENGINE COOLANT TEMPERATURE GAUGE

The gauge indicates the engine coolant temperature. The engine coolant temperature is within the normal range ① when the gauge needle points within the zone shown in the illustration.

The engine coolant temperature varies with the outside air temperature and driving conditions.

⚠ CAUTION

If the gauge indicates coolant temperature near the hot (H) end of the normal range, reduce vehicle speed to decrease temperature. If the gauge is over the normal range, stop the vehicle as soon as safely possible. If the engine is overheated, continued operation of the vehicle may seriously damage the engine. See "If your vehicle overheats" in the "In case of emergency" section for immediate action required.



FUEL GAUGE

The gauge indicates the **approximate** fuel level in the tank.

The gauge may move slightly during braking, turning, acceleration, or going up or down hills.

The gauge needle returns to E (Empty) after the ignition switch is placed in the OFF position.

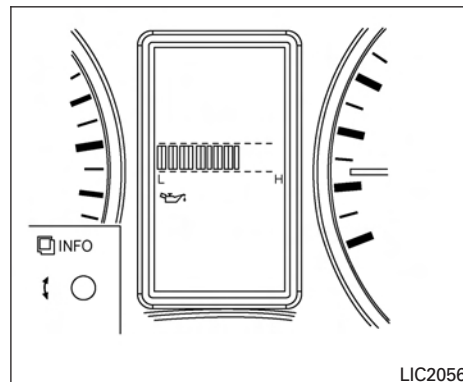
The low fuel warning light comes on when the amount of fuel in the tank is getting low.

Refill the fuel tank before the gauge registers E (Empty).

The  indicates that the fuel-filler door is located on the driver's side of the vehicle.

CAUTION

- If the vehicle runs out of fuel, the  malfunction indicator light may come on. Refuel as soon as possible. After a few driving trips, the  light should turn off. If the light remains on after a few driving trips, have the vehicle inspected by a NISSAN dealer.
- For additional information, see “Malfunction Indicator Light (MIL)” later in this section.

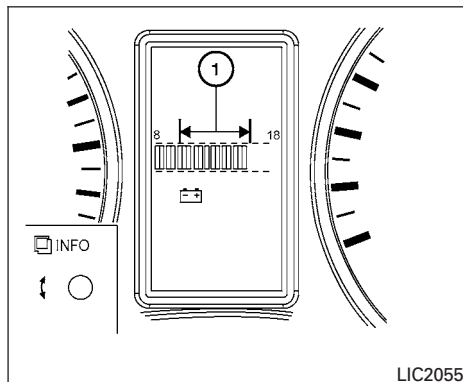


ENGINE OIL PRESSURE GAUGE

The gauge indicates the engine lubrication system oil pressure while the engine is running. The indication should be in the middle of the gauge when the engine is running. The digital gauge displays in the vehicle information display by pressing the INFO knob 1 time.

⚠ CAUTION

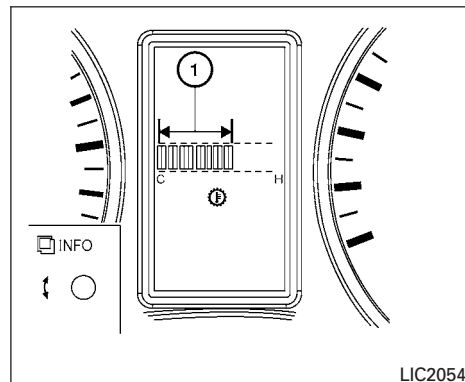
- This gauge is not designed to indicate low engine oil level. Use the dipstick to check the oil level. (See “Engine oil” in the “Maintenance and do-it-yourself” section.)
- If the gauge does not move with the proper amount of the engine oil, have the vehicle checked by a **NISSAN** dealer. Continued vehicle operation in such a condition could cause serious damage to the engine.



VOLTMETER

When the ignition switch is placed in the ON position, the voltmeter indicates the battery voltage. When the engine is running, it indicates the generator voltage. To view the digital gauge in the vehicle information display press the INFO knob 2 times.

While cranking the engine, the volts drop below the normal range. If the range is not within the normal range (11 – 15 volts) ① while the engine is running, it may indicate that the charging system is not functioning properly. Have the system checked by a **NISSAN** dealer.



AUTOMATIC TRANSMISSION FLUID TEMPERATURE GAUGE

This gauge indicates the temperature of the automatic transmission fluid. The automatic transmission fluid temperature is in the normal range ① when the gauge indication is within the zone shown in the illustration. To view the digital gauge in the vehicle information display press the INFO knob 3 times.

 CAUTION

- This gauge is not designed to indicate low automatic transmission fluid level. Use the dipstick to check the fluid level. (See “5-speed automatic transmission fluid” in the “Maintenance and do-it-yourself” section.)
- If the gauge indicates automatic transmission fluid temperature over the normal range, stop the vehicle as soon as safely possible. Have the vehicle checked by a NISSAN dealer. Continued operation of the vehicle may seriously damage the transmission.

WARNING/INDICATOR LIGHTS AND AUDIBLE REMINDERS

ABS or  Anti-lock Braking System (ABS) warning light	 Low fuel warning light	SET Cruise set switch indicator light (if so equipped)
AT CHECK Automatic Transmission check warning light	 Low tire pressure warning light	 High beam indicator light (blue)
 Automatic Transmission oil temperature warning light	 Low windshield-washer fluid warning light (if so equipped)	 Malfunction Indicator Light (MIL)
BRAKE or  Brake warning light	 Master warning light	 Security indicator light (if so equipped)
 Charge warning light	 Passenger's seat belt warning light	 Slip indicator light
 Door open warning light	 Supplemental air bag warning light	TOW Tow mode ON indicator light (if so equipped)
 Driver's seat belt warning light and chime	P Automatic Transmission position indicator light	 Turn signal/hazard indicator lights
 Engine oil pressure warning light	CRUISE Cruise main switch indicator light (if so equipped)	 Vehicle Dynamic Control (VDC) off indicator light

CHECKING BULBS

With all doors closed, apply the parking brake and place the ignition switch in the ON position without starting the engine. The following lights will come on:

 , **BRAKE** or  ,  , 

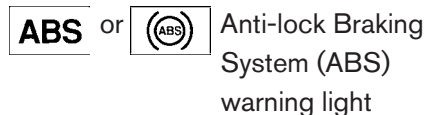
The following lights come on briefly and then go off:

ABS or  ,  ,  , **AT CHECK** , 

If any light fails to come on, it may indicate a burned-out bulb or an open circuit in the electrical system. Have the system repaired promptly.

WARNING LIGHTS

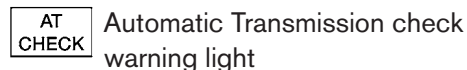
For additional information on warnings and indicators, see “Vehicle information display” later in this section.



When the ignition switch is placed in the ON position, the Anti-lock Braking System (ABS) warning light illuminates and then turns off. This indicates the ABS is operational.

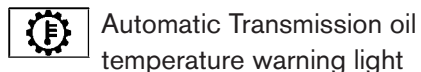
If the ABS warning light illuminates while the engine is running, or while driving, it may indicate the ABS is not functioning properly. Have the system checked by a NISSAN dealer.

If an ABS malfunction occurs, the anti-lock function is turned off. The brake system then operates normally, but without anti-lock assistance. See “Brake system” in the “Starting and driving” section.

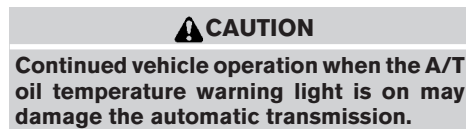


When the ignition switch is placed in the ON position, the light comes on for about 2 seconds. If the light comes on at any other time, it may

indicate the automatic transmission system is not functioning properly. Have the system checked by a NISSAN dealer.



This light comes on when the automatic transmission oil temperature is too high. If the light comes on while driving, reduce the vehicle speed as soon as safely possible until the light turns off.



This light functions for both the parking brake and the foot brake systems.

Parking brake indicator

When the ignition switch is placed in the ON position, the light comes on when the parking brake is applied.

Low brake fluid warning light

When the ignition switch is placed in the ON position, the light warns of a low brake fluid level. If the light comes on while the engine is running

with the parking brake not applied, stop the vehicle and perform the following:

1. Check the brake fluid level. Add brake fluid as necessary. See “Brake fluid” in the “Maintenance and do-it-yourself” section of this manual.
2. If the brake fluid level is correct, have the warning system checked by a NISSAN dealer.

⚠ WARNING

- **Your brake system may not be working properly if the warning light is on. Driving could be dangerous. If you judge it to be safe, drive carefully to the nearest service station for repairs. Otherwise, have your vehicle towed because driving it could be dangerous.**
- **Pressing the brake pedal with the engine stopped and/or a low brake fluid level may increase your stopping distance and braking will require greater pedal effort as well as pedal travel.**
- **If the brake fluid level is below the MINIMUM or MIN mark on the brake fluid reservoir, do not drive until the brake system has been checked at a NISSAN dealer.**



Charge warning light

If this light comes on while the engine is running, it may indicate the charging system is not functioning properly. Turn the engine off and check the generator belt. If the belt is loose, broken, missing, or if the light remains on, see a NISSAN dealer immediately.

CAUTION

Do not continue driving if the generator belt is loose, broken or missing.



Door open warning light

This light comes on when any of the doors are not closed securely while the ignition switch is in the ON position.



Driver's seat belt warning light and chime

The light and chime remind you to fasten your seat belt. The light illuminates whenever the ignition switch is placed in the ON or START position and remains illuminated until the driver's seat belt is fastened. At the same time, the chime sounds for about 6 seconds unless the driver's seat belt is securely fastened.

Refer to "Seat belts" in the "Safety—Seats, seat belts and supplemental restraint system" section for precautions on seat belt usage.



Engine oil pressure warning light

This light warns of low engine oil pressure. If the light flickers or comes on during normal driving, pull off the road in a safe area, stop the engine **immediately** and call a NISSAN dealer or other authorized repair shop.

The engine oil pressure warning light is not designed to indicate a low oil level. Use the dipstick to check the oil level. See "Engine oil" in the "Maintenance and do-it-yourself" section of this manual.

CAUTION

Running the engine with the engine oil pressure warning light on could cause serious damage to the engine almost immediately. Such damage is not covered by warranty. Turn off the engine as soon as it is safe to do so.



Low fuel warning light

This light comes on when the fuel level in the fuel tank is getting low. Refuel as soon as it is convenient, preferably before the fuel gauge reaches E (Empty). **There will be a small reserve of fuel in the tank when the fuel gauge needle reaches E (Empty).**



Low tire pressure warning light

Your vehicle is equipped with a Tire Pressure Monitoring System (TPMS) that monitors the tire pressure of all tires except the spare.

The low tire pressure warning light warns of low tire pressure or indicates that the TPMS is not functioning properly.

After the ignition switch is placed in the ON position, this light illuminates for about 1 second and turns off.

Low tire pressure warning:

If the vehicle is being driven with low tire pressure, the warning light will illuminate. A CHECK TIRE pressure warning also appears in the vehicle information display.

When the low tire pressure warning light illuminates, you should stop and adjust the tire pressure of all 4 tires to the recommended COLD tire pressure shown on the Tire and Loading Information label located in the driver's door opening. The low tire pressure warning light does not automatically turn off when the tire pressure is adjusted. After the tire is inflated to the recommended pressure, the vehicle must be driven at speeds above 16 MPH (25 km/h) to activate the TPMS and turn off the low tire pressure warning light. Use a tire pressure gauge to check the tire pressure.

The CHECK TIRE pressure warning is active as long as the low tire pressure warning light remains illuminated.

For additional information, see "Vehicle information display" in the "Instruments and controls" section and "Tire Pressure Monitoring System (TPMS)" in the "Starting and driving" section and in the "In case of emergency" section.

TPMS malfunction:

If the TPMS is not functioning properly, the low tire pressure warning light will flash for approximately 1 minute when the ignition switch is placed in the ON position. The light will remain on after the 1 minute. Have the system checked by a NISSAN dealer. The CHECK TIRE pressure warning does not appear if the low tire pressure warning light illuminates to indicate a TPMS malfunction.

For additional information, see "Tire Pressure Monitoring System (TPMS)" in the "Starting and driving" section and "Tire pressure" in the "Maintenance and do-it-yourself" section in this manual.

WARNING

- **If the light does not illuminate with the ignition switch in the ON position, have the vehicle checked by a NISSAN dealer as soon as possible.**

- **If the light illuminates while driving, avoid sudden steering maneuvers or abrupt braking, reduce vehicle speed, pull off the road to a safe location and stop the vehicle as soon as possible. Driving with under-inflated tires may permanently damage the tires and increase the likelihood of tire failure. Serious vehicle damage could occur and may lead to an accident and could result in serious personal injury. Check the tire pressure for all four tires. Adjust the tire pressure to the recommended COLD tire pressure shown on the Tire and Loading Information label located in the driver's door opening to turn the low tire pressure warning light OFF. If the light still comes on while driving after adjusting the tire pressure, a tire may be flat. 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 is replaced, tire pressure will not be indicated, the TPMS will not function and the low tire pressure warning light will flash for approximately 1 minute. The light will remain on after 1 minute. Contact your NISSAN dealer as soon as possible for tire replacement and/or system resetting.
- Replacing tires with those not originally specified by NISSAN could affect the proper operation of the TPMS.

CAUTION

- The TPMS is not a substitute for the regular tire pressure check. Be sure to check the tire pressure regularly.
- If the vehicle is being driven at speeds of less than 16 MPH (25 km/h), the TPMS may not operate correctly.
- Be sure to install the specified size of tires to the 4 wheels correctly.



Low windshield-washer fluid warning light (if so equipped)

This light comes on when the windshield-washer fluid is at a low level. Add windshield-washer fluid as necessary. See “Windshield-washer fluid” in the “Maintenance and do-it-yourself” section of this manual.



Master warning light

This light comes on when various vehicle information display warnings appear.



Passenger's seat belt warning light

The light reminds you to notify the passenger to fasten their seat belt. The light illuminates whenever the ignition is placed in the ON or START position and remains illuminated until the passenger's seat belt is fastened.

The light will remain on for 30 seconds when the vehicle is shifted out of P (Park) and the passenger seat belt is unfastened. If the passenger seat belt is fastened within 30 seconds, the light will turn off.

Refer to “Seat belts” in the “Safety—Seats, seat belts and supplemental restraint system” section for precautions on seat belt usage.



Supplemental air bag warning light

When the ignition switch is placed in the ON or START position, the supplemental air bag warning light illuminates for about 7 seconds and then turns off. This means the system is operational.

If any of the following conditions occur, the front air bag, side air bag, curtain air bag, and pretensioner seat belt systems need servicing and your vehicle must be taken to a NISSAN dealer:

- The supplemental air bag warning light remains on after approximately 7 seconds.
- The supplemental air bag warning light flashes intermittently.
- The supplemental air bag warning light does not come on at all.

Unless checked and repaired, the supplemental restraint systems (air bag systems) and/or the seat belts with pretensioner system may not function properly. For additional details see “Supplemental restraint system” in the “Safety—Seats, seat belts and supplemental restraint system” section of this manual.

WARNING

If the supplemental air bag warning light is on, it could mean that the front air bag, side air bag, curtain air bag and/or pretensioner systems will not operate in an accident. To help avoid injury to yourself or others, have your vehicle checked by a NISSAN dealer as soon as possible.

INDICATOR LIGHTS

For additional information on warnings and indicators, see “Vehicle information display” later in this section.



Automatic Transmission position indicator light

When the ignition switch is placed in the ON position, this indicator light shows the automatic transmission selector position. See “Driving the vehicle” in the “Starting and driving” section of this manual.



Cruise main switch indicator light (if so equipped)

The light comes on when the cruise control main switch is pushed. The light goes out when the main switch is pushed again. When the cruise

main switch indicator light comes on, the cruise control system is operational.

See “Cruise control” in the “Starting and driving” section.



Cruise set switch indicator light (if so equipped)

The light comes on while the vehicle speed is controlled by the cruise control system. If the light blinks while the engine is running, it may indicate the cruise control system is not functioning properly. Have the system checked by a NISSAN dealer.



High beam indicator light (blue)

This blue light comes on when the headlight high beams are on and goes out when the low beams are selected.

The high beam indicator light also comes on when the passing signal is activated.



Malfunction Indicator Light (MIL)

If this indicator light comes on steady or blinks while the engine is running, it may indicate a potential emission control malfunction.

The  may also come on steady if the fuel-filler cap is loose or missing, or if the vehicle runs out of fuel. Check to make sure the fuel-filler cap is installed and closed tightly, and that the vehicle has at least 3 gallons (11.4 liters) of fuel in the fuel tank.

After a few driving trips, the  light should turn off if no other potential emission control system malfunction exists.

When the ignition switch is in the ON position, sometimes the indicator light may illuminate for 20 seconds and then blink for 10 seconds, without the engine running. This is due to a function of checking the engine control system, and it is not a malfunction. After a few normal drives, this function will not occur and the  stays illuminated with the ignition switch in the ON position.

CAUTION

Incorrect setting of the engine control system may lead to non-compliance of local and national emission laws and regulations.

Operation

The Malfunction Indicator Light will come on in one of two ways:

- **Malfunction Indicator Light on steady** — An emission control system malfunction has been detected. Check the fuel-filler cap if the LOOSE FUEL CAP warning appears in the vehicle information display. If the fuel-filler cap is loose or missing, tighten or install the cap and continue to drive the vehicle. The  light should turn off after a few driving trips. If the  light does not turn off after a few driving trips, have the vehicle inspected by a NISSAN dealer. You do not need to have your vehicle towed to the dealer.
- **Malfunction Indicator Light blinking** — An engine misfire has been detected which may damage the emission control system. To reduce or avoid emission control system damage:
 - do not drive at speeds above 45 MPH (72 km).
 - avoid hard acceleration or deceleration.
 - avoid steep uphill grades.
 - if possible, reduce the amount of cargo being hauled or towed.

The Malfunction Indicator Light may stop blinking and come on steady. Have the vehicle inspected by a NISSAN dealer. You do not need to have your vehicle towed to the dealer.

CAUTION

Continued vehicle operation without having the emission control system checked and repaired as necessary could lead to poor driveability, reduced fuel economy, and possible damage to the emission control system.



Security indicator light (if so equipped)

This light blinks whenever the ignition switch is in the LOCK, OFF or ACC position. This function indicates the security system equipped on the vehicle is operational.

For additional information, see “Security systems” later in this section.



Slip indicator light

This indicator will blink when the VDC system or the traction control system is operating, thus alerting that the vehicle is nearing its traction limits. The road surface may be slippery.



Tow mode ON indicator light (if so equipped)

This light comes on when the tow mode function is ON.



Turn signal/hazard indicator lights

The appropriate light flashes when the turn signal switch is activated.

Both lights flash when the hazard switch is turned on.



Vehicle Dynamic Control (VDC) off indicator light

This indicator light comes on when the Vehicle Dynamic Control off switch is pushed to OFF. This indicates the Vehicle Dynamic Control system is not operating.

Push the Vehicle Dynamic Control off switch again or restart the engine and the system will operate normally. See “Vehicle Dynamic Control (VDC) system” in the “Starting and driving” section of this manual.

VEHICLE INFORMATION DISPLAY

The Vehicle Dynamic Control light also comes on when you place the ignition switch in the ON position. The light will turn off after about 2 seconds if the system is operational. If the light stays on or comes on along with the  indicator light while you are driving, have the Vehicle Dynamic Control system checked by a NISSAN dealer.

While the Vehicle Dynamic Control system is operating, you might feel slight vibration or hear the system working when starting the vehicle or accelerating, but this is normal.

AUDIBLE REMINDERS

Brake pad wear warning

The disc brake pads have audible wear warnings. When a disc brake pad requires replacement, it makes a high pitched scraping sound when the vehicle is in motion, whether or not the brake pedal is depressed. Have the brakes checked as soon as possible if the warning sound is heard.

Key reminder chime

A chime sounds if the driver's door is opened while the key is left in the ignition switch. Remove the key and take it with you when leaving the vehicle.

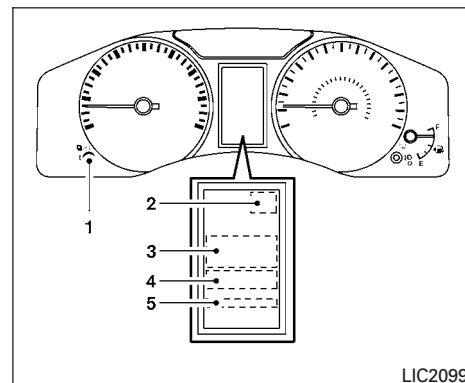
Light reminder chime

With the ignition switch placed in the OFF position, a chime sounds when the driver's door is opened if the headlights or parking lights are on.

Turn the headlight control switch off before leaving the vehicle.

Parking brake reminder chime

A chime sounds if the parking brake is set and the vehicle is driven.



The vehicle information display is located between the speedometer and the tachometer.

1. INFO knob
2. Outside temperature
3. Digital gauges
4. Message center/maintenance icons
5. Range — Avg MPG — Avg MPH — Time —
Tire pressures — Settings —
Warnings/Message center

HOW TO USE THE VEHICLE INFORMATION DISPLAY

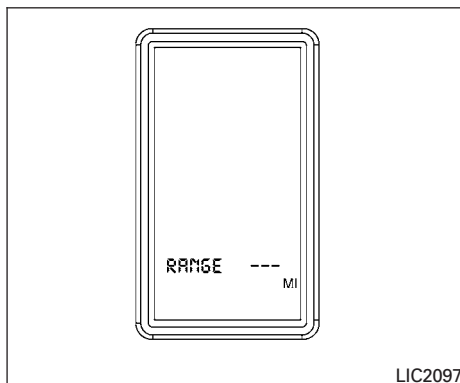
Rotate the  knob, located on the left of the instrument panel just behind the steering wheel, to display the following modes:

Range → Avg MPG → Avg MPH → Time → Tire Pressures → Settings → Warnings

The icons at the bottom of the display screen show the options available:

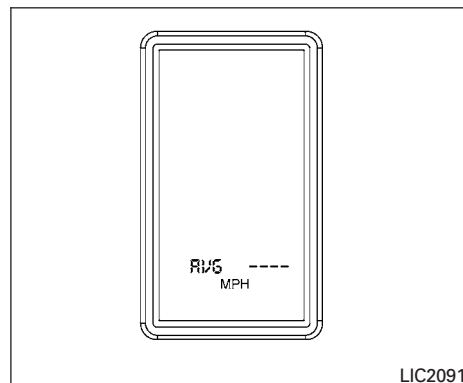
ENTER — Press the  INFO knob to select a highlighted option.

HOLD:RESET — Press the  INFO knob for more than 1 second to reset the selected item.



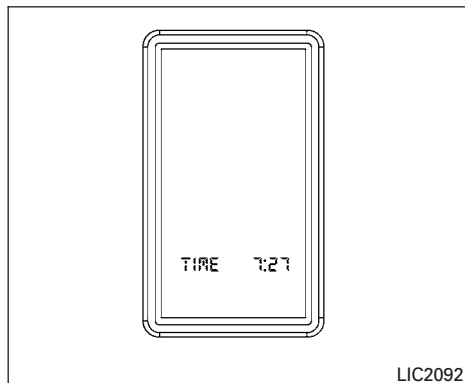
Range mode

The range mode can be selected to give you an estimation of the distance that can be driven before refueling. The range is constantly calculated based on the amount of fuel in the fuel tank and the actual fuel consumption.



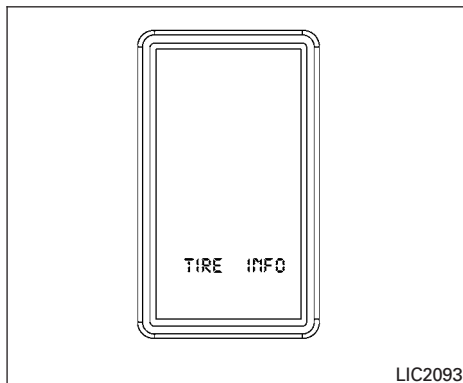
Average speed mode

The average speed mode can be selected to display the average miles per hour since the last reset.



Time (elapsed) mode

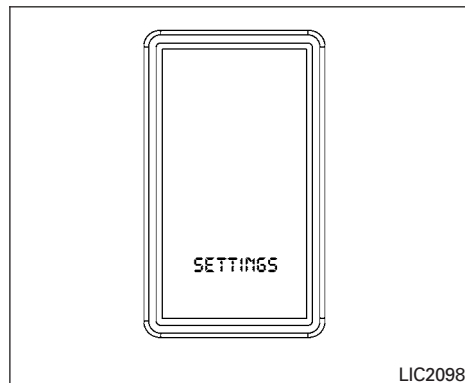
The time (elapsed) mode can be selected to show the time driven since the last reset.



Tire pressure information mode

The specific tire pressure of each tire (except the spare) can be viewed by pressing the INFO knob:

- Front left — FL PSI (KPA)
- Front right — FR PSI (KPA)
- Rear left — RL PSI (KPA)
- Rear right — RR PSI (KPA)



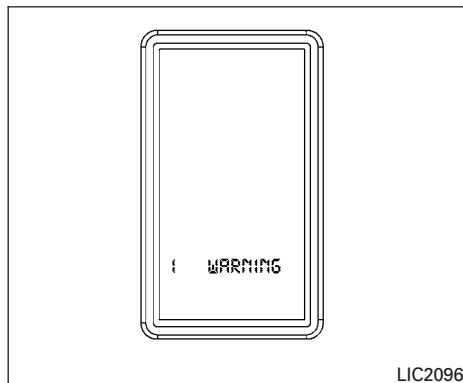
Setting mode

The setting mode allows you to set reminders or preferences for maintenance intervals, reset the TPMS after rotating the tires or to change the unit of the display.

In the setting mode screen, rotate the  knob to select the following settings:

Press  to select and change one of the following menu items.

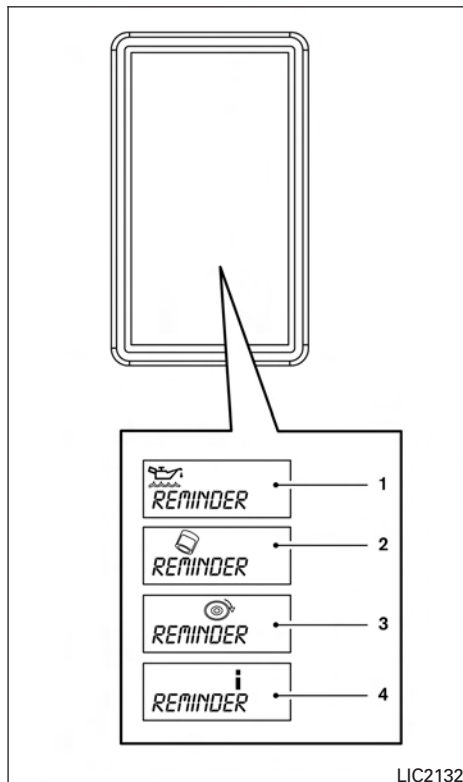
- Maintenance
- Reset TPMS
- Unit (US — METRIC)



Warning mode

The warning mode can be selected to view any warnings that may be present. Once the screen is selected you have the option of skipping the warning or viewing it in detail.

Warnings can be present for issues such as low tire pressure or a loose fuel cap. For more information about potential warnings see "Vehicle information display warnings and indicators" later in this section.



Indicators for maintenance

1. Engine oil replacement indicator
This indicator and REMINDER appears when the customer set distance comes for changing the engine oil. You can set or reset the distance for changing the engine oil. See "Setting mode" earlier in this section.
2. Oil filter replacement indicator
This indicator and REMINDER appears when the customer set distance comes for replacing the oil filter. You can set or reset the distance for replacing the oil filter. See "Setting mode" earlier in this section.
3. Tire rotation indicator
This indicator and REMINDER appears when the customer set distance comes for rotating the tires. See "Setting mode" earlier in this section.

WARNING

The tire rotation indicator is not a substitute for regular tire checks, including tire pressure checks. See “Changing Wheels and Tires” in “Maintenance & Do-It-Yourself” section. Many factors including tire inflation, alignment, driving habits and road conditions affect tire wear and when tires should be replaced. Setting the tire replacement indicator for a certain driving distance does not mean your tires will last that long. Use the tire replacement indicator as a guide only and always perform regular tire checks. Failure to perform regular tire checks, including tire pressure checks could result in tire failure. Serious vehicle damage could occur and may lead to a collision, which could result in serious personal injury or death.

4. Other indicator

This indicator and REMINDER message appears when the customer's set distance is achieved. This reminder can be used for other maintenance items such as air filter, brakes, or washer fluid. You can set or reset the distance for this reminder. See “Setting mode” earlier in this section. For scheduled maintenance items and intervals, see your “NISSAN Service and Maintenance Guide.”

Reset TPMS

From the setting mode screen rotate the  knob to select RESET TPMS. For additional information on the reset procedure, see “TPMS sensor reset” in the “Maintenance and do-it-yourself” section.

Vehicle information display warnings and indicators

PARK BRAKE warning

This warning illuminates in the message area of the vehicle information display when the parking brake is set and the vehicle is driven.

LOW FUEL warning

This warning illuminates in the message area of the vehicle information display when the fuel level in the fuel tank is getting low. Refuel as soon as it is convenient, preferably before the fuel gauge reaches E (Empty). **There will be a small reserve of fuel in the tank when the fuel gauge needle reaches E (Empty).**

CHECK TIRE pressure warning

This warning appears and alternates between CHECK TIRE, tire location(s) and pressures(s), when the low tire pressure warning light in the meter illuminates and low tire pressure is detected.

Example:

CHECK TIRE → RL 38 PSI → RR 39 PSI → CHECK TIRE

If this warning appears, stop the vehicle and adjust the tire pressure to the recommended COLD tire pressure shown on the Tire and Loading Information label. See “Low tire pressure warning light” earlier in this section and “Tire Pressure Monitoring System (TPMS)” in the “Starting and driving” section.

TPMS ERROR warning

This warning appears in message area of the vehicle information display if the TPMS is not functioning properly. Have the system checked by a NISSAN dealer.

LOW OIL P(ressure) warning

This warning appears in message area of the vehicle information display if the low oil pressure is detected. This gauge is not designed to indicate low oil level. **The low oil pressure warning is not designed to indicate a low oil level.** Use the dipstick to check the oil level. See “Engine oil” in the “Maintenance and do-it-yourself” section.

SECURITY SYSTEMS

LO VOLTAGE warning

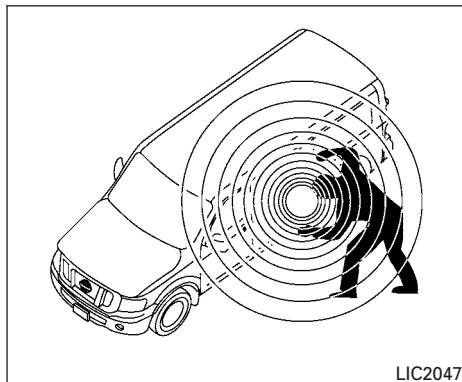
This warning appears in message area of the vehicle information display if the system detects that the charging system is not functioning properly. Have the system checked by a NISSAN dealer. For additional information, see "Voltmeter" earlier in this section.

LOOSE FUEL CAP warning

This warning appears in the message area of the vehicle information display when the fuel-filler cap is not tightened correctly after the vehicle has been refueled. See "Fuel-filler cap" in the "Pre-driving checks and adjustments" section.

A/T TEMP warning

This light comes on when the automatic transmission oil temperature is too high. If the message displays in the message area of the vehicle information display during normal driving, pull off the road in a safe area, stop the engine **immediately** and call a NISSAN dealer.



Your vehicle may have two types of security systems:

- Vehicle security system (if so equipped)
- NISSAN Vehicle Immobilizer System

VEHICLE SECURITY SYSTEM (if so equipped)

The vehicle security system provides visual and audible alarm signals if someone opens the doors when the system is armed. It is not, however, a motion detection type system that activates when a vehicle is moved or when a vibration occurs.

The system helps deter vehicle theft but cannot prevent it, nor can it prevent the theft of interior or exterior vehicle components in all situations. Always secure your vehicle even if parking for a brief period. Never leave your keys in the ignition, and always lock the vehicle when unattended. Be aware of your surroundings, and park in secure, well-lit areas whenever possible.

Many devices offering additional protection, such as component locks, identification markers, and tracking systems, are available at auto supply stores and specialty shops. Your NISSAN dealer may also offer such equipment. Check with your insurance company to see if you may be eligible for discounts for various theft protection features.

How to arm the vehicle security system

1. Close all windows. **(The system can be armed even if the windows are open.)**
2. Remove the key from the ignition switch.
3. Close all doors. Lock all doors. The doors can be locked with the key, power door lock switch (if the door is opened, locked and then closed), or with the keyfob.

Keyfob operation:

- Push the  button on the keyfob. All doors lock. The hazard lights flash twice and the horn beeps once to indicate all doors are locked.
- When the  button is pushed with all doors locked, the hazard lights flash twice and the horn beeps once as a reminder that the doors are already locked.

The horn may or may not beep. Refer to “Silencing the horn beep feature” in the “Pre-driving checks and adjustments ” section.

4. Confirm that the  indicator light comes on. The  light stays on for about 30 seconds. The vehicle security system is now pre-armed. After about 30 seconds the vehicle security system automatically shifts into the armed phase. The  light begins to flash once every 3 seconds. If, during the 30-second pre-arm time period, the door is unlocked by the key or the keyfob, or the ignition switch is placed to ACC or ON, the system will not arm.

- **If the key is turned slowly when locking the door, the system may not arm. Furthermore, if the key is turned beyond the vertical position toward the unlock position to remove the key, the system may be disarmed when the key is removed. If the indicator light fails to glow for a period of time, unlock the door once and lock it again.**
- **Even when the driver and/or passengers are in the vehicle, the system will arm with all doors closed and locked with the ignition switch in the OFF position.**

Vehicle security system activation

The vehicle security system will give the following alarm:

- The headlights blink and the horn sounds intermittently.
- The alarm automatically turns off after a period of time. However, the alarm reactivates if the vehicle is tampered with again. The alarm can be shut off by unlocking the driver's door with the key or by pressing the  button on the keyfob.

The alarm is activated by:

- opening a door without using the key or keyfob (even if the door is unlocked by using the inside lock knob or the power door lock switch).

How to stop an activated alarm

The alarm stops only by unlocking the driver's door with the key or by pressing the  button on the keyfob.

NISSAN VEHICLE IMMOBILIZER SYSTEM (if so equipped)

The NISSAN Vehicle Immobilizer System will not allow the engine to start without the use of a registered key.

If the engine fails to start using a registered key (for example, when interference is caused by another registered key, an automated toll road device or automatic payment device on the key ring), restart the engine using the following procedures:

1. Leave the ignition switch in the ON position for approximately 5 seconds.
2. Turn the ignition switch to the OFF or LOCK position, and wait approximately 10 seconds.

3. Repeat steps 1 and 2.
4. Restart the engine while holding the device (which may have caused the interference) separate from the registered key.

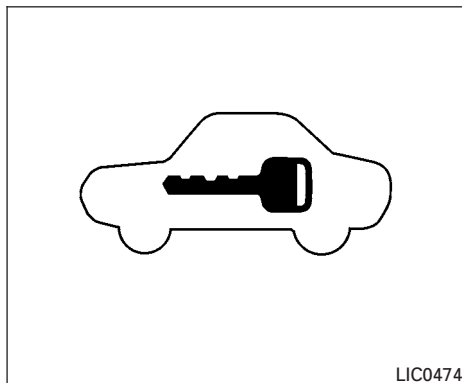
If the no start condition re-occurs, NISSAN recommends placing the registered key on a separate key ring to avoid interference from other devices.

Statement related to Section 15 of FCC Rules for NISSAN Vehicle Immobilizer System (CONT ASSY — IMMOBILIZER, ANT ASSY — IMMOBILIZER)

This device complies with part 15 of the FCC Rules and RSS-210 of Industry Canada. 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 of the device.

CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.



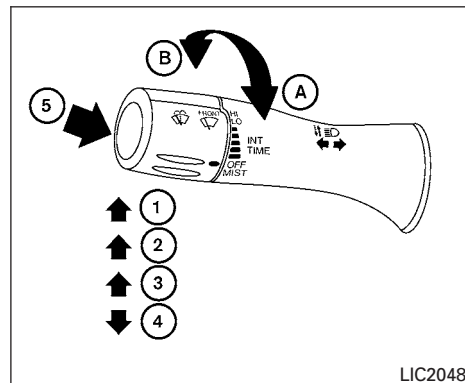
Security indicator light

The security indicator light blinks whenever the ignition switch is placed in the LOCK, OFF or ACC position. This function indicates the NISSAN Vehicle Immobilizer System is operational.

If the NISSAN Vehicle Immobilizer System is malfunctioning, the light will remain on while the ignition switch is placed in the ON position.

If the light still remains on and/or the engine will not start, see a NISSAN dealer for NISSAN Vehicle Immobilizer System service as soon as possible. Please bring all registered keys that you have when visiting your NISSAN dealer for service.

WINDSHIELD WIPER AND WASHER SWITCH



SWITCH OPERATION

The windshield wiper and washer operates when the ignition switch is in the ON position.

Push the lever down to operate the wiper at the following speed:

- ① Intermittent (INT TIME) - intermittent operation, can be adjusted by turning the knob from OFF, (A) (Slower) to (B) (Faster) in 5 incremental steps.
- ② Wiper Low (LO) — continuous low speed operation can be adjusted by turning the knob from (A) to (B) to the LO position.

- ③ Wiper High (HI) — continuous high speed operation can be adjusted by turning the knob from (A) to (B) to the HI position.
- ④ Wiper MIST — one sweep operation of the wiper can be adjusted by turning the knob from (B) to (A). The knob will automatically return to the OFF position after releasing.
- ⑤ Windshield washer — push the button in as shown to operate the washer, the wiper will also operate several times.

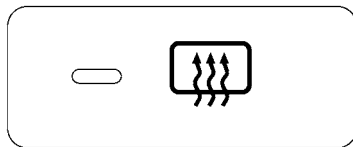
WARNING

In freezing temperatures the washer solution may freeze on the windshield and obscure your vision which may lead to an accident. Warm the windshield with the defroster before you wash the windshield.

CAUTION

- **Do not operate the washer continuously for more than 30 seconds.**
- **Do not operate the washer if the reservoir is empty.**
- **Do not fill the windshield-washer fluid reservoir with washer fluid concentrates at full strength. Some methyl alcohol based washer fluid concentrates may permanently stain the grille if spilled while filling the windshield-washer fluid reservoir.**
- **Pre-mix washer fluid concentrates with water to the manufacturer's recommended levels before pouring the fluid into the windshield-washer fluid reservoir. Do not use the windshield-washer fluid reservoir to mix the washer fluid concentrate and water.**

REAR WINDOW AND OUTSIDE MIRROR (if so equipped) DEFROSTER SWITCH



LIC2061

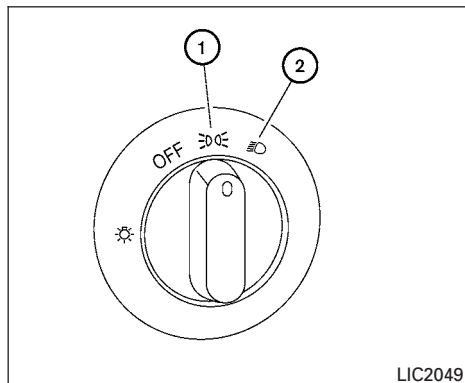
To defrost the rear window glass, start the engine and push the rear window defroster switch on. The rear window defroster indicator light comes on. Push the switch again to turn the defroster off.

The rear window defroster automatically turns off after approximately 15 minutes.

CAUTION

When cleaning the inner side of the rear window, be careful not to scratch or damage the rear window defroster.

HEADLIGHT AND TURN SIGNAL SWITCH



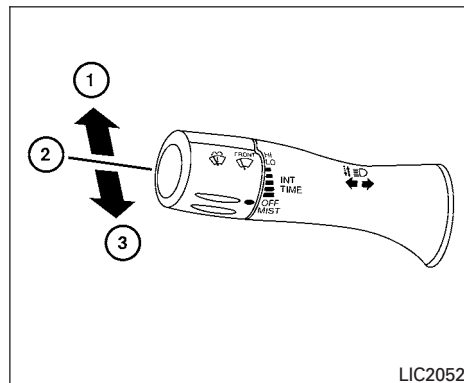
HEADLIGHT CONTROL SWITCH

Lighting

- ① When turning the switch to the  position, the front parking, tail, license plate and instrument panel lights come on.
- ② When turning the switch to the  position, the headlights come on and all the other lights remain on.

CAUTION

Use the headlights with the engine running to avoid discharging the vehicle battery.



Headlight beam select

- ① To select the high beam function, push the lever forward. The high beam lights come on and the  light illuminates.
- ② Pull the lever back to select the low beam.
- ③ Pulling and releasing the lever flashes the headlight high beams on and off.

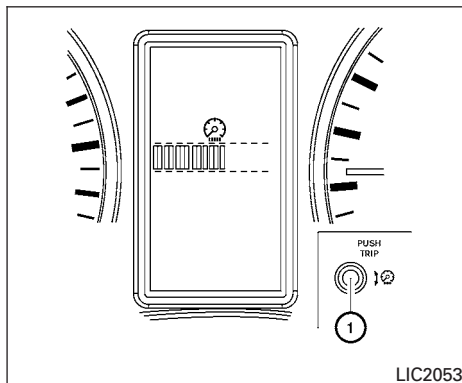
DAYTIME RUNNING LIGHT SYSTEM

The headlights automatically illuminate at a reduced intensity when the engine is started with the parking brake released. The daytime running lights operate with the headlight switch in the OFF position or in the  position. Turn the headlight switch to the  position for full illumination when driving at night.

If the parking brake is applied before the engine is started, the daytime running lights do not illuminate. The daytime running lights illuminate when the parking brake is released. The daytime running lights will remain on until the ignition switch is placed in the OFF position.

⚠ WARNING

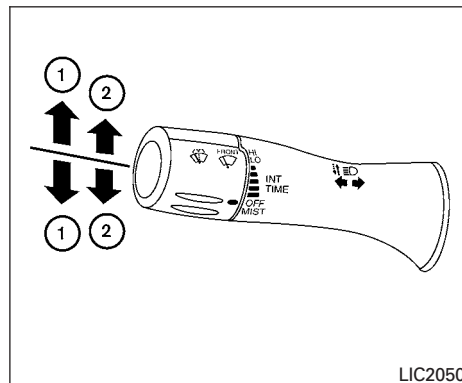
When the daytime running light system is active, tail lights on your vehicle are not on. It is necessary at dusk to turn on your headlights. Failure to do so could cause an accident injuring yourself and others.



INSTRUMENT BRIGHTNESS CONTROL

The instrument brightness control operates when the headlight control switch is in the  or  position.

Turn the control ① to adjust the brightness of the instrument panel lights when driving at night.



TURN SIGNAL SWITCH

Turn signal

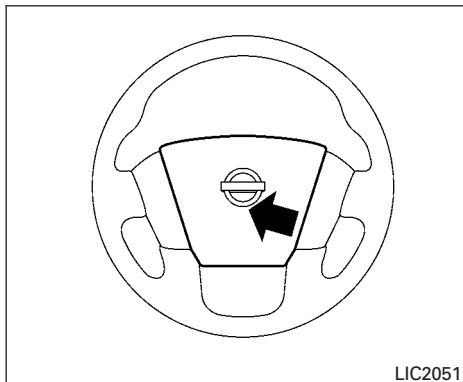
- ① Move the lever up or down to signal the turning direction. When the turn is completed, the turn signals cancel automatically.

Lane change signal

- ② To signal a lane change, move the lever up or down to the point where the indicator light begins to flash, but the lever does not latch.

The turn signal will flash three times automatically.

HORN

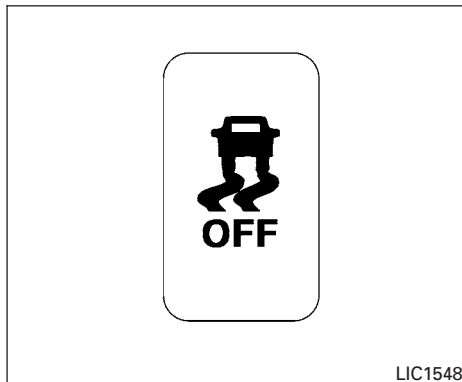


To sound the horn, push near the horn icon of the steering wheel.

WARNING

Do not disassemble the horn. Doing so could affect proper operation of the supplemental front air bag system. Tampering with the supplemental front air bag system may result in serious personal injury.

VEHICLE DYNAMIC CONTROL (VDC) OFF SWITCH



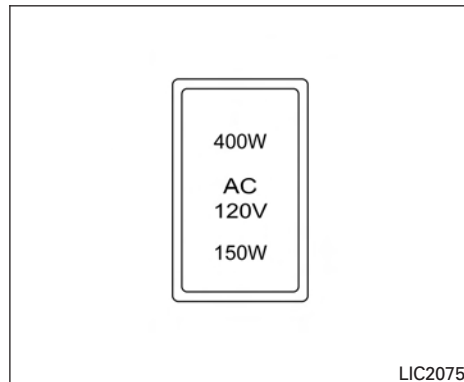
The vehicle should be driven with the Vehicle Dynamic Control (VDC) system on for most driving conditions.

If the vehicle is stuck in mud or snow, the VDC system reduces the engine output to reduce wheel spin. The engine speed will be reduced even if the accelerator is depressed to the floor. If maximum engine power is needed to free a stuck vehicle, turn the VDC system off.

To turn off the VDC system, push the VDC OFF switch. The  indicator will come on.

Push the VDC OFF switch again or restart the engine to turn on the system. See "Vehicle Dynamic Control (VDC) system" in the "Starting and driving" section.

POWER INVERTER SWITCH (if so equipped)



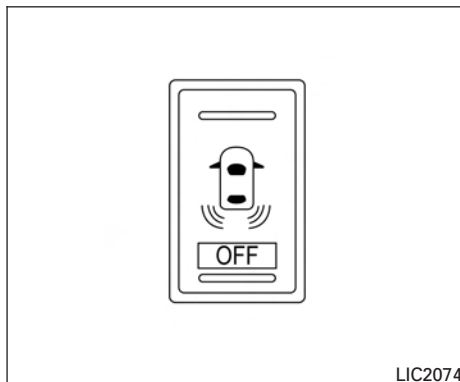
To use the outlets for devices that require 120v power, place the ignition in the ON position and push the power inverter switch.

The 400W or 150W on the switch will illuminate according to the mode selected. Only the 150W is available when the ignition switch is placed in the ON position or while the vehicle is being driven. For more information on using devices that require the power inverter switch activated, see "120v outlets" later in this section.

REAR SONAR SYSTEM OFF SWITCH (if so equipped)

CAUTION

- Use power outlets with the engine running to avoid discharging the vehicle battery.
- Do not attempt to use this while driving.
- Do not use double adapters or more than one electrical accessory, doing so could significantly drain the battery of your vehicle.



WARNING

The rear sonar system is a convenience but it is not a substitute for proper backing. Always turn and check that it is safe to do so before backing up. Always back up slowly.

The rear sonar system is active when the ignition switch is placed to the ON position and the shift selector is in R (Reverse).

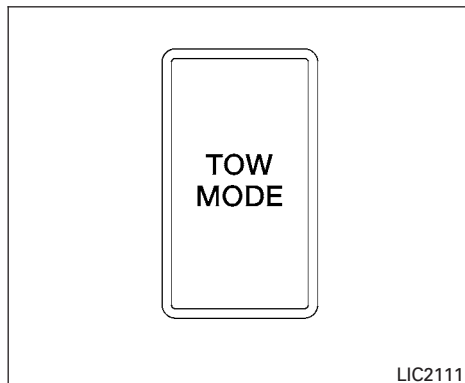
When sensors detect obstacles within 5.9 ft (1.8 m) of the rear bumper, a beeping tone is emitted.

The rear sonar system can be disabled by pushing the OFF switch. When the system is disabled, the indicator light on the switch will illuminate. Push the switch again to enable the system. The indicator light will go off.

The system will automatically reset the next time the ignition switch is turned on.

See "Rear sonar system" in the "Starting and driving" section.

TOW MODE SWITCH (if so equipped)



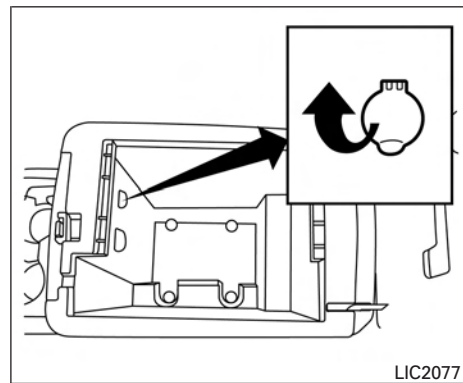
Tow mode should be used when pulling a heavy trailer or hauling a heavy load. Driving the vehicle in the tow mode with no trailer/load or light trailer/light load will not cause any damage. However, fuel economy may be reduced and the transmission/engine driving characteristics may feel unusual.

Press the tow mode switch to activate tow mode. The **TOW** indicator will come on when tow mode is selected. Press the tow mode switch again to turn tow mode OFF.

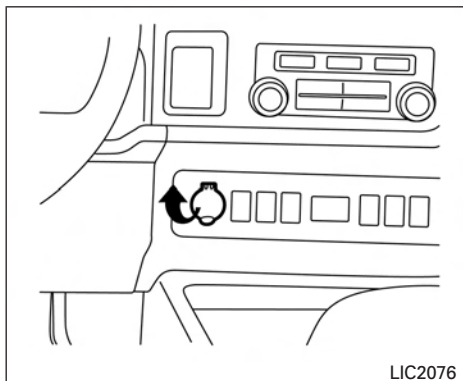
Tow mode is automatically canceled when the key is turned OFF.

For additional information, refer to "Tow mode" in the "Technical and consumer information" section later in this manual.

POWER OUTLETS



12v Center console (if so equipped)
12V OUTLETS (if so equipped)



12v Instrument Panel

The power outlets are for powering electrical accessories such as cellular telephones.

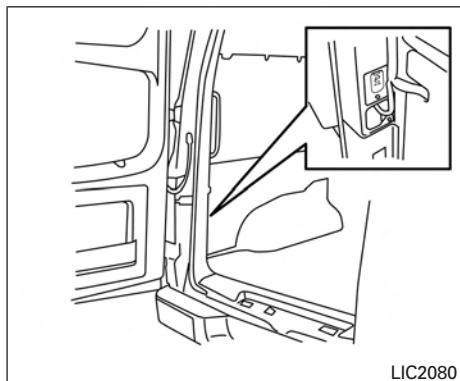
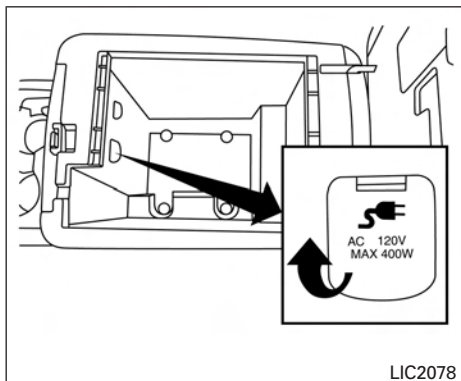
The power outlets on the instrument panel and inside the console are powered directly by the vehicle's battery.

Open the cap to use a power outlet.

CAUTION

- The outlet and plug may be hot during or immediately after use.
- Only certain power outlets are designed for use with a cigarette lighter unit. Do not use any other power outlet for an accessory lighter. See your NISSAN dealer for additional information.
- Do not use with accessories that exceed a 12 volt, 120W (10A) power draw. Do not use double adapters or more than one electrical accessory.
- Use power outlets with the engine running to avoid discharging the vehicle battery.
- Avoid using power outlets when the air conditioner, headlights or rear window defroster is on.
- Before inserting or disconnecting a plug, be sure the electrical accessory being used is turned OFF.
- Push the plug in as far as it will go. If good contact is not made, the plug may overheat or the internal temperature fuse may open.

- When not in use, be sure to close the cap. Do not allow water or any other liquid to contact the outlet.



120v Center console (if so equipped)

120v Cargo area (if so equipped)

120V OUTLETS

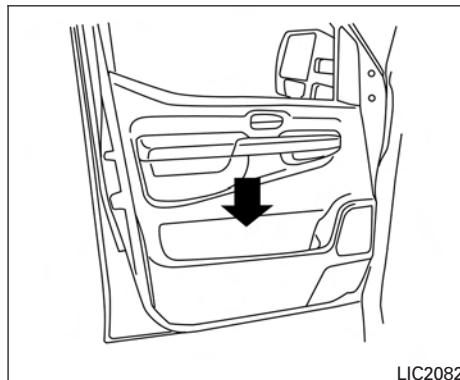
		Before Drive (idling) (Park)		When shifting out of Park		When shifting back to (idling) (Park)		Switch Reset	
Options	What is plugged IN	Indicator	Inverter Status	Indicator	Inverter Status	Indicator	Inverter Status	Indicator	Inverter Status
	Nothing plugged but switch is on	150 and 400	ON	150	ON	150 and 400	ON	NOT NECESSARY	NOT NECESSARY
	Device<150W	150 and 400	ON	150	ON	150 and 400	ON	NOT NECESSARY	NOT NECESSARY
	150W>device<400W	150 and 400	ON	OFF	OFF	ON	ON	150 and 400	ON
	Device>400W	150 and 400	OFF	OFF	OFF	OFF	OFF	OFF**	OFF**

** OFF means that the inverter system cannot be reset until a device that is within the specified range of operation is plugged in. Therefore, the switch indicators and inverter would remain OFF. There may be a very short period of time where the switch indicators are on, but once the inverter reaches it's peak saturation point (temp and power level). it will shut off both the inverter and the switch indicators.

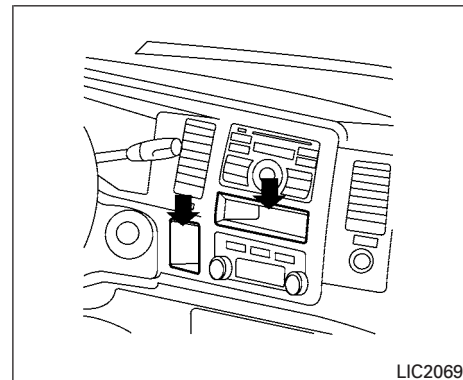
STORAGE

CAUTION

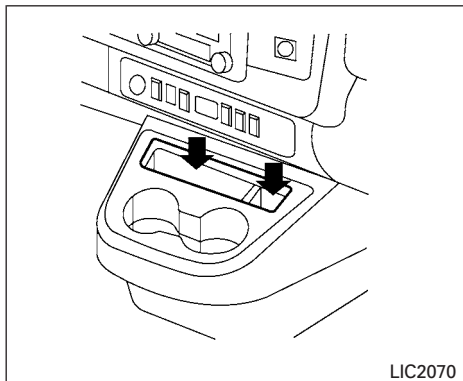
- The outlet and plug may be hot during or immediately after use.
- Use power outlets with the engine running to avoid discharging the vehicle battery.
- Do not use double adaptors or more than one electrical accessory.
- Avoid using power outlets when the air conditioner, headlights or rear window defroster is on.
- Before inserting or disconnecting a plug, be sure the electrical accessory being used is turned OFF.
- Push the plug in as far as it will go. If good contact is not made, the plug may overheat or the internal temperature fuse may open.
- When not in use, be sure to close the cap. Do not allow water or any other liquid to contact the outlet.



MAP POCKETS



Instrument panel
INSTRUMENT PANEL STORAGE
TRAYS

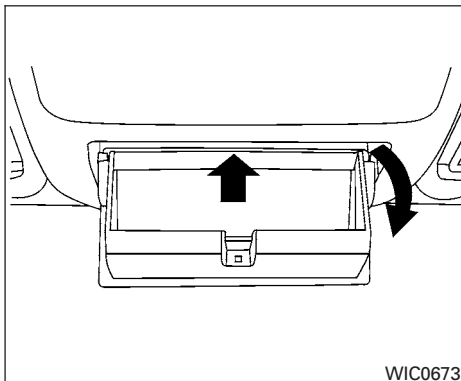


Lower center console

The long storage tray can be used to store business cards.

⚠ WARNING

Do not place sharp objects in the trays to help prevent injury in an accident or sudden stop.



SUNGLASSES HOLDER (if so equipped)

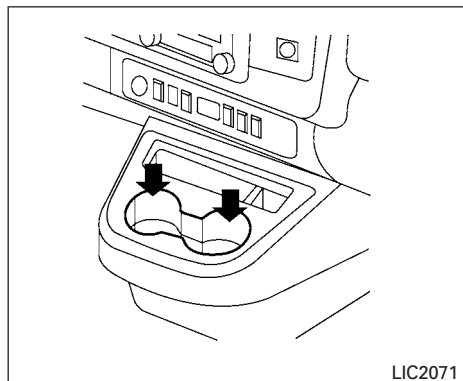
To open the sunglasses holder, push and release.

⚠ WARNING

- Keep the sunglasses holder closed while driving to prevent an accident.

⚠ CAUTION

- Do not leave sunglasses in the sunglasses holder while parking in direct sunlight. The heat may damage the sunglasses.
- Do not use for anything other than sunglasses.

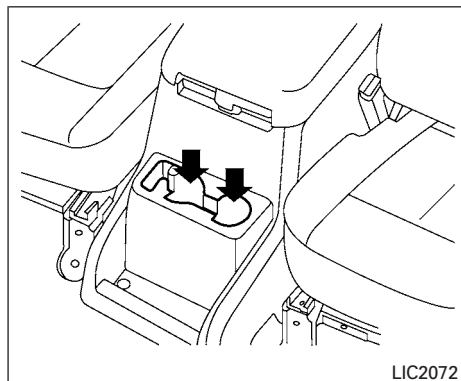


Instrument panel

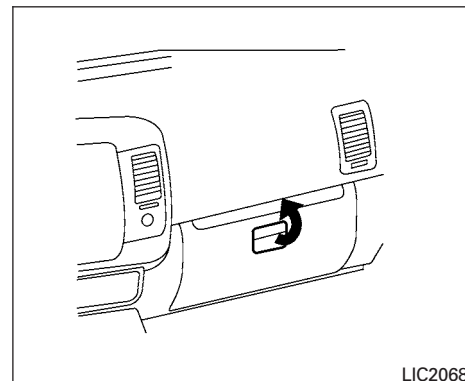
CUP HOLDERS

⚠ CAUTION

- **Avoid abrupt starting and braking when the cup holder is being used to prevent spilling the drink. If the liquid is hot, it can scald you or your passenger.**
- **Use only soft cups in the cup holder. Hard objects can injure you in an accident.**



Center console (if so equipped)

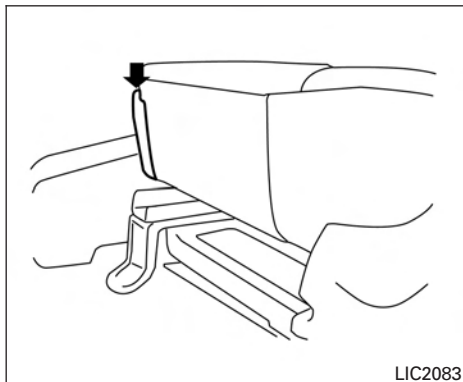


GLOVE BOX

Open the glove box by pulling the handle.

⚠ WARNING

Keep glove box lid closed while driving to help prevent injury in an accident or a sudden stop.

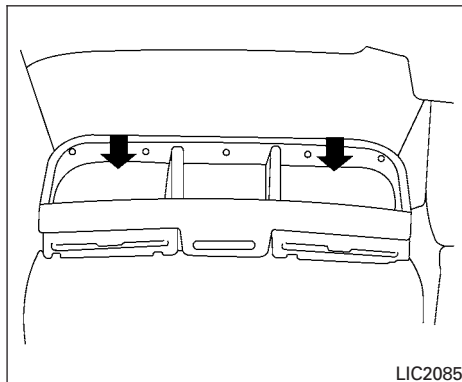


SEAT POCKET (if so equipped)

The seat pocket is located on the front corner of the driver's seat. The pocket can be used to store small items.

WARNING

Do not store angular, sharp, heavy objects or objects that cannot fully fit inside the pouch because they might increase the likelihood of an injury in a crash.



OVERHEAD CONSOLE (if so equipped)

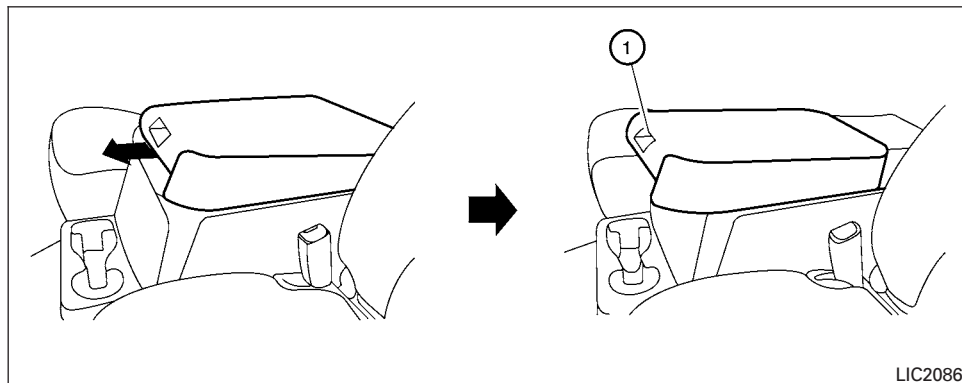
WARNING

To avoid serious personal injury, do not:

- Place sharp objects in the front overhead compartment.
- Store objects in the front of the overhead compartment that exceed the height of the shelving lip. Such objects may become dangerous projectiles and cause injury when the vehicle is moving or if the vehicle is involved in a collision.

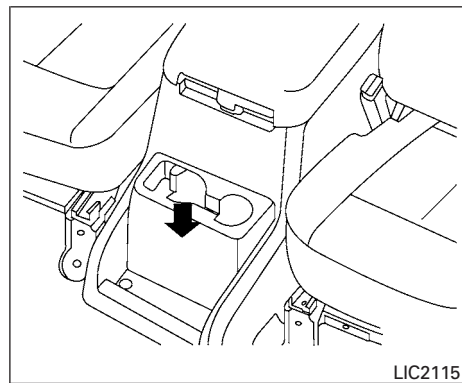
CAUTION

To avoid damaging the shelving, cargo in the overhead compartment should not exceed 10 pounds (4.54kg).



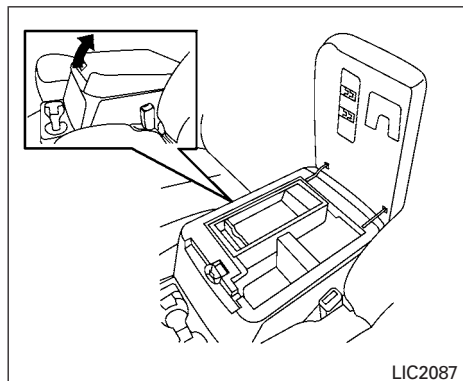
CONSOLE BOX (if so equipped)

The front of the console box lid ① has a place for securing items with metal clips.



Binder storage tray

The tray located in the front of the console box is for storing binders.

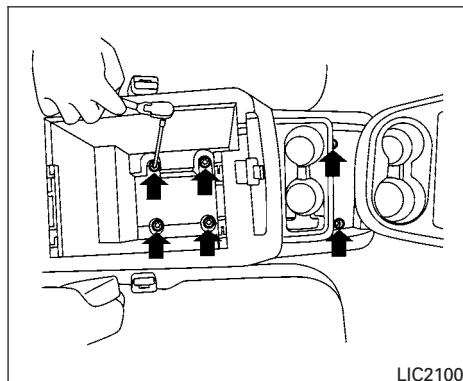


Lower half

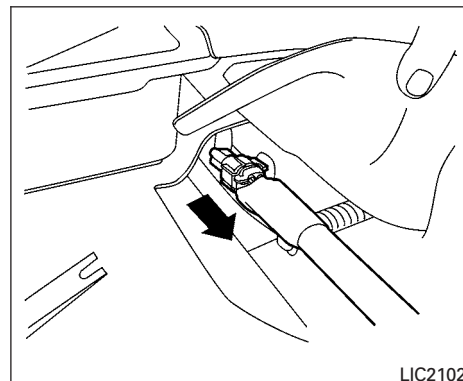
Removable center console

To remove the center console:

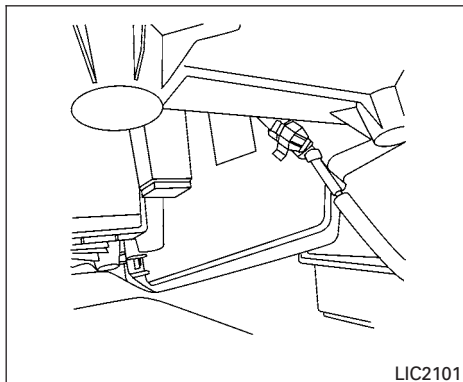
1. Stop the vehicle and place the ignition switch in the OFF position.
2. Lift out tray.
3. Unplug all accessories from the outlets.



4. Remove 4 bolts located inside the console and 2 in the front storage tray.

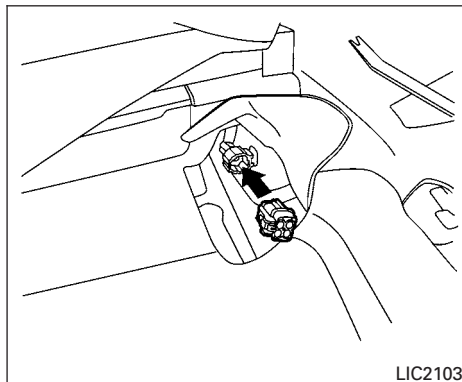


5. Disconnect the power supply. The connector may need to be accessed from the driver's door side of the seat by reaching underneath the seat.



LIC2101

6. The harness cap (if so equipped) is taped to the harness underneath the inside of the center console. Remove the tape to remove the cap.



LIC2103

For customers without 120V proceed to step 8.

7. Install the cap to the harness connector located at the bottom corner of the driver's seat.
8. Securely tighten the bolts to the vehicle after the console is removed.

⚠ WARNING

Reinstall bolts in the floor mounting holes to prevent water intrusion and reduce the chance for carbon monoxide to get into the occupant compartment.

⚠ CAUTION

Properly stow and secure the console if it is not stored outside the vehicle.

To install the center console:

1. Stop the vehicle and place the ignition switch in the OFF position.
2. Remove the 6 bolts from the floor mounting holes.

For customers without 120V proceed to step 5.

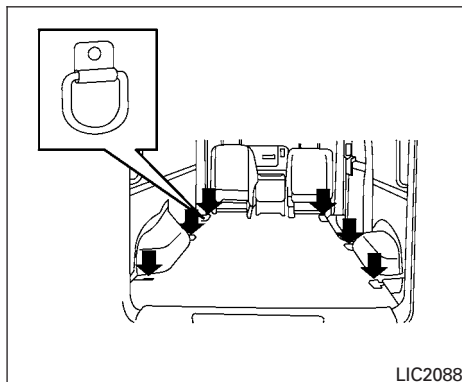
3. Remove the cap from the harness connector located at the bottom corner of the driver's seat and place the cap in glove box for future use.
4. Connect the harness from the console to the connector at the bottom of the driver's seat. This may need to be accessed from driver's door side of the seat by reaching underneath the seat.
5. Securely tighten 6 bolts, 4 bolts located inside the console and the 2 in the front storage tray.

D-RINGS

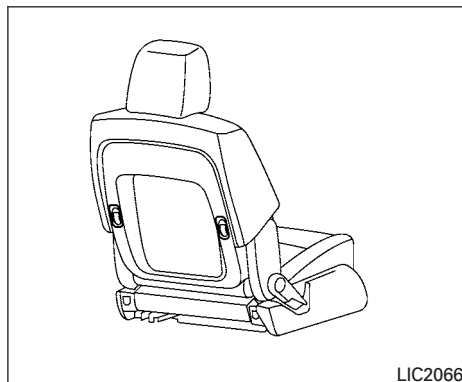
The D-rings can be used to secure cargo with ropes or other types of straps.

WARNING

- Properly secure all cargo with ropes or straps to help prevent it from sliding or shifting. Do not place cargo higher than the seatbacks. In a sudden stop or collision, unsecured cargo could cause personal injury.
- Use suitable ropes or straps to secure cargo.
- Never allow anyone to ride in the cargo area. It is extremely dangerous to ride in the a cargo area of a vehicle. In a collision, people riding in theses areas are more likely to be seriously injured or killed.
- Do not allow people to ride in any area of your vehicle that is not equipped with seats and seat belts.
- Be sure everyone in your vehicle is in a seat and using a seat belt properly.



Do not apply a load of more than 1,124 lbs (5,000 N) to a single D-ring.



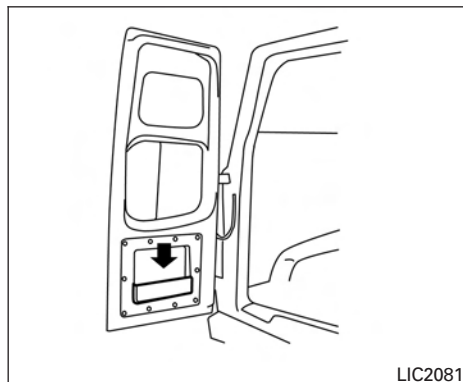
GROCERY HOOKS (if so equipped)

The grocery hooks are located on the back of the passenger's seat. The grocery hooks allow for standard size plastic grocery bags to hang side by side.

CAUTION

To avoid damaging the hooks do not apply a total load of more than 18 lbs (8 kg) to a single grocery hook.

WINDOWS



REAR DOOR STORAGE (if so equipped)

CAUTION

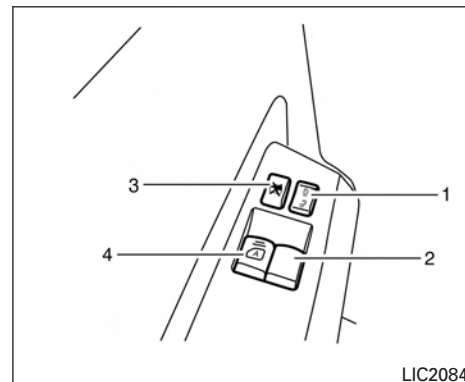
To avoid damaging the rear door storage do not apply a total load of more than 10 lbs (4.5 kg) in the rear door storage.

POWER WINDOWS (if so equipped)

WARNING

- **Make sure that all passengers have their hands, etc. inside the vehicle while it is in motion and before closing the windows. Use the window lock switch to prevent unexpected use of the power windows.**
- **Do not leave children unattended inside the vehicle. They could unknowingly activate switches or controls and become trapped in a window. Unattended children could become involved in serious accidents.**

The power windows operate when the ignition switch is placed in the ON position, or for a period of time after the ignition switch is placed in the OFF position. If the driver's or passenger's door is opened during this period of time, the power to the windows is canceled.

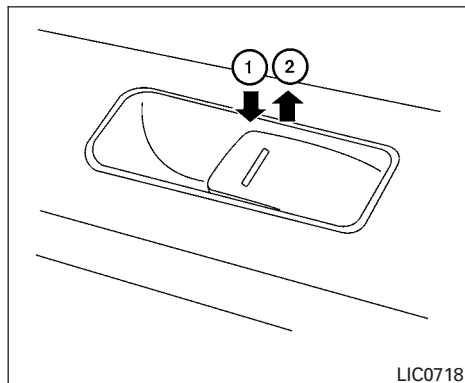


1. Power door lock switch
2. Front passenger side
3. Window lock button
4. Driver side (if so equipped) automatic switch

Driver's side power window switch

The driver's side control panel is equipped with switches to open or close the both front windows.

To open a window, push the switch and hold it down. To close a window, pull the switch and hold it up. To stop the opening or closing function at any time, simply release the switch.

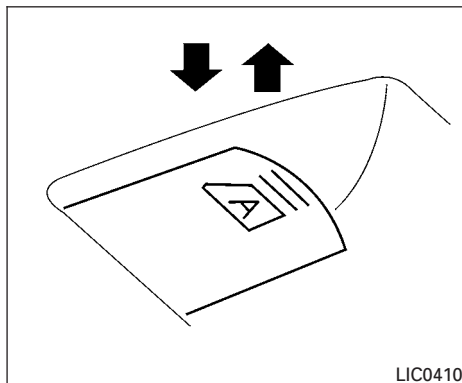


Front passenger's power window switch

The passenger's window switch operates only the corresponding passenger's window. To open the window, push the switch and hold it down ①. To close the window, pull the switch up ②.

Locking passengers' windows

When the window lock button is depressed, only the driver's side window can be opened or closed. Push it again to cancel the window lock function.



Automatic operation

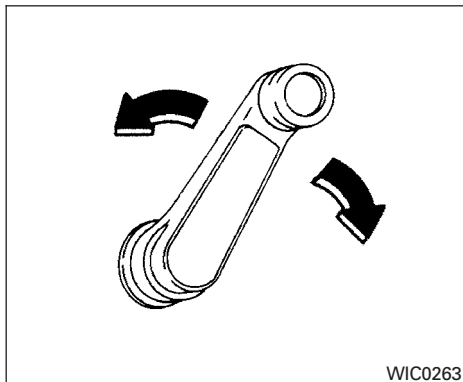
To fully open a window equipped with automatic operation, press the window switch down to the second detent and release it; it need not be held. The window automatically opens all the way. To stop the window, lift the switch up while the window is opening.

When power window switch does not operate

If the power window automatic function (closing only) does not operate properly, perform the following procedure to initialize the power window system.

1. Place the ignition switch in the ON position.
2. Open the window more than halfway by operating the power window switch.
3. Pull up and hold the window switch and hold it to close the window, and then hold the switch for more than 3 seconds after the window is closed completely.
4. Release the power window switch. Operate the window by automatic function to confirm the initialization is complete.

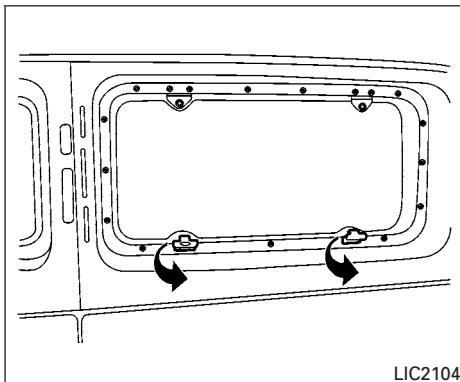
If the power window automatic function does not operate properly after performing the above procedure, see a NISSAN dealer for assistance.



WIC0263

MANUAL WINDOWS (if so equipped)

The side windows can be opened or closed by turning the hand crank on each door.



LIC2104

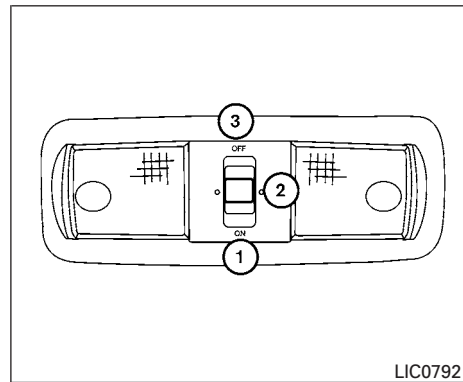
MANUAL VENT WINDOWS (if so equipped)

To open a manual vent window, pull the latch handles up until it releases.

To lock the window in the open position, push the latch handles down until it locks.

To close a manual vent window, pull the latch handles up and to the inside of the vehicle then push the latches down until they lock.

INTERIOR LIGHTS



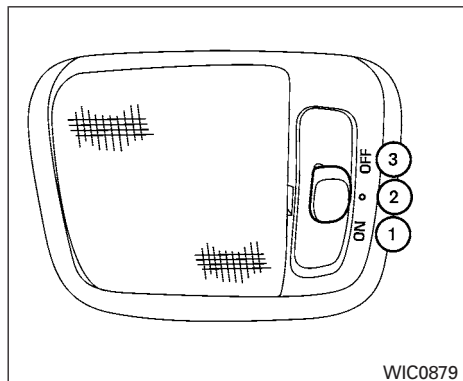
LIC0792

Type A

The interior lights have a three-position switch and operate regardless of ignition switch position.

When the switch is in the ON position ①, the interior lights illuminate, regardless of door position. The lights will go off after a period of time unless the ignition switch is in the ON position.

When the switch is in the ON, DOOR or normal position ②, the interior lights will stay on for about 30 seconds when:



Type B

WIC0879

- The doors are unlocked by the keyfob, a key, or the power door lock switch while all doors are closed and the ignition switch is in the OFF position.
- The driver's door is opened and then closed while the key is removed from the ignition switch.
- The key is removed from the ignition switch while all doors are closed.

The lights will turn off while the timer is activated when:

- The driver's door is locked by the keyfob, a key, or the power door lock switch.
- The ignition switch is placed in the ON position.

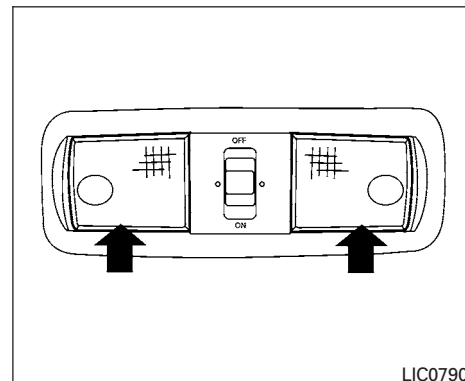
The lights will turn off automatically after a period of time while doors are open to prevent the battery from becoming discharged.

When the switch is in the OFF position ③, the interior lights do not illuminate, regardless of door position.

⚠ CAUTION

Do not use for extended periods of time with the engine stopped. This could result in a discharged battery.

MAP LIGHTS



LIC0790

To turn the map lights on, press the switches. To turn them off, press the switches again.

⚠ CAUTION

Do not use for extended periods of time with the engine stopped. This could result in a discharged battery.

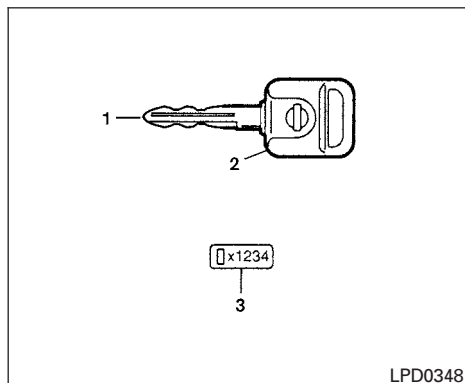
MEMO

3 Pre-driving checks and adjustments

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KEYS



1. Two master keys (black) with transponder chip
2. Transponder chip
3. Key number plate

A key number plate is supplied with your keys. Record the key number and keep it in a safe place (such as your wallet), not in the vehicle. If you lose your keys, see a NISSAN dealer for duplicates by using the key number. NISSAN does not record key numbers so it is very important to keep track of your key number plate.

A key number is only necessary when you have lost all keys and do not have one to make a duplicate. If you still have a key, your NISSAN dealer can duplicate it.

3-2 Pre-driving checks and adjustments

NISSAN VEHICLE IMMOBILIZER SYSTEM KEYS (if so equipped)

You can only drive your vehicle using the master keys which are registered to the NISSAN Vehicle Immobilizer System components in your vehicle. These keys have a transponder chip in the key head.

The master key can be used for all the locks.

Never leave these keys in the vehicle.

Additional or replacement keys:

If you still have a key, the key number is not necessary when you need extra NISSAN Vehicle Immobilizer System keys. Your dealer can duplicate your existing key. As many as five NISSAN Vehicle Immobilizer System keys can be used with one vehicle. You should bring all NISSAN Vehicle Immobilizer System keys that you have to your NISSAN dealer for registration. This is because the registration process will erase the memory of all key codes previously registered into the NISSAN Vehicle Immobilizer System. After the registration process, these components will only recognize keys coded into the NISSAN Vehicle Immobilizer System during registration. Any key that is not given to your dealer at the time of registration will no longer be able to start your vehicle.

⚠ CAUTION

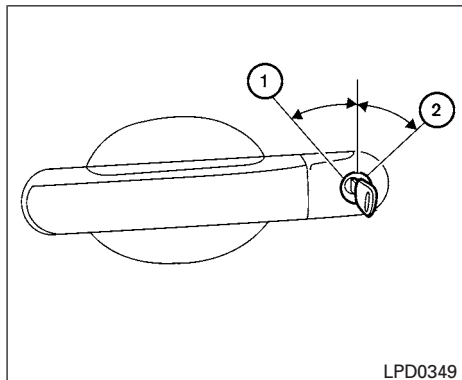
Do not allow the immobilizer system key, which contains an electrical transponder, to come into contact with water or salt water. This could affect system function.

DOORS

When the doors are locked using one of the following methods, the doors can not be opened using the inside or outside door handles. The doors must be unlocked to open the doors.

WARNING

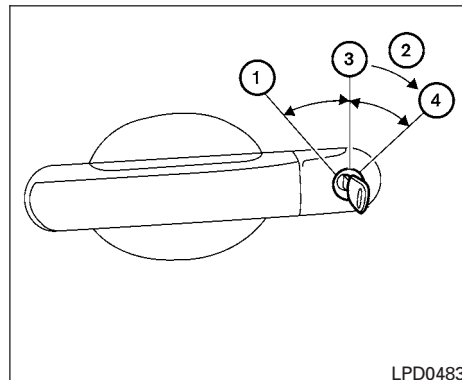
- **Always have the doors locked while driving. Along with the use of seat belts, this provides greater safety in the event of an accident by helping to prevent persons from being thrown from the vehicle. This also helps keep children and others from unintentionally opening the doors, and will help keep out intruders.**
- **Before opening any door, always look for and avoid oncoming traffic.**
- **Do not leave children unattended inside the vehicle. They could unknowingly activate switches or controls. Unattended children could become involved in serious accidents.**



LOCKING WITH KEY

Manual or Power (without Vehicle Security System) (if so equipped)

To lock a door, turn the key toward the front of the vehicle ①. To unlock, turn the key toward the rear ②.



Power with Vehicle Security System (if so equipped)

The power door lock system with Vehicle Security System allows you to lock all doors at the same time.

Front and sliding doors

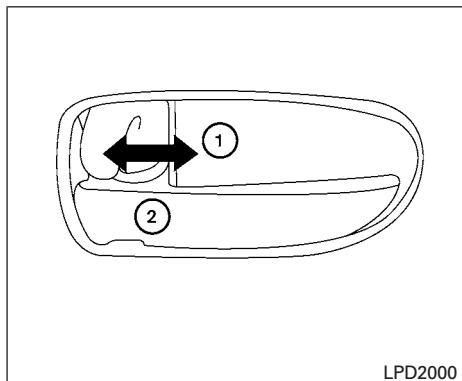
Turning the key toward the front ① of the vehicle locks all the doors.

Turning the key one time toward the rear ② of the vehicle unlocks that door. From that position, returning the key to neutral ③ (where the key can only be removed and inserted) and turning it toward the rear again within 5 seconds unlocks all doors ④.

Rear door

Turning the key toward the left ① of the vehicle locks all the doors.

Turning the key one time toward the right ② of the vehicle unlocks that door. From that position, returning the key to neutral ③ (where the key can only be removed and inserted) and turning it toward the right again within 5 seconds unlocks all doors ④.

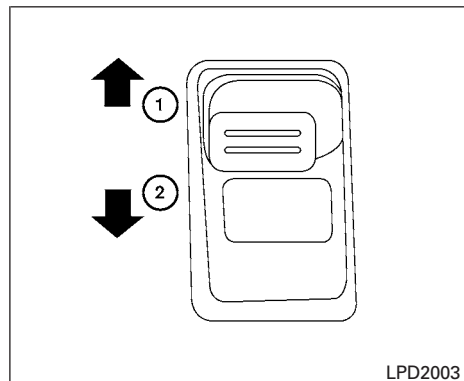


LPD2000

Inside lock – front driver and passenger LOCKING WITH INSIDE LOCK KNOB

To lock the door without the key, move the inside lock knob to the lock position ①, then close the door.

To unlock the door without the key, move the inside lock knob to the unlock position ②.

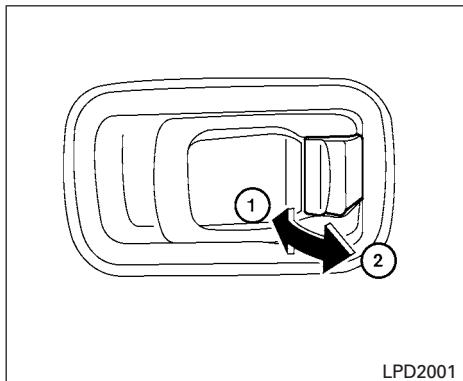


LPD2003

Inside lock – sliding door

To lock the door without the key, move the inside lock knob to the lock position ②, then close the door.

To unlock the door without the key, move the inside lock knob to the unlock position ①.

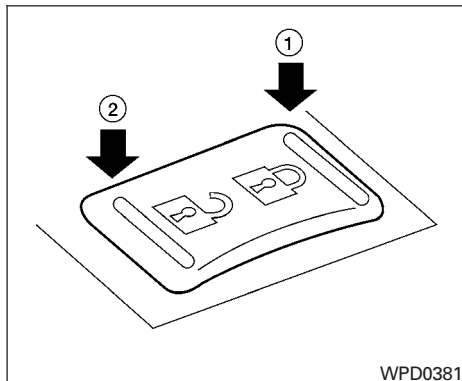


Inside lock – back door

To lock the door without the key, move the inside lock knob to the lock position ①, then close the door.

To unlock the door without the key, move the inside lock knob to the unlock position ②.

To open the door from the inside, pull the inside door handle toward you.



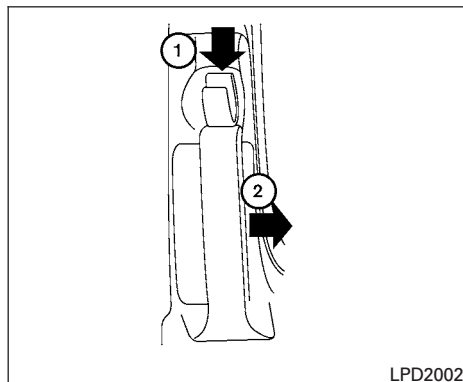
LOCKING WITH POWER DOOR LOCK SWITCH (if so equipped)

To lock all the doors without a key, push the door lock switch (driver's or front passenger's side) to the lock position ①. When locking the door this way, be certain not to leave the key inside the vehicle.

To unlock all the doors without a key, push the door lock switch (driver's or front passenger's side) to the unlock position ②.

Lockout protection

When the power door lock switch (driver's or front passenger's side) is moved to the lock position with the key in the ignition switch and any door open, all doors will lock and then unlock automatically. This helps to prevent the keys from being accidentally locked inside the vehicle.



LPD2002

OPERATING THE SLIDING DOOR

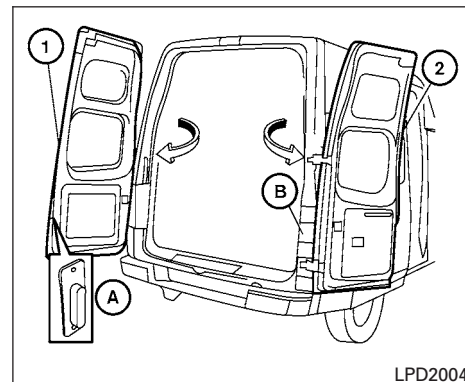
The sliding door can be opened from the inside or the outside.

To open the sliding door from the inside, pull the release lever ① down and pull the handle ② toward the rear of the vehicle until the door clicks. This will lock the door into an open position.

To close the sliding door from the inside pull the release lever ① down. The door will release from the open position and slide closed.

To open a sliding door from the outside, pull out the outside handle and slide the door toward the rear of the vehicle until the door clicks. The door will lock into an open position.

To close the sliding door from the outside, pull the outside handle again. The door will release from the open position and slide closed.



LPD2004

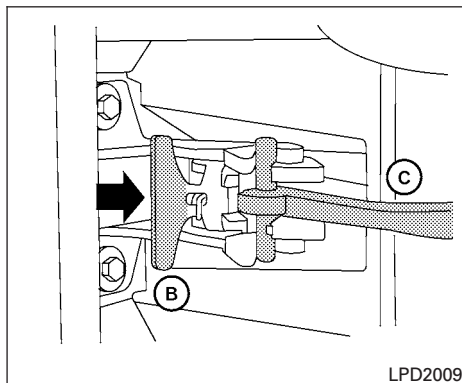
BACK DOORS

CAUTION

Do not operate the 243° release lever until the door has been fully opened. Doing so can result in damage to the vehicle and/or malfunction of the mechanism.

Open the back doors by performing the following:

1. From the outside of the vehicle, pull the door handle on the right side door toward you and open door until it stops.
2. Lift the lever **(A)** on the side of the left back door and pull the door to open until the door stops **(1)**.



The back doors open approximately 243° to allow access to the rear of the vehicle.

3. To open either door to the wide open position **(2)** pull the release lever **(B)** toward the back door and release the check link arm **(C)**.
4. Open the door slowly until the magnetic door stopper connects to the stop pad on outside of the vehicle. Do not use the stopper as a step.

AUTOMATIC DOOR LOCKS (if so equipped)

- All doors lock automatically when the vehicle speed reaches 15 MPH (24 km/h).
- All doors unlock automatically when the transmission is placed in the P (Park) position.

The automatic unlock function can be deactivated or activated. To deactivate or activate the automatic door unlock system, perform the following procedure:

1. Close all doors.
2. Place the ignition switch in the ON position.
3. Within 20 seconds of performing Step 2, push and hold the power door lock switch to the **(1)** position (UNLOCK) for more than 5 seconds.
4. When activated, the hazard indicator will flash twice. When deactivated, the hazard indicator will flash once.
5. The ignition switch must be placed in the OFF and ON position again between each setting change.

REMOTE KEYLESS ENTRY SYSTEM (if so equipped)

When the automatic door unlock system is deactivated, the doors do not unlock when the transmission is placed in the P (Park) position. To unlock the door manually, use the inside lock knob or the power door lock switch (driver's or front passenger's side).

WARNING

- **Radio waves could adversely affect electric medical equipment. Those who use a pacemaker should contact the electric medical equipment manufacturer for the possible influences before use.**
- **The remote keyless entry keyfob transmits radio waves when the buttons are pushed. The FAA advises radio waves may affect aircraft navigation and communication systems. Do not operate the remote keyless entry keyfob while on an airplane. Make sure the buttons are not operated unintentionally when the unit is stored for a flight.**

It is possible to lock/unlock all doors, turn on the interior lights and activate the panic alarm by using the keyfob from outside the vehicle.

Some settings for the keyfob, such as horn beep, can be adjusted. For more information refer to "Silencing the horn beep feature" in this section.

Be sure to remove the key from the vehicle before locking the doors.

The keyfob can operate at a maximum distance of approximately 33 ft (10 m) from the vehicle. The effective distance depends upon the conditions around the vehicle.

As many as 5 keyfobs can be used with one vehicle. For information concerning the purchase and use of additional keyfobs, contact a NISSAN dealer.

The keyfob will not function when:

- the battery is discharged.
- the distance between the vehicle and the keyfob is over 33 ft (10 m).

The panic alarm will not activate when the key is in the ignition switch.

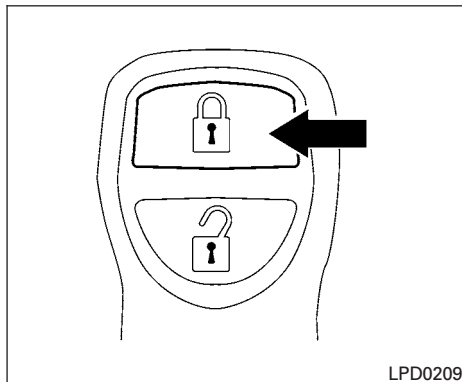
CAUTION

Listed below are conditions or occurrences which will damage the keyfob:

- **Do not allow the keyfob, which contains electrical components, to come into contact with water or salt water. This could affect the system function.**
- **Do not drop the keyfob.**
- **Do not strike the keyfob sharply against another object.**

- Do not change or modify the keyfob.
- Wetting may damage the keyfob. If the keyfob gets wet, immediately wipe until it is completely dry.
- Do not place the keyfob for an extended period in an area where temperatures exceed 140°F (60°C).
- Do not attach the keyfob with a key holder that contains a magnet.
- Do not place the keyfob near equipment that produces a magnetic field, such as a TV, audio equipment and personal computers.

If a keyfob is lost or stolen, **NISSAN** recommends erasing the ID code of that keyfob. This will prevent the keyfob from unauthorized use to unlock the vehicle. For information regarding the erasing procedure, please contact a **NISSAN** dealer.



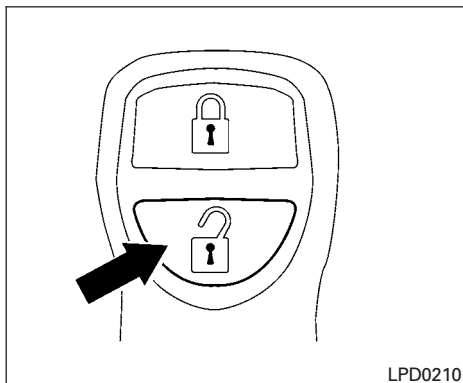
HOW TO USE REMOTE KEYLESS ENTRY SYSTEM

Locking doors

1. Close all windows.
2. Remove the key from the ignition switch.
3. Close the hood and all doors.
4. Press the  button on the keyfob. All the doors lock. The hazard warning lights flash twice and the horn beeps once to indicate all doors are locked.

- When the  button is pressed with all doors locked, the hazard warning lights flash twice and the horn beeps once as a reminder that the doors are already locked.
- If a door is open and you press the  button, the doors will lock but the horn will not beep and the hazard warning lights will not flash.

The horn may or may not beep. For more information refer to "Silencing the horn beep feature" in this section.



LPD0210

Unlocking doors

Press the  button on the keyfob once.

- Only the driver's door unlocks.
- The hazard warning lights flash once if all doors are completely closed with the ignition switch in any position except the ON position.
- The interior lights turn on and the light timer activates for a period of time when the interior light switch is in the DOOR position with the ignition switch in any position except the ON position.

Press the  button on the keyfob again within 5 seconds.

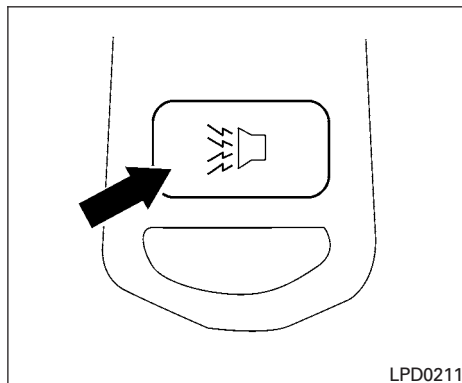
- All doors unlock.
- The hazard warning lights flash once if all doors are completely closed.

The interior lights can be turned off without waiting by inserting the key into the ignition switch and placing it in the ON or START position, locking the doors with the keyfob or pushing the interior light switch to the OFF position.

Auto relock (if so equipped)

When the  button on the keyfob is pressed, all doors will lock automatically within 1 minute unless one of the following operations is performed:

- Any door is opened.
- A key is inserted into the ignition switch and the switch is cycled from OFF to ON.



LPD0211

Using the panic alarm

If you are near your vehicle and feel threatened, you may activate the panic alarm to call attention by pressing and holding the  button on the keyfob for **longer than 0.5 seconds**.

The panic alarm and headlights will stay on for a period of time.

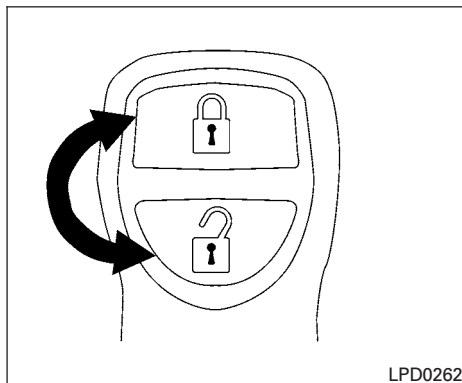
The panic alarm stops when:

- it has run for a period of time, or
- any button is pressed on the keyfob.

Using the interior lights

Press the  button on the keyfob once to turn on the interior lights.

For additional information, refer to “Interior lights” in the “Instruments and controls” section in this manual.



Silencing the horn beep feature

If desired, the horn beep feature can be deactivated using the keyfob.

To deactivate: Press and hold the  and  buttons **for at least 2 seconds.**

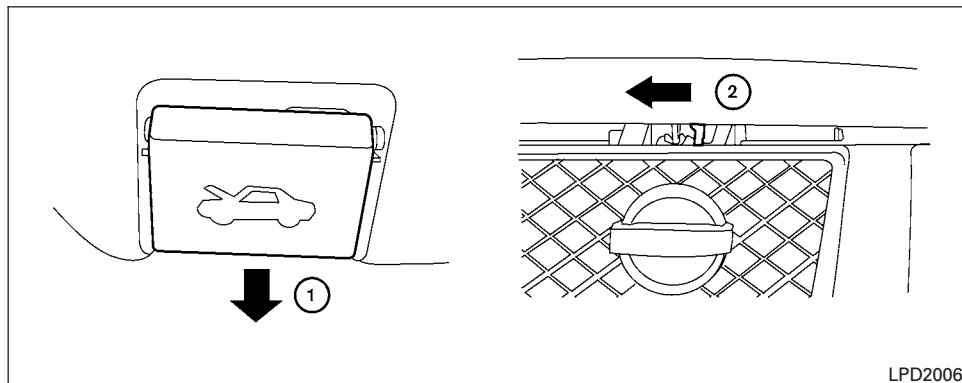
The hazard warning lights will flash three times to confirm that the horn beep feature has been deactivated.

To activate: Press and hold the  and  buttons **for at least 2 seconds once more.**

The hazard warning lights will flash once and the horn will sound once to confirm that the horn beep feature has been reactivated.

Deactivating the horn beep feature does not silence the horn if the alarm is triggered.

HOOD



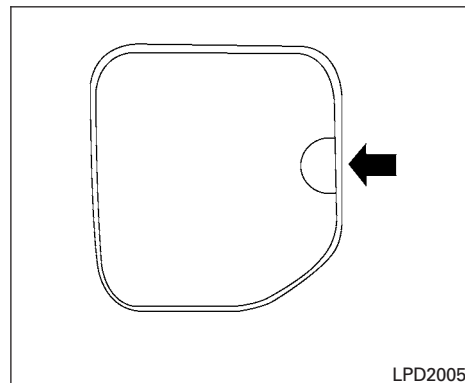
- ① Pull the hood lock release handle located below the driver side instrument panel. The hood will spring up slightly.
- ② Push the lever at the front of the hood to the side as illustrated with your fingertips and raise the hood.

When closing the hood, lower it slowly and make sure it locks into place.

WARNING

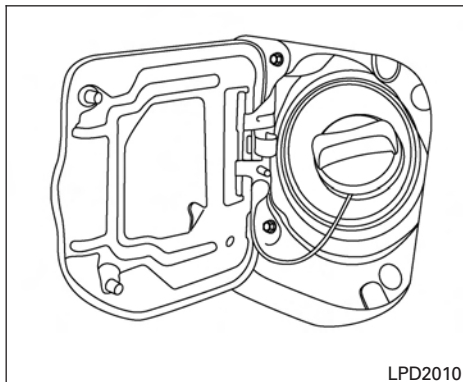
- **Make sure the hood is completely closed and latched before driving. Failure to do so could cause the hood to fly open and result in an accident.**
- **If you see steam or smoke coming from the engine compartment, to avoid injury do not open the hood.**

FUEL-FILLER DOOR



OPENING THE FUEL-FILLER DOOR

Pull on the finger tab to open.



FUEL-FILLER CAP

WARNING

- Gasoline is extremely flammable and highly explosive under certain conditions. You could be burned or seriously injured if it is misused or mishandled. Always stop the engine and do not smoke or allow open flames or sparks near the vehicle when refueling.

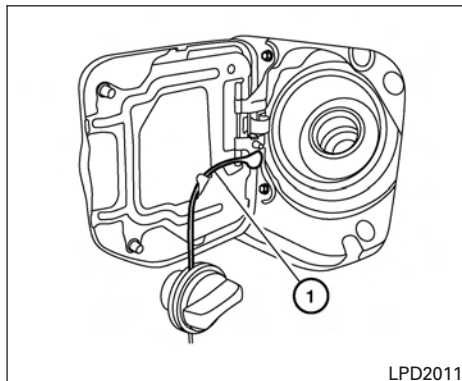
- Do not attempt to top off the fuel tank after the fuel pump nozzle shuts off automatically. Continued refueling may cause fuel overflow, resulting in fuel spray and possibly a fire.
- Use only an original equipment type fuel-filler cap as a replacement. It has a built-in safety valve needed for proper operation of the fuel system and emission control system. An incorrect cap can result in a serious malfunction and possible injury. It could also cause the  Malfunction Indicator Light (MIL) to come on.
- Never pour fuel into the throttle body to attempt to start your vehicle.
- Do not fill a portable fuel container in the vehicle or trailer. Static electricity can cause an explosion of flammable liquid, vapor or gas in any vehicle or trailer. To reduce the risk of serious injury or death when filling portable fuel containers:
 - Always place the container on the ground when filling.
 - Do not use electronic devices when filling.

- Keep the pump nozzle in contact with the container while you are filling it.
- Use only approved portable fuel containers for flammable liquid.

CAUTION

- Do not use E-15 or E-85 fuel in your vehicle. For further information see the “Fuel Recommendation” in the “Technical and consumer information” section of this manual.
- The LOOSE FUEL CAP warning will appear if the fuel-filler cap is not properly tightened. It may take a few driving trips for the message to be displayed. Failure to tighten the fuel-filler cap properly after the LOOSE FUEL CAP warning appears may cause the  Malfunction Indicator Light (MIL) to illuminate.

- Failure to tighten the fuel-filler cap properly may cause the  Malfunction Indicator Light (MIL) to illuminate. If the  light illuminates because the fuel-filler cap is loose or missing, tighten or install the cap and continue to drive the vehicle. The  light should turn off after a few driving trips. If the  light does not turn off after a few driving trips, have the vehicle inspected by a NISSAN dealer.
- For additional information, see the “Malfunction Indicator Light (MIL)” in the “Instruments and Controls” section in this manual.
- If fuel is spilled on the vehicle body, flush it away with water to avoid paint damage.



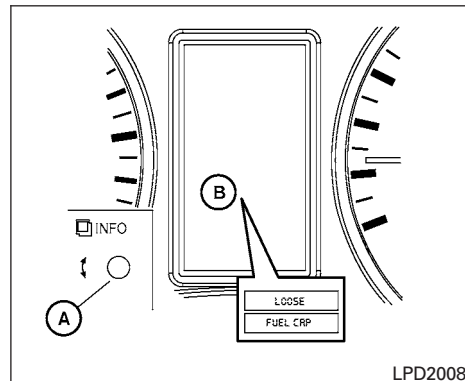
LPD2011

To remove the fuel-filler cap:

1. Turn the fuel-filler cap counterclockwise to remove.
2. Loop the tether strap around the hook ① while refueling.

To install the fuel-filler cap:

1. Insert the fuel-filler cap straight into the fuel-filler tube.
2. Turn the fuel-filler cap clockwise until a single click is heard.



LPD2008

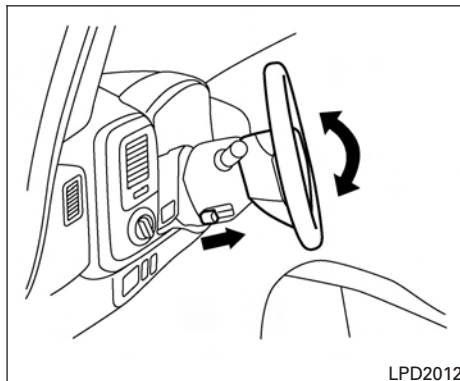
Loose Fuel Cap warning

The LOOSE FUEL CAP warning appears in the vehicle information display when the fuel-filler cap is not tightened correctly after the vehicle has been refueled. It may take a few driving trips for the message to be displayed. To turn off the warning, perform the following:

1. Remove and install the fuel-filler cap as previously described as soon as possible.
2. Tighten the fuel-filler cap until it clicks.

STEERING WHEEL

3. Push the INFO knob **(A)** on the instrument panel located behind the steering wheel for about 1 second to turn off the LOOSE FUEL CAP warning **(B)** after tightening the fuel-filler cap.



TILT OPERATION

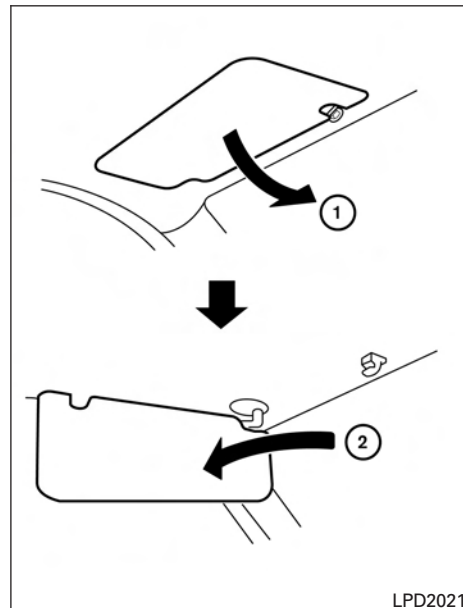
! WARNING

Do not adjust the steering wheel while driving. You could lose control of your vehicle and cause an accident.

Pull the lock lever forward and hold it to adjust the steering wheel up or down to the desired position.

Release the lock lever to lock the steering wheel in place.

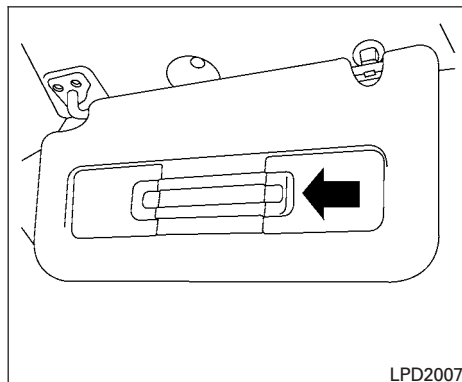
SUN VISORS



To block out glare from the front, swing down the sun visor **(1)**.

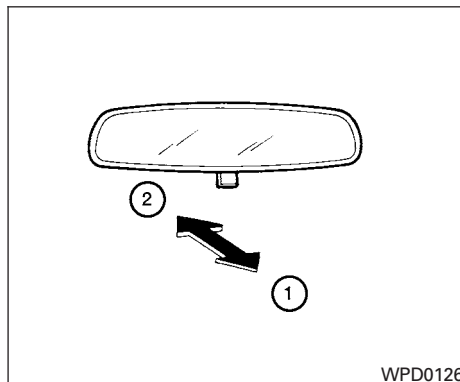
To block glare from the side, disconnect the sun visor from the center mount and swing it to the side **(2)**.

MIRRORS



STORAGE CLIP

To access the storage clip, pull the sun visor down. Insert items such as business cards, directions, etc. under the clip. Do not view information while operating the vehicle.



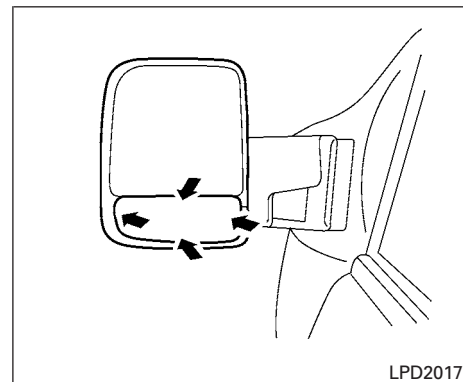
REARVIEW MIRROR (if so equipped)

The night position ① reduces glare from the headlights of vehicles behind you at night.

Use the day position ② when driving in daylight hours.

WARNING

Use the night position only when necessary, because it reduces rear view clarity.



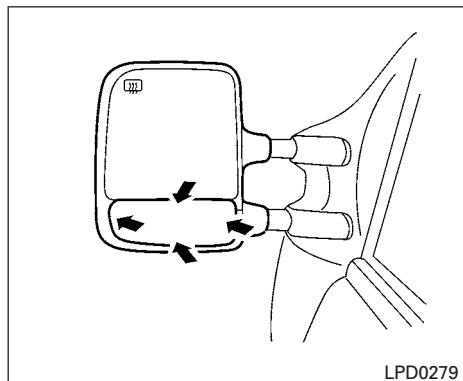
Type A

OUTSIDE MIRRORS

WARNING

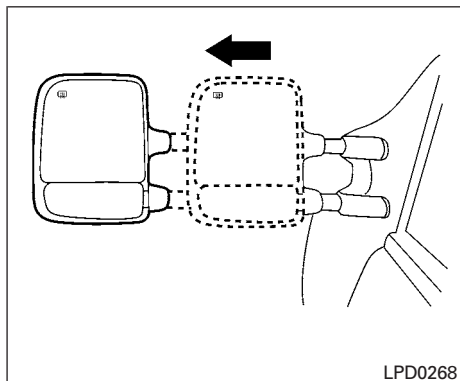
Objects viewed in the convex portion of the mirror are closer than they appear. Be careful when changing lanes or turning. Using only the convex mirror could cause an accident. Use the other mirrors or glance over your shoulder to properly judge distances to other objects.

Use the outside mirror remote control to adjust the top portion of the mirror.



Type B (Trailer tow)

The lower portion of the mirror can be moved manually in any direction for a better rear view.



Trailer tow

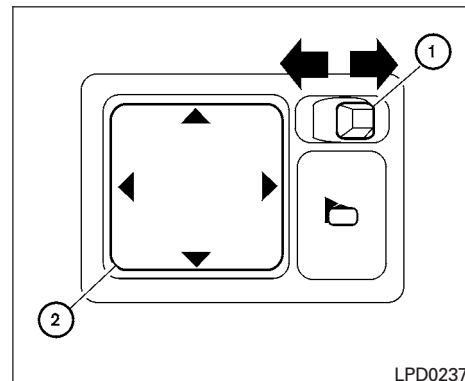
Pull the trailer tow mirror outward to extend it to the desired position for better visibility while towing a trailer.

WARNING

Do not extend or retract mirrors while driving. You may lose control of your vehicle and cause an accident.

CAUTION

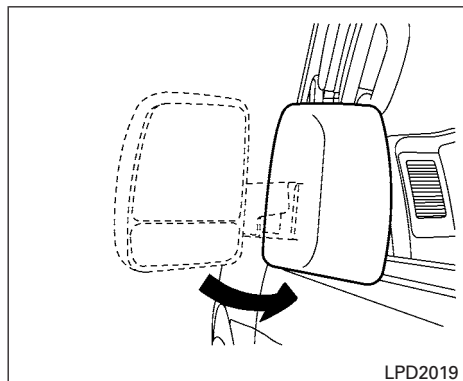
Driving in tight spaces with mirrors extended may cause damage to the vehicle.



Electric control type (if so equipped)

The outside mirror remote control will operate only when the ignition switch is placed in the ACC or ON position.

Move the small switch ① to select the right or left mirror. Adjust each mirror to the desired position using the large switch ②.



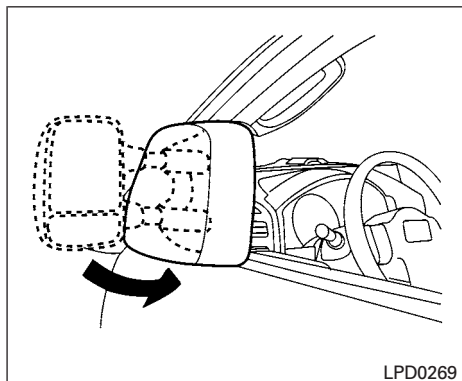
Type A

Foldable outside mirrors

Pull the outside mirror toward the door to fold it.

Heated mirrors (if so equipped)

Some outside mirrors can be heated to defrost, defog, or de-ice for improved visibility. For additional information, see "Rear window and outside mirror defroster switch" in the "Instruments and controls" section of this manual.



Type B (Trailer tow)

4 Display screen, heater, air conditioner, audio and phone systems

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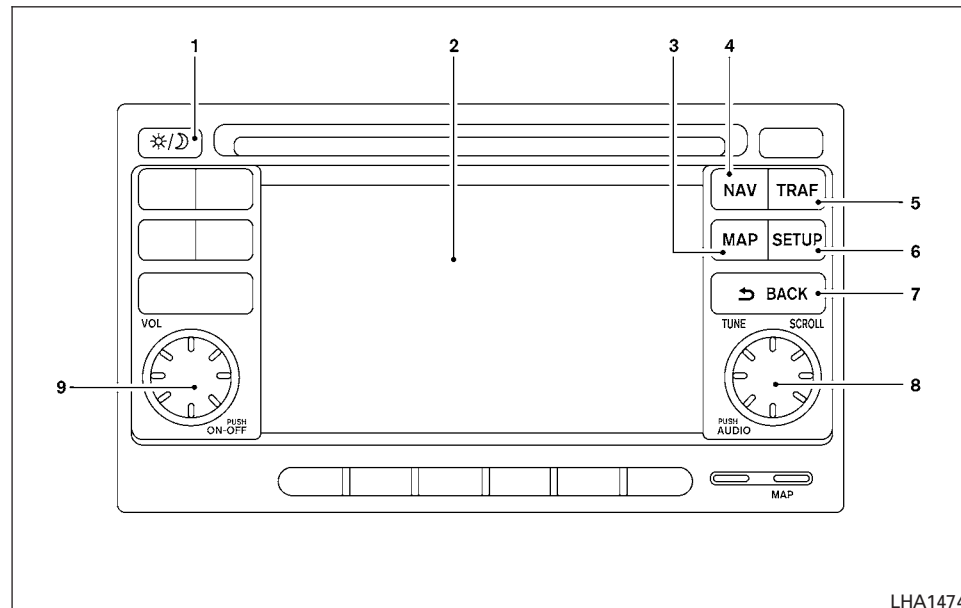
CONTROL PANEL BUTTONS — COLOR SCREEN WITH NAVIGATION SYSTEM (if so equipped)

WARNING

- Do not disassemble or modify this system. If you do, it may result in accidents, fire, or electrical shock.
- In case you notice any foreign object in the system hardware, spill liquid on it, or notice smoke or smell coming from it, stop using the system immediately and contact your nearest **NISSAN** dealer. Ignoring such conditions may lead to accidents, fire or electrical shock.

CAUTION

Do not use this system if you notice any abnormality, such as a frozen screen or lack of sound. Continued use of the system may result in accident, fire or electric shock.



1.  (brightness control) button

2. Display screen

3. MAP button*

4. NAV button*

5. TRAF button*

6. SETUP button (P. 4-5)

7.  BACK button

8. TUNE/SCROLL knob

9. Power button/Volume control knob

*For Navigation system control buttons, refer to the separate Navigation System Owner's Manual.

When you use this system, make sure the engine is running.

If you use the system with the engine not running (ignition ON or ACC) for a long time, it will discharge the battery, and the engine will not start.

Reference symbols:

“Example” — Words marked in quotes refer to a key shown only on the display. These keys can be selected by touching the screen.

HOW TO USE THE TOUCH SCREEN

CAUTION

- The glass display screen may break if it is hit with a hard or sharp object. If the glass screen breaks, do not touch it. Doing so could result in an injury.

- To clean the display, never use a rough cloth, alcohol, benzene, thinner or any kind of solvent or paper towel with a chemical cleaning agent. They will scratch or deteriorate the panel.
- Do not splash any liquid such as water or car fragrance on the display. Contact with liquid will cause the system to malfunction.

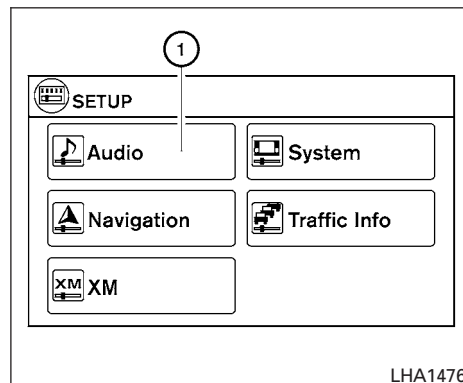
To help ensure safe driving, some functions cannot be operated while driving.

The on-screen functions that are not available while driving will be “grayed out” or muted.

Park the vehicle in a safe location and then operate the navigation system.

WARNING

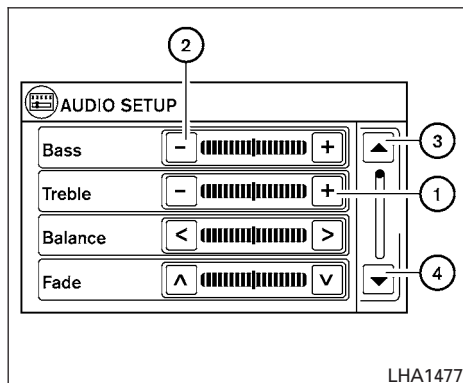
- ALWAYS give your full attention to driving.
- Avoid using vehicle features that could distract you. If distracted, you could lose control of your vehicle and cause an accident.



Touch screen operation

Selecting the item:

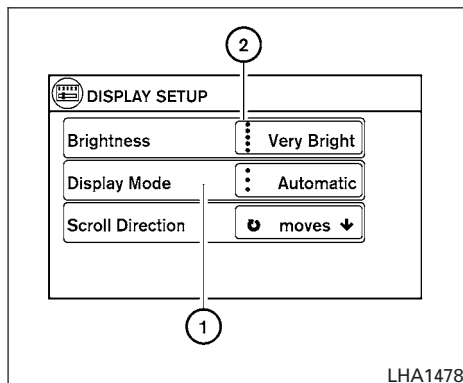
Touch an item to select. For example, to select the “Audio” key, touch the “Audio” key ① on the screen.



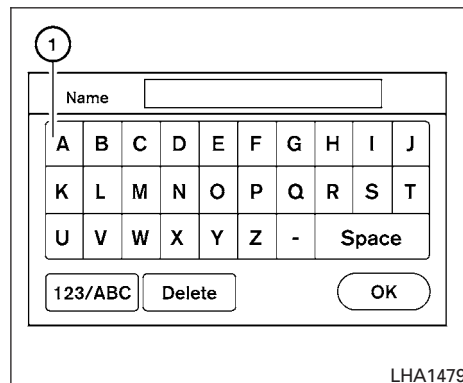
Adjusting the item:

For screens where an item can be adjusted incrementally, such as when adjusting the bass and treble for the audio system, touch the “+” key ① or the “-” key ② to adjust the settings of an item.

When there are more items than can be displayed on one screen, touch the up arrow ③ to scroll up the page or touch the down arrow ④ to scroll down the page.



Other items are adjusted by selecting one of a set number of conditions. For example, the Display Mode can be set to “Automatic”, “Day” or “Night”. To adjust this type of item, touch the item ①. The item will cycle through the available settings and the red indicator lights to the left of the setting condition ② will come on or turn off accordingly.



Inputting characters:

Touch the letter key ①.

There are some options available when inputting characters.

- **123 / ABC:**
Changes the available character set to numbers.
- **Space:**
Inserts a space.
- **Delete:**
Deletes the last inputted character with one touch. Touch and hold the “Delete” key to delete all of the characters.

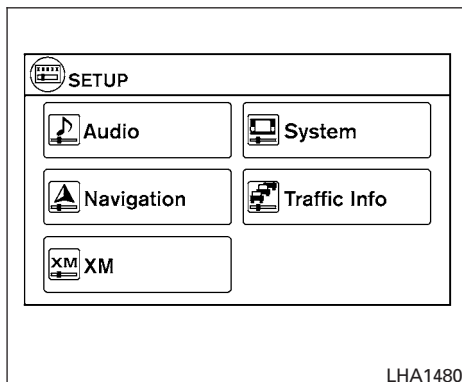
- **OK:**
Completes the character input.

Touch screen maintenance

If you clean the display screen, use a dry, soft cloth. If additional cleaning is necessary, use a small amount of neutral detergent with a soft cloth. Never spray the screen with water or detergent. Dampen the cloth first and then wipe the screen.

HOW TO USE THE BACK BUTTON

Press the  BACK button to return to the previous screen.



HOW TO USE THE SETUP BUTTON

When the SETUP button is pressed, the Setup screen will appear on the display. You can select and/or adjust several functions, features and modes that are available for your vehicle.

Audio setup

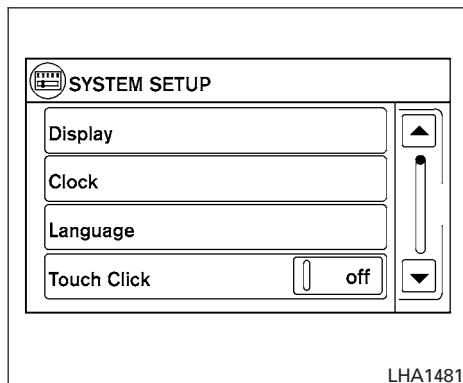
For audio setup, refer to “Audio system” in this section.

Navigation setup

Refer to the separate Navigation System Owner's Manual for information regarding this item.

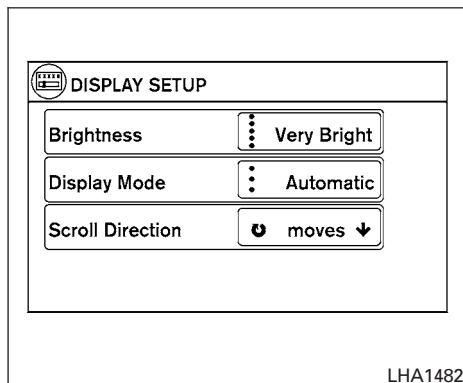
XM setup

For XM setup, refer to “Audio system” in this section.



System setup

Select the “System” key to select and/or adjust various functions of the system. A screen with additional options will appear.



Display:

Select the “Display” key to adjust the appearance of the display. The following settings can be adjusted:

Brightness

The brightness of the display can be set to Very Bright, Bright, Default, Dark or Very Dark. Touch the “Brightness” key to cycle through the options.

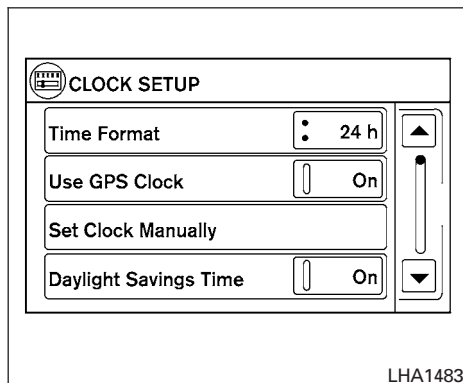
Display Mode

The display can be adjusted to fit the level of lighting in the vehicle. Touch the “Display Mode” key to cycle through the options. “Day” and

“Night” modes are suited for the respective times of day, while “Automatic” controls the display automatically.

Scroll Direction

The direction that menus scroll can be adjusted. Choose either “up” or “down”.



Clock:

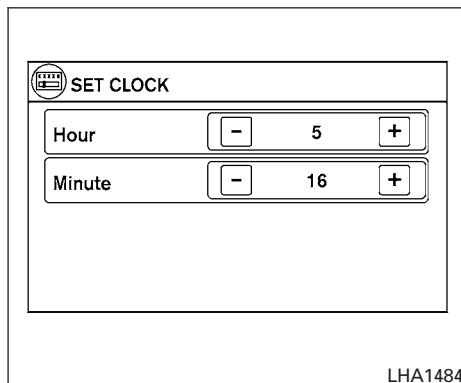
Select the “Clock” key to adjust the time and the appearance of the clock on the display. The following settings can be adjusted:

Time Format

The clock can be set to 12 hours or 24 hours.

Use GPS Clock

When this setting is activated, the clock is set and continually updated via the GPS used by the Navigation System.



Set Clock Manually

When this setting is activated, the clock can be set manually. Touch the “+” or “-” key to adjust the hours and minutes up or down.

Daylight Savings Time

When this setting is activated, daylight savings time is on. Touch the “Daylight Savings Time” key to toggle the setting on or off.

Time Zone

Choose the applicable time zone from the list.



Language:

Select the “Language” key to adjust the language used by the system. The language can be set to English, Français or Español.

Touch click:

Select the “Touch Click” key to toggle the touch click feature on or off. When activated, a click sound will be heard every time a key on the screen is touched.

REARVIEW MONITOR (if so equipped)

Beep tones:

Select the “Beep Tones” key to toggle the beep tones feature on or off. When activated, a beep sound will be heard when a pop-up message appears on the screen or a button on the unit (such as the  button) is pressed and held for two seconds.

Reset all settings/memory:

Select the “Reset All Settings/Memory” key to return all settings to default and to clear the memory.

Traffic setup

Refer to the separate Navigation System Owner's Manual for information regarding this item.

BUTTON

To change the display brightness, press the  button. Pressing the button again will change the display to the day or the night display.

If no operation is performed within 5 seconds, the display will return to the previous display.

Press and hold the  button for more than two seconds to turn the display off. Press the button again to turn the display on.

When the shift selector is shifted into the R (Reverse) position, the monitor display shows a rearward view from the vehicle.

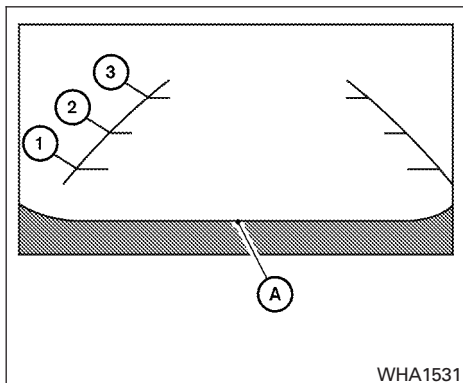
WARNING

- The system is designed as an aid to the driver in detecting large stationary objects to help avoid damaging the vehicle. The system will not detect small objects below the bumper, and may not detect objects close to the bumper or on the ground.
- The RearView Monitor is a convenience but it is not a substitute for proper backing. Always turn and check that it is safe to do so before backing up. Always back up slowly.
- Objects viewed in the RearView Monitor differ from actual distance because a wide-angle lens is used.
- Underneath the bumper and the corner areas of the bumper cannot be viewed on the RearView Monitor because of its monitoring range limitation.
- Do not put anything on the rearview camera. The rearview camera is installed beside the license plate light.

- When washing the vehicle with high-pressure water, be sure not to spray it around the camera. Otherwise, water may enter the camera unit causing water condensation on the lens, a malfunction, fire or an electric shock.
- Do not strike the camera. It is a precision instrument. Otherwise, it may malfunction or cause damage resulting in a fire or an electric shock.

CAUTION

There is a plastic cover over the camera. Do not scratch the cover when cleaning dirt or snow from the cover.



HOW TO READ THE DISPLAYED LINES

Lines which indicate the vehicle clearance and distances to objects with reference to the bumper line (A) are displayed on the monitor.

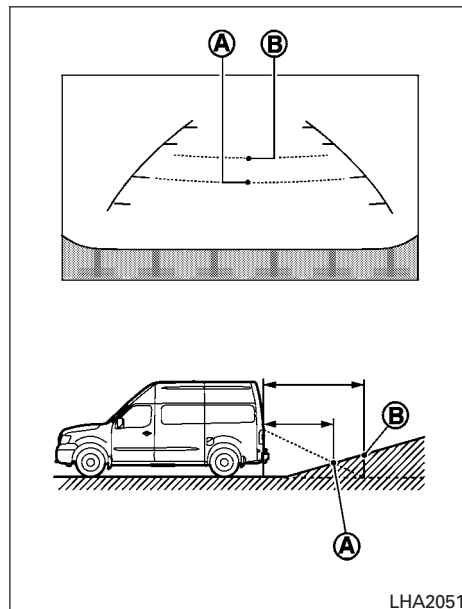
They are indicated as reference distances to objects. The lines and colors in the display indicate distances from the back bumper line (A) in the illustration.

- ① 1.5 ft (0.5 m) red
- ② 3 ft (1 m) yellow
- ③ 7 ft (2 m) green

The vehicle clearance lines are wider than the actual clearance.

DIFFERENCE BETWEEN PREDICTED AND ACTUAL DISTANCES

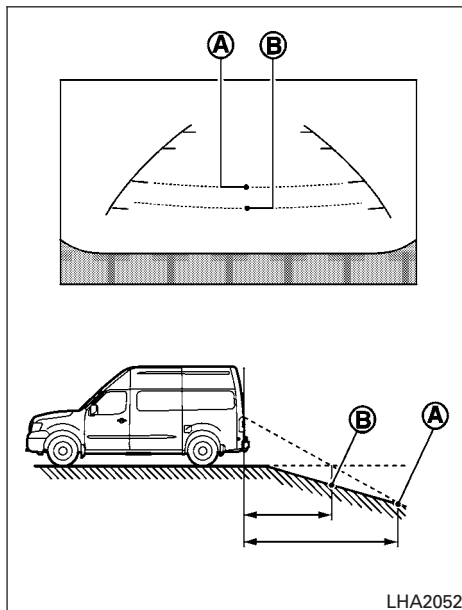
The distance guide line and the vehicle width guide line should be used as a reference only when the vehicle is on a level, paved surface. The distance viewed on the monitor is for reference only and may be different than the actual distance between the vehicle and displayed objects.



Backing up on a steep uphill

When backing up the vehicle up a hill, the distance guide lines and the vehicle width guide lines are shown closer than the actual distance. For example, the display shows 3 ft (1.0 m) to the place (A), but the actual 3 ft (1.0 m) distance on

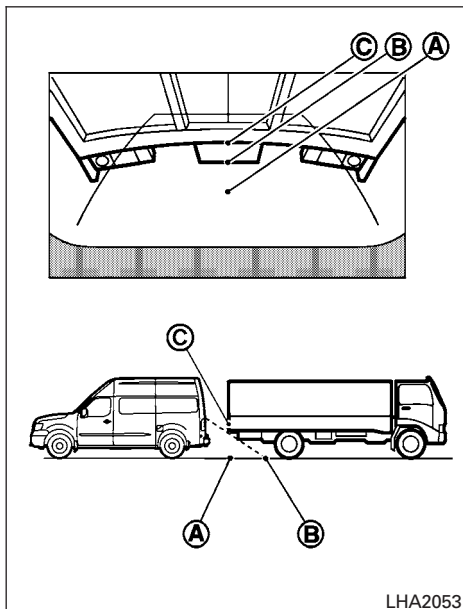
the hill is the place ②. Note that any object on the hill is further than it appears on the monitor.



the hill is the place ②. Note that any object on the hill is closer than it appears on the monitor.

Backing up on a steep downhill

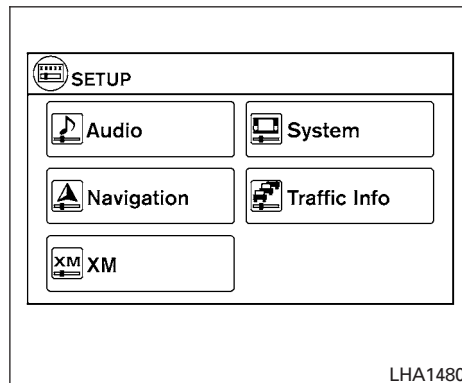
When backing up the vehicle down a hill, the distance guide lines and the vehicle width guide lines are shown farther than the actual distance. For example, the display shows 3 ft (1.0 m) to the place ①, but the actual 3 ft (1.0 m) distance on



Backing up behind a projecting object

The position ③ is shown farther than the position ② in the display. However, the position ③ is actually at the same distance as the position ①. The vehicle may hit the object when backing up to

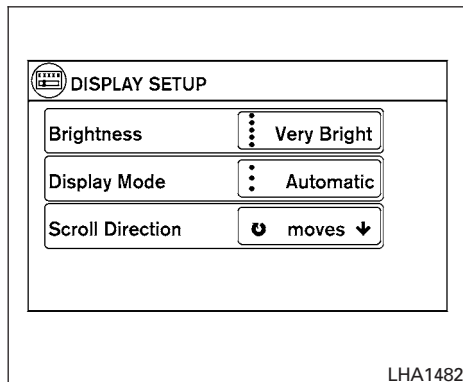
the position ① if the object projects over the actual backing up course.



ADJUSTING THE SCREEN

To adjust the quality of the screen, perform the following:

1. Press the SETUP button.
2. Touch "System".



3. Touch "Display".
4. To adjust the brightness, touch the "Brightness" key repeatedly to set the display to Very Bright, Bright, Default, Dark or Very Dark. Touch "Display Mode" to cycle between day, night and automatic display modes.

Do not adjust the screen settings of the RearView Monitor while the vehicle is moving.

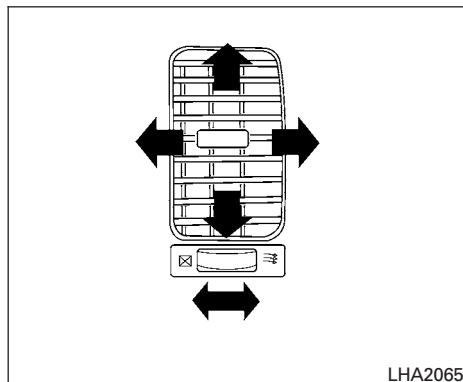
OPERATING TIPS

⚠ CAUTION

- **Do not use alcohol, benzine or thinner to clean the camera. This will cause discoloration. To clean the camera, wipe with a cloth dampened with a diluted mild cleaning agent and then wipe with a dry cloth.**
- **Do not damage the camera as the monitor screen may be adversely affected.**
- When the shift selector is shifted to R (Reverse), the monitor screen automatically changes to the RearView Monitor mode. However, the radio can be heard.
- It may take some time until the RearView Monitor is displayed after the shift selector has been shifted to R (Reverse). Objects may be distorted momentarily until the RearView Monitor screen is displayed completely. When the shift selector is returned to a position other than R (Reverse), it may take some time until the screen changes. Objects on the screen may be distorted until they are completely displayed.
- When the temperature is extremely high or low, the screen may not clearly display objects. This is not a malfunction.

- When strong light directly enters the camera, objects may not be displayed clearly.
- Vertical lines may be seen in objects on the screen. This is due to strong reflected light from the bumper. This is not a malfunction.
- The screen may flicker under fluorescent light. This is not a malfunction.
- The colors of objects on the RearView Monitor may differ somewhat from those of the actual object.
- When the contrast of objects is low at night, pressing the setting control knob or SETUP button may not change the brightness.
- Objects on the monitor may not be clear in a dark place or at night.
- If dirt, rain or snow attaches to the camera, the RearView Monitor may not display objects. Clean the camera.
- Do not use body wax on the camera window. If body wax does get on the camera window, wipe off the wax with a clean cloth dampened with mild detergent diluted with water.

VENTS



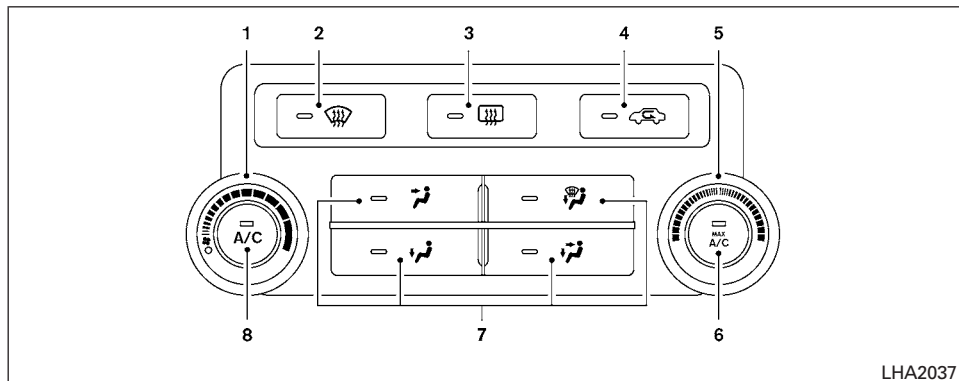
Adjust air flow direction by moving the vent slides.

Open or close the vents by using the dial. Move the dial toward the  to open the vents or toward the  to close them.

HEATER AND AIR CONDITIONER (manual)

WARNING

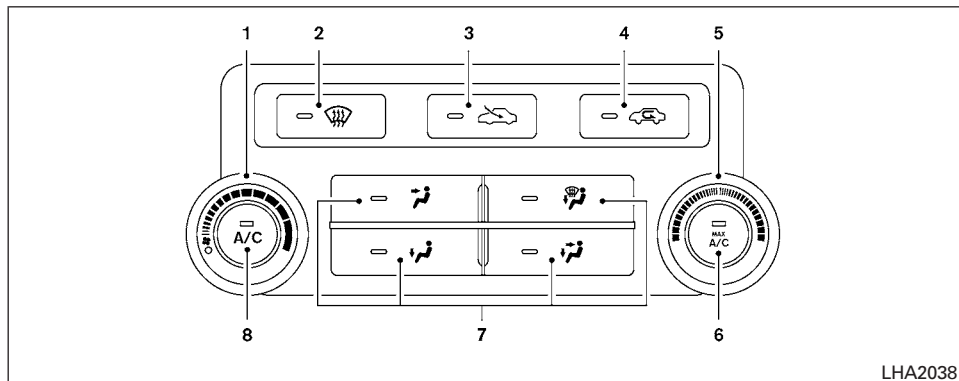
- The air conditioner cooling function operates only when the engine is running.
- Do not leave children or adults who would normally require the assistance of others alone in your vehicle. Pets should also not be left alone. They could accidentally injure themselves or others through inadvertent operation of the vehicle. Also, on hot, sunny days, temperatures in a closed vehicle could quickly become high enough to cause severe or possibly fatal injuries to people or animals.
- Do not use the recirculation mode for long periods as it may cause the interior air to become stale and the windows to fog up.



LHA2037

Type A

1. Fan speed control dial
2. Front window defroster button
3. Rear window defroster button (Type A)
/ Fresh air button (Type B)
4. Air recirculation button
5. Temperature control dial
6. MAX A/C button
7. Air flow control buttons
8. Air conditioner ON/OFF button



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Type B

CONTROLS

Fan control dial

The fan control dial turns the fan on and off, and controls fan speed.

Air flow control buttons

The air flow control buttons allow you to select the air flow outlets.

MAX — Air flows from center and side vents with maximum cooling (air conditioning).
A/C

-  — Air flows from center and side vents.
-  — Air flows from center and side vents and the front and rear floor outlets.
-  — Air flows mainly from the front and rear floor outlets.
-  — Air flows from defroster outlets and the front and rear floor outlets.

Temperature control dial

The temperature control dial allows you to adjust the temperature of the outlet air. To lower the

temperature, turn the dial to the left. To increase the temperature, turn the dial to the right.

Air recirculation button

Press the  button to recirculate air inside the vehicle.

Press the  button to the on position when:

- driving on a dusty road.
- to prevent traffic fumes from entering passenger compartment.
- for maximum cooling when using the air conditioner.

The air recirculation mode is only functional when the air flow control mode is in the following positions: ,  or .

For models equipped with the Type A system, press the  button to turn air recirculation off. Outside air is drawn into the passenger compartment and distributed through the selected outlet.

For models equipped with the Type B system, press the  button to switch to the fresh air intake mode. Outside air is drawn into the passenger compartment and distributed through the selected outlet.

The  mode is not necessary for normal heater or air conditioner operation.

Fresh air intake (Type B only)

Press the fresh air intake button . The air flow is drawn from outside the vehicle.

Air conditioner button

Start the engine, turn the fan control dial to the desired position and press the  button to turn on the air conditioner. The indicator light comes on when the air conditioner is operating. To turn off the air conditioner, press the  button again.

The air conditioner cooling function operates only when the engine is running.

Rear window and outside mirror (if so equipped) defroster switch

For more information about the rear window and outside mirror (if so equipped) defroster switch, see "Rear window and outside mirror defroster switch" in the "Instruments and controls" section of this manual.

HEATER OPERATION

Heating

This mode is used to direct heated air to the foot outlets. Some air also flows from the defrost outlets.

1. Press the  button to the OFF position (Type A) or press the  button (Type B) for normal heating. The indicator light on the  button will go off.
2. Press the  air flow control button.
3. Turn the fan control dial to the desired position.
4. Turn the temperature control dial to the desired position between the middle and the hot position.

Ventilation

This mode directs outside air to the side and center vents.

1. Press the  button to the OFF position (Type A) or press the  button (Type B). The indicator light on the  button will go off.
2. Press the  air flow control button.

3. Turn the fan control dial to the desired position.
4. Turn the temperature control dial to the desired position.

Defrosting or defogging

This mode directs the air to the defrost outlets to defrost/defog the windows.

1. Turn the air flow control dial to the  position.
 2. Turn the fan control dial to the desired position.
 3. Turn the temperature control dial to the desired position between the middle and the hot position.
- To quickly remove ice or fog from the windows, turn the fan control dial to the right and the temperature control to the full HOT position.

- When the  position is selected, the air conditioner automatically turns on (however, the indicator light on the A/C button will not come on) if the outside temperature is more than 36°F (2°C). This dehumidifies the air which helps defog the windshield. The  mode automatically turns off, allowing outside air to be drawn into the passenger compartment to further improve the defogging performance.

Bi-level heating

The bi-level mode directs warmed air to the side and center vents and to the front and rear floor outlets.

1. Press the  button to the OFF position (Type A) or press the  button (Type B). The indicator light on the  button will go off.
2. Press the  air flow control button.
3. Turn the fan control dial to the desired position.
4. Turn the temperature control dial to the desired position.

Heating and defogging

This mode heats the interior and defogs the windshield.

1. Press the  air flow control button.
 2. Turn the fan control dial to the desired position.
 3. Turn the temperature control dial to the desired position between the middle and the hot position.
- When the  position is selected, the air conditioner automatically turns on (however, the indicator light on the A/C button will not come on) if the outside temperature is more than 36°F (2°C). This dehumidifies the air which helps defog the windshield. The  mode automatically turns off, allowing outside air to be drawn into the passenger compartment to further improve the defogging performance.

Operating tips

Clear snow and ice from the wiper blades and air inlet in front of the windshield. This improves heater operation.

AIR CONDITIONER OPERATION

Start the engine, turn the fan control dial to the desired position, and press the A/C button to activate the air conditioner. When the air conditioner is on, cooling and dehumidifying functions are added to the heater operation.

The air conditioner cooling function operates only when the engine is running.

Cooling

This mode is used to cool and dehumidify the air.

1. Press the  button (Type A) to the OFF position or press the  button (Type B).
2. Press the  air flow control button.
3. Turn the fan control dial to the desired position.
4. Press the A/C button. The indicator light on the A/C button will come on.
5. Turn the temperature control dial to the desired position.

- For quick cooling when the outside temperature is high, press the  button to the ON position. The indicator light on the  button will come on. Be sure to return the  button to the OFF position (Type A) or press the  button (Type B) for normal cooling. The indicator light on the  button will go off. You may also select MAX A/C for quick cooling.

Dehumidified heating

This mode is used to heat and dehumidify the air.

1. Press the  button to the OFF position (Type A) or press the  button (Type B). The indicator light on the  button will go off.
2. Press the  air flow control button.
3. Turn the fan control dial to the desired position.
4. Press the A/C button on. The indicator light on the A/C button will come on.
5. Turn the temperature control dial to the desired position.

Operating tips

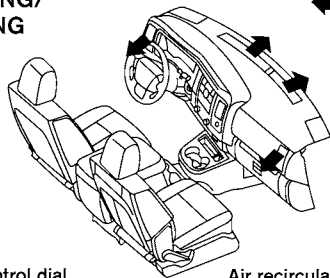
- Keep the windows closed while the air conditioner is in operation.
- After parking in the sun, drive for 2 or 3 minutes with the windows open to vent hot air from the passenger compartment. Then, close the windows. This allows the air conditioner to cool the interior more quickly.
- **The air conditioning system should be operated for approximately 10 minutes at least once a month. This helps prevent damage to the system due to lack of lubrication.**
- A visible mist may be seen coming from the ventilators in hot, humid conditions as the air is cooled rapidly. This does not indicate a malfunction.
- **If the engine coolant temperature gauge indicates engine coolant temperature over the normal range, turn the air conditioner off. See “If your vehicle overheats” in the “In case of emergency” section of this manual.**

AIR FLOW CHARTS

The following charts show the button and dial positions for **MAXIMUM AND QUICK** heating, cooling or defrosting. For additional information on heating and cooling see “Heater and air conditioner” in this section. **The air recirculation () mode should always be OFF for heating and defrosting.**

DEFROSTING/ DEFOGGING

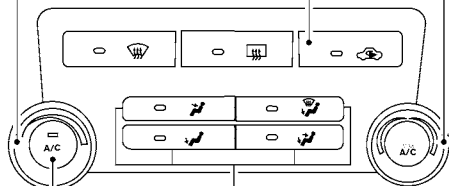
← : Air passed through
heater core



Fan control dial

Air recirculation
button

Temperature
control dial



Air conditioner button

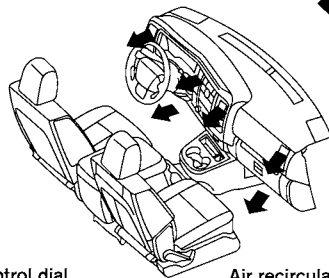
Air flow
controls

A/C Button	Air flow control	Temp control	Fan control	Air recirculation button
OFF		HOT (RIGHT)	HI (RIGHT)	OFF

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BI-LEVEL HEATING

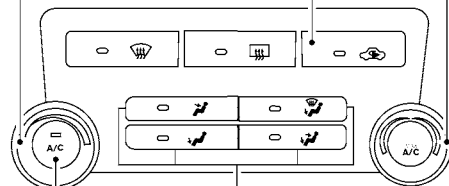
← : Air passed through
heater core



Fan control dial

Air recirculation
button

Temperature
control dial



Air conditioner button

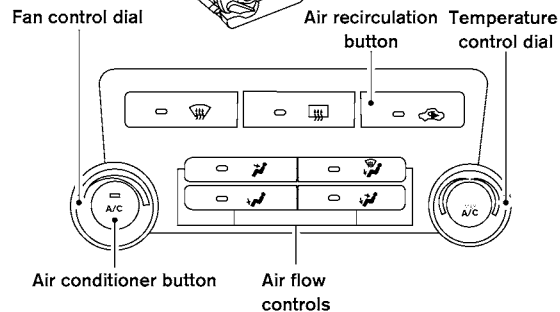
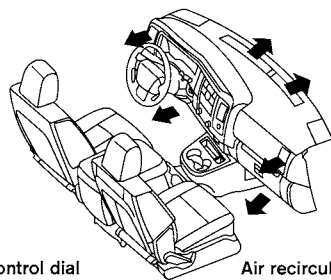
Air flow
controls

A/C Button	Air flow control	Temp control	Fan control	Air recirculation button
OFF		HOT (RIGHT)	HI (RIGHT)	OFF

LHA2040

HEATING

← : Air passed through heater core

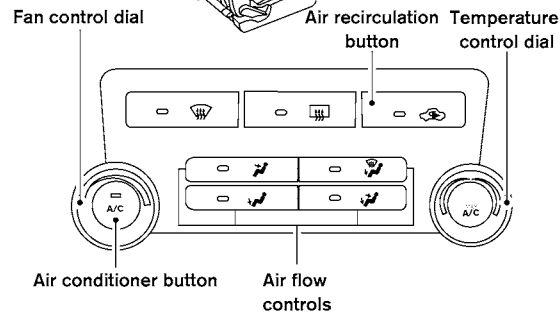
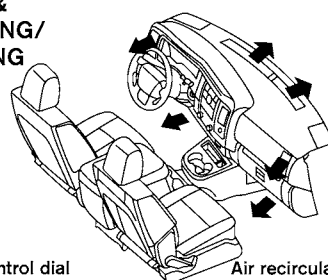


A/C Button	Air flow control	Temp control	Fan control	Air recirculation button
OFF		HOT (RIGHT)	HI (RIGHT)	OFF

LHA2041

HEATING & DEFROSTING/DEFOGGING

← : Air passed through heater core

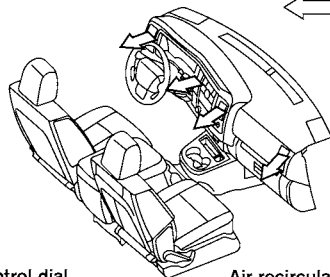


A/C Button	Air flow control	Temp control	Fan control	Air recirculation button
OFF		HOT (RIGHT)	HI (RIGHT)	OFF

LHA2042

COOLING

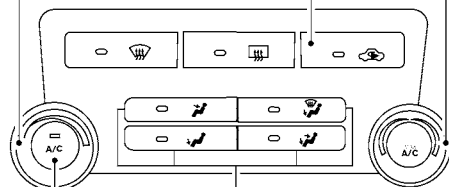
← : Air not passed through evaporator core



Fan control dial

Air recirculation button

Temperature control dial



Air conditioner button

Air flow controls

A/C Button	Air flow control	Temp control	Fan control	Air recirculation button
Auto turns ON	MAX A/C	COOL (LEFT)	HI (RIGHT)	Auto turns ON

LHA2043

SERVICING AIR CONDITIONER

The air conditioner system in your NISSAN vehicle is charged with a refrigerant designed with the environment in mind.

This refrigerant does not harm the earth's ozone layer.

Special charging equipment and lubricant is required when servicing your NISSAN air conditioner. Using improper refrigerants or lubricants will cause severe damage to your air conditioner system. See "Air conditioner system refrigerant and oil recommendations" in the "Technical and consumer information" section of this manual.

A NISSAN dealer is able to service your "environmentally friendly" air conditioning system.

WARNING

The air conditioner system contains refrigerant under high pressure. To avoid personal injury, any air conditioner service should be done only by an experienced technician with proper equipment.

AUDIO SYSTEM (if so equipped)

RADIO

Place the ignition switch in the ACC or ON position and press the PWR (power)/VOL (volume) knob to turn the radio on. If you listen to the radio with the engine not running, the ignition switch should be placed in the ACC position.

Radio reception is affected by station signal strength, distance from radio transmitter, buildings, bridges, mountains and other external influences. Intermittent changes in reception quality normally are caused by these external influences.

Using a cellular phone in or near the vehicle may influence radio reception quality.

Radio reception

Your NISSAN radio system is equipped with state-of-the-art electronic circuits to enhance radio reception. These circuits are designed to extend reception range, and to enhance the quality of that reception.

However, there are some general characteristics of both FM and AM radio signals that can affect radio reception quality in a moving vehicle, even when the finest equipment is used. These characteristics are completely normal in a given reception area and do not indicate any malfunction in your NISSAN radio system.

Reception conditions will constantly change because of vehicle movement. Buildings, terrain, signal distance and interference from other vehicles can work against ideal reception. Described below are some of the factors that can affect your radio reception.

Some cellular phones or other devices may cause interference or a buzzing noise to come from the audio system speakers. Storing the device in a different location may reduce or eliminate the noise.

FM RADIO RECEPTION

Range: FM range is normally limited to 25 – 30 mi (40 – 48 km), with monaural (single channel) FM having slightly more range than stereo FM. External influences may sometimes interfere with FM station reception even if the FM station is within 25 mi (40 km). The strength of the FM signal is directly related to the distance between the transmitter and receiver. FM signals follow a line-of-sight path, exhibiting many of the same characteristics as light. For example, they will reflect off objects.

Fade and drift: As your vehicle moves away from a station transmitter, the signals will tend to fade and/or drift.

Static and flutter: During signal interference from buildings, large hills or due to antenna position (usually in conjunction with increased distance from the station transmitter), static or flutter can be heard. This can be reduced by adjusting the treble control to reduce treble response.

Multipath reception: Because of the reflective characteristics of FM signals, direct and reflected signals reach the receiver at the same time. The signals may cancel each other, resulting in momentary flutter or loss of sound.

AM RADIO RECEPTION

AM signals, because of their low frequency, can bend around objects and skip along the ground. In addition, the signals can be bounced off the ionosphere and bent back to earth. Because of these characteristics, AM signals are also subject to interference as they travel from transmitter to receiver.

Fading: Occurs while the vehicle is passing through freeway underpasses or in areas with many tall buildings. It can also occur for several seconds during ionospheric turbulence even in areas where no obstacles exist.

Static: Caused by thunderstorms, electrical power lines, electric signs and even traffic lights.

SATELLITE RADIO RECEPTION (if so equipped)

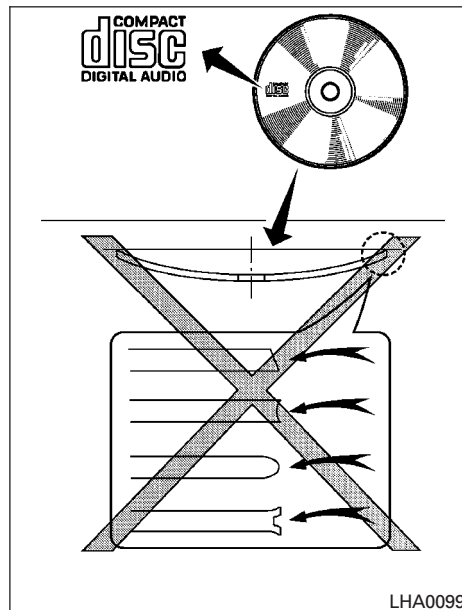
When the satellite radio is used for the first time or the battery has been replaced, the satellite radio may not work properly. This is not a malfunction. Wait more than 10 minutes with satellite radio ON and the vehicle outside of any metal or large building for satellite radio to receive all of the necessary data.

No satellite radio reception is available unless there is an active SiriusXM Satellite Radio service subscription. Satellite radio is not available in Alaska, Hawaii and Guam. If satellite radio is not operational then pressing the RADIO button will switch between FM and AM bands.

Satellite radio performance may be affected if cargo carried on the roof blocks the satellite radio signal.

If possible, do not put cargo over the satellite antenna.

A build up of ice on the satellite radio antenna can affect satellite radio performance. Remove the ice to restore satellite radio reception.



AUDIO OPERATION PRECAUTIONS

Compact disc (CD) player

CAUTION

- Do not force a compact disc into the CD insert slot. This could damage the CD and/or CD player.
- Trying to load a CD with the CD door closed could damage the CD and/or CD player.
- Only one CD can be loaded into the CD player at a time.
- Only use high quality 4.7 in (12 cm) round discs that have the "COMPACT disc DIGITAL AUDIO" logo on the disc or packaging.
- During cold weather or rainy days, the player may malfunction due to the humidity. If this occurs, remove the CD and dehumidify or ventilate the player completely.
- The player may skip while driving on rough roads.
- The CD player sometimes cannot function when the compartment temperature is extremely high or low. Decrease/increase the temperature before use.

- Do not expose the CD to direct sunlight.
- CDs that are in poor condition or are dirty, scratched or covered with fingerprints may not work properly.
- The following CDs may not work properly:
 - Copy control compact discs (CCCD)
 - Recordable compact discs (CD-R)
 - Rewritable compact discs (CD-RW)
- Do not use the following CDs as they may cause the CD player to malfunction:
 - 3.1 in (8 cm) discs with an adapter
 - CDs that are not round
 - CDs with a paper label
 - CDs that are warped, scratched, or have abnormal edges
- This audio system can only play pre-recorded CDs. It has no capability to record or burn CDs.
- If the CD cannot be played, one of the following messages will be displayed.

CHECK DISC:

- Confirm that the CD is inserted correctly (the label side is facing up, etc.).
- Confirm that the CD is not bent or warped and it is free of scratches.

PRESS EJECT:

This is an error due to excessive temperature inside the player. Remove the CD by pressing the EJECT button. After a short time, reinsert the CD. The CD can be played when the temperature of the player returns to normal.

UNPLAYABLE:

The file is unplayable in this audio system (only MP3 or WMA (if so equipped) CD).

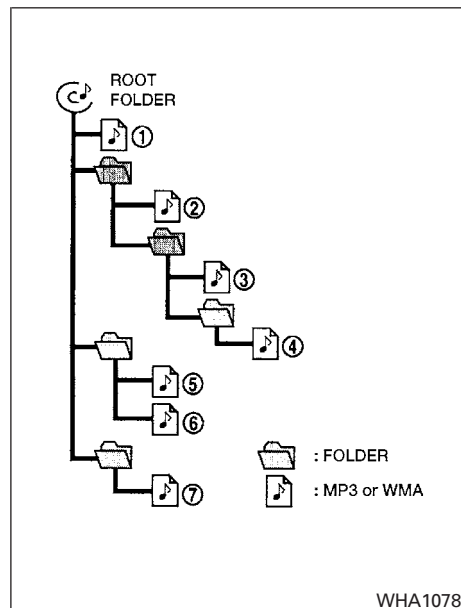
Compact disc with MP3 or WMA (if so equipped)

Terms:

- **MP3** — MP3 is short for Moving Pictures Experts Group Audio Layer 3. MP3 is the most well-known compressed digital audio file format. This format allows for near “CD quality” sound, but at a fraction of the size of normal audio files. MP3 conversion of an audio track from CD-ROM can reduce the file size by approximately a 10:1 ratio with virtually no perceptible loss in quality. MP3 compression removes the redundant and irrelevant parts of a sound signal that the human ear doesn’t hear.
- **WMA** — Windows Media Audio (WMA)* is a compressed audio format created by Microsoft as an alternative to MP3. The WMA codec offers greater file compression than the MP3 codec, enabling storage of more digital audio tracks in the same amount of space when compared to MP3s at the same level of quality.
- **Bit rate** — Bit rate denotes the number of bits per second used by a digital music file. The size and quality of a compressed digital audio file is determined by the bit rate used when encoding the file.

- **Sampling frequency** — Sampling frequency is the rate at which the samples of a signal are converted from analog to digital (A/D conversion) per second.
- **Multisession** — Multisession is one of the methods for writing data to media. Writing data once to the media is called a single session, and writing more than once is called a multisession.
- **ID3/WMA Tag** — The ID3/WMA tag is the part of the encoded MP3 or WMA file that contains information about the digital music file such as song title, artist, encoding bit rate, track time duration, etc. ID3 tag information is displayed on the Artist/song title line on the display.

* Windows® and Windows Media® are registered trademarks and trademarks in the United States of America and other countries of Microsoft Corporation of the USA.



Playback order chart

Playback order:

Music playback order of a CD with MP3 or WMA files is as illustrated.

- The names of folders not containing MP3 or WMA files are not shown in the display.
- If there is a file in the top level of the disc, "Root Folder" is displayed.
- The playback order is the order in which the files were written by the writing software. Therefore, the files might not play in the desired order.

Specification chart:

Supported media			CD, CD-R, CD-RW
Supported file systems			ISO9660 LEVEL1, ISO9660 LEVEL2, Apple ISO, Romeo, Joliet * ISO9660 Level 3 (packet writing) is not supported.
Supported versions*1	MP3	Version	MPEG1, MPEG2, MPEG2.5
		Sampling frequency	8 kHz - 48 kHz
		Bit rate	8 kbps - 320 kbps, VBR
	WMA	Version	WMA7, WMA8, WMA9
		Sampling frequency	32 kHz - 48 kHz
		Bit rate	48 kbps - 192 kbps, VBR
Tag information			ID3 tag VER1.0, VER1.1, VER2.2, VER2.3 (MP3 only)
Folder levels			Folder levels: 8, Max folders: 255 (including root folder), Files: 512 (Max. 255 files for one folder)
Text character number limitation			128 characters
Displayable character codes*2			01: ASCII, 02: ISO-8859-1, 03: UNICODE (UTF-16 BOM Big Endian), 04: UNICODE (UTF-16 Non-BOM Big Endian), 05: UNICODE (UTF-8), 06: UNICODE (Non-UTF-16 BOM Little Endian)

*1 Files created with a combination of 48 kHz sampling frequency and 64 kbps bit rate cannot be played.

*2 Available codes depend on what kind of media, versions and information are going to be displayed.

Troubleshooting guide:

Symptom	Cause and Countermeasure
Cannot play	Check if the disc was inserted correctly.
	Check if the disc is scratched or dirty.
	Check if there is condensation inside the player. If there is, wait until the condensation is gone (about 1 hour) before using the player.
	If there is a temperature increase error, the CD player will play correctly after it returns to the normal temperature.
	If there is a mixture of music CD files (CD-DA data) and MP3/WMA files on a CD, only the music CD files (CD-DA data) will be played.
	Files with extensions other than ".MP3", ".WMA", ".mp3" or ".wma" cannot be played. In addition, the character codes and number of characters for folder names and file names should be in compliance with the specifications.
	Check if the finalization process, such as session close and disc close, is done for the disc.
Poor sound quality	Check if the disc is protected by copyright.
	Check if the disc is scratched or dirty.
It takes a relatively long time before the music starts playing.	Bit rate may be too low.
	If there are many folders or file levels on the MP3/WMA disc, or if it is a <u>multisession disc</u> , some time may be required before the music starts playing.
Music cuts off or skips	The writing software and hardware combination might not match, or the writing speed, writing depth, writing width, etc., might not match the specifications. Try using the slowest writing speed.
Skipping with high bit rate files	Skipping may occur with large quantities of data, such as for high bit rate data.
Moves immediately to the next song when playing	When a non-MP3/WMA file has been given an extension of ".MP3", ".WMA", ".mp3" or ".wma", or when play is prohibited by copyright protection, there will be approximately 5 seconds of no sound and then the player will skip to the next song.
Songs do not play back in the desired order	The playback order is the order in which the files were written by the writing software. Therefore, the files might not play in the desired order.

USB (Universal Serial Bus) memory (if so equipped)

 WARNING

Do not connect or disconnect the USB device while driving. Doing so can be a distraction. If distracted you could lose control of your vehicle and cause an accident or serious injury.

 CAUTION

- Do not force the USB device into the USB port. Inserting the USB device tilted or up-side-down into the port may damage the USB device and the port. Make sure that the USB device is connected correctly into the USB port.
- Do not grab the USB port cover (if so equipped) when pulling the USB device out of the port. This could damage the port and the cover.
- Do not leave the USB cable in a place where it can be pulled unintentionally. Pulling the cable may break the wire, USB device or the port.

- To avoid damage and loss of function when using a USB device, note the following precautions.

- Do not bend the cable excessively (1.6 in [40 mm]) radius minimum.
- Do not twist the cable excessively (more than 180 degrees).
- Do not pull or drop the cable.
- Do not hit or press the USB port or USB device with hands, feet, or objects.
- Do not store objects with sharp edges in the storage area where the cable is stored.
- Do not leave the USB device and attached devices in the vehicle compartment. When not in use for extended periods of time, store the cable and USB device in a clean, dust free environment at room temperature and without direct sun exposure.
- Do not use the cable for any other purposes than its intended use in the vehicle.

The vehicle is not equipped with a USB device. USB devices should be purchased separately as necessary.

This system cannot be used to format USB devices. To format a USB device, use a personal computer.

In some states/area, the USB device for the front seats plays only sound without images for regulatory reasons, even when the vehicle is parked.

This system supports various USB memory devices, USB hard drives and iPod® players. Some USB devices may not be supported by this system.

- Partitioned USB devices may play correctly.
- Some characters used in other languages (Chinese, Japanese, etc.) may not appear properly in the display. Using English language characters with a USB device is recommended.

General notes for USB use:

- The USB device may not function when the passenger compartment temperature is extremely high. Lower the temperature before use.

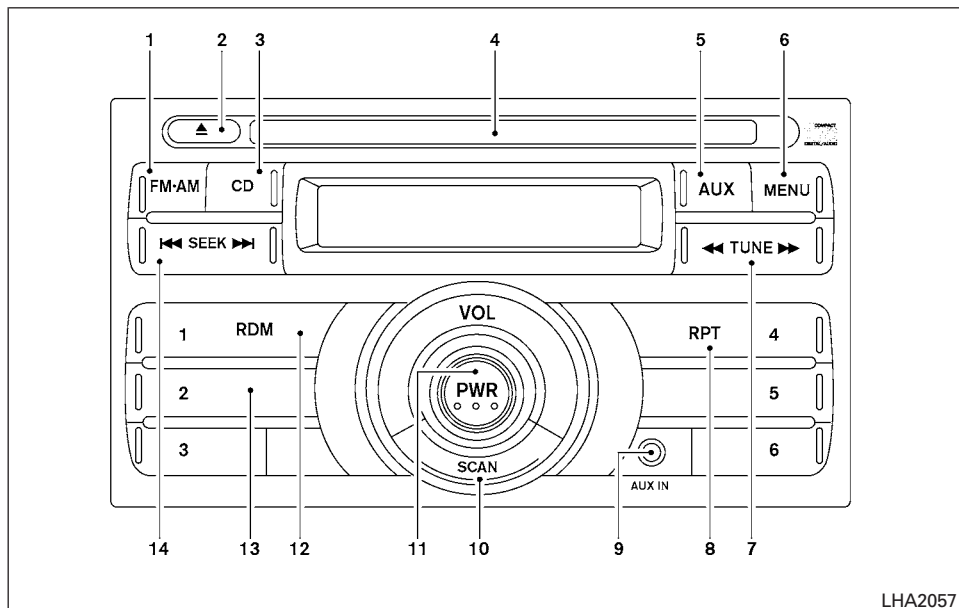
- During cold weather or rainy days, the player may malfunction due to humidity. If this occurs, remove the USB device and dehumidify or ventilate the USB player completely.
- Do not connect a USB device if a connector, cable or USB port is wet. Allow the connector, cable, and USB port to dry completely before connecting the USB device. (Wait for 24 hours or more until it is dry.) If the connector and USB port are exposed to fluids other than water, evaporative residue may cause a short circuit between the connector pins and USB port. In this case, replace the cable and USB port. Otherwise damage to the USB device and a loss of function may occur.
- If the cable is damaged (insulation cut, connectors cracked, contamination such as liquids, dust, dirt, etc. in the connectors), do not use the cable. Replace the cable with a new one.
- Do not put a USB device in a location where static electricity occurs, electrical noise is generated or hot air from the air conditioner blows directly on it. Doing so may cause the data stored on the USB device to be corrupted.

Notes for iPod® use:

iPod® is a trademark of Apple Inc., registered in the U.S. and other countries.

- Improperly plugging in the iPod may cause a checkmark to be displayed on and off (flickering). Always make sure that the iPod is connected properly.
- An iPod® nano (1st Generation) may remain in fast forward or rewind mode if it is connected during a seek operation. In this case, please manually reset the iPod.
- An iPod® nano (2nd Generation) will continue to fast-forward or rewind if it is disconnected during a seek operation.
- An incorrect song title may appear when the Play Mode is changed while using an iPod® nano (2nd Generation).
- Audiobooks may not play in the same order as they appear on an iPod®.
- Large video files cause slow responses in an iPod®. The vehicle center display may momentarily black out, but will soon recover.

- If an iPod® automatically selects large video files while in the shuffle mode, the vehicle center display may momentarily black out, but will soon recover.



1. FM-AM button
2. ▲ CD eject button
3. CD button
4. CD insert slot
5. AUX button

Type A

6. MENU button
7. ◀ TUNE ▶ button
8. RPT button
9. AUX IN jack
10. SCAN button

11. PWR button/VOL control knob
12. RDM button
13. Station select (1 - 6) buttons
14. ◀◀ SEEK ▶▶ button

FM/AM RADIO WITH COMPACT DISC (CD) PLAYER (Type A) (if so equipped)

For all operation precautions, see "Audio operation precautions" earlier in this section.

Audio main operation

Power button and VOL control knob

Place the ignition switch in the ACC or ON position, then press the PWR (power) button. If you listen to the radio with the engine not running, place the ignition switch in the ACC position. The mode (radio or CD) that was playing immediately before the system was turned off resumes playing.

When no CD is loaded, the radio comes on. Pressing the PWR button again turns the system off.

Turn the VOL control knob to the right to increase volume or to the left to decrease volume.

MENU button (BASS, TREBLE, FADE, BALANCE and CLOCK):

Press the MENU button to change the mode as follows:

BAS → TRE → FAD → BAL → CLOCK → Audio → BAS

To adjust Bass, Treble, Fade and Balance, press the MENU button until the desired mode appears in the display. Press the SEEK button to adjust Bass and Treble to the desired level. You can also use the SEEK button to adjust Fade and Balance modes. Balance adjusts the sound between the right and left speakers. Since this vehicle is not equipped with rear speakers, adjusting the fade to the rear of the vehicle will reduce the volume until no sound is played.

Once you have adjusted the sound quality to the desired level, press the MENU button repeatedly until the radio or CD display reappears. Otherwise, the radio or CD display will automatically reappear after about 10 seconds.

NOTE:

If the clock is enabled, pressing the MENU button will change the mode as follows:
BAS → TRE → FAD → BAL → CLOCK → Hour adjustment → Minute adjustment → Audio → BAS

For more information on setting the clock, see "Clock set" later in this section.

Clock operation

Press the MENU button until CLOCK is displayed; use the SEEK button to turn the clock display on (CLK ON) or off (CLK OFF).

Clock set

If the clock is not displayed with the ignition switch in the ACC or ON position, you need to select the CLK ON mode. Press the MENU button repeatedly until CLOCK is displayed. Use the SEEK button to enable CLK ON mode.

1. Press the MENU button repeatedly until CLOCK mode appears; press the SEEK button until CLK ON appears.
2. Press the MENU button again; the hours will start flashing.
3. Press the SEEK button ◀◀ or ▶▶ to adjust the hour.
4. Press the MENU button again; the display will switch to the minute adjustment mode.
5. The minutes will start flashing. Press SEEK button ◀◀ or ▶▶ to adjust the minutes.
6. Press the MENU button again to exit the clock set mode.

The display will return to the regular clock display after 10 seconds, or press the MENU button again to return to the regular clock display.

Resetting the time

Hold the MENU button down and then press the TUNE/SEEK button; the time will reset as follows:

- If the displayed minutes before the reset are in the range of :00 - :29, the hour displayed before the reset will stay the same and the minutes will be reset to :00.
- If the displayed minutes before the reset are in the range of :30 - :59, the hour displayed before the reset will advance by one hour and the minutes will be reset to :00.

For example, if the MENU button and the TUNE/SEEK button are pressed while the time displayed is between 8:00 and 8:29, the display will be reset to 8:00. If the buttons were pressed while the time was between 8:30 and 8:59, the display will be reset to 9:00. At the same time the display will return to the audio.

FM/AM radio operation

FM-AM button:

Press the FM-AM button to change the band as follows:

FM1 → FM2 → AM → FM1

The FM stereo indicator, ST, illuminates during FM stereo reception. When the stereo broadcast signal is weak, the radio automatically changes from stereo to monaural reception.

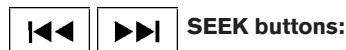


TUNE buttons:

Manual tuning

Press the TUNE ◀◀ or ▶▶ button for less than 0.5 seconds for manual tuning.

To move quickly through the channels, press and hold either TUNE ◀◀ or ▶▶ button down for more than 1.5 seconds.



SEEK buttons:

SEEK tuning

Press the SEEK ◀◀ or ▶▶ button to seek through the frequencies. Seek tuning begins from low to high frequencies, or high to low frequencies, depending on which button is pressed, and stops at the next broadcasting sta-

tion. Once the highest broadcasting station is reached, the radio continues in the seek mode at the lowest broadcasting station.

Station memory operations:

Twelve stations can be set for the FM band (6 for FM1 and 6 for FM2) and 6 stations can be set for the AM band to the preset buttons.

1. Press the FM-AM button to change to the desired band.
2. Tune to the desired station using manual TUNE or SEEK tuning. Press and hold any of the desired station memory buttons (1 – 6) until a beep sound is heard. (The radio mutes when the select button is pressed.)
3. The channel indicator will then come on and the sound will resume. Programming is now complete.
4. Other buttons can be set in the same manner.

If the battery cable is disconnected, or if the fuse opens, the radio memory will be canceled. In that case, reset the desired stations.

Compact disc (CD) player operation

If the radio is already operating, it automatically turns off and the compact disc begins to play.

CD button:

When the CD button is pressed with a compact disc loaded and the radio playing, the radio turns off and the last used compact disc starts to play.



TUNE (rewind and fast forward) buttons:

When the TUNE ◀◀ or ▶▶ button is pressed while the compact disc is playing, the compact disc plays at an increased speed while rewinding or fast forwarding. When the button is released, the compact disc returns to normal play speed.



SEEK buttons:

When ▶▶ is pressed while the compact disc is playing, the next track following the present one starts to play from the beginning. Press ▶▶ several times to skip several tracks. Each time the button is pressed, the CD advances 1 additional track. The track number appears in the display window. (When the last track on the compact disc is skipped, the first track is played.)

When ◀◀ is pressed, the track being played returns to the beginning. Press ◀◀ several times to skip back several tracks. Each time the button is pressed, the CD moves back one track.

RPT button:

When the RPT button is pressed while the compact disc is being played, the play pattern can be changed as follows:

1 $\longleftrightarrow$ Normal

1: The track that is currently playing will be repeated.

RDM button:

When the RDM button is pressed while the compact disc is being played, the play pattern can be changed as follows:

RDM $\longleftrightarrow$ Normal

RDM: Tracks from the disc that is currently playing will be played randomly.

AUX (Auxiliary) button:

The AUX IN jack is located on the CD player. The AUX IN audio input jack accepts any standard analog audio input such as from a portable cassette tape/CD player, MP3 player or laptop computers.

Press the AUX button to play a compatible device when it is plugged into the AUX IN jack.

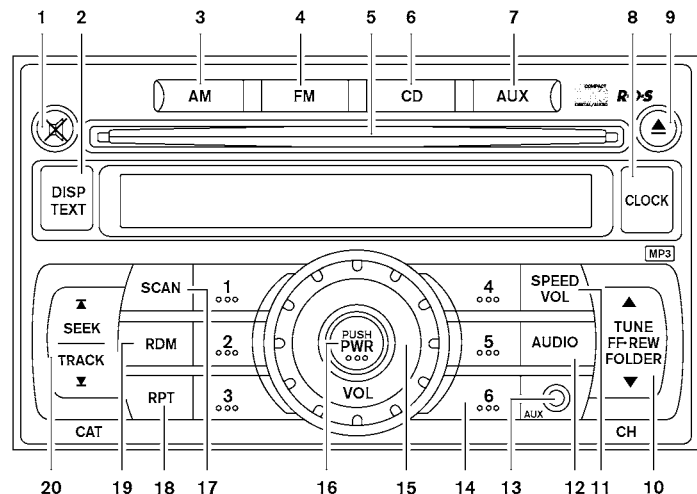
**CD EJECT button:**

When the  button is pressed with a compact disc loaded, the compact disc will be ejected.

When the  button is pressed while the compact disc is being played, the compact disc will eject and the system will turn off.

CD IN indicator:

CD IN indicator appears on the display when the CD is loaded with the system on.



Type B

1. MUTE button
2. DISP/TEXT button
3. AM button
4. FM button
5. CD insert slot
6. CD button
7. AUX button
8. CLOCK button
9. CD eject button
10. TUNE/FF-REW/FOLDER button

11. SPEED VOL button
12. AUDIO button
13. AUX IN jack
14. Station select (1 - 6) buttons
15. VOLUME control knob
16. PWR button
17. SCAN button
18. RPT button
19. RDM button
20. SEEK/TRACK button

FM/AM RADIO WITH COMPACT DISC (CD) PLAYER (Type B) (if so equipped)

For all operation precautions, see "Audio operation precautions" in this section.

Audio main operation

POWER/VOLUME control:

Place the ignition switch in the ACC or ON position. Press the PWR button while the system is off to call up the mode (radio, CD or AUX) that was playing immediately before the system was turned off. While the system is on, pressing the PWR button turns the system off.

Turn the VOL control knob to adjust the volume.



MUTE button:

Press the  button to mute the audio sound.

Press the  button again to resume playing the audio at its previous volume.

AUDIO button (Bass, Treble, Fade, Balance, SSV, Beep):

Press the AUDIO button to change the mode as follows:

Bass → Treble → Fade → Balance → Beep ON/OFF → Normal mode

To adjust Bass, Treble, Fade and Balance, press the AUDIO button until the desired mode appears in the display. Press the TUNE ▲

or ▼ or SEEK ▲ or ▼ button to adjust the selected mode to the desired level. Balance adjusts the sound between the right and left speakers. Since this vehicle is not equipped with rear speakers, adjusting the fade to the rear of the vehicle will reduce the volume until no sound is played.

To change the Beep to ON or OFF, press the TUNE button up or down until the desired mode is displayed. This will enable or disable the beep sound heard during menu selection.

SPEED VOL button:

To change the Speed Sensitive Volume (SSV) mode to Off, Low, Mid or High, press the SPEED VOL button until the desired setting is displayed.

Once you have adjusted the sound quality to the desired level, press the AUDIO button repeatedly until the radio or CD display reappears. If no action is taken, the radio or CD display will automatically reappear after approximately 5 seconds.

Clock set

If the clock is not displayed with the ignition switch in the ACC or ON position, press the CLOCK button to resume the display. Pressing the CLOCK button toggles the clock display on and off.

1. Press and hold the CLOCK button until the clock display starts to flash.
2. Press the SEEK/TRACK button ▲ or ▼ to adjust the hours.
3. Press the TUNE/FF-REW/FOLDER button ▲ or ▼ to adjust the minutes.
4. Press the CLOCK button again to exit the clock set mode.

If no action is taken, the display will return to the regular clock display after 10 seconds.

DISP (display) button

This button works during FM and CD operation. See the detailed function for this button in the section for each mode.

FM/AM radio operation

AM button:

Press the AM button to change the band to AM.

If another audio source is playing when the AM button is pressed, the audio source playing will automatically be turned off and the last radio station played will begin playing.

FM button:

Press the FM button to change the band as follows:

FM1 → FM2 → FM1

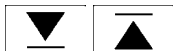
If another audio source is playing when the FM button is pressed, the audio source playing will automatically be turned off and the last radio station played will begin playing.

The FM stereo indicator (ST) illuminates during FM stereo reception. When the stereo broadcast signal is weak, the radio automatically changes from stereo to monaural reception.



TUNE button (Tuning):

Press the TUNE/FF-REW/FOLDER button ▼ or ▲ for manual tuning.



SEEK tuning:

Press the SEEK/TRACK button ▼ or ▲ to tune from low to high or high to low frequencies and to stop at the next broadcasting station.

SCAN tuning:

Press the SCAN button to stop at each broadcasting station for 5 seconds. Pressing the button again during this 5 second period will stop SCAN tuning and the radio will remain tuned to that station. If the SCAN button is not pressed within 5 seconds, SCAN tuning moves to the next station.

1 to 6 Station memory operations:

Twelve stations can be set for the FM band (6 for FM1, 6 for FM2) and six stations can be set for the AM band.

1. Choose the radio band AM, FM1 or FM2 using the AM or FM button.
2. Tune to the desired station using manual, SEEK or SCAN tuning. Press and hold any of the desired station memory buttons (1 – 6) until a beep sound is heard.

3. The channel indicator will then come on and the sound will resume. Programming is now complete.
4. Other buttons can be set in the same manner.

If the battery cable is disconnected or if the fuse opens, the radio memory will be canceled. In that case, reset the desired stations.

Compact disc (CD) player operation

If the radio is already operating, it automatically turns off and the compact disc begins to play.

CD button:

When the CD button is pressed with the system off and the compact disc loaded, the system will turn on and the compact disc will start to play.

When the CD button is pressed with a compact disc loaded and the radio playing, the radio will automatically be turned off and the compact disc will start to play.

DISP/TEXT button:

When the DISP/TEXT button is pressed while a CD is playing, the display will change as follows:

CD:

Track number → Disc title → Song title → Track number

CD with MP3 or WMA:

Track number → Folder title → Album title → Artist → Song title → Track number



TUNE/FF-REW/FOLDER (Reverse or Fast Forward) button:

CD:

When the TUNE/FF-REW/FOLDER button ▲ (fast forward) or ▼ (reverse) is pressed while the compact disc is playing, the compact disc plays at an increased speed while reversing or fast forwarding. When the button is released, the compact disc returns to normal play speed.

CD with MP3 or WMA:

When the TUNE/FF-REW/FOLDER button ▲ (fast forward) or ▼ (reverse) is pressed for less than 1.5 seconds while the compact disc is playing, the folders in the CD will change.

When the TUNE/FF-REW/FOLDER button ▲ (fast forward) or ▼ (reverse) is pressed for more than 1.5 seconds while the compact disc is playing, the compact disc plays at an increased speed while reversing or fast

forwarding. When the button is released, the compact disc returns to normal play speed.



SEEK/TRACK button:

When the SEEK/TRACK button ▲ is pressed while the compact disc is playing, the next track following the present one starts to play from the beginning. Press the SEEK/TRACK button ▲ several times to skip several tracks. Each time the button is pressed, the CD advances one additional track. The track number appears in the display window. (When the last track on the compact disc is skipped, the first track is played.)

When the SEEK/TRACK button ▼ is pressed, the track being played returns to the beginning. Press the SEEK/TRACK button ▼ several times to skip back several tracks. Each time the button is pressed the CD moves back one track.

RPT button:

When the RPT button is pressed while a compact disc is playing, the play pattern can be changed as follows:

CD:

TRACK REPEAT → DISC REPEAT

CD with MP3 or WMA:

FOLDER REPEAT → TRACK REPEAT → DISC REPEAT

TRACK REPEAT: the current track will be repeated.

DISC REPEAT: play pattern returns to normal.

FOLDER REPEAT: the current folder will be repeated.

RDM button:

When the RDM button is pressed while a compact disc is playing, the play pattern can be changed as follows:

CD:

DISC RANDOM → DISC REPEAT

CD with MP3 or WMA:

DISC RANDOM → FOLDER RANDOM → DISC REPEAT

DISC RANDOM: all tracks on the disc will be played randomly.

FOLDER RANDOM: all tracks in the current folder will be played randomly.

DISC REPEAT: play pattern returns to normal.

AUX (Auxiliary) button:

The AUX IN jack is located on the front of the radio. The AUX IN audio input jack accepts any standard analog audio input such as from a portable cassette tape/CD player, MP3 player or a laptop computer.

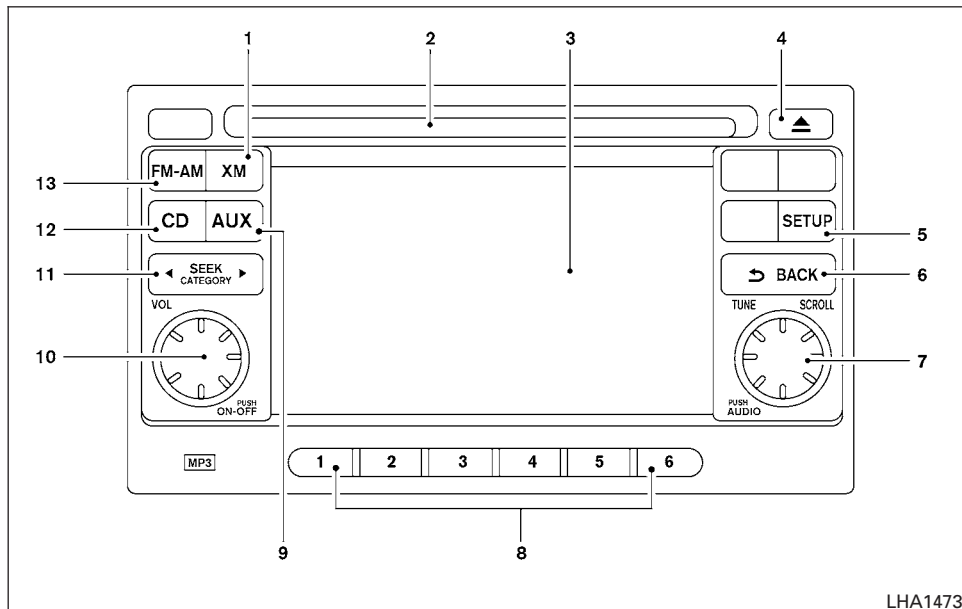
Press the AUX button to play a compatible device when it is plugged into the AUX IN jack.



EJECT button:

When the ▲ button is pressed with a compact disc loaded, the compact disc will eject and the last source will be played.

When the ▲ button is pressed twice with a compact disc loaded, the compact disc will be ejected further for easier CD removal. If the disc is not removed within 15 seconds, the disc will reload.



1. XM button	7. TUNE/SCROLL knob, AUDIO button
2. CD insert slot	8. Station select (1 - 6) buttons
3. Display screen	9. AUX button
4. CD eject button	10. VOL/ON-OFF control knob
5. SETUP button	11. SEEK/CATEGORY button
6. BACK button	12. CD button

13. FM-AM button

*No satellite radio reception is available when the XM button is pressed to access satellite radio stations unless optional satellite receiver and antenna are installed and an SiriusXM Satellite Radio service subscription is active. Satellite radio is not available in Alaska, Hawaii and Guam.

FM/AM/SAT RADIO WITH COMPACT DISC (CD) PLAYER (if so equipped)

For all operation precautions, see "Audio operation precautions" in this section.

Audio main operation

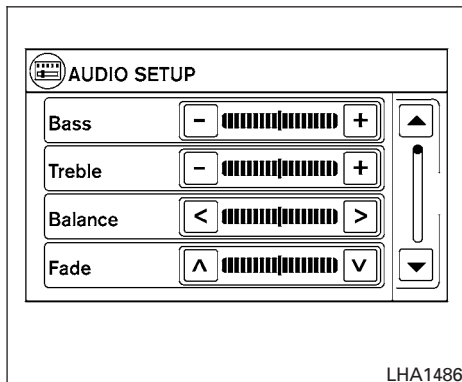
VOL/ON-OFF control:

Place the ignition switch in the ACC or ON position and push the VOL/ON-OFF control knob while the system is off to call up the mode (radio, CD, AUX, USB or iPod®) that was playing immediately before the system was turned off.

To turn the system off, press the VOL/ON-OFF control knob.

Turn the VOL/ON-OFF control knob to adjust the volume.

This vehicle may be equipped with Speed Volume for audio. When this feature is active, the audio volume changes as the driving speed changes.

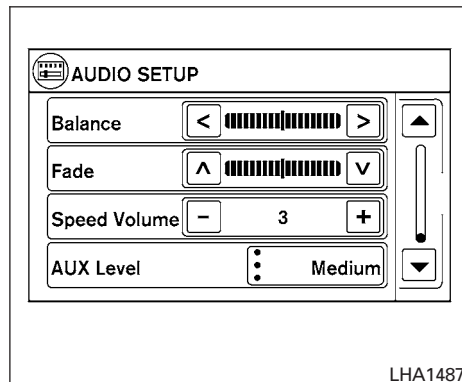


Audio settings:

Press the SETUP button to display the audio settings on the screen. These settings can also be displayed by pressing the AUDIO button (TUNE/SCROLL knob). Use the touchscreen to adjust the following items to the desired setting:

Bass, Treble, Balance and Fade:

Controls the sound of the audio system. Balance adjusts the sound between the left and right speakers. Since this vehicle is not equipped with rear speakers, adjusting the fade to the rear of the vehicle will reduce the volume until no sound is played.



Speed Volume:

Controls the level to which the volume is adjusted as the vehicle's driving speed changes. Choose a setting between 1 and 5 or choose 0 to disable the feature entirely.

AUX Level:

Controls the volume level of incoming sound when an auxiliary device is connected to the system. Available options are Quiet, Medium and Loud.

FM/AM/SAT radio operation

FM-AM button:

Press the FM-AM button to change the band as follows:

AM → FM1 → FM2 → AM

If another audio source is playing when the FM-AM button is pressed, the audio source playing will automatically be turned off and the last radio station played will begin playing.

The FM stereo indicator (ST) is shown on the screen during FM stereo reception. When the stereo broadcast signal is weak, the radio automatically changes from stereo to monaural reception.

XM band select:

Pressing the XM button will change the band as follows:

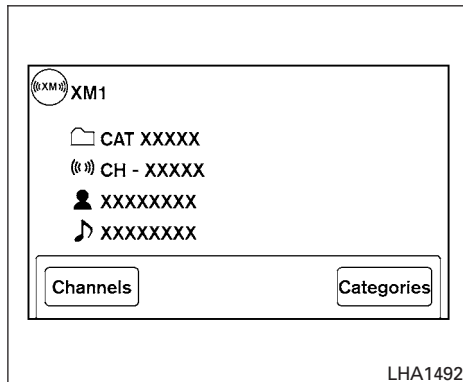
XM1* → XM2* → XM3* → XM1* (satellite, if so equipped)

When the XM button is pressed while the ignition switch is in the ACC or ON position, the radio will come on at the last station played.

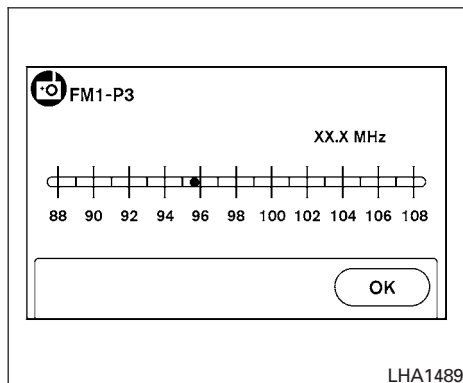
The last station played will also come on when the VOL/ON-OFF control knob is pressed to turn the radio on.

*When the XM button is pressed, the satellite radio mode will be skipped unless an optional satellite receiver and antenna are installed and a SiriusXM Satellite Radio service subscription is active. Satellite radio is not available in Alaska, Hawaii and Guam.

If a compact disc is playing when the XM button is pressed, the compact disc will automatically be turned off and the last radio station played will come on.



While the radio is in XM mode, the operation can be controlled through the touchscreen. Touch the "Channels" key to display a list of channels. Touch a channel displayed on the list to change to that channel. Touch the "Categories" key to display a list of categories. Touch a category displayed on the list to display options within that category.



Tuning with the touchscreen:

When in AM or FM mode, the radio can be tuned using the touchscreen. To bring up the visual tuner, touch the "Tune" key on the lower right corner of the screen. A screen appears with a bar running from low frequencies on the left to high frequencies on the right. Touch the screen at the location of the frequency you wish to tune and the station will change to that frequency. To return to the regular radio display screen, touch the "OK" key.

Tuning with the TUNE/SCROLL knob:

The radio can also be manually tuned using the TUNE/SCROLL knob. When in FM or AM mode,

turn the TUNE/SCROLL knob to the left for lower frequencies or to the right for higher frequencies. When in XM mode, turn the TUNE/SCROLL knob to change the channel.



SEEK tuning:

When in FM or AM mode, press the SEEK/CATEGORY button ◀ or ▶ to tune from low to high or high to low frequencies and to stop at the next broadcasting station.

When in XM mode, press the SEEK/CATEGORY button ◀ or ▶ to change the category.

1 to 6 Station memory operations:

Twelve stations can be set for the FM band (6 for FM1, 6 for FM2) and six stations can be set for the AM band. Eighteen stations can be set for the XM band (6 for XM1, 6 for XM2, 6 for XM3).

1. Choose the radio band AM, FM1 or FM2 using the FM·AM select button or choose the radio band XM1, XM2 or XM3 using the XM button.
2. Tune to the desired station using manual or seek tuning. Press and hold any of the desired station memory buttons (1 – 6) until a beep sound is heard.

3. The channel indicator will then come on and the sound will resume. Programming is now complete.

4. Other buttons can be set in the same manner.

If the battery cable is disconnected or if the fuse opens, the radio memory will be canceled. In that case, reset the desired stations.

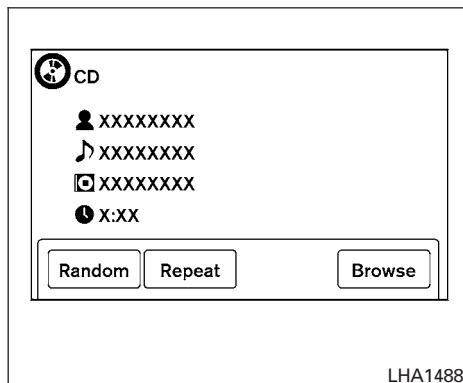
Compact disc (CD) player operation

If the radio is already operating, it automatically turns off and the compact disc begins to play.

CD button:

When the CD button is pressed with the system off and the compact disc loaded, the system will turn on and the compact disc will start to play.

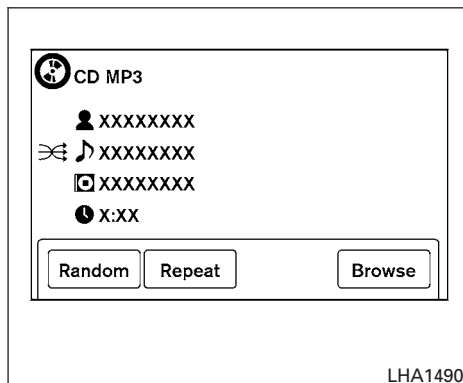
When the CD button is pressed with a compact disc loaded and the radio playing, the radio will automatically be turned off and the compact disc will start to play.



CD/MP3 display mode

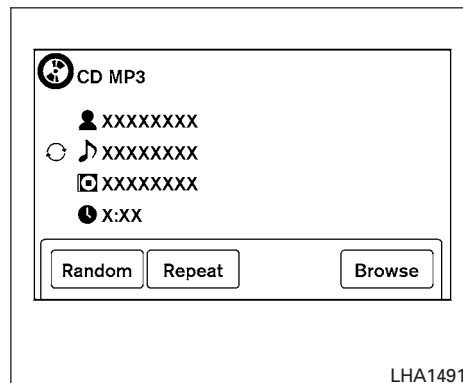
While listening to a CD or an MP3/WMA CD, certain text may be displayed (when a CD encoded with text is being used). Depending on how the CD or MP3/WMA CD is encoded, the text is displayed listing the artist, album and song title.

There are other keys displayed on the screen when a CD is playing:



Random:

Touch the “Random” key to apply a random play pattern to the CD. When the random mode is active, the  icon will be displayed to the left of the song title. If an MP3 CD is playing, touching “Random” alternates between randomly playing songs within the current folder and songs from the CD as a whole. The  icon is displayed to the left of the song title or folder name to denote which pattern is applied. To cancel Random mode, touch the “Random” key until no  icon is displayed.



Repeat:

Touch the “Repeat” key to apply a repeat play pattern to the CD. When the repeat mode is active, the  icon will be displayed to the left of the song title. If an MP3 CD is playing, touching “Repeat” alternates between repeating the current song and repeating the current folder. The  icon is displayed to the left of the song title or folder name to denote which pattern is applied. To cancel Repeat mode, touch the “Repeat” key until no  icon is displayed.

Browse:

Touch the "Browse" key to display the titles on the CD in list format. Touch the title of a song in the list to begin playing that song. If an MP3 CD is playing, touching the "Browse" key will also list the folders on the disc. Follow the procedure for selecting a song with the touchscreen to choose a folder.



**SEEK/CATEGORY
(Reverse or Fast
Forward) button:**

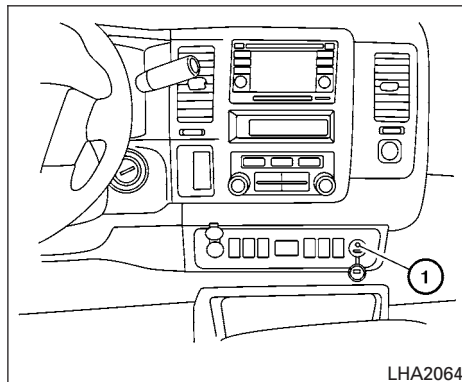
Press and hold the SEEK/CATEGORY button ◀ or ▶ for 1.5 seconds while the compact disc is playing to reverse or fast forward the track being played. The compact disc plays at an increased speed while reversing or fast forwarding. When the button is released, the compact disc returns to normal play speed.



SEEK/CATEGORY button:

Press the SEEK/CATEGORY button ◀ while a CD or MP3/WMA CD is playing to return to the beginning of the current track. Press the SEEK/CATEGORY button ◀ several times to skip backward several tracks.

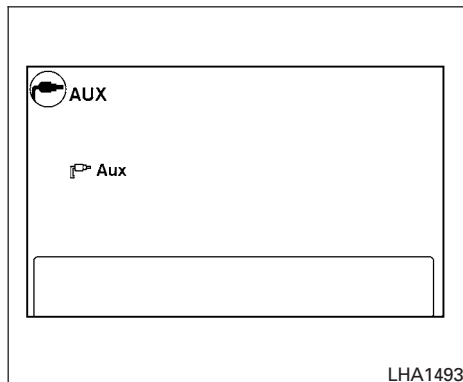
Press the SEEK/CATEGORY button ▶ while a CD or MP3/WMA CD is playing to advance one track. Press the SEEK/CATEGORY button ▶ several times to skip forward several tracks. If the last track on a CD is skipped, the first track on the disc is played. If the last track in a folder of an MP3/WMA CD is skipped, the first track of the next folder is played.



LHA2064

AUX button:

The AUX IN jack is located on the instrument panel above the USB jack ①. The AUX IN audio input jack accepts any standard analog audio input such as from a portable cassette tape/CD player, MP3 player or a laptop computer.



Press the AUX button to play a compatible device plugged into the AUX IN jack. The AUX button is also used to switch the audio system to a source plugged into the USB input jack in the center console. When a device is plugged into the AUX IN jack while another device is plugged into the USB input jack, the AUX button is used to toggle between the two functions.

For more information about the USB input jack, see "USB interface" in this section.

EJECT button:

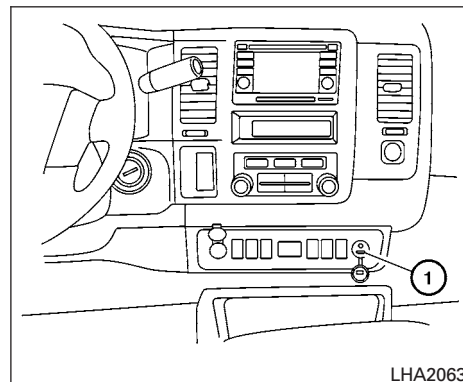
When the  button is pressed with a compact disc loaded, the compact disc will eject and the last source will be played.

When the  button is pressed twice with a compact disc loaded, the compact disc will be ejected further for easier CD removal. If the disc is not removed within 10 seconds, the disc will reload.

Additional features

For more information about the iPod® player available with this system, see "iPod® player operation" in this section.

For more information about the USB interface available with this system, see "USB interface" in this section.



USB INTERFACE (if so equipped)

Connecting a device to the USB input jack

⚠ CAUTION

- **Do not force the USB device into the USB port. Inserting the USB device tilted or up-side-down into the port may damage the USB device and the port. Make sure that the USB device is connected correctly into the USB port. (Some USB devices come with a  mark as a guide. Make sure that the mark is facing the correct direction before inserting the device.)**
- **Do not locate objects near the USB device to prevent the objects from leaning on the USB device and the port. Pressure from the objects may damage the USB device and the port.**

The USB input jack is located on the instrument panel. Open the protective cover on the USB jack, then insert the USB device into the jack ①.

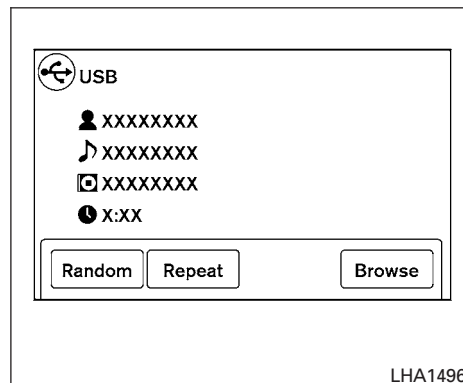
When a compatible storage device is plugged into the jack, compatible audio files on the storage device can be played through the vehicle's audio system.

Audio file operation

AUX button:

Place the ignition switch in the ON or ACC position and press the AUX button to switch to the USB input mode. If another audio source is playing and a USB memory device is inserted, press the AUX button repeatedly until the center display changes to the USB memory mode.

If the system has been turned off while the USB memory was playing, push the ON-OFF/VOL control knob to restart the USB memory.



Play information:

Information about the audio files being played is shown on the display screen of the vehicle's audio system. Touch "Browse" to display the list of folders and files on the USB device. Touch the name of a song on the screen to begin playing that song.



SEEK/CATEGORY button:

Press the SEEK/CATEGORY button  while an audio file on the USB device is playing to return to the beginning of the current track. Press the SEEK/CATEGORY button  several times to skip backward several tracks.

Press the SEEK/CATEGORY button ► while an audio file on the USB device is playing to advance one track. Press the SEEK/CATEGORY button ► several times to skip forward several tracks. If the last track in a folder on the USB device is skipped, the first track of the next folder is played.

Press and hold the SEEK/CATEGORY button ◀ or ► for 1.5 seconds while an audio file on the USB device is playing to reverse or fast forward the track being played. The track plays at an increased speed while reversing or fast forwarding. When the button is released, the audio file returns to normal play speed.

Random and repeat play mode:

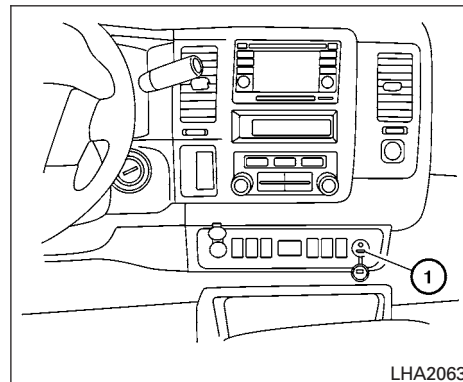
While files on a USB device are playing, the play pattern can be altered so that songs are repeated or played randomly.

Random:

Touch the "Random" key to apply a random play pattern to the USB device. When the random mode is active, the 𐄞 icon is displayed to the left of the song title or album name to denote which random pattern is applied. To cancel Random mode, touch the "Random" key until no 𐄞 icon is displayed.

Repeat:

Touch the "Repeat" key to apply a repeat play pattern to the USB device. When the repeat mode is active, the 𐄞 icon is displayed to the left of the song title or album name to denote which repeat pattern is applied. To cancel Repeat mode, touch the "Repeat" key until no 𐄞 icon is displayed.



iPod®* PLAYER OPERATION (if so equipped)

Connecting iPod®

⚠ CAUTION

- **Do not force the iPod® cable into the USB port. Inserting the USB device tilted or up-side-down into the port may damage the iPod® cable and the port. Make sure that the iPod® cable is connected correctly into the USB port. (Some iPod® cables come with a ⚡ mark as a guide. Make sure that the mark is facing the correct direction before inserting the iPod® cable.)**
- **Do not locate objects near the iPod® cable to prevent the objects from leaning on the iPod® cable and the port. Pressure from the objects may damage the iPod® cable and the port.**

To connect an iPod® to the vehicle so that the iPod® can be controlled with the audio system controls and display screen, use the USB jack located on the instrument panel. Open the protective cover on the USB jack and then connect the iPod®-specific end of the cable to the iPod® and the USB end of the cable to the USB jack on the vehicle ①. If your iPod® supports charging via a USB connection, its battery will be charged while connected to the vehicle with the ignition switch in the ACC or ON position.

4-48 Display screen, heater, air conditioner, audio and phone systems

While connected to the vehicle, the iPod® can only be operated by the vehicle audio controls.

To disconnect the iPod® from the vehicle, remove the USB end of the cable from the USB jack on the vehicle, then remove the cable from the iPod®.

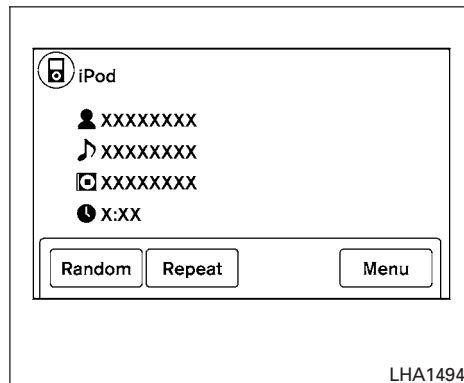
* iPod® is a trademark of Apple Inc., registered in the U.S. and other countries.

Compatibility

The following models are compatible:

- iPod® Classic - 5th generation
- iPod® Nano - 1st through 2nd generation

Make sure that your iPod® firmware is updated to the version indicated above.



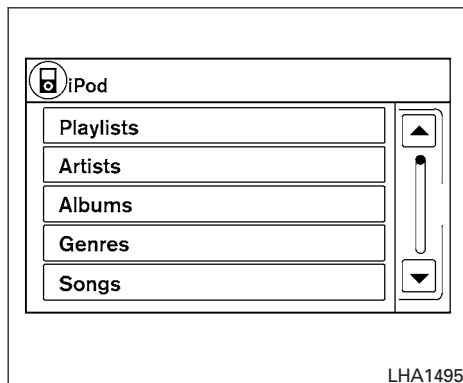
Audio main operation

AUX button:

Place the ignition switch in the ACC or ON position and press the AUX button repeatedly until the iPod® mode is displayed on the screen.

If another audio source is playing and the iPod® is connected, press the AUX button repeatedly to switch to the iPod® mode.

If the vehicle audio system is turned off while the iPod® is playing, the iPod® will start when the VOL/ON-OFF control knob is pressed.



Interface:

The interface for iPod® operation shown on the vehicle's audio system display screen is similar to the iPod® interface. Use the touchscreen,  BACK button or the TUNE/SCROLL knob to navigate the menus on the screen.

When the iPod® is playing, touch the "Menu" key to bring up the iPod® interface.

Depending on the iPod® model, the following items may be available on the menu list screen. For further information about each item, see the iPod® Owner's Manual.

- Playlists
- Artists
- Albums
- Genres
- Songs
- Composers
- Audiobooks
- Podcasts



SEEK/CATEGORY button:

Press the SEEK/CATEGORY button  or  to skip backward or forward one track.

Press and hold the SEEK/CATEGORY button  or  for 1.5 seconds while a track is playing to reverse or fast forward the track being played. The track plays at an increased speed while reversing or fast forwarding. When the button is released, the track returns to normal play speed.

Random and repeat play mode:

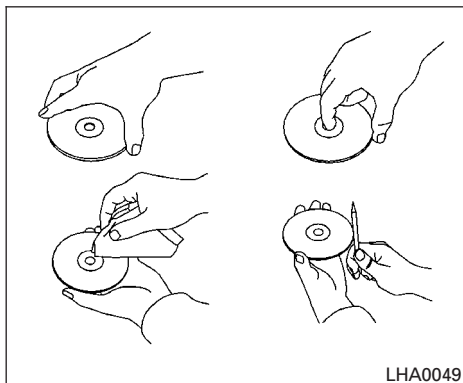
While the iPod® is playing, the play pattern can be altered so that songs are repeated or played randomly.

Random:

Touch the "Random" key to apply a random play pattern to the iPod®. When the random mode is active, the  icon is displayed to the left of the song title or album name to denote which random pattern is applied. To cancel Random mode, touch the "Random" key until no  icon is displayed.

Repeat:

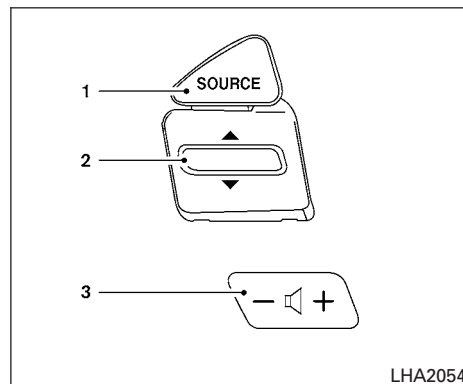
Touch the "Repeat" key to apply a repeat play pattern to the iPod®. When the repeat mode is active, the  icon is displayed to the left of the song title or album name to denote which repeat pattern is applied. To cancel Repeat mode, touch the "Repeat" key until no  icon is displayed.



CD CARE AND CLEANING

- Handle a CD by its edges. Do not bend the disc. Never touch the surface of the disc.
- Always place the discs in the storage case when they are not being used.
- To clean a disc, wipe the surface from the center to the outer edge using a clean, soft cloth. Do not wipe the disc using a circular motion.
- Do not use a conventional record cleaner or alcohol intended for industrial use.

- A new disc may be rough on the inner and outer edges. Remove the rough edges by rubbing the inner and outer edges with the side of a pen or pencil as illustrated.



1. SOURCE select switch
2. Tuning switch
3. Volume control switch

STEERING WHEEL SWITCH FOR AUDIO CONTROL (if so equipped)

The audio system can be operated using the controls on the steering wheel.

SOURCE select switch

Push the SOURCE select switch to change the mode in the following sequence:

AM → FM* → XM** (if so equipped) → CD*** → USB/iPod*** (if so equipped) → AUX*** → AM

CAR PHONE OR CB RADIO

* When using the SOURCE switch, the audio mode switches to the FM preset bank (FM1 or FM2) that was last active. To switch between the FM1 and FM2 preset banks, use the controls on the audio system.

** When using the SOURCE switch, the audio mode switches to the XM preset bank (XM1 or XM2) that was last active. To switch between the XM1 and XM2 preset banks, use the controls on the audio system.

*** These modes are only available when compatible media is connected to the system.

Volume control switch

Push the volume control switch up or down to increase or decrease the volume.



Tuning

Memory change (radio):

Push the tuning switch (▼ or ▲) for less than 1.5 seconds to change presets.

Seek tuning (radio):

Push the tuning switch (▼ or ▲) for more than 1.5 seconds to seek the next or previous radio station.

Next/Previous track (CD):

Push the tuning switch ▼ or ▲ for less than 1.5 seconds to return to the beginning of the present track or skip to the next track. Push several times to skip back or skip through tracks.

ANTENNA

The antenna cannot be shortened, but can be removed. When you need to remove the antenna, turn the antenna rod counterclockwise.

To install the antenna rod, turn the antenna clockwise. Tighten the antenna rod to specification using a suitable tool such as an open-end wrench. The antenna rod tightening specification is 3.4 – 3.6 N·m (30 – 32 in·lb). Do not use pliers to tighten the antenna as they can leave marks on the antenna surface. The antenna rod cannot be hand tightened to the proper specification.

⚠ CAUTION

Always properly tighten the antenna rod during installation or the antenna rod may break during vehicle operation.

When installing a CB, ham radio or car phone in your vehicle, be sure to observe the following precautions; otherwise, the new equipment may adversely affect the engine control system and other electronic parts.

⚠ WARNING

- **A cellular phone should not be used for any purpose while driving so full attention may be given to vehicle operation. Some jurisdictions prohibit the use of cellular phones while driving.**
- **If you must make a call while your vehicle is in motion, the hands free cellular phone operational mode (if so equipped) is highly recommended. Exercise extreme caution at all times so full attention may be given to vehicle operation.**
- **If you are unable to devote full attention to vehicle operation while talking on the phone, pull off the road to a safe location and stop your vehicle.**

BLUETOOTH® HANDS-FREE PHONE SYSTEM (if so equipped)

CAUTION

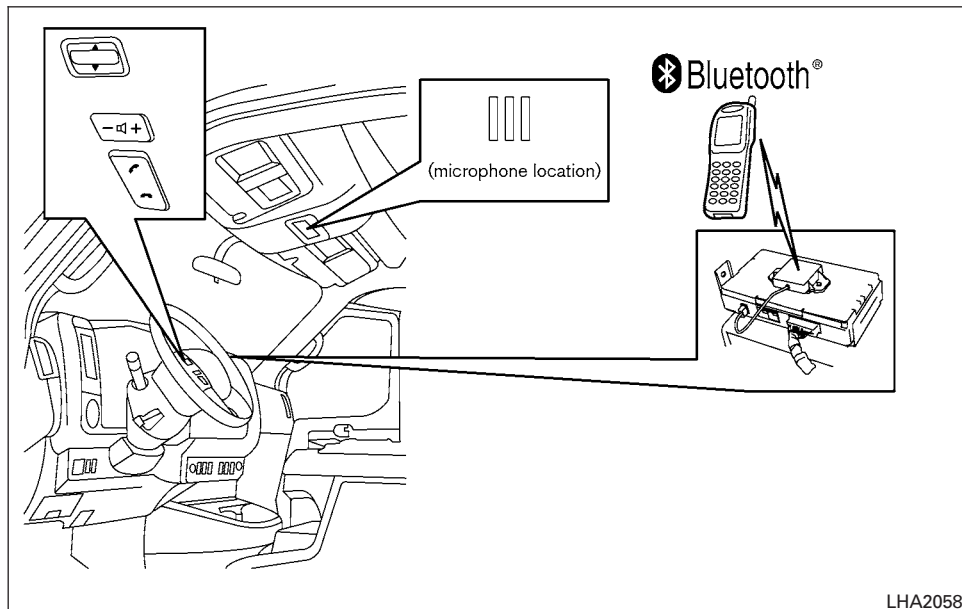
- Keep the antenna as far away as possible from the electronic control modules.
- Keep the antenna wire more than 8 in (20 cm) away from the electronic control system harnesses. Do not route the antenna wire next to any harness.
- Adjust the antenna standing-wave ratio as recommended by the manufacturer.
- Connect the ground wire from the CB radio chassis to the body.
- For details, consult a NISSAN dealer.

WARNING

- Use a phone after stopping your vehicle in a safe location. If you have to use a phone while driving, exercise extreme caution at all times so full attention may be given to vehicle operation.
- If you are unable to devote full attention to vehicle operation while talking on the phone, pull off the road to a safe location and stop your vehicle.

CAUTION

To avoid discharging the vehicle battery, use a phone after starting the engine.



Your NISSAN is equipped with the Bluetooth® Hands-Free Phone System. If you have a compatible Bluetooth® enabled cellular phone, you can set up the wireless connection between your cellular phone and the in-vehicle phone module. With Bluetooth® wireless technology, you can

make or receive a hands-free telephone call with your cellular phone in the vehicle.

Once your cellular phone is connected to the in-vehicle phone module, no other phone connecting procedure is required. Your phone is automatically connected with the in-vehicle

phone module when the ignition switch is placed in the ON position with the previously connected cellular phone turned on and carried in the vehicle.

You can connect up to 5 different Bluetooth® cellular phones to the in-vehicle phone module. However, you can talk on only one cellular phone at a time.

Before using the Bluetooth® Hands-Free Phone System, refer to the following notes.

- Set up the wireless connection between a cellular phone and the in-vehicle phone module before using the hands-free phone system.
- Some Bluetooth® enabled cellular phones may not be recognized by the in-vehicle phone module. Please visit www.nissanusa.com/bluetooth for a recommended phone list and connecting instructions.
- You will not be able to use a hands-free phone under the following conditions:
 - Your vehicle is outside of the cellular service area.

- Your vehicle is in an area where it is difficult to receive a cellular signal; such as in a tunnel, in an underground parking garage, near a tall building or in a mountainous area.
- Your cellular phone is locked to prevent it from being dialed.
- When the radio wave condition is not ideal or ambient sound is too loud, it may be difficult to hear the other person's voice during a call.
- Do not place the cellular phone in an area surrounded by metal or far away from the in-vehicle phone module to prevent tone quality degradation and wireless connection disruption.
- While a cellular phone is connected through the Bluetooth® wireless connection, the battery power of the cellular phone may discharge quicker than usual. The Bluetooth® Hands-Free Phone System cannot charge cellular phones.
- If the hands-free phone system seems to be malfunctioning, see "Troubleshooting guide" later in this section. You can also visit www.nissanusa.com/bluetooth for troubleshooting help.
- Some cellular phones or other devices may cause interference or a buzzing noise to come from the audio system speakers. Storing the device in a different location may reduce or eliminate the noise.
- Refer to the cellular phone Owner's Manual regarding the telephone charges, cellular phone antenna and body, etc.

REGULATORY INFORMATION

FCC Regulatory information

- CAUTION: To maintain compliance with FCC's RF exposure guidelines, use only the supplied antenna. Unauthorized antenna, modification, or attachments could damage the transmitter and may violate FCC regulations.
- 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.

IC Regulatory information

- 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.

- This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

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USING THE SYSTEM

The NISSAN Voice Recognition system allows hands-free operation of the Bluetooth® Phone System.

If the vehicle is in motion, some commands may not be available so full attention may be given to vehicle operation.

Initialization

When the ignition switch is placed in the ON position, NISSAN Voice Recognition is initialized, which takes a few seconds. If the  button is pressed before the initialization completes, the system will announce "Hands-free phone system not ready" and will not react to voice commands.

Operating tips

To get the best performance out of the NISSAN Voice Recognition system, observe the following:

- Keep the interior of the vehicle as quiet as possible. Close the windows to eliminate surrounding noises (traffic noises, vibration sounds, etc.), which may prevent the system from recognizing voice commands correctly.
- Wait until the tone sounds before speaking a command. Otherwise, the command will not be received properly.
- Start speaking a command within 5 seconds after the tone sounds.
- Speak in a natural voice without pausing between words.

Giving voice commands

To operate NISSAN Voice Recognition, press and release the  button located on the steering wheel. After the tone sounds, speak a command.

The command given is picked up by the microphone, and voice feedback is given when the command is accepted.

- If you need to hear the available commands for the current menu again, say "Help" and the system will repeat them.

- If a command is not recognized, the system announces, "Command not recognized. Please try again." Make sure the command is said exactly as prompted by the system and repeat the command in a clear voice.
- If you want to go back to the previous command, you can say "Go back" or "Correction" any time the system is waiting for a response.
- You can cancel a command when the system is waiting for a response by saying, "Cancel" or "Quit." The system announces "Cancel" and ends the VR session. You can also press and hold the  button on the steering wheel for 5 seconds at any time to end the VR session. Whenever the VR session is cancelled, a double beep is played to indicate you have exited the system.
- If you want to adjust the volume of the voice feedback, press the volume control switches (+ or -) on the steering wheel while being provided with feedback. You can also use the radio volume control knob.
- In most cases you can interrupt the voice feedback to speak the next command by pressing the  button on the steering wheel.

- To use the system faster, you may speak the second level commands with the main menu command on the main menu. For example, press the  button and after the tone say, "Call Redial."

How to say numbers

NISSAN Voice Recognition requires a certain way to speak numbers in voice commands. Refer to the following rules and examples.

- Either "zero" or "oh" can be used for "0".
Example: 1-800-662-6200
 - "One eight oh oh six six two six two oh oh", or
 - "One eight zero zero six six two six two oh oh"
- Words can be used for the first 4 digits places only.
Example: 1-800-662-6200
 - "One eight hundred six six two six two oh oh",
 - NOT "One eight hundred six six two sixty two hundred," and
 - NOT "One eight oh oh six six two sixty two hundred"

- Numbers can be spoken in small groups. The system will prompt you to continue entering digits, if desired.

Example: 1-800-662-6200

- “One eight zero zero”

The system repeats the numbers and prompts you to enter more.

- “six six two”

The system repeats the numbers and prompts you to enter more.

- “six two zero zero”

- Say “pound” for “#”. Say “star” for “*” (available when using the “Special Number” command and the “Send” command during a call).

See “List of voice commands” and “Special number” in this section for more information.

Example: 1-555-1212 *123

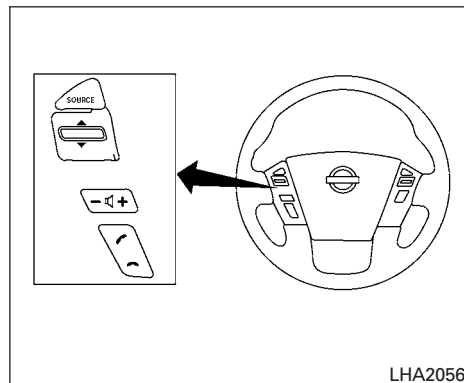
- “One five five five one two one two star one two three”

- Say “plus” for “+” (available only when using the “Special Number” command).
- Say “pause” for a 2-second pause (available only when storing a phone book number).

NOTE:

For best results, say phone numbers as single digits.

The voice command “Help” is available at any time. Please use the “Help” command to get information on how to use the system.



LHA2056

CONTROL BUTTONS

The control buttons for the Bluetooth® Hands-Free Phone System are located on the steering wheel.



PHONE/SEND

Press the  button to initiate a VR session or answer an incoming call.

You can also use the  button to interrupt the system feedback and give a command at once. See “List of voice commands” and “During a call” in this section for more information.



PHONE/END

While the voice recognition system is active, press and hold the  button for 5 seconds to quit the voice recognition system at any time.



TUNING SWITCH

While using the voice recognition system, tilt the tuning switch up or down to manually control the phone system.

GETTING STARTED

The following procedures will help you get started using the Bluetooth® Hands-Free Phone System with NISSAN Voice Recognition. For additional command options, refer to “List of voice commands” in this section.

Choosing a language

You can interact with the Bluetooth® Hands-Free Phone System using English, Spanish or French.

To change the language, perform the following.

1. Press and hold the  button for more than 5 seconds.
2. The system announces: “Press the PHONE/SEND () button for the hands-free phone system to enter the voice adaptation mode or press the PHONE/END () button to select a different language.”
3. Press the  button.

For information on voice adaptation, see “Voice Adaptation (VA) mode” in this section.

4. The system announces the current language and gives you the option to change the language to Spanish (in Spanish) or French (in French). To select the current language, press the PHONE/SEND () button. To select a different language, tilt the tuning switch ( or ) up or down.

NOTE:

You must press the  button within 5 seconds to change the language.

5. If you decide not to change the language, do not press either button. After 5 seconds, the VR session will end, and the language will not be changed.

Connecting procedure

NOTE:

The connecting procedure must be performed when the vehicle is stationary. If the vehicle starts moving during the procedure, the procedure will be cancelled.

Main Menu

“Connect phone” 

“Add phone” 

Initiate from handset 

Name phone 

1. Press the  button on the steering wheel. The system announces the available commands.
2. Say: “Connect phone” . The system acknowledges the command and announces the next set of available commands.

3. Say: "Add phone" **(B)**. The system acknowledges the command and asks you to initiate connecting from the phone handset **(C)**.

The connecting procedure of the cellular phone varies according to each cellular phone model. See the cellular phone Owner's Manual for details. You can also visit www.nissanus.com/bluetooth for instructions on connecting NISSAN recommended cellular phones.

When prompted for a Passkey code, enter "1234" from the handset. The Passkey code "1234" has been assigned by NISSAN and cannot be changed.

4. The system asks you to say a name for the phone **(D)**.

If the name is too long or too short, the system tells you, then prompts you for a name again.

Also, if more than one phone is connected and the name sounds too much like a name already used, the system tells you, then prompts you for a name again.

Making a call by entering a phone number

Main Menu

"Call" **(A)**

"Phone Number" **(B)**

Speak the digits **(C)**

"Dial" **(D)**

1. Press the  button on the steering wheel. A tone will sound.
2. Say: "Call" **(A)**. The system acknowledges the command and announces the next set of available commands.
3. Say "Phone Number" **(B)**. The system acknowledges the command and announces the next set of available commands.
4. Say the number you wish to call starting with the area code in single digit format **(C)**. If the system has trouble recognizing the correct phone number, try entering the number in the following groups: 3-digit area code, 3-digit prefix and the last 4-digits. For example, 555-121-3354 can be said as "five five five" as the 1st group, then "one two one" as the 2nd group, and "three three five four" as the 3rd group. For dialing more than 10 digits or any special characters, say

"Special Number". See "How to say numbers" in this section for more information.

5. When you have finished speaking the phone number, the system repeats it back and announces the available commands.
6. Say: "Dial" **(D)**. The system acknowledges the command and makes the call.

For additional command options, see "List of voice commands" in this section.

Receiving a call

When you hear the ring tone, press the  button on the steering wheel.

Once the call has ended, press the  button on the steering wheel.

NOTE:

If you do not wish to take the call when you hear the ring tone, press the  button on the steering wheel.

For additional command options, see "List of voice commands" later in this section.

LIST OF VOICE COMMANDS

Main Menu
"Call"
"Phonebook"
"Recent Calls"
"Connect Phone"

When you press and release the  button on the steering wheel, you can choose from the commands on the Main Menu. The following pages describe these commands and the commands in each sub-menu.

Remember to wait for the tone before speaking.

After the main menu, you can say "Help" to hear the list of commands currently available any time the system is waiting for a response.

If you want to end an action without completing it, you can say "Cancel" or "Quit" at any time the system is waiting for a response. The system will end the VR session. Whenever the VR session is cancelled, a double beep is played to indicate you have exited the system.

If you want to go back to the previous command, you can say "Go back" or "Correction" any time the system is waiting for a response.

"Call"

Main Menu
"Call"
(Speak name) (A)
"Phone Number"
(Speak Digits) (B)
"Special Number" (C)
"Redial" (D)
"Call Back" (E)

(Speak name) (A)

If you have stored entries in the phonebook, you can dial a number associated with a name and location.

See "Phonebook" in this section to learn how to store entries.

When prompted by the system, say the name of the phone book entry you wish to call. The system acknowledges the name.

If there are multiple locations associated with the name, the system asks you to choose the location.

Once you have confirmed the name and location, the system begins the call.

(Speak Digits) (B)

When prompted by the system, say the number you wish to call. Refer to "How to say numbers" and "Making a call by entering a phone number" in this section for more details.

"Special Number" (C)

For dialing more than 10 digits or any special characters, say "Special Number". When the system acknowledges the command, the system will prompt you to speak the number.

"Redial" (D)

Use the Redial command to call the last number that was dialed.

The system acknowledges the command, repeats the number and begins dialing.

If a redial number does not exist, the system announces, "There is no number to redial" and ends the VR session.

"Call Back" (E)

Use the Call Back command to dial the number of the last incoming call within the vehicle.

The system acknowledges the command, repeats the number and begins dialing.

If a call back number does not exist, the system announces, "There is no number to call back" and ends the VR session.

During a call

During a call there are several command options available. Press the  button on the steering wheel to mute the receiving voice and enter commands.

- "Help" — The system announces the available commands.
- "Cancel/Quit" — The system announces "Cancel," ends the VR session and returns to the call.
- "Send" — Use the Send command to enter numbers, "*" or "#" during a call. For example, if you were directed to dial an extension by an automated system:
Say: "Send one two three four."
The system acknowledges the command and sends the tones associated with the numbers. The system then ends the VR session and returns to the call. Say "star" for "*", Say "pound" for "#".
- "Transfer call" — Use the Transfer Call command to transfer the call from the Bluetooth® Hands-Free Phone System to the cellular phone when privacy is desired.

The system announces, "Transfer call. Call transferred to privacy mode." The system then ends the VR session.

To reconnect the call from the cellular phone to the Bluetooth® Hands-Free System, press the  button.

- "Mute" — Use the Mute command to mute your voice so the other party cannot hear it. Use the mute command again to unmute your voice.

NOTE:

If a call is ended or the cellular phone network connection is lost while the Mute feature is on, the Mute feature will be reset to "off" for the next call so the other party can hear your voice.

"Phonebook" (phones without automatic phonebook download function)

NOTE:

The "Transfer Entry" command is not available when the vehicle is moving.

Main Menu

"Phonebook"

"Transfer Entry" (A)

"Delete Entry" (B)

"List Names" (C)

For phones that do not support automatic download of the phonebook (PBAP Bluetooth® profile), the "Phonebook" command is used to manually add entries to the vehicle phonebook.

The phonebook stores up to 40 names for each phone connected to the system.

NOTE:

Each phone has its own separate phonebook. You cannot access Phone A's phonebook if you are currently connected with Phone B.

"Transfer Entry" (A)

Use the Transfer Entry command to store a new name in the system.

When prompted by the system, say the name you would like to give the new entry.

For example, say: "Mary."

If the name is too long or too short, the system tells you, then prompts you for a name again.

Also, if the name sounds too much like a name already stored, the system tells you, then prompts you for a name again.

The system will ask you to transfer a phone number stored in the cellular phone's memory.

Enter a phone number by voice command:

For example, say: "five five five one two one two." See "How to say numbers" in this section for more information.

To transfer a phone number stored in the cellular phone's memory:

Say "Transfer entry." The system acknowledges the command and asks you to initiate the transfer from the phone handset. The new contact phone number will be transferred from the cellular phone via the Bluetooth® communication link.

The transfer procedure varies according to each cellular phone. See the cellular phone Owner's Manual for details. You can also visit www.nissanusa.com/bluetooth for instructions on transferring phone numbers from NISSAN recommended cellular phones.

The system repeats the number and prompts you for the next command. When you have finished entering numbers or transferring an entry, choose "Store."

The system confirms the name, location and number.

"Delete Entry" (B)

Use the Delete Entry command to erase one entry from the phonebook. After the system recognizes the command, speak the name to delete or say "List Names" to choose an entry.

"List Names" (C)

Use the List Names command to hear all the names in the phonebook.

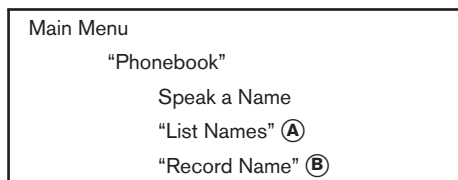
The system recites the phonebook entries but does not include the actual phone numbers. When the playback of the list is complete, the system goes back to the main menu.

You can stop the playback of the list at any time by pressing the  button on the steering wheel. The system ends the VR session.

"Phonebook" (phones with automatic phonebook download function)

NOTE:

The "Transfer Entry" command is not available when the vehicle is moving.



For phones that support automatic download of the phonebook (PBAP Bluetooth® profile), the "Phonebook" command is used to manage entries in the vehicle phonebook. You can say the name of an entry at this menu to initiate dialing of that entry.

The phonebook stores up to 1000 names for each phone connected to the system.

When a phone is connected to the system, the phonebook is automatically downloaded to the vehicle. This feature allows you to access your phonebook from the Bluetooth® system and call contacts by name. You can record a custom voice tag for contact names that the system has difficulty recognizing. For more information see "Record name" in this section.

NOTE:

Each phone has its own separate phone-book. You cannot access Phone A's phone-book if you are currently connected with Phone B.

“List Names” (A)

Use the List Names command to hear all the names and locations in the phone book.

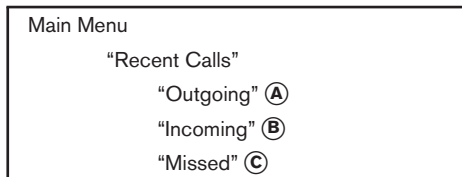
The system recites the phone book entries but does not include the actual phone numbers. When the playback of the list is complete, the system goes back to the main menu.

You can stop the playback of the list at any time by pressing the  button on the steering wheel. The system ends the VR session. See the “Record name” command in this section for information about recording custom voice tags for list entries that the system has difficulty pronouncing.

“Record Name” (B)

The system allows you to record custom voice tags for contact names in the phonebook that the vehicle has difficulty recognizing. This feature can also be used to record voice tags to directly dial an entry with multiple numbers. Up to 40 voice tags can be recorded to the system.

“Recent Calls”



Use the Recent Calls command to access outgoing, incoming or missed calls.

“Outgoing” (A)

Use the Outgoing command to list the outgoing calls made from the vehicle.

“Incoming” (B)

Use the Incoming command to list the incoming calls made to the vehicle.

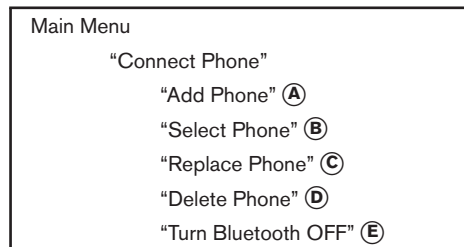
“Missed” (C)

Use the Missed command to list the calls made to the vehicle that were not answered.

“Connect Phone”

NOTE:

The Add Phone command is not available when the vehicle is moving.



Use the Connect Phone commands to manage the phones connecting to the vehicle or to enable the Bluetooth® function on the vehicle.

“Add Phone” (A)

Use the Add Phone command to add a phone to the vehicle. See “Connecting procedure” in this section for more information.

“Select Phone” (B)

Use the Select Phone command to select from a list of phones connected to the vehicle. The system will list the names assigned to each phone and then prompt you for the phone you wish to select. Only one phone can be active at a time.

“Replace Phone”

Use the Replace Phone command to replace an existing phone pairing with a new phone. The system will keep all voice tags assigned to your phonebook.

“Delete Phone”

Use the Delete Phone command to delete a phone that is connected to the vehicle. The system will list the names assigned to each phone and then prompt you for the phone you wish to delete. Deleting a phone from the vehicle will also delete that phonebook for that phone.

“Turn Bluetooth OFF”

Use the Turn Bluetooth OFF command to prevent a wireless connection to your phone.

VOICE ADAPTATION (VA) MODE

Voice Adaptation allows up to two out-of-dialect users to train the system to improve recognition accuracy. By repeating a number of commands, the users can create a voice model of their own voice that is stored in the system. The system is capable of storing a different voice adaptation model for each connected phone.

Training procedure

The procedure for training a voice is as follows.

1. Position the vehicle in a reasonably quiet outdoor location.
2. Sit in the driver's seat with the engine running, the parking brake on, and the transmission in P (Park).
3. Press and hold the  button for more than 5 seconds.
4. The system announces: “Press the PHONE/SEND () button for the hands-free phone system to enter the voice adaptation mode or press the PHONE/END () button to select a different language.”
5. Press the  button.

For information on selecting a different language, see “Choosing a language” in this section.

6. Voice memory A or memory B is selected automatically. If both memory locations are already in use, the system will prompt you to overwrite one. Follow the instructions provided by the system.
7. When preparation is complete and you are ready to begin, press the  button.
8. The VA mode will be explained. Follow the instructions provided by the system.

9. When training is finished, the system will tell you an adequate number of phrases have been recorded.
10. The system will announce that voice adaptation has been completed and the system is ready.

The VA mode will stop if:

- The  button is pressed for more than 5 seconds in VA mode.
- The vehicle begins moving during VA mode.
- The ignition switch is placed in the OFF or LOCK position.

Training phrases

During the VA mode, the system instructs the trainer to say the following phrases. (The system will prompt you for each phrase.)

- phonebook transfer entry
- dial three oh four two nine
- delete call back number
- incoming
- transfer entry
- eight pause nine three two pause seven
- delete all entries

- call seven two four zero nine
- phonebook delete entry
- next entry
- dial star two one seven oh
- yes
- no
- select
- missed
- dial eight five six nine two
- Bluetooth on
- outgoing
- call three one nine oh two
- nine seven pause pause three oh eight
- cancel
- call back number
- call star two zero nine five
- delete phone
- dial eight three zero five one
- record name
- four three pause two nine pause zero

- delete redial number
- phonebook list names
- call eight oh five four one
- correction
- connect phone
- dial seven four oh one eight
- previous entry
- delete
- dial nine seven two six six
- call seven six three oh one
- go back
- call five six two eight zero
- dial six six four three seven

MANUAL CONTROL

While using the voice recognition system, it is possible to select menu options by using the steering wheel controls instead of speaking voice commands. This can be especially helpful if the noise of driving makes it difficult for the voice recognition system to accurately interpret commands. The manual control mode does not allow dialing a phone number by digits. The user may select an entry from the Phonebook or Recent

Calls lists. To re-activate voice recognition, exit the manual control mode by pressing and holding the PHONE/END () button. At that time, pressing the PHONE/SEND () button will start the Hands Free Phone System.

Operating tips

- To enter manual control mode, start the voice recognition system and tilt the tuning () switch up or down. The system will speak "Showing Manual Options" when manual controls are initially activated.
- To browse the menu options, tilt the tuning () switch up or down. The system will always speak the current menu option. Depending on the audio display, it will also show the current menu option.
- To select the current menu option, press the PHONE/SEND () button.
- To go back to the previous menu, press the PHONE/END () button. If the current menu is the Main Menu, pressing the PHONE/END () button will exit the Phone system.
- To exit the manual control mode, press and hold the PHONE/END () button for 5 seconds.

TROUBLESHOOTING GUIDE

The system should respond correctly to all voice commands without difficulty. If problems are encountered, try the following solutions.

Where the solutions are listed by number, try each solution in turn, starting with number 1, until the problem is resolved.

Symptom	Solution
System fails to interpret the command correctly.	1. Ensure that the command is valid. See "List of voice commands" in this section.
	2. Ensure that the command is spoken after the tone.
	3. Speak clearly without pausing between words and at a level appropriate to the ambient noise level in the vehicle.
	4. Ensure that the ambient noise level is not excessive (for example, windows open or defroster on). NOTE: If it is too noisy to use the phone, it is likely that the voice commands will not be recognized.
	5. If more than one command was said at a time, try saying the commands separately.
	6. If the system consistently fails to recognize commands, the voice training procedure should be carried out to improve the recognition response for the speaker. See "Voice Adaptation (VA) mode" in this section.
The system consistently selects the wrong entry from the phone book.	1. Ensure that the phone book entry name requested matches what was originally stored. This can be confirmed by using the "List Names" command. See "Phonebook" in this section.
	2. Replace one of the names being confused with a new name.

MEMO

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PRECAUTIONS WHEN STARTING AND DRIVING

WARNING

- Do not leave children or adults who would normally require the assistance of others alone in your vehicle. Pets should also not be left alone. They could accidentally injure themselves or others through inadvertent operation of the vehicle. Also, on hot, sunny days, temperatures in a closed vehicle could quickly become high enough to cause severe or possibly fatal injuries to people or animals.
- Properly secure all cargo with ropes or straps to help prevent it from sliding or shifting. Do not place cargo higher than the seatbacks. In a sudden stop or collision, unsecured cargo could cause personal injury.

EXHAUST GAS (carbon monoxide)

WARNING

- Do not breathe exhaust gases; they contain colorless and odorless carbon monoxide. Carbon monoxide is dangerous. It can cause unconsciousness or death.

- Always keep the doors closed when driving the vehicle. Do not drive with the doors open and do not attempt to transport long cargo by driving with the doors open. Doing so can damage the doors and door hinges. Cargo may also fall out of the vehicle which may cause serious personal injury or death.
- If you suspect that exhaust fumes are entering the vehicle, drive with all windows fully open, and have the vehicle inspected immediately.
- Do not run the engine in closed spaces such as a garage.
- Do not park the vehicle with the engine running for any extended length of time.
- Keep the doors closed while driving, otherwise exhaust gases could be drawn into the passenger compartment. If you must drive with this open, follow these precautions:

1. Open all the windows.
2. Set the  air recirculation button to off and the fan control dial to high to circulate the air.

- If electrical wiring or other cable connections must pass to a trailer through the seal on the body, follow the manufacturer's recommendation to prevent carbon monoxide entry into the vehicle.
- The exhaust system and body should be inspected by a qualified mechanic whenever:
 - a. The vehicle is raised for service.
 - b. You suspect that exhaust fumes are entering into the passenger compartment.
 - c. You notice a change in the sound of the exhaust system.
 - d. You have had an accident involving damage to the exhaust system, underbody, or rear of the vehicle.

THREE-WAY CATALYST

The three-way catalyst is an emission control device installed in the exhaust system. Exhaust gases in the three-way catalyst are burned at high temperatures to help reduce pollutants.

WARNING

- **The exhaust gas and the exhaust system are very hot. Keep people, animals or flammable materials away from the exhaust system components.**
- **Do not stop or park the vehicle over flammable materials such as dry grass, waste paper or rags. They may ignite and cause a fire.**

CAUTION

- **Do not use leaded gasoline. Deposits from leaded gasoline will seriously reduce the three-way catalyst's ability to help reduce exhaust pollutants.**
- **Keep your engine tuned up. Malfunctions in the ignition, fuel injection, or electrical systems can cause overrich fuel flow into the three-way catalyst, causing it to overheat. Do not keep driving if the engine misfires, or if noticeable loss of performance or other unusual operating conditions are detected. Have the vehicle inspected promptly by a NISSAN dealer.**

- **Avoid driving with an extremely low fuel level. Running out of fuel could cause the engine to misfire, damaging the three-way catalyst.**
- **Do not race the engine while warming it up.**
- **Do not push or tow your vehicle to start the engine.**

DRIVING PRECAUTIONS

Utility vehicles have a significantly higher rollover rate than other types of vehicles.

They have larger tires and higher ground clearance than passenger cars to make them capable of performing in a variety of applications. This gives them a higher center of gravity than ordinary cars. An advantage of higher ground clearance is a better view of the road, allowing you to anticipate problems. However, they are not designed for cornering at the same speeds as conventional two-wheel drive vehicles any more than low-slung sports cars are designed to perform satisfactorily under off-road conditions. If at all possible, avoid sharp turns at high speeds. As with other vehicles of this type, failure to operate this vehicle correctly may result in loss of control or vehicle rollover. In a rollover crash, an unbelted person is significantly more likely to die than a person wearing a seat belt.

A loaded vehicle with a higher center of gravity may handle differently than an unloaded vehicle. The risk of loss of control or vehicle rollover increases as more cargo is loaded in the vehicle. The risk increases because the cargo placed in the vehicle raises the vehicle's center of gravity. As a result, the van handles differently from other ordinary passenger vehicles and it has less resistance to rollover which can make it more difficult to control in an emergency situation. Placing any load on the roof also raises the center of gravity and increases the potential for rollover. Do not overload your vehicle and make sure the load is evenly distributed.

To reduce the risk of loss of control or vehicle rollover drive at slower speed, avoid abrupt steering changes and increase your following distance and allow for increased stopping distance.

Be sure to read the driving safety precautions later in this section.

TIRE PRESSURE MONITORING SYSTEM (TPMS)

Each tire, including the spare (if provided), should be checked monthly when cold and inflated to the inflation pressure recommended by the vehicle manufacturer on the vehicle placard or tire inflation pressure label. (If your vehicle has tires of a different size than the size indicated on

the vehicle placard or tire inflation pressure label, you should determine the proper tire inflation pressure for those tires.)

As an added safety feature, your vehicle has been equipped with a Tire Pressure Monitoring System (TPMS) that illuminates a low tire pressure telltale when one or more of your tires is significantly under-inflated. Accordingly, when the low tire pressure telltale illuminates, you should stop and check all 4 tires as soon as possible, and inflate them to the proper pressure. Driving on a significantly under-inflated tire causes the tire to overheat and can lead to tire failure. Under-inflation also reduces fuel efficiency and tire tread life, and may affect the vehicle's handling and stopping ability.

Please note that the TPMS is not a substitute for proper tire maintenance, and it is the driver's responsibility to maintain correct tire pressure, even if under-inflation has not reached the level to trigger illumination of the TPMS low tire pressure telltale.

Your vehicle has also been equipped with a TPMS malfunction indicator to indicate when the system is not operating properly. The TPMS malfunction indicator is combined with the low tire pressure telltale. When the system detects a malfunction, the telltale will flash for approximately one minute and then remain continuously illuminated. This sequence will continue upon subsequent vehicle start-ups as long as the mal-

function exists. When the malfunction indicator is illuminated, the system may not be able to detect or signal low tire pressure as intended. TPMS malfunctions may occur for a variety of reasons, including the installation of replacement or alternate tires or wheels on the vehicle that prevent the TPMS from functioning properly. Always check the TPMS malfunction telltale after replacing one or more tires or wheels on your vehicle to ensure that the replacement or alternate tires and wheels allow the TPMS to continue to function properly.

Additional information:

- **The TPMS does not monitor the tire pressure of the spare tire.**
- The TPMS will activate only when the vehicle is driven at speeds above 16 MPH (25 km/h). Also, this system may not detect a sudden drop in tire pressure (for example a flat tire while driving).
- The low tire pressure warning light does not automatically turn off when the tire pressure is adjusted. After all 4 tires are inflated to the recommended pressure, the vehicle must be driven at speeds above 16 MPH (25 km/h) to activate the TPMS and turn off the low tire pressure warning light. Use a tire pressure gauge to check the tire pressure.

- The CHECK TIRE pressure warning appears in the vehicle information display when the low tire pressure warning light is illuminated and low tire pressure is detected. The CHECK TIRE pressure warning turns off when the low tire pressure warning light turns off.
- The CHECK TIRE pressure warning does not appear if the low tire pressure warning light illuminates to indicate a TPMS malfunction.
- Tire pressure rises and falls depending on the heat caused by the vehicle's operation and the outside temperature. Low outside temperature can lower the temperature of the air inside the tire which can cause a lower tire inflation pressure. This may cause the low tire pressure warning light to illuminate. If the warning light illuminates in low ambient temperature, check the tire pressure for all four tires.
- The Tire and Loading Information label (also referred to as the vehicle placard or tire inflation pressure label) is located in the driver's door opening.

For additional information, see "Low tire pressure warning light" in the "Instruments and controls" section, "Tire Pressure Monitoring System (TPMS)" in the "In case of emergency" section.

5-4 Starting and driving

WARNING

- If the low tire pressure warning light illuminates while driving, avoid sudden steering maneuvers or abrupt braking, reduce vehicle speed, pull off the road to a safe location and stop the vehicle as soon as possible. Driving with under-inflated tires may permanently damage the tires and increase the likelihood of tire failure. Serious vehicle damage could occur and may lead to an accident and could result in serious personal injury. Check the tire pressure for all four tires. Adjust the tire pressure to the recommended COLD tire pressure shown on the Tire and Loading Information label to turn the low tire pressure warning light OFF. If you have a flat tire, replace it with a spare tire as soon as possible. (See “Flat tire” in the “In case of emergency” section for changing a flat tire.)

- When a spare tire is mounted or a wheel is replaced, tire pressure will not be indicated, the TPMS will not function and the low tire pressure warning light will flash for approximately 1 minute. The light will remain on after 1 minute. Contact your NISSAN dealer as soon as possible for tire replacement and/or system resetting.
- Replacing tires with those not originally specified by NISSAN could affect the proper operation of the TPMS.
- Do not inject any tire liquid or aerosol tire sealant into the tires, as this may cause a malfunction of the tire pressure sensors.

CAUTION

Do not place metalized film or any metal parts (antenna, etc.) on the windows. This may cause poor reception of the signals from the tire pressure sensors, and the TPMS will not function properly.

Some devices and transmitters may temporarily interfere with the operation of the TPMS and cause the low tire pressure warning light to illuminate.

Some examples are:

- Facilities or electric devices using similar radio frequencies are near the vehicle.
- If a transmitter set to similar frequencies is being used in or near the vehicle.
- If a computer (or similar equipment) or a DC/AC converter is being used in or near the vehicle.

FCC Notice:

For USA:

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

For Canada:

This device complies with RSS-210 of Industry Canada. Operation is subject to the following two conditions:

1. This device may not cause interference, and
2. This device must accept any interference, include interference that may cause undesired operation of the device.
3. The term “IC:” before the radio certification number only signifies that Industry Canada technical specifications were met.

AVOIDING COLLISION AND ROLLOVER

WARNING

Failure to operate this vehicle in a safe and prudent manner may result in loss of control or an accident.

Be alert and drive defensively at all times. Obey all traffic regulations. Avoid excessive speed, high speed cornering, or sudden steering maneuvers, because these driving practices could cause you to lose control of your vehicle. **As with any vehicle, loss of control could result in a**

5-6 Starting and driving

collision with other vehicles or objects or cause the vehicle to roll over, particularly if the loss of control causes the vehicle to slide sideways. Be attentive at all times, and avoid driving when tired. Never drive when under the influence of alcohol or drugs (including prescription or over-the-counter drugs which may cause drowsiness). Always wear your seat belt as outlined in the “Safety – Seats, seat belts and supplemental restraint system” section of this manual, and also instruct your passengers to do so.

Seat belts help reduce the risk of injury in collisions and rollovers. **In a rollover crash, an unbelted or improperly belted person is significantly more likely to be injured or killed than a person properly wearing a seat belt.**

OFF-ROAD RECOVERY

If the right side or left side wheels unintentionally leave the road surface, maintain control of the vehicle by following the procedure below. Please note that this procedure is only a general guide. The vehicle must be driven as appropriate based on the conditions of the vehicle, road and traffic.

1. Remain calm and do not overreact.
2. Do not apply the brakes.

3. Maintain a firm grip on the steering wheel with both hands and try to hold a straight course.
 4. When appropriate, slowly release the accelerator pedal to gradually slow the vehicle.
 5. If there is nothing in the way, steer the vehicle to follow the road while vehicle speed is reduced. Do not attempt to drive the vehicle back onto the road surface until vehicle speed is reduced.
 6. When it is safe to do so, gradually turn the steering wheel until both tires return to the road surface. When all tires are on the road surface, steer the vehicle to stay in the appropriate driving lane.
- If you decide that it is not safe to return the vehicle to the road surface based on vehicle, road or traffic conditions, gradually slow the vehicle to a stop in a safe place off the road.

RAPID AIR PRESSURE LOSS

Rapid air pressure loss or a “blow-out” can occur if the tire is punctured or is damaged due to hitting a curb or pothole. Rapid air pressure loss can also be caused by driving on under-inflated tires.

Rapid air pressure loss can affect the handling and stability of the vehicle, especially at highway speeds.

Help prevent rapid air pressure loss by maintaining the correct air pressure and visually inspect the tires for wear and damage. See “Wheels and tires” in the “Maintenance and do-it-yourself” section of this manual. If a tire rapidly loses air pressure or “blows-out” while driving, maintain control of the vehicle by following the procedure below. Please note that this procedure is only a general guide. The vehicle must be driven as appropriate based on the conditions of the vehicle, road and traffic.

WARNING

The following actions can increase the chance of losing control of the vehicle if there is a sudden loss of tire air pressure. Losing control of the vehicle may cause a collision and result in personal injury.

- **The vehicle generally moves or pulls in the direction of the flat tire.**
- **Do not rapidly apply the brakes.**
- **Do not rapidly release the accelerator pedal.**
- **Do not rapidly turn the steering wheel.**

1. Remain calm and do not over react.
2. Maintain a firm grip on the steering wheel with both hands and try to hold a straight course.
3. When appropriate, slowly release the accelerator pedal to gradually slow the vehicle.
4. Gradually steer the vehicle to a safe location off the road and away from traffic if possible.
5. Lightly apply the brake pedal to gradually stop the vehicle.
6. Turn on the hazard warning flashers and either contact a roadside emergency service to change the tire or see “Changing a flat tire” in the “In case of emergency” section of this manual.

DRINKING ALCOHOL/DRUGS AND DRIVING

WARNING

Never drive under the influence of alcohol or drugs. Alcohol in the bloodstream reduces coordination, delays reaction time and impairs judgement. Driving after drinking alcohol increases the likelihood of being involved in an accident injuring yourself and others. Additionally, if you are injured in an accident, alcohol can increase the severity of the injury.

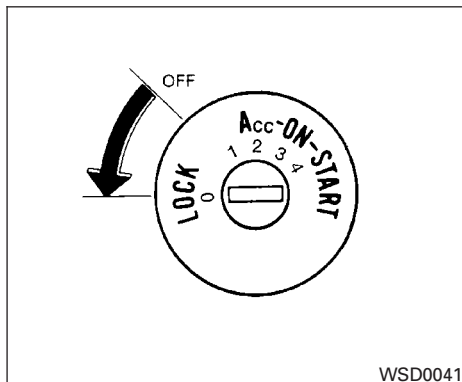
NISSAN is committed to safe driving. However, you must choose not to drive under the influence of alcohol. Every year thousands of people are injured or killed in alcohol-related accidents. Although the local laws vary on what is considered to be legally intoxicated, the fact is that alcohol affects all people differently and most people underestimate the effects of alcohol.

Remember, drinking and driving don't mix! And that is true for drugs, too (over-the-counter, prescription, and illegal drugs). Don't drive if your ability to operate your vehicle is impaired by alcohol, drugs, or some other physical condition.

IGNITION SWITCH

WARNING

- **Never remove the ignition key or place the ignition switch in the LOCK position while driving. The steering wheel will lock. This may cause the driver to lose control of the vehicle and could result in serious vehicle damage or personal injury.**



AUTOMATIC TRANSMISSION

The ignition lock is designed so the ignition switch cannot be placed in the LOCK position and the key cannot be removed until the shift selector is moved to the P (Park) position.

When removing the key from the ignition switch, make sure the shift selector is in the P (Park) position.

If the shift selector is not returned to P (Park) position, the ignition switch cannot be placed in the LOCK position.

To remove the key from the ignition switch:

1. Shift the shift selector to the P (Park) position with the ignition switch in the ON position.
2. Place the ignition switch in the LOCK position.
3. Remove the key from the ignition switch.

If the shift selector is shifted to the P (Park) position after the ignition switch is placed in the OFF position or when the ignition switch cannot be placed in the LOCK position, proceed as follows to remove the key.

1. Move the shift selector into the P (Park) position.
2. Place the ignition switch slightly toward the ON position.
3. Place the ignition switch in the LOCK position.
4. Remove the key.

The shift selector is designed so it cannot move out of P (Park) and into any of the other gear positions if the ignition switch is placed in the OFF position or if the key is removed from the switch.

The shift selector can be moved if the ignition switch is in the ON position and the foot brake pedal is depressed.

There is an OFF position between the LOCK and ON positions. The OFF position is indicated by a “1” on the ignition switch. For models without NISSAN vehicle immobilizer system: when the ignition switch is in the OFF position, the steering wheel is not locked.

In order for the steering wheel to be locked, it must be turned about 1/8 of a turn clockwise from the straight up position.

To lock the steering wheel, turn the ignition to the LOCK position. Remove the key. To unlock the steering wheel, insert the key and turn it gently while rotating the steering wheel slightly right and left.

If the key will not turn from the LOCK position, turn the steering wheel to the left or right while turning the key to unlock the key cylinder.

IGNITION SWITCH POSITIONS

LOCK: Normal parking position (0)

OFF: (1)

The engine can be turned off without locking the steering wheel.

ACC: (Accessories) (2)

This position activates electrical accessories such as the radio when the engine is not running.

ON: Normal operating position (3)

This position turns on the ignition system and the electrical accessories.

START: (4)

This position starts the engine. As soon as the engine has started, release the key. It automatically returns to the ON position.

NISSAN VEHICLE IMMOBILIZER SYSTEM (if so equipped)

The NISSAN Vehicle Immobilizer System will not allow the engine to start without the use of the registered key.

If the engine fails to start using a registered key (for example, when interference is caused by another registered key, an automated toll road device or automatic payment device on the key ring), restart the engine using the following procedures:

1. Leave the ignition switch in the ON position for approximately 5 seconds.
2. Turn the ignition switch to the OFF or LOCK position, and wait approximately 10 seconds.
3. Repeat steps 1 and 2.
4. Restart the engine while holding the device (which may have caused the interference) separate from the registered key.

If the no start condition re-occurs, NISSAN recommends placing the registered key on a separate key ring to avoid interference from other devices.

BEFORE STARTING THE ENGINE

- Make sure the area around the vehicle is clear.
- Check fluid levels such as engine oil, coolant, brake fluid, and windshield-washer fluid as frequently as possible, or at least whenever you refuel.
- Check that all windows and lights are clean.
- Visually inspect tires for their appearance and condition. Also check tires for proper inflation.
- Check that all doors are closed.
- Position seat and adjust head restraints.
- Adjust inside and outside mirrors.
- Fasten seat belts and ask all passengers to do likewise.
- Check the operation of warning lights when the ignition switch is placed in the ON position. See "Warning/indicator lights and audible reminders" in the "Instruments and controls" section of this manual.

STARTING THE ENGINE

1. Apply the parking brake.
2. Move the shift selector to P (Park) or N (Neutral). P (Park) is recommended.

The shift selector cannot be moved out of P (Park) and into any of the other gear positions if the ignition switch is turned to the OFF position or if the key is removed from the ignition switch.

The starter is designed not to operate if the shift selector is in any of the driving positions.

3. Crank the engine **with your foot off the accelerator pedal** by placing the ignition switch in the START position. Release the key when the engine starts. If the engine starts, but fails to run, repeat the above procedure.
 - If the engine is very hard to start in extremely cold weather or when restarting, depress the accelerator pedal a little (approximately 1/3 to the floor) and hold it and then crank the engine. Release the key and the accelerator pedal when the engine starts.
 - If the engine is very hard to start because it is flooded, depress the accelerator pedal all the way to the floor and hold it. Crank the engine for 5 to 6 seconds. After

cranking the engine, release the accelerator pedal. Crank the engine **with your foot off the accelerator pedal** by turning the ignition key to START. Release the key when the engine starts. If the engine starts, but fails to run, repeat the above procedure.

CAUTION

Do not operate the starter for more than 15 seconds at a time. If the engine does not start, turn the key off and wait 10 seconds before cranking again, otherwise the starter could be damaged.

4. Allow the engine to idle for at least 30 seconds after starting. Do not race the engine while warming it up. Drive at moderate speed for a short distance first, especially in cold weather.

In cold weather, keep the engine running for a minimum of 2–3 minutes before shutting it off. Starting and stopping the engine over a short period of time may make the vehicle more difficult to start.

DRIVING THE VEHICLE

NOTE:

Care should be taken to avoid situations that can lead to potential battery discharge and potential no-start conditions such as:

1. Installation or extended use of electronic accessories that consume battery power when the engine is not running (Phone chargers, GPS, DVD players, etc.)
2. Vehicle is not driven regularly and/or only driven short distances. In these cases, the battery may need to be charged to maintain battery health.

ENGINE PROTECTION MODE

The engine has an engine protection mode to reduce the chance of damage if the coolant temperature becomes too high (for example, when climbing steep grades in high temperature with heavy loads, such as when towing a trailer). When the engine temperature reaches a certain level:

- The engine coolant temperature gauge will move toward the H position.
- Engine power may be reduced.
- The air conditioning cooling function may be automatically turned OFF for a short time (the blower will continue to operate).

Engine power and, under some conditions, vehicle speed will decrease. Vehicle speed can be controlled with the accelerator pedal, but the vehicle may not accelerate at the desired speed. The transmission will downshift or upshift as it reaches prescribed shift points. You can also shift manually.

As driving conditions change and engine coolant temperature is reduced, vehicle speed can be increased using the accelerator pedal, and air conditioning cooling function will automatically be turned back ON.

If:

1. The engine coolant temperature is not reduced.
2. The air conditioning cooling function does not turn back ON.
3. If the engine oil pressure low warning light illuminates or the engine coolant temperature gauge indicates an overheating condition, this may indicate a malfunction. Move the vehicle off the road in a safe area and allow the engine to cool. If either condition is still present after checking the oil and coolant, do not continue to drive and call a NISSAN dealer.

The malfunction indicator light (MIL) may also come ON. If **only** it remains on, you do not need to have your vehicle towed, but have it inspected soon by a NISSAN dealer. See "Malfunction indicator light (MIL)" in the "Instruments and controls" section of this manual.

WARNING

Overheating can result in reduced engine power and vehicle speed. The reduced speed may be lower than other traffic, which could increase the chance of a collision. Be especially careful when driving. If the vehicle cannot maintain a safe driving speed, pull to the side of the road in a safe area. Allow the engine to cool and return to normal operation. See “If your vehicle overheats” in the “In case of emergency” section of this manual.

CAUTION

Running the engine with the engine oil pressure warning light on could cause serious damage to the engine almost immediately. Such damage is not covered by warranty. Turn off the engine as soon as it is safe to do so.

AUTOMATIC TRANSMISSION

WARNING

- Do not depress the accelerator pedal while shifting from P (Park) or N (Neutral) to R (Reverse), or L (Low). Always depress the brake pedal until shifting is completed. Failure to do so could cause you to lose control and have an accident.
- Cold engine idle speed is high, so use caution when shifting into a forward or reverse gear before the engine has warmed up.
- Never shift to P (Park) or R (Reverse) while the vehicle is moving. This could cause an accident.
- Except in an emergency, do not shift to the N (Neutral) position while driving. Doing so can cause a loss of engine braking which may result in a collision, serious personal injury or death. In addition, coasting with the transmission in the N (Neutral) position may cause serious damage to the transmission.

CAUTION

- When stopping the vehicle on an uphill grade, do not hold the vehicle by depressing the accelerator pedal. The foot brake should be used for this purpose.
- Do not downshift abruptly on slippery roads. This may cause a loss of control.

The automatic transmission in your vehicle is electronically controlled to produce maximum power and smooth operation.

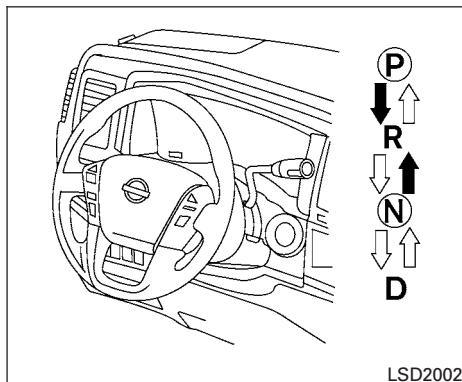
The recommended operating procedures for this transmission are shown on the following pages. Follow these procedures for maximum vehicle performance and driving enjoyment.

Starting the vehicle

1. After starting the engine, fully depress the foot brake pedal before moving the shift selector out of the P (Park) position.
2. Keep the foot brake pedal depressed and move the shift selector into a driving gear.
3. Release the foot brake, then gradually start the vehicle in motion.

The automatic transmission is designed so the foot brake pedal **MUST** be depressed before shifting from P (Park) to any drive position while the ignition switch is in the ON position.

The shift selector cannot be moved out of the P (Park) position and into any of the other gear positions if the ignition switch is placed in the LOCK or OFF position.



To move the shift selector:

➡ : Shift while depressing the brake pedal

⇨ : Shift without depressing brake pedal

Shifting

After starting the engine, fully depress the brake pedal and move the shift selector out of the P (Park) position.

⚠ WARNING

Apply the parking brake if the shift selector is in any position while the engine is not running. Failure to do so could cause the vehicle to move unexpectedly or roll away and result in serious personal injury or property damage.

If the ignition switch is placed in the OFF or ACC position for any reason while the vehicle is in N (Neutral), or any D (Drive) position, the ignition switch cannot be turned to the LOCK position. Move the shift selector to the P (Park) position, then the ignition switch can be turned to LOCK.

P (Park):

⚠ CAUTION

To prevent transmission damage, use the P (Park) or R (Reverse) position only when the vehicle is completely stopped.

Use the P (Park) shift selector position when the vehicle is parked or when starting the engine. Make sure the vehicle is completely stopped. **The brake pedal should be depressed to move the shift selector from N (Neutral) or any drive position to P (Park).** Apply the parking brake. When parking on a hill, apply the parking brake first, then move the shift selector into the P (Park) position.

R (Reverse):

CAUTION

To prevent transmission damage, use the **P (Park)** or **R (Reverse)** position only when the vehicle is completely stopped.

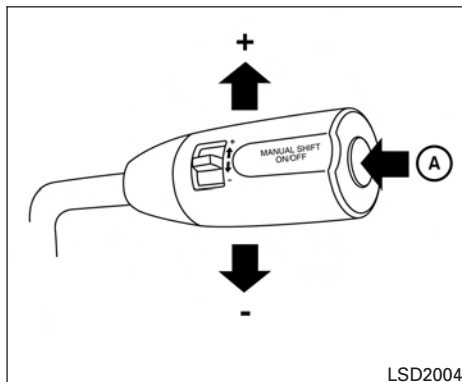
Use the R (Reverse) position to back up. Make sure the vehicle is completely stopped before selecting the R (Reverse) position. **The brake pedal must be depressed to move the shift selector from P (Park), N (Neutral) or any drive position to R (Reverse).**

N (Neutral):

Neither forward nor reverse gear is engaged. The engine can be started in this position. You may shift to N (Neutral) and restart a stalled engine while the vehicle is moving.

D (Drive):

Use this position for all normal forward driving.



Manual shift mode

When the manual shift mode button **(A)** is pressed while driving, the transmission enters the manual shift mode. Shift ranges can be selected manually.

To leave manual mode from any position push the manual shift mode button **(A)** again. Manual shift mode is also canceled when the vehicle is restarted.

In the manual shift mode, the shift range is displayed on the position indicator in the meter. After pressing the manual shift mode button, the position indicator first displays M4 (Fourth).

Shift ranges up or down one by one as follows:

M1 ↔ M2 ↔ M3 ↔ M4 ↔ M5

M5 (Fifth):

Allows the vehicle to shift to the highest gear.

Shift ranges up or down one by one as follows:

M1 ↔ M2 ↔ M3 ↔ M4 ↔ M5

M5 will be displayed on the position indicator in the meter.

M4 (Fourth):

For driving up or down long slopes where engine braking would be advantageous.

Shift ranges up or down one by one as follows:

M1 ↔ M2 ↔ M3 ↔ M4

M4 will be displayed on the position indicator in the meter.

M3 (Third):

Use for hill climbing or engine braking on downhill grades.

Shift ranges up or down one by one as follows:

M1 ↔ M2 ↔ M3

M3 will be displayed on the position indicator in the meter.

M2 (Second):

Use for hill climbing or engine braking on downhill grades.

Shift ranges up or down one by one as follows:

M1 $\longleftrightarrow$ M2

M2 will be displayed on the position indicator in the meter.

M1 (First):

Use this position when climbing steep hills slowly or driving slowly through deep snow, sand or mud, or for maximum engine braking on steep downhill grades.

M1 will be displayed on the position indicator on the meter.

- Remember not to drive at high speeds for extended periods of time in lower than M4 range. This reduces fuel economy.

When shifting up:

Move the shift selector to the + (up) side. (Shifts to higher range.)

When shifting down:

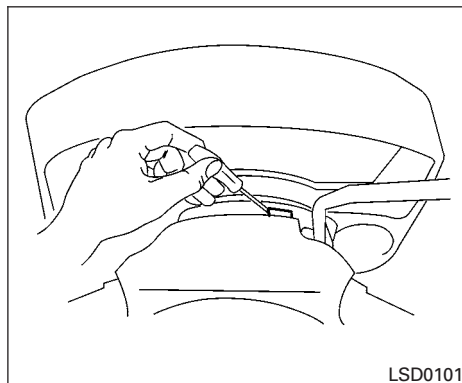
Move the shift selector to the - (down) side. (Shifts to lower range.)

- The transmission will automatically down-shift the gears. (For example, if you select the 3rd range, the transmission will shift down between the 3rd and 1st gears.)
- Moving the shift selector rapidly to the same side twice will shift the ranges in succession.

When canceling the manual shift mode:

Press the manual shift mode button (A) to return the transmission to the normal driving mode.

- In the manual shift mode, the transmission may not shift to the selected gear immediately because of vehicle speed. The transmission will up or down shift when vehicle speed matches the programmed transmission shift points. This helps maintain driving performance and reduces the chance of vehicle damage or loss of control.**
- In the manual shift mode, the transmission will not up shift to a higher gear than is manually selected. When the vehicle speed decreases, the transmission automatically shifts down and shifts to 1st gear before the vehicle comes to a stop.**



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Shift lock release

If the battery is discharged, the shift selector may not be moved from the P (Park) position even with the brake pedal depressed.

To move the shift selector, release the shift lock. The shift selector can be moved to N (Neutral). However, for models without the NISSAN vehicle immobilizer system, the steering wheel will be locked unless the ignition switch is turned to the ON position. This allows the vehicle to be moved if the battery is discharged.

If the shift selector cannot be moved out of P (Park), have a NISSAN dealer check the automatic transmission system as soon as possible.

WARNING

If the shift selector cannot be moved from the P (Park) position while the engine is running and the brake pedal is depressed, the stop lights may not work. Malfunctioning stop lights could cause an accident injuring yourself and others.

Accelerator downshift — in D position —

For passing or hill climbing, depress the accelerator pedal to the floor. This shifts the transmission down into a lower gear, depending on the vehicle speed.

Fail-safe

When the fail-safe operation occurs, please note that the transmission will be locked in any of the forward gears according to the condition.

If the vehicle is driven under extreme conditions, such as excessive wheel spinning and subsequent hard braking, the fail-safe system may be activated. This will occur even if all electrical circuits are functioning properly. In this case, turn the ignition switch OFF and wait for 3 seconds. Then turn the ignition switch back to the ON position. The vehicle should return to its normal operating condition. If it does not

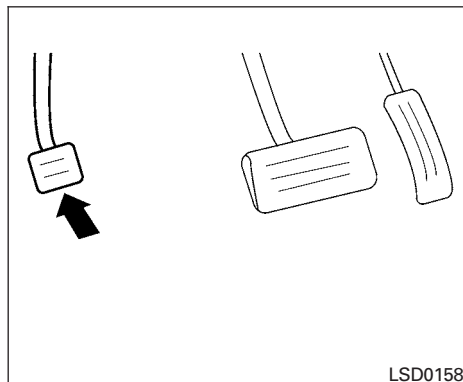
return to its normal operating condition, have a NISSAN dealer check the transmission and repair it if necessary.

PARKING BRAKE

WARNING

- Be sure the parking brake is fully released before driving. Failure to do so can cause brake failure and lead to an accident.
- Do not release the parking brake from outside the vehicle.
- Do not use the shift selector in place of the parking brake. When parking, be sure the parking brake is fully engaged.
- Do not leave children unattended in a vehicle. They could release the parking brake and cause an accident.

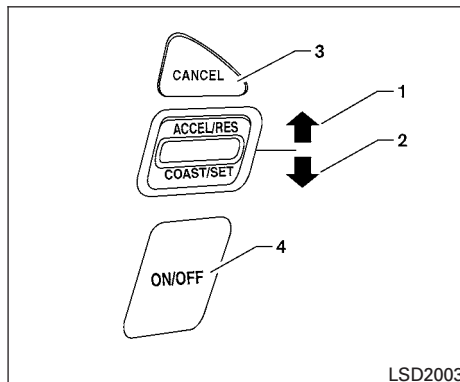
CRUISE CONTROL (if so equipped)



To engage: Firmly depress the parking brake.

To release:

1. Firmly apply the foot brake.
2. Move the shift selector to the P (Park) position.
3. Firmly depress the parking brake pedal and it will release.
4. Before driving, be sure the brake warning light goes out.



1. ACCEL/RES switch
2. COAST/SET switch
3. CANCEL switch
4. ON/OFF switch

PRECAUTIONS ON CRUISE CONTROL

- If the cruise control system malfunctions, it cancels automatically. The SET indicator light in the vehicle information display then blinks to warn the driver, see "Vehicle information display" in the "Instruments and controls" section.

- If the SET indicator light blinks, push the cruise control ON-OFF switch off and have the system checked by a NISSAN dealer.
- The SET indicator light may blink when the cruise control ON-OFF switch is pushed ON while pushing the ACCEL/RES, COAST/SET, or CANCEL switch. To properly set the cruise control system, use the following procedures.

WARNING

Do not use the cruise control when driving under the following conditions:

- When it is not possible to keep the vehicle at a set speed.
- In heavy traffic or in traffic that varies in speed.
- On winding or hilly roads.
- On slippery roads (rain, snow, ice, etc.).
- In very windy areas.

Doing so could cause a loss of vehicle control and result in an accident.

CRUISE CONTROL OPERATIONS

The cruise control allows driving at a speed between 25 - 89 MPH (40 - 144 km/h) without keeping your foot on the accelerator pedal.

To turn on the cruise control, push the ON-OFF switch on. The CRUISE indicator light in the vehicle information display will illuminate.

To set cruising speed, accelerate the vehicle to the desired speed, push the COAST/SET switch and release it. The SET indicator light in the vehicle information display will illuminate. Take your foot off the accelerator pedal. Your vehicle maintains the set speed.

- **To pass another vehicle**, depress the accelerator pedal. When you release the pedal, the vehicle returns to the previously set speed.
- The vehicle may not maintain the set speed when going up or down steep hills. If this happens, drive without the cruise control.

To cancel the preset speed, use one of the following three methods.

- Push the CANCEL button; the SET indicator light in the vehicle information display goes out.
- Tap the brake pedal; the SET indicator light goes out.

- Push the ON-OFF switch off. Both the CRUISE indicator light and SET indicator light in the vehicle information display go out.

The cruise control is automatically canceled and the SET light in the vehicle information display goes out if:

- you depress the brake pedal while pushing the ACCEL/RES or SET/COAST switch. The preset speed is deleted from memory.
- the vehicle slows down more than 8 MPH (13 km/h) below the set speed.
- you move the shift selector to N (Neutral).

To reset at a faster cruising speed, use one of the following three methods.

- Depress the accelerator pedal. When the vehicle attains the desired speed, push and release the COAST/SET switch.
- Push and hold the ACCEL/RES switch. When the vehicle attains the speed you desire, release the switch.
- Push and release the ACCEL/RES switch. Each time you do this, the set speed increases by about 1 MPH (1.6 km/h).

To reset at a slower cruising speed, use one of the following three methods.

- Lightly tap the brake pedal. When the vehicle attains the desired speed, push the COAST/SET switch and release it.
- Push and hold the COAST/SET switch. Release the switch when the vehicle slows to the desired speed.
- Push and release the COAST/SET switch. Each time you do this, the set speed decreases by about 1 MPH (1.6 km/h).

To resume the preset speed, push and release the ACCEL/RES switch. The vehicle returns to the last set cruising speed when the vehicle speed is over 25 MPH (40 km/h).

BREAK-IN SCHEDULE

CAUTION

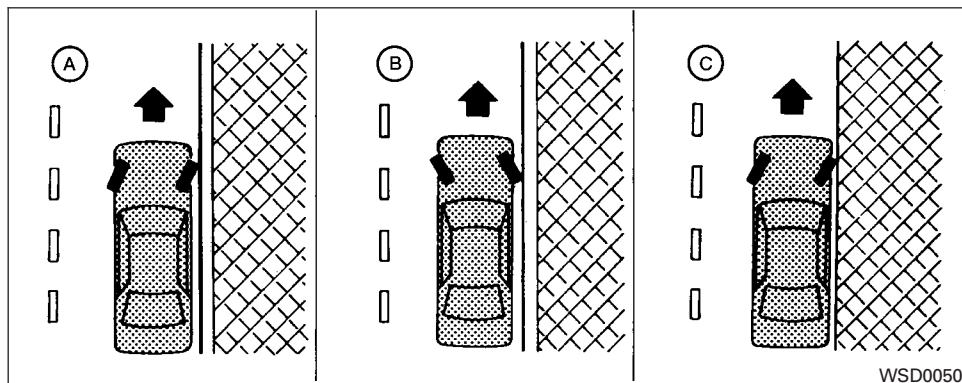
During the first 1,200 miles (2,000 km), follow these recommendations to obtain maximum engine performance and ensure the future reliability and economy of your new vehicle. Failure to follow these recommendations may result in shortened engine life and reduced engine performance.

- Avoid driving for long periods at constant speed, either fast or slow, and do not run the engine over 4,000 rpm.
- Do not accelerate at full throttle in any gear.
- Avoid quick starts.
- Avoid hard braking as much as possible.
- Do not tow a trailer for the first 500 miles (800 km). Your engine, axle or other parts could be damaged.

INCREASING FUEL ECONOMY

- Accelerate slowly and smoothly. Maintain cruising speeds with a constant accelerator position.
- Drive at moderate speeds on the highway. Driving at high speed lowers fuel economy.
- Avoid unnecessary stopping and braking. Maintain a safe distance behind other vehicles.
- Use a proper gear range which suits road conditions. On level roads, shift into high gear as soon as possible.
- Avoid unnecessary engine idling.
- Keep your engine tuned up.
- Follow the recommended periodic maintenance schedule.
- Keep the tires inflated to the correct pressure. Low tire pressure increases tire wear and lowers fuel economy.
- Keep the front wheels in correct alignment. Improper alignment increases tire wear and lowers fuel economy.
- Air conditioner operation lowers fuel economy. Use the air conditioner only when necessary.
- When cruising at highway speeds, it is more economical to use the air conditioner and leave the windows closed to reduce drag.

PARKING/PARKING ON HILLS



WARNING

- Do not stop or park the vehicle over flammable materials such as dry grass, waste paper or rags. They may ignite and cause a fire.
- Safe parking procedures require that both the parking brake be set and the transmission placed into P (Park). Failure to do so could cause the vehicle to move unexpectedly or roll away and result in an accident. Make sure the shift selector has been pushed as far forward as it can go and cannot be moved without depressing the foot brake pedal.

- Never leave the engine running while the vehicle is unattended.
- Do not leave children unattended inside the vehicle. They could unknowingly activate switches or controls. Unattended children could become involved in serious accidents.

1. Firmly apply the parking brake.
2. Move the shift selector to the P (Park) position.
3. To help prevent the vehicle from rolling into traffic when parked on an incline, it is a good practice to turn the wheels as illustrated.

• HEADED DOWNHILL WITH CURB: (A)

Turn the wheels into the curb and move the vehicle forward until the curb side wheel gently touches the curb.

• HEADED UPHILL WITH CURB: (B)

Turn the wheels away from the curb and move the vehicle back until the curb side wheel gently touches the curb.

• HEADED UPHILL OR DOWNHILL, NO CURB: (C)

Turn the wheels toward the side of the road so the vehicle will move away from the center of the road if it moves.

4. Place the ignition switch in the LOCK position.

POWER STEERING

The power assisted steering uses a hydraulic pump, driven by the engine, to assist steering.

If the engine stops or the drive belt breaks, you will still have control of the vehicle. However, much greater steering effort is needed, especially in sharp turns and at low speeds.

WARNING

If the engine is not running or is turned off while driving, the power assist for the steering will not work. Steering will be harder to operate.

BRAKE SYSTEM

The brake system has two separate hydraulic circuits. If one circuit malfunctions, you will still have braking at 2 wheels.

BRAKE PRECAUTIONS

Using the brakes

Avoid resting your foot on the brake pedal while driving. This will overheat the brakes, wear out the brake pads faster, and reduce gas mileage.

To help reduce brake wear and to prevent the brakes from overheating, reduce speed and downshift to a lower gear before going down a slope or long grade. Overheated brakes may reduce braking performance and could result in loss of vehicle control.

WARNING

- **While driving on a slippery surface, be careful when braking, accelerating or downshifting. Abrupt braking or accelerating could cause the wheels to skid and result in an accident.**
- **If the engine is not running or is turned off while driving, the power assist for the brakes will not work. Braking will be harder.**

Wet brakes

When the vehicle is washed or driven through water, the brakes may get wet. As a result, your braking distance will be longer and the vehicle may pull to one side during braking.

To dry the brakes, drive the vehicle at a safe speed while lightly pressing the brake pedal to heat up the brakes. Do this until the brakes return to normal. Avoid driving the vehicle at high speeds until the brakes function correctly.

Parking brake break-in

Break-in the parking brake shoes whenever the effect of the parking brake is weakened or whenever the parking brake shoes and/or rotors are replaced, in order to assure the best brake performance.

This procedure is described in the vehicle service manual and can be performed by a NISSAN dealer.

ANTI-LOCK BRAKING SYSTEM (ABS)

WARNING

- The Anti-lock Braking System (ABS) is a sophisticated device, but it cannot prevent accidents resulting from careless or dangerous driving techniques. It can help maintain vehicle control during braking on slippery surfaces. Remember that stopping distances on slippery surfaces will be longer than on normal surfaces even with ABS. Stopping distances may also be longer on rough, gravel or snow covered roads, or if you are using tire chains. Always maintain a safe distance from the vehicle in front of you. Ultimately, the driver is responsible for safety.
- Tire type and condition may also affect braking effectiveness.
 - When replacing tires, install the specified size of tires on all four wheels.

- When installing a spare tire, make sure that it is the proper size and type as specified on the Tire and Loading Information label. See “Tire and Loading Information label” in the “Technical and consumer information” section of this manual.
- For detailed information, see “Wheels and tires” in the “Maintenance and do-it-yourself” section of this manual.

The Anti-lock Braking System (ABS) controls the brakes so the wheels do not lock during hard braking or when braking on slippery surfaces. The system detects the rotation speed at each wheel and varies the brake fluid pressure to prevent each wheel from locking and sliding. By preventing each wheel from locking, the system helps the driver maintain steering control and helps to minimize swerving and spinning on slippery surfaces.

Using the system

Depress the brake pedal and hold it down. Depress the brake pedal with firm steady pressure, but do not pump the brakes. The ABS will operate to prevent the wheels from locking up. Steer the vehicle to avoid obstacles.

WARNING

Do not pump the brake pedal. Doing so may result in increased stopping distances.

Self-test feature

The ABS includes electronic sensors, electric pumps, hydraulic solenoids and a computer. The computer has a built-in diagnostic feature that tests the system each time you start the engine and move the vehicle at a low speed in forward or reverse. When the self-test occurs, you may hear a “clunk” noise and/or feel a pulsation in the brake pedal. This is normal and does not indicate a malfunction. If the computer senses a malfunction, it switches the ABS off and illuminates the ABS warning light on the instrument panel. The brake system then operates normally, but without anti-lock assistance.

If the ABS warning light illuminates during the self-test or while driving, have the vehicle checked by a NISSAN dealer.

Normal operation

The ABS operates at speeds above 3 - 6 MPH (5 - 10 km/h). The speed varies according to road conditions.

ACTIVE BRAKE LIMITED SLIP (ABLS) SYSTEM

When the ABS senses that 1 or more wheels are close to locking up, the actuator rapidly applies and releases hydraulic pressure. This action is similar to pumping the brakes very quickly. You may feel a pulsation in the brake pedal and hear a noise from under the hood or feel a vibration from the actuator when it is operating. This is normal and indicates that the ABS is operating properly. However, the pulsation may indicate that road conditions are hazardous and extra care is required while driving.

- ABLS system uses automatic braking to transfer power from a slipping drive wheel to the wheel on the same axle with more traction. The ABLS system applies braking to the slipping wheel, which helps redirect power to the other wheel.
- The ABLS system is always ON. In some conditions, the system may automatically turn the ABLS system off. If the system is automatically turned off, normal brake function will continue. ABLS will function even when the VDC system is turned OFF.
- The ABLS does not operate if both wheels on a drive axle are slipping.

WARNING

- **The ABLS system helps provide increased traction, but will not prevent accidents due to abrupt steering operation or by careless driving or dangerous driving practices. Reduce vehicle speed and be especially careful when driving and cornering on slippery surfaces. Always drive carefully.**

- **Do not modify the vehicle's suspension. If suspension parts such as shock absorbers, struts, springs, stabilizer bars, bushings and wheels are not NISSAN approved for your vehicle or are extremely deteriorated, the ABLS system may not operate properly. This could adversely affect vehicle handling performance, and the slip indicator light may illuminate.**
- **If brake related parts such as brake pads, rotors and calipers are not NISSAN recommended or are extremely deteriorated, the ABLS system may not operate properly and the slip indicator light may illuminate.**
- **If wheels or tires other than the NISSAN recommended ones are used, the ABLS system may not operate properly and the slip indicator light may illuminate.**

VEHICLE DYNAMIC CONTROL (VDC) SYSTEM

The Vehicle Dynamic Control (VDC) system uses various sensors to monitor driver inputs and vehicle motion. Under certain driving conditions, the VDC System helps to perform the following functions:

- Controls brake pressure to reduce wheel slip on one slipping drive wheel so power is transferred to a non slipping drive wheel on the same axle.
- Controls brake pressure and engine output to reduce drive wheel slip based on vehicle speed (traction control function).
- Controls brake pressure at individual wheels and engine output to help the driver maintain control of the vehicle in the following conditions:
 - understeer (vehicle tends to not follow the steered path despite increased steering input)
 - oversteer (vehicle tends to spin due to certain road or driving conditions)

The VDC system can help the driver to maintain control of the vehicle, but it cannot prevent loss of vehicle control in all driving situations.

When the VDC system operates, the  indicator in the instrument panel flashes so note the following:

5-24 Starting and driving

- The road may be slippery or the system may determine some action is required to help keep the vehicle on the steered path.
- You may feel a pulsation in the brake pedal and hear a noise or vibration from under the hood. This is normal and indicates that the VDC system is working properly.
- Adjust your speed and driving to the road conditions.

See "Slip indicator light" and "Vehicle Dynamic Control (VDC) off indicator light" in the "Instruments and controls" section.

If a malfunction occurs in the system, the  indicator light comes on in the instrument panel. The VDC system automatically turns off when the indicator light is off.

The VDC OFF switch is used to turn off the VDC system. The  indicator illuminates to indicate the VDC system is off.

When the VDC switch is used to turn off the system, the VDC system still operates to prevent one drive wheel from slipping by transferring power to a non slipping drive wheel. The  indicator flashes if this occurs. All other VDC functions are off and the  indicator will not flash.

The VDC system is automatically reset to on when the ignition switch is placed in the off position then back to the on position.

The computer has a built in diagnostic feature that tests the system each time you start the engine and move the vehicle forward or in reverse at a slow speed. When the self-test occurs, you may hear a clunk noise and/or feel a pulsation in the brake pedal. This is normal and is not an indication of a malfunction.

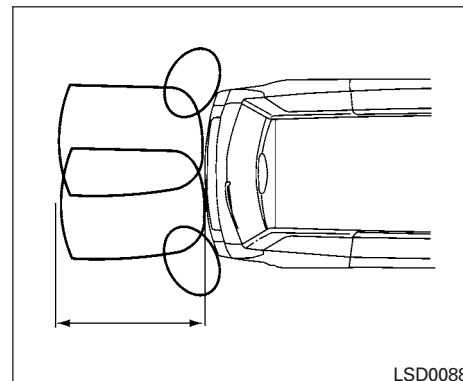
WARNING

- **The VDC system is designed to help the driver maintain stability but does not prevent accidents due to abrupt steering operation at high speeds or by careless or dangerous driving techniques. Reduce vehicle speed and be especially careful when driving and cornering on slippery surfaces and always drive carefully.**

- Do not modify the vehicle's suspension. If suspension parts such as shock absorbers, struts, springs, stabilizer bars, bushings and wheels are not NISSAN recommended for your vehicle or are extremely deteriorated, the VDC system may not operate properly. This could adversely affect vehicle handling performance, and the  indicator may flash or the  indicator light may illuminate.
- If brake related parts such as brake pads, rotors and calipers are not NISSAN recommended or are extremely deteriorated, the VDC system may not operate properly and the  indicator light may illuminate.
- If engine control related parts are not NISSAN recommended or are extremely deteriorated, the  indicator light may illuminate.
- When driving on extremely inclined surfaces such as higher banked corners, the VDC system may not operate properly and the  indicator may flash or the  indicator light may illuminate. Do not drive on these types of roads.

- When driving on an unstable surface such as a turntable, ferry, elevator or ramp, the  indicator may flash or the  indicator light may illuminate. This is not a malfunction. Restart the engine after driving onto a stable surface.
- If wheels or tires other than the NISSAN recommended ones are used, the VDC system may not operate properly and the  indicator may flash or the  indicator light may illuminate.
- The VDC system is not a substitute for winter tires or tire chains on a snow covered road.

REAR SONAR SYSTEM (if so equipped)



WARNING

- Always turn and look back before backing up. The RSS is not a substitute for proper backing procedures.
- Read and understand the limitations of the rear sonar system as contained in this section. Inclement weather may affect the function of the RSS; this may include reduced performance or a false activation.
- This system is not designed to prevent contact with small or moving objects.

- **The system is designed as an aid to the driver in detecting large stationary objects to help avoid damaging the vehicle. The system will not detect small objects below the bumper, and may not detect objects close to the bumper or on the ground.**
- **If your vehicle sustains damage to the rear bumper fascia, leaving it misaligned or bent, the sensing zone may be altered causing inaccurate measurement of obstacles or false alarms.**

The Rear Sonar System (RSS) sounds a tone to warn the driver of obstacles near the rear bumper when the shift selector is in R (Reverse). The system may not detect objects at speeds above 3 mph (5 km/h) and may not detect certain angular or moving objects.

The RSS detects obstacles up to 5.9 feet (1.8 m) from the rear bumper with a decreased coverage area at the outer corners of the bumper, (refer to the illustration for approximate zone coverage areas). As you move closer to the obstacle, the rate of the tone increases. When the obstacle is less than 10 inches (25.0 cm) away, the tone will sound continuously. If the RSS detects a stationary or receding object further than 10 inches (25.0 cm) from the side of the vehicle, the tone

will sound for only three seconds. Once the system detects an object approaching, the tone will sound again.

The RSS automatically turns on when the shift selector is placed in R (Reverse) and the ignition is ON. The RSS OFF switch on the instrument panel allows the driver to turn the RSS on and off. To turn the RSS off, the ignition must be ON, and the shift selector in R (Reverse). An indicator light on the switch will illuminate when the system is turned off. If the indicator light illuminates when the RSS is not turned off, it may indicate a malfunction in the RSS.

Keep the RSS sensors (located on the rear bumper fascia) free from snow, ice and large accumulations of dirt (do not clean the sensors with sharp objects). If the sensors are covered, it will affect the accuracy of the RSS.

COLD WEATHER DRIVING

FREEING A FROZEN DOOR LOCK

To prevent a door lock from freezing, apply de-icer through the key hole. If the lock becomes frozen, heat the key before inserting it into the key hole or use the remote keyless entry keyfob (if so equipped).

ANTI-FREEZE

In the winter when it is anticipated that the temperature will drop below 32°F (0°C), check the anti-freeze to assure proper winter protection. For details, see "Engine cooling system" in the "Maintenance and do-it-yourself" section of this manual.

BATTERY

If the battery is not fully charged during extremely cold weather conditions, the battery fluid may freeze and damage the battery. To maintain maximum efficiency, the battery should be checked regularly. For details, see "Battery" in the "Maintenance and do-it-yourself" section of this manual.

DRAINING OF COOLANT WATER

If the vehicle is to be left outside without anti-freeze, drain the cooling system, including the engine block. Refill before operating the vehicle. For details, see “Changing engine coolant” in the “Maintenance and do-it-yourself” section of this manual.

TIRE EQUIPMENT

1. SUMMER tires have a tread designed to provide superior performance on dry pavement. However, the performance of these tires will be substantially reduced in snowy and icy conditions. If you operate your vehicle on snowy or icy roads, NISSAN recommends the use of MUD & SNOW or ALL SEASON TIRES on all four wheels. Please consult a NISSAN dealer for the tire type, size, speed rating and availability information.
2. For additional traction on icy roads, studded tires may be used. However, some U.S. states and Canadian provinces prohibit their use. Check local, state and provincial laws before installing studded tires.

Skid and traction capabilities of studded snow tires on wet or dry surfaces may be poorer than that of non-studded snow tires.

3. Tire chains may be used. For details see “Tire chains” in the “Maintenance and do-it-yourself” section of this manual.

SPECIAL WINTER EQUIPMENT

It is recommended that the following items be carried in the vehicle during winter:

- A scraper and stiff-bristled brush to remove ice and snow from the windows and wiper blades.
- A sturdy, flat board to be placed under the jack to give it firm support.
- A shovel to dig the vehicle out of snowdrifts.
- Extra washer fluid to refill the windshield-washer fluid reservoir.

DRIVING ON SNOW OR ICE

WARNING

- **Wet ice (32°F, 0°C and freezing rain), very cold snow or ice can be slick and very hard to drive on. The vehicle will have much less traction or “grip” under these conditions. Try to avoid driving on wet ice until the road is salted or sanded.**

- **Whatever the condition, drive with caution. Accelerate and slow down with care. If accelerating or downshifting too fast, the drive wheels will lose even more traction.**
- **Allow more stopping distance under these conditions. Braking should be started sooner than on dry pavement.**
- **Allow greater following distances on slippery roads.**
- **Watch for slippery spots (glare ice). These may appear on an otherwise clear road in shaded areas. If a patch of ice is seen ahead, brake before reaching it. Try not to brake while on the ice, and avoid any sudden steering maneuvers.**
- **Do not use the cruise control on slippery roads.**
- **Snow can trap dangerous exhaust gases under your vehicle. Keep snow clear of the exhaust pipe and from around your vehicle.**

ENGINE BLOCK HEATER (if so equipped)

Engine block heaters are used to assist with cold temperature starting.

The engine block heater should be used when the outside temperature is 20°F (-7°C) or lower.

WARNING

- **Do not use your engine block heater with an ungrounded electrical system or a 2-pronged adapter. You can be seriously injured by an electrical shock if you use an ungrounded connection.**
- **Disconnect and properly store the engine block heater cord before starting the engine. Damage to the cord could result in an electrical shock and can cause serious injury.**
- **Use a heavy-duty 3-wire, 3-pronged extension cord rated for at least 10 A. Plug the extension cord into a Ground Fault Interrupt (GFI) protected, grounded 110-VAC outlet. Failure to use the proper extension cord or a grounded outlet can result in a fire or electrical shock and cause serious personal injury.**

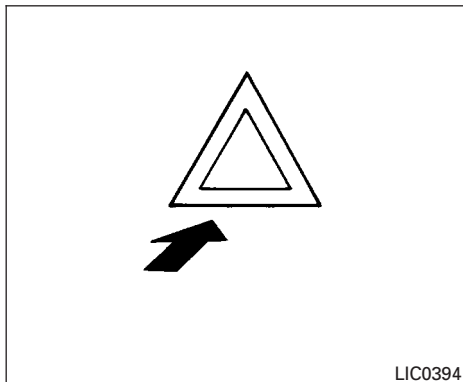
To use the engine block heater:

1. Turn the engine off.
2. Open the hood and unwrap the engine block heater cord.
3. Plug the engine block heater cord into a grounded 3-wire, 3-pronged extension cord.
4. Plug the extension cord into a Ground Fault Interrupt (GFI) protected, grounded 110-volt AC (VAC) outlet.
5. The engine block heater must be plugged in for at least 2 - 4 hours, depending on outside temperatures, to properly warm the engine coolant. Use an appropriate timer to turn the engine block heater on.
6. Before starting the engine, unplug and properly store the cord to keep it away from moving parts.

6 In case of emergency

Hazard warning flasher switch	6-2	Push starting.....	6-11
Flat tire.....	6-2	If your vehicle overheats.....	6-11
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Changing a flat tire	6-3	Towing recommended by NISSAN	6-13
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HAZARD WARNING FLASHER SWITCH



Push the switch on to warn other drivers when you must stop or park under emergency conditions. All turn signal lights flash.

WARNING

- If stopping for an emergency, be sure to move the vehicle well off the road.
- Do not use the hazard warning flashers while moving on the highway unless unusual circumstances force you to drive so slowly that your vehicle might become a hazard to other traffic.
- Turn signals do not work when the hazard warning flasher lights are on.

FLAT TIRE

TIRE PRESSURE MONITORING SYSTEM (TPMS)

This vehicle is equipped with the Tire Pressure Monitoring System (TPMS). It monitors tire pressure of all tires except the spare. When the low tire pressure warning light is lit, and the CHECK TIRE pressure warning appears in the vehicle information display, one or more of your tires is significantly under-inflated. If the vehicle is being driven with low tire pressure, the TPMS will activate and warn you of it by the low tire pressure warning light. This system will activate only when the vehicle is driven at speeds above 16 MPH (25 km/h). For more details, refer to "Warning/indicator lights and audible reminders" in the "Instruments and controls" section, and "Tire Pressure Monitoring System (TPMS)" in the "Starting and driving" section.

WARNING

- If the low tire pressure warning light illuminates while driving, avoid sudden steering maneuvers or abrupt braking, reduce vehicle speed, pull off the road to a safe location and stop the vehicle as soon as possible. Driving with under-inflated tires may permanently damage the tires and increase the likelihood of tire failure. Serious vehicle damage could occur and may lead to an accident and could result in serious personal injury. Check the tire pressure for all four tires. Adjust the tire pressure to the recommended **COLD** tire pressure shown on the Tire and Loading Information label to turn the low tire pressure warning light **OFF**. 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 is replaced, the TPMS will not function and the low tire pressure warning light will flash for approximately 1 minute. The light will remain on after 1 minute. Contact your NISSAN dealer as soon as possible for tire replacement and/or system resetting.

- Replacing tires with those not originally specified by NISSAN could affect the proper operation of the TPMS.
- Do not inject any tire liquid or aerosol tire sealant into the tires, as this may cause a malfunction of the tire pressure sensors.

CHANGING A FLAT TIRE

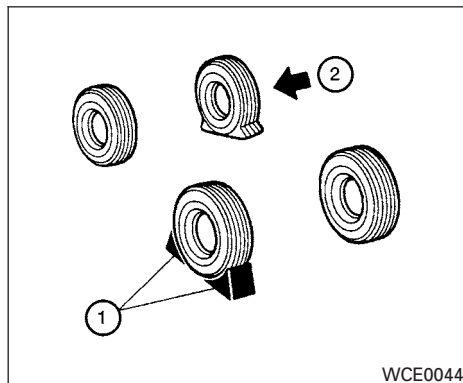
If you have a flat tire, follow the instructions below:

Stopping the vehicle

1. Safely move the vehicle off the road and away from traffic.
2. Turn on the hazard warning flashers.
3. Park on a level surface and apply the parking brake. Move the shift selector to P (Park).
4. Turn off the engine.
5. Raise the hood to warn other traffic and to signal professional road assistance personnel that you need assistance.
6. Have all passengers get out of the vehicle and stand in a safe place, away from traffic and clear of the vehicle.

WARNING

- Make sure the parking brake is securely applied and the automatic transmission is shifted into P (Park).
- Never change tires when the vehicle is on a slope, ice or slippery areas. This is hazardous.
- Never change tires if oncoming traffic is close to your vehicle. Wait for professional road assistance.

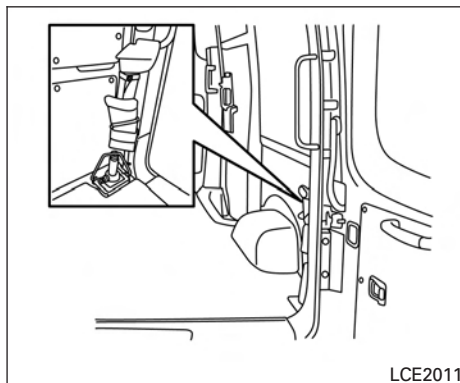


Blocking wheels

Place tire stoppers supplied in tool kit ① at both the front and back of the wheel diagonally opposite the flat tire ② to prevent the vehicle from moving when it is jacked up.

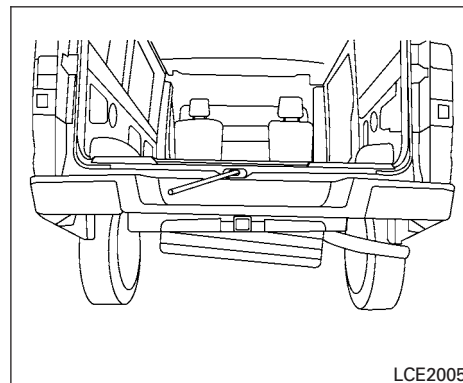
⚠ WARNING

Be sure to block the wheel as the vehicle may move and result in personal injury.



1. Remove the jack and tool kit.

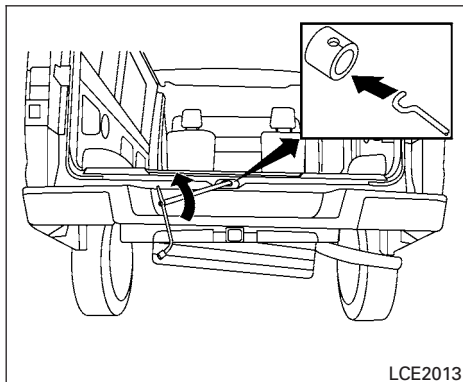
Getting the spare tire and tools



2. Find the oval-shaped opening above the middle of the rear step bumper. Pass the J-shaped end of the jack rod through the opening and direct it toward the spare tire winch, located directly above the spare tire.

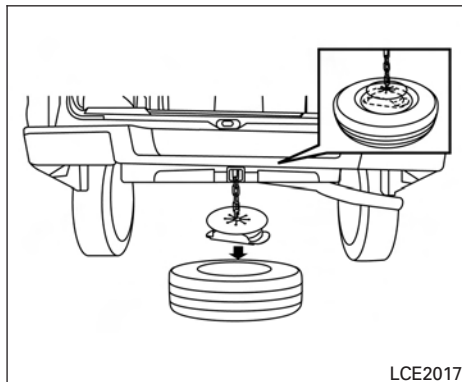
⚠ CAUTION

Do not insert the jack rod straight as it is designed to be inserted at an angle as shown.



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3. Fit the square end of the jack rod into the square hole of the wheel nut wrench to form a handle.
4. Seat the J-shaped end of the jack rod into the opening of the tire winch. Apply pressure to keep the jack rod engaged in the spare tire winch and turn the jack rod counter-clockwise to lower the spare tire.
5. Once the spare tire is completely lowered, reach under the vehicle, remove the retainer chain, and carefully slide the tire from under the rear of the vehicle. Do not remove the rubber spacer.



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6. To reinstall the wheel, insert the tire chain through the wheel. Be sure the rubber spacer is centered on the wheel before lifting. Use the assembled jack rod and slowly rotate the winch clockwise to raise the wheel to the vehicle.

NOTE:

Inspect the spacer every six years and replace as necessary. Contact your NISSAN dealer for replacement parts if necessary.

⚠ CAUTION

- Be sure to center the spare tire suspending plate on the wheel and then lift the spare tire.
- Failure to use the spacer may allow the chain to get stuck on the wheel nut holes.

Jacking up vehicle and removing the damaged tire

⚠ WARNING

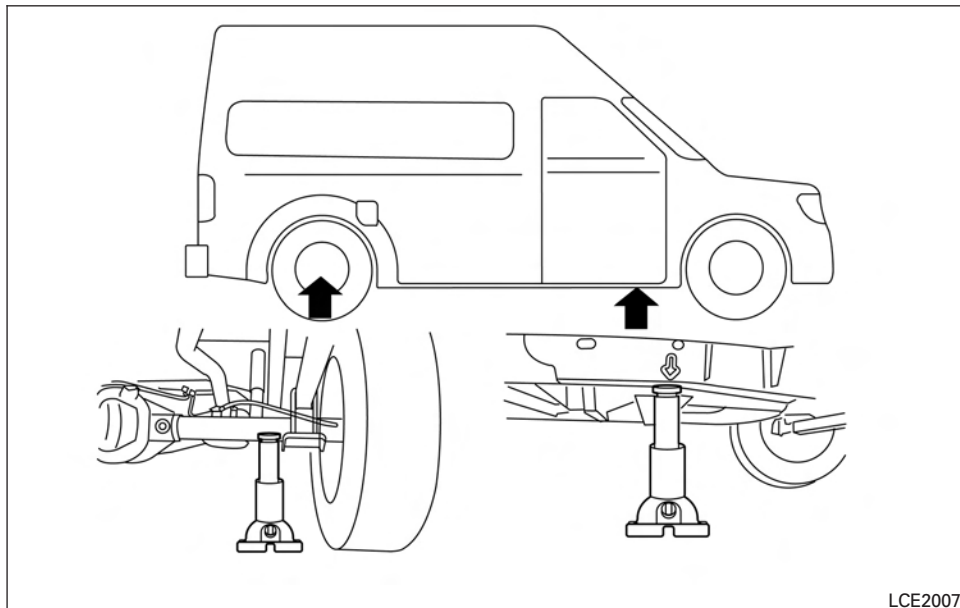
- **Never get under the vehicle while it is supported only by the jack. If it is necessary to work under the vehicle, support it with safety stands.**
- **Use only the jack provided with your vehicle to lift the vehicle. Do not use the jack provided with your vehicle on other vehicles. The jack is designed for lifting only your vehicle during a tire change.**
- **Use the correct jack-up points. Never use any other part of the vehicle for jack support.**
- **Never jack up the vehicle more than necessary.**
- **Never use blocks on or under the jack.**

- **Do not start or run the engine while the vehicle is on the jack. It may cause the vehicle to move.**
- **Do not allow passengers to stay in the vehicle while it is on the jack.**
- **Never run the engine with a wheel(s) off the ground. It may cause the vehicle to move.**

Always refer to the illustration for the correct placement and jack-up points for your specific vehicle model and jack type.

Carefully read the caution label attached to the jack body and the following instructions.

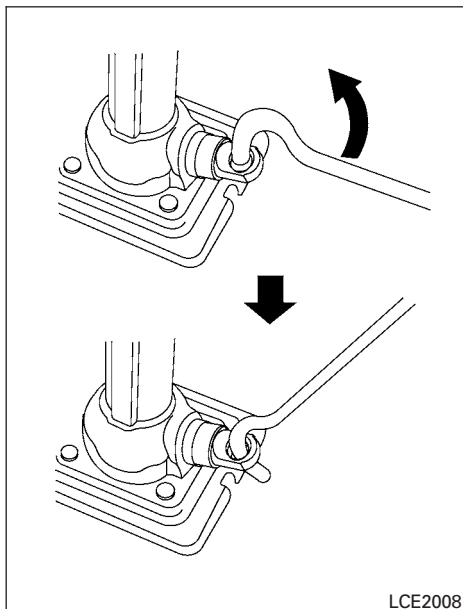
1. Loosen each wheel nut one or two turns by turning counterclockwise with the wheel nut wrench. **Do not remove the wheel nuts until the tire is off the ground.**



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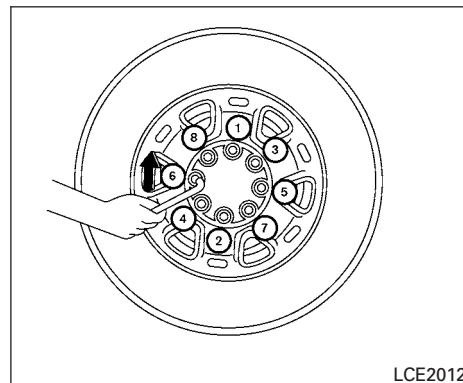
2. Place the jack directly under the jack-up point as illustrated so the top of the jack contacts the vehicle at the jack-up point. The jack-up points are indicated by stamped arrows on the side of the frame.

The jack should be used on firm and level ground.



3. Install the assembled jack rod into the jack as shown.
4. To lift the vehicle, securely hold the jack lever and rod. Carefully raise the vehicle until the tire clears the ground.

5. Remove the wheel nuts and then remove the tire.



Installing the spare tire

The spare tire is designed for emergency use. See specific instructions under the heading “Wheels and tires” in the “Maintenance and do-it-yourself” section of this manual.

1. Clean any mud or dirt from the surface between the wheel and hub.
2. Carefully put the spare tire on and tighten the wheel nuts finger tight.
3. With the wheel nut wrench, tighten wheel nuts alternately and evenly as illustrated until they are tight.

4. Lower the vehicle slowly until the tire touches the ground. Then, with the wheel nut wrench, tighten the wheel nuts securely in the sequence illustrated. Lower the vehicle completely.

WARNING

- **Incorrect wheel nuts or improperly tightened wheel nuts can cause the wheel to become loose or come off. This could cause an accident.**
- **Do not use oil or grease on the wheel studs or nuts. This could cause the nuts to become loose.**
- **Retighten the wheel nuts when the vehicle has been driven for 600 miles (1,000 km) (also in cases of a flat tire, etc.).**

As soon as possible, tighten the wheel nuts to the specified torque with a torque wrench.

Wheel nut tightening torque:

138 ft-lb (187 N-m)

The wheel nuts must be kept tightened to specification at all times. It is recommended that wheel nuts be tightened to specifications at each lubrication interval.

6-8 In case of emergency

Adjust tire pressure to the COLD pressure.

COLD pressure: After vehicle has been parked for three hours or more or driven less than 1 mile (1.6 km).

COLD tire pressures are shown on the Tire and Loading Information label affixed to the driver side center pillar.

After adjusting tire pressure to the COLD tire pressure, the display(if so equipped) of the tire pressure information may show higher pressure than the COLD tire pressure after the vehicle has been driven more than 1 mile (1.6 km). This is because the tire pressure increases as the tire temperature rises. This does not indicate a system malfunction.

5. Securely store the flat tire and jacking equipment in the vehicle.

WARNING

- **Always make sure that the spare tire and jacking equipment are properly secured after use. Such items can become dangerous projectiles in an accident or sudden stop.**
- **The spare tire is designed for emergency use. See specific instructions under the heading “Wheels and tires” in the “Maintenance and do-it-yourself” section of this manual.**

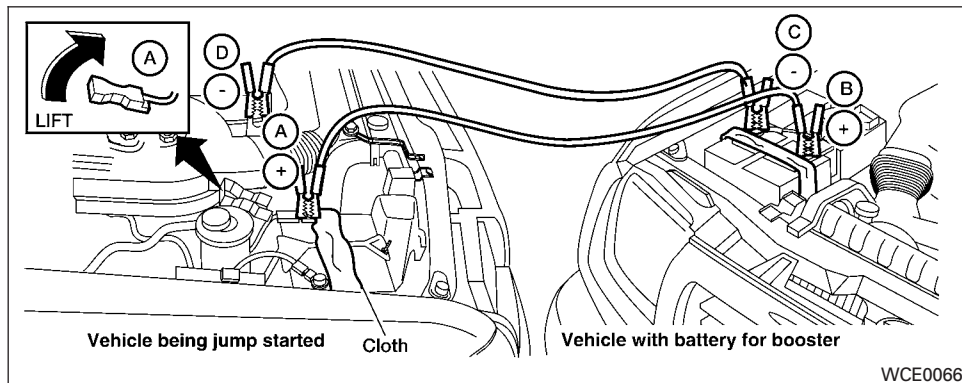
JUMP STARTING

To start your engine with a booster battery, the instructions and precautions below must be followed.

WARNING

- If done incorrectly, jump starting can lead to a battery explosion, resulting in severe injury or death. It could also damage your vehicle.
- Explosive hydrogen gas is always present in the vicinity of the battery. Keep all sparks and flames away from the battery.
- Do not allow battery fluid to come into contact with eyes, skin, clothing or painted surfaces. Battery fluid is a corrosive sulfuric acid solution which can cause severe burns. If the fluid should come into contact with anything, immediately flush the contacted area with water.
- Keep battery out of the reach of children.
- The booster battery must be rated at 12 volts. Use of an improperly rated battery can damage your vehicle.

- **Whenever working on or near a battery, always wear suitable eye protectors (for example, goggles or industrial safety spectacles) and remove rings, metal bands, or any other jewelry. Do not lean over the battery when jump starting.**
- **Do not attempt to jump start a frozen battery. It could explode and cause serious injury.**



⚠ WARNING

Always follow the instructions below. Failure to do so could result in damage to the charging system and cause personal injury.

1. If the booster battery is in another vehicle, position the two vehicles to bring their batteries near each other.

Do not allow the two vehicles to touch.

2. Apply the parking brake. Move the shift selector to P (Park). Switch off all unnecessary electrical systems (lights, heater, air conditioner, etc.).

3. Remove vent caps on the battery (if so equipped). Cover the battery with an old cloth to reduce explosion hazard.
4. Connect jumper cables in the sequence illustrated (A, B, C, D).

⚠ CAUTION

- **Always connect positive (+) to positive (+) and negative (-) to body ground (for example, strut mounting bolt, engine lift bracket, etc.) — not to the battery.**

- **Make sure the jumper cables do not touch moving parts in the engine compartment and that the cable clamps do not contact any other metal.**

5. Start the engine of the booster vehicle and let it run for a few minutes.
6. Keep the engine speed of the booster vehicle at about 2,000 RPM, and start the engine of the vehicle being jump started.

⚠ CAUTION

Do not keep the starter motor engaged for more than 10 seconds. If the engine does not start right away, turn the key off and wait 3 to 4 seconds before trying again.

7. After starting the engine, carefully disconnect the negative cable and then the positive cable.
8. Replace the vent caps (if so equipped). Be sure to dispose of the cloth used to cover the vent holes as it may be contaminated with corrosive acid.

PUSH STARTING

WARNING

Do not push start this vehicle. The three-way catalyst may be damaged.

CAUTION

Automatic transmission models cannot be push-started or tow-started. Attempting to do so may cause transmission damage.

IF YOUR VEHICLE OVERHEATS

WARNING

- **Do not continue to drive if your vehicle overheats. Doing so could cause engine damage or a vehicle fire.**
- **To avoid the danger of being scalded, never remove the radiator or coolant reservoir cap while the engine is still hot. When the radiator or coolant reservoir cap is removed, pressurized hot water will spurt out, possibly causing serious injury.**
- **Do not open the hood if steam is coming out.**
- **Overheating can result in reduced engine power and vehicle speed. The reduced speed may be lower than other traffic, which could increase the chance of a collision. Be especially careful when driving. If the vehicle cannot maintain a safe driving speed, pull to the side of the road in a safe area. Allow the engine to cool and return to normal operation.**

If your vehicle is overheating (indicated by an extremely high temperature gauge reading and the illumination of the engine oil pressure/engine coolant temperature high indicator light), or if you feel a lack of engine power, detect abnormal noise, etc. take the following steps.

1. Move the vehicle safely off the road, apply the parking brake and move the shift selector to P (Park).

Do not stop the engine.

2. Turn off the air conditioner. Open all the windows, move the heater or air conditioner temperature control to maximum hot and fan control to high speed.
3. Get out of the vehicle. Look and listen for steam or coolant escaping from the radiator before opening the hood. (If steam or coolant is escaping, turn off the engine.) Do not open the hood further until no steam or coolant can be seen.
4. Open the engine hood.

WARNING

If steam or water is coming from the engine, stand clear to prevent getting burned.

TOWING YOUR VEHICLE

5. Visually check drive belts for damage or looseness. Also check if the cooling fan is running. The radiator hoses and radiator should not leak water. If coolant is leaking, the water pump belt is missing or loose, or the cooling fan does not run, stop the engine.

WARNING

Be careful not to allow your hands, hair, jewelry or clothing to come into contact with, or get caught in, engine belts or the engine cooling fan. The engine cooling fan can start at any time.

6. After the engine cools down, check the coolant level in the engine coolant reservoir tank with the engine running. Add coolant to the engine coolant reservoir tank if necessary. Have your vehicle repaired at a NISSAN dealer.

When towing your vehicle, all State (Provincial in Canada) and local regulations for towing must be followed. Incorrect towing equipment could damage your vehicle. Towing instructions are available from a NISSAN dealer. Local service operators are generally familiar with the applicable laws and procedures for towing. To assure proper towing and to prevent accidental damage to your vehicle, NISSAN recommends having a service operator tow your vehicle. It is advisable to have the service operator carefully read the following precautions:

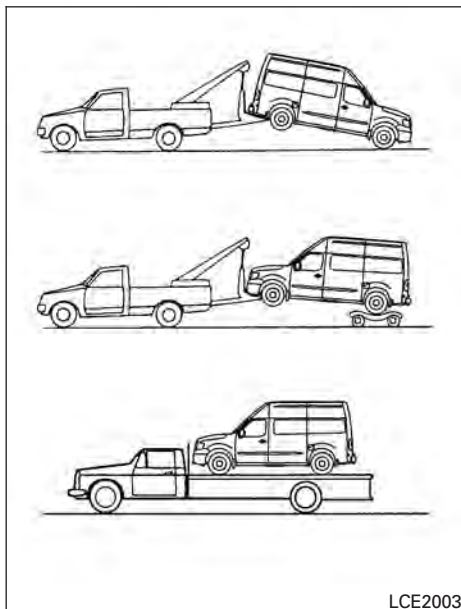
WARNING

- **Never ride in a vehicle that is being towed.**
- **Never get under your vehicle after it has been lifted by a tow truck.**

CAUTION

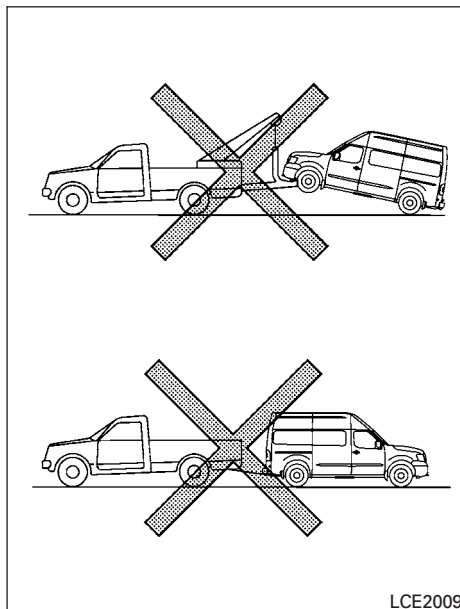
- **When towing, make sure that the transmission, axles, steering system and powertrain are in working condition. If any of these conditions apply, dollies or a flatbed tow truck must be used.**
- **Always attach safety chains before towing.**

For information about towing your vehicle behind a recreational vehicle (RV), refer to “Flat towing” in the “Technical and consumer information” section of this manual.



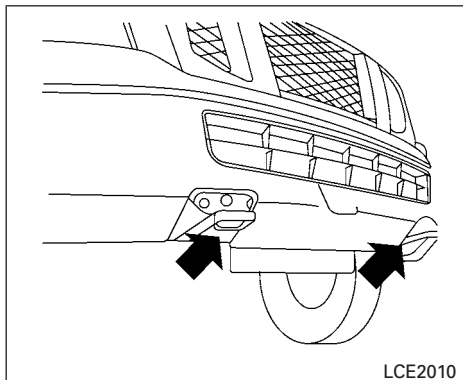
TOWING RECOMMENDED BY NISSAN

NISSAN recommends that your vehicle be towed with the driving (rear) wheels off the ground or place the vehicle on a flat bed truck as illustrated.



CAUTION

- **Never tow automatic transmission models with the rear wheels on the ground or four wheels on the ground (forward or backward), as this may cause serious and expensive damage to the transmission. If it is necessary to tow the vehicle with the front wheels raised always use towing dollies under the rear wheels.**
- **When towing automatic transmission models with the front wheels on the ground or on towing dollies:**
 - **Place the ignition switch in the OFF position and secure the steering wheel in a straight-ahead position with a rope or similar device. Never secure the steering wheel by placing the ignition switch in the LOCK position. This may cause damage to the lock mechanism.**



Hooks (if so equipped)

VEHICLE RECOVERY (freeing a stuck vehicle)

Pulling a stuck vehicle

⚠ WARNING

To avoid vehicle damage, serious personal injury or death when recovering a stuck vehicle:

- **Contact a professional towing service to recover the vehicle if you have any questions regarding the recovery procedure.**

- **Attach recovery devices only to main structural members of the vehicle or the recovery hooks.**
- **Do not use the vehicle tie-downs to tow or free a stuck vehicle.**
- **Only use devices specifically designed for vehicle recovery and follow the manufacturer's instructions.**
- **Always pull the recovery device straight out from the front of the vehicle. Never pull at an angle.**
- **Route recovery devices so they do not touch any part of the vehicle except the attachment point.**

If your vehicle is stuck in sand, snow, mud, etc., use a tow strap or other device designed specifically for vehicle recovery. Always follow the manufacturer's instructions for the recovery device.

Do not use the tie-down hooks for towing or vehicle recovery.

Rocking a stuck vehicle

⚠ WARNING

- **Stand clear of a stuck vehicle.**
- **Do not spin your tires at high speed. This could cause them to explode and result in serious injury. Parts of your vehicle could also overheat and be damaged.**

If your vehicle is stuck in sand, snow, mud, etc., use the following procedure:

1. Turn off the Vehicle Dynamic Control System (VDC).
2. Make sure the area in front and behind the vehicle is clear of obstructions.
3. Turn the steering wheel right and left to clear an area around the front tires.
4. Slowly rock the vehicle forward and backward.
 - Shift back and forth between R (Reverse) and D (Drive).
 - Apply the accelerator as little as possible to maintain the rocking motion.

- Release the accelerator pedal before shifting between R (Reverse) and D (Drive).
 - Do not spin the tires above 35 mph (55 km/h).
5. If the vehicle cannot be freed after a few tries, contact a professional towing service to remove the vehicle.

MEMO

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CLEANING EXTERIOR

In order to maintain the appearance of your vehicle, it is important to take proper care of it.

To protect the paint surfaces, please wash your vehicle as soon as you can:

- after a rainfall to prevent possible damage from acid rain.
- after driving on coastal roads.
- when contaminants such as soot, bird droppings, tree sap, metal particles or bugs get on the paint surface.
- when dust or mud builds up on the surface.

Whenever possible, store or park your vehicle inside a garage or in a covered area.

When it is necessary to park outside, park in a shady area or protect the vehicle with a body cover.

Be careful not to scratch the paint surface when putting on or removing the body cover.

WASHING

Wash dirt off with a wet sponge and plenty of water. Clean the vehicle thoroughly using a mild soap, a special vehicle soap or general purpose dishwashing liquid mixed with clean, lukewarm (never hot) water.

7-2 Appearance and care

CAUTION

- **Do not use car washes that use acid in the detergent. Some car washes, especially brushless ones, use some acid for cleaning. The acid may react with some plastic vehicle components, causing them to crack. This could affect their appearance, and also could cause them not to function properly. Always check with your car wash to confirm that acid is not used.**
- **Do not wash the vehicle with strong household soap, strong chemical detergents, gasoline or solvents.**
- **Do not wash the vehicle in direct sunlight or while the vehicle body is hot, as the surface may become water-spotted.**
- **Avoid using tight-napped or rough cloths, such as washing mitts. Care must be taken when removing caked-on dirt or other foreign substances so the paint surface is not scratched or damaged.**

Rinse the vehicle thoroughly with plenty of clean water.

Inside flanges, seams and folds on the doors, hatches and hood are particularly vulnerable to

the effects of road salt. Therefore, these areas must be cleaned regularly. Take care that the drain holes in the lower edge of the door are open. Spray water under the body and in the wheel wells to loosen the dirt and wash away road salt.

A damp chamois can be used to dry the vehicle to avoid water spots.

WAXING

Regular waxing protects the paint surface and helps retain new vehicle appearance. Polishing is recommended to remove built-up wax residue and to avoid a weathered appearance before re-applying wax.

A NISSAN dealer can assist you in choosing the proper product.

- Wax your vehicle only after a thorough washing. Follow the instructions supplied with the wax.
- Do not use a wax containing any abrasives, cutting compounds or cleaners that may damage the vehicle finish.

Machine compounding or aggressive polishing on a base coat/clear coat paint finish may dull the finish or leave swirl marks.

REMOVING SPOTS

Remove tar and oil spots, industrial dust, insects, and tree sap as quickly as possible from the surface of the paint to avoid lasting damage or staining. Special cleaning products are available at a NISSAN dealer or any automotive accessory store.

UNDERBODY

In areas where road salt is used in winter, it is necessary to clean the underbody regularly in order to prevent dirt and salt from building up and causing the acceleration of corrosion on the underbody and suspension. Before the winter period and again in the spring, the underseal must be checked and, if necessary, retreated.

GLASS

Use glass cleaner to remove smoke and dust film from the glass surfaces. It is normal for glass to become coated with a film after the vehicle is parked in the hot sun. Glass cleaner and a soft cloth will easily remove this film.

CAUTION

When cleaning the inside of the windows, do not use sharp-edged tools, abrasive cleaners or chlorine-based disinfectant cleaners. They could damage the electrical conductors, radio antenna elements or rear window defroster elements.

CHROME PARTS

Clean all chrome parts regularly with a non-abrasive chrome polish to maintain the finish.

TIRE DRESSINGS

NISSAN does not recommend the use of tire dressings. Tire manufacturers apply a coating to the tires to help reduce discoloration of the rubber. If a tire dressing is applied to the tires, it may react with the coating and form a compound. This compound may come off the tire while driving and stain the vehicle paint.

If you choose to use a tire dressing, take the following precautions:

- Use a water-based tire dressing. The coating on the tire dissolves more easily than with an oil-based tire dressing.

- Apply a light coat of tire dressing to help prevent it from entering the tire tread/grooves (where it would be difficult to remove).
- Wipe off excess tire dressing using a dry towel. Make sure the tire dressing is completely removed from the tire tread/grooves.
- Allow the tire dressing to dry as recommended by the tire dressing manufacturer.

CLEANING INTERIOR

Occasionally remove loose dust from the interior trim, plastic parts and seats using a vacuum cleaner or soft brush. Wipe the vinyl surfaces with a clean, soft cloth dampened in mild soap solution, then wipe clean with a dry, soft cloth. Gently dab or tap soiled cloth areas with a moist, soft cloth. Before using any fabric protector, read the manufacturer's recommendations. Some fabric protectors contain chemicals that may stain or bleach the seat material.

Immediately clean spills on water repellent surfaces by wiping with soft, dry cloth.

Use a cloth dampened only with water to clean the meter and gauge lens.

CAUTION

- **Never use benzine, thinner or any similar material.**
- **Never use fabric protectors unless recommended by the manufacturer.**
- **Do not use glass or plastic cleaner on meter or gauge lens covers. It may damage the lens cover.**

AIR FRESHENERS

Most air fresheners use a solvent that could affect the vehicle interior. If you use an air freshener, take the following precautions:

- Hanging-type air fresheners can cause permanent discoloration when they contact vehicle interior surfaces. Place the air freshener in a location that allows it to hang free and not contact an interior surface.
- Liquid-type air fresheners typically clip on the vents. These products can cause immediate damage and discoloration when spilled on interior surfaces.

Carefully read and follow the manufacturer's instructions before using the air fresheners.

FLOOR MATS

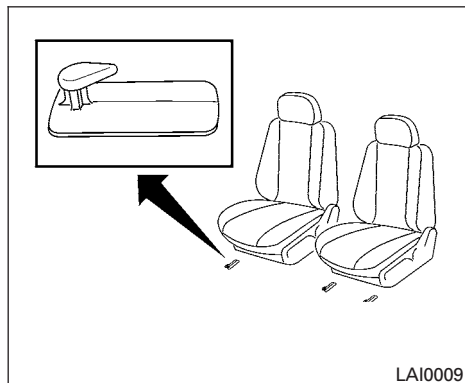
WARNING

To avoid potential pedal interference that may result in a collision or injury:

- **NEVER place a floor mat on top of another floor mat in the driver front position.**

- **Use only genuine NISSAN floor mats specifically designed for use in your vehicle model. See your NISSAN dealer for more information.**
- **Properly position the mats in the floorwell using the floor mat positioning aid. See "Floor mat positioning aid" in this section.**

The use of genuine NISSAN floor mats can extend the life of your vehicle vinyl flooring and make it easier to clean the interior. Mats should be maintained with regular cleaning and replaced if they become excessively worn.



Floor mat positioning aid

This vehicle includes two driver's side front floor mat brackets and one passenger's side front floor mat bracket to help keep your floor mats in place. Genuine NISSAN floor mats have been specially designed for your vehicle model. The driver's side floor mat has two grommet holes incorporated in it and the passenger's side has one grommet hole. Position each mat by placing the floor mat bracket hook through the floor mat grommet holes while centering the mat in the floorwell.

Periodically check to make certain the mats are properly positioned.

SEAT BELTS

The seat belts can be cleaned by wiping them with a sponge dampened in a mild soap solution. Allow the belts to dry completely in the shade before using them. See "Seat belt maintenance" in the "Safety – Seats, seat belts and supplemental restraint system" section of this manual.

⚠ WARNING

Do not allow wet seat belts to roll up in the retractor. NEVER use bleach, dye or chemical solvents to clean the seat belts, since these materials may severely weaken the seat belt webbing.

CORROSION PROTECTION

MOST COMMON FACTORS CONTRIBUTING TO VEHICLE CORROSION

- The accumulation of moisture-retaining dirt and debris in body panel sections, cavities, and other areas.
- Damage to paint and other protective coatings caused by gravel and stone chips or minor traffic accidents.

ENVIRONMENTAL FACTORS INFLUENCE THE RATE OF CORROSION

Moisture

Accumulation of sand, dirt and water on the vehicle body underside can accelerate corrosion. Wet floor coverings will not dry completely inside the vehicle and should be removed for drying to avoid floor panel corrosion.

Relative humidity

Corrosion will be accelerated in areas of high relative humidity, especially those areas where the temperatures stay above freezing and where atmospheric pollution exists and road salt is used.

Temperature

High temperatures accelerate the rate of corrosion to those parts which are not well ventilated.

Air pollution

Industrial pollution, the presence of salt in the air in coastal areas, or heavy road salt use accelerates the corrosion process. Road salt also accelerates the disintegration of paint surfaces.

TO PROTECT YOUR VEHICLE FROM CORROSION

- Wash and wax your vehicle often to keep the vehicle clean.
- Always check for minor damage to the paint and repair it as soon as possible.
- Keep drain holes at the bottom of the doors open to avoid water accumulation.
- Check the underbody for accumulation of sand, dirt or salt. If present, wash with water as soon as possible.

CAUTION

- **NEVER remove dirt, sand or other debris from the passenger compartment by washing it out with a hose. Remove dirt with a vacuum cleaner or broom.**
- **Never allow water or other liquids to come in contact with electronic components inside the vehicle as this may damage them.**

Chemicals used for road surface de-icing are extremely corrosive. They accelerate corrosion and deterioration of underbody components such as the exhaust system, fuel and brake lines, brake cables, floor pan and fenders.

In winter, the underbody must be cleaned periodically.

For additional protection against rust and corrosion, which may be required in some areas, consult a NISSAN dealer.

8 Maintenance and do-it-yourself

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MAINTENANCE REQUIREMENTS

Your NISSAN has been designed to have minimum maintenance requirements with long service intervals to save you both time and money. However, some day-to-day and regular maintenance is essential to maintain your NISSAN's good mechanical condition, as well as its emissions and engine performance.

It is the owner's responsibility to make sure that the scheduled maintenance, as well as general maintenance, is performed.

As the vehicle owner, you are the only one who can ensure that your vehicle receives proper maintenance. You are a vital link in the maintenance chain.

Scheduled maintenance

For your convenience, both required and optional scheduled maintenance items are described and listed in your "NISSAN Service and Maintenance Guide". You must refer to that guide to ensure that necessary maintenance is performed on your NISSAN at regular intervals.

General maintenance

General maintenance includes those items which should be checked during normal day-to-day operation. They are essential for proper vehicle operation. It is your responsibility to perform these maintenance procedures regularly as prescribed.

8-2 Maintenance and do-it-yourself

Performing general maintenance checks requires minimal mechanical skill and only a few general automotive tools.

These checks or inspections can be done by you, a qualified technician, or, if you prefer, a NISSAN dealer.

Where to go for service

If maintenance service is required or your vehicle appears to malfunction, have the systems checked and corrected by a NISSAN dealer.

NISSAN technicians are well-trained specialists who are kept up-to-date with the latest service information through technical bulletins, service tips, and in-dealership training programs. They are completely qualified to work on NISSAN vehicles **before** they work on your vehicle, rather than after they have worked on it.

You can be confident that a NISSAN dealer's service department performs the best job to meet the maintenance requirements on your vehicle — in a reliable and economical way.

GENERAL MAINTENANCE

During the normal day-to-day operation of the vehicle, general maintenance should be performed regularly as prescribed in this section. If you detect any unusual sounds, vibrations or smells, be sure to check for the cause or have a NISSAN dealer do it promptly. In addition, you should notify a NISSAN dealer if you think that repairs are required.

When performing any checks or maintenance work, closely observe the "Maintenance precautions" later in this section.

EXPLANATION OF GENERAL MAINTENANCE ITEMS

Additional information on the following items with " * " is found later in this section.

Outside the vehicle

The maintenance items listed here should be performed from time to time, unless otherwise specified.

Doors and engine hood Check that the doors and engine hood operate properly. Also ensure that all latches lock securely. Lubricate hinges, latches, latch pins, rollers and links as necessary. Make sure that the secondary latch keeps the hood from opening when the primary latch is released.

When driving in areas using road salt or other corrosive materials, check lubrication frequently.

Lights* Clean the headlights on a regular basis. Make sure that the headlights, stop lights, tail lights, turn signal lights, and other lights are all operating properly and installed securely. Also check headlight aim.

Road wheel nuts (lug nuts)* When checking the tires, make sure no wheel nuts are missing, and check for any loose wheel nuts. Tighten if necessary.

Tire rotation* Tires should be rotated every 7,500 miles (12,000 km).

Tires* Check the pressure with a gauge often and always prior to long distance trips. If necessary, adjust the pressure in all tires, including the spare, to the pressure specified. Check carefully for damage, cuts or excessive wear.

Tire Pressure Monitoring System (TPMS) transmitter components Replace the TPMS transmitter grommet seal, valve core and cap when the tires are replaced due to wear or age.

Wheel alignment and balance If the vehicle should pull to either side while driving on a straight and level road, or if you detect uneven or abnormal tire wear, there may be a need for wheel

alignment. If the steering wheel or seat vibrates at normal highway speeds, wheel balancing may be needed.

- For additional information regarding tires, refer to "Important Tire Safety Information" (US) or "Tire Safety Information" (Canada) in the Warranty Information Booklet.

Windshield Clean the windshield on a regular basis. Check the windshield at least every six months for cracks or other damage. Have a damaged windshield repaired by a qualified repair facility.

Windshield wiper blades* Check for cracks or wear if they do not wipe properly.

Inside the vehicle

The maintenance items listed here should be checked on a regular basis, such as when performing periodic maintenance, cleaning the vehicle, etc.

Additional information on the following items with an "*" is found later in this section.

Accelerator pedal Check the pedal for smooth operation and make sure the pedal does not bind or require uneven effort. Keep the floor mat away from the pedal.

Automatic transmission P (Park) position mechanism On a fairly steep hill check that your vehicle is held securely with the shift selector in the P (Park) position without applying any brakes.

Brake pedal Check the pedal for smooth operation. If the brake pedal suddenly goes down further than normal, the pedal feels spongy or the vehicle seems to take longer to stop, see a NISSAN dealer immediately. Keep the floor mat away from the pedal.

Brakes Check that the brakes do not pull the vehicle to one side when applied.

Parking brake Check the parking brake operation regularly. The vehicle should be securely held on a fairly steep hill with only the parking brake applied. If the parking brake needs adjustment, see a NISSAN dealer.

Seats Check seat position controls such as seat adjusters, seatback recliner, etc. to ensure they operate smoothly and all latches lock securely in every position. Check that the head restraints move up and down smoothly and the locks (if so equipped) hold securely in all latched positions.

Seat belts Check that all parts of the seat belt system (for example, buckles, anchors, adjusters and retractors) operate properly and smoothly, and are installed securely. Check the belt webbing for cuts, fraying, wear or damage.

Steering wheel Check for changes in the steering system, such as excessive freeplay, hard steering or strange noises.

Warning lights and chimes Make sure all warning lights and chimes are operating properly.

Windshield wiper and washer* Check that the wipers and washer operate properly and that the wipers do not streak.

Windshield defroster Check that the air comes out of the defroster outlets properly and in sufficient quantity when operating the heater or air conditioner.

Under the hood and vehicle

The maintenance items listed here should be checked periodically (for example, each time you check the engine oil or refuel).

Battery* (for serviceable batteries) Check the fluid level in each cell. It should be between the MAX and MIN lines. Vehicles operated in high temperatures or under severe conditions require frequent checks of the battery fluid level.

NOTE:

Care should be taken to avoid situations that can lead to potential battery discharge and potential no-start conditions such as:
1. Installation or extended use of electronic accessories that consume battery power when the engine is not running (Phone chargers, GPS, DVD players, etc.)
2. Vehicle is not driven regularly and/or only driven short distances. In these cases, the battery may need to be charged to maintain battery health.

Brake fluid level* Make sure that the brake fluid level is between the MIN and MAX lines on the reservoir.

Engine coolant level* Check the coolant level when the engine is cold.

Engine drive belts* Make sure the drive belts are not frayed, worn, cracked or oily.

Engine oil level* Check the level after parking the vehicle on a level surface with the engine off. Wait more than 10 minutes for the oil to drain back into the oil pan.

Exhaust system Make sure there are no loose supports, cracks or holes. If the sound of the exhaust seems unusual or there is a smell of exhaust fumes, immediately have the exhaust system inspected by a NISSAN dealer. See the

carbon monoxide warning in the "Starting and driving" section of this manual.

Fluid leaks Check under the vehicle for fuel, oil, water or other fluid leaks after the vehicle has been parked for a while. Water dripping from the air conditioner after use is normal. If you should notice any leaks or if gasoline fumes are evident, check for the cause and have it corrected immediately.

Power steering fluid level* and lines Check the level when the fluid is cold, with the engine off. Check the lines for proper attachment, leaks, cracks, etc.

Radiator and hoses Check the front of the radiator and clean off any dirt, insects, leaves, etc., that may have accumulated. Make sure the hoses have no cracks, deformation, rot or loose connections.

Underbody The underbody is frequently exposed to corrosive substances such as those used on icy roads or to control dust. It is very important to remove these substances from the underbody, otherwise rust may form on the floor pan, frame, fuel lines and exhaust system. At the end of winter, the underbody should be thoroughly flushed with plain water, in those areas where mud and dirt may have accumulated. See the "Appearance and care" section of this manual.

Windshield-washer fluid* Check that there is adequate fluid in the reservoir.

MAINTENANCE PRECAUTIONS

When performing any inspection or maintenance work on your vehicle, always take care to prevent serious accidental injury to yourself or damage to the vehicle. The following are general precautions which should be closely observed.

WARNING

- **Park the vehicle on a level surface, apply the parking brake securely and block the wheels to prevent the vehicle from moving. Move the shift selector to P (Park)**
- **Be sure the ignition switch is in the OFF or LOCK position when performing any parts replacement or repairs.**
- **If you must work with the engine running, keep your hands, clothing, hair and tools away from moving fans, belts and any other moving parts.**
- **It is advisable to secure or remove any loose clothing and remove any jewelry, such as rings, watches, etc. before working on your vehicle.**
- **Always wear eye protection whenever you work on your vehicle.**

- **If you must run the engine in an enclosed space such as a garage, be sure there is proper ventilation for exhaust gases to escape.**
- **Never get under the vehicle while it is supported only by a jack. If it is necessary to work under the vehicle, support it with safety stands.**
- **Keep smoking materials, flame and sparks away from the fuel tank and battery.**
- **On gasoline engine models, the fuel filter or fuel lines should be serviced by a NISSAN dealer because the fuel lines are under high pressure even when the engine is off.**

CAUTION

- **Do not work under the hood while the engine is hot. Turn the engine off and wait until it cools down.**
- **Avoid contact with used engine oil and coolant. Improperly disposed engine oil, engine coolant and/or other vehicle fluids can damage the environment. Always conform to local regulations for disposal of vehicle fluid.**

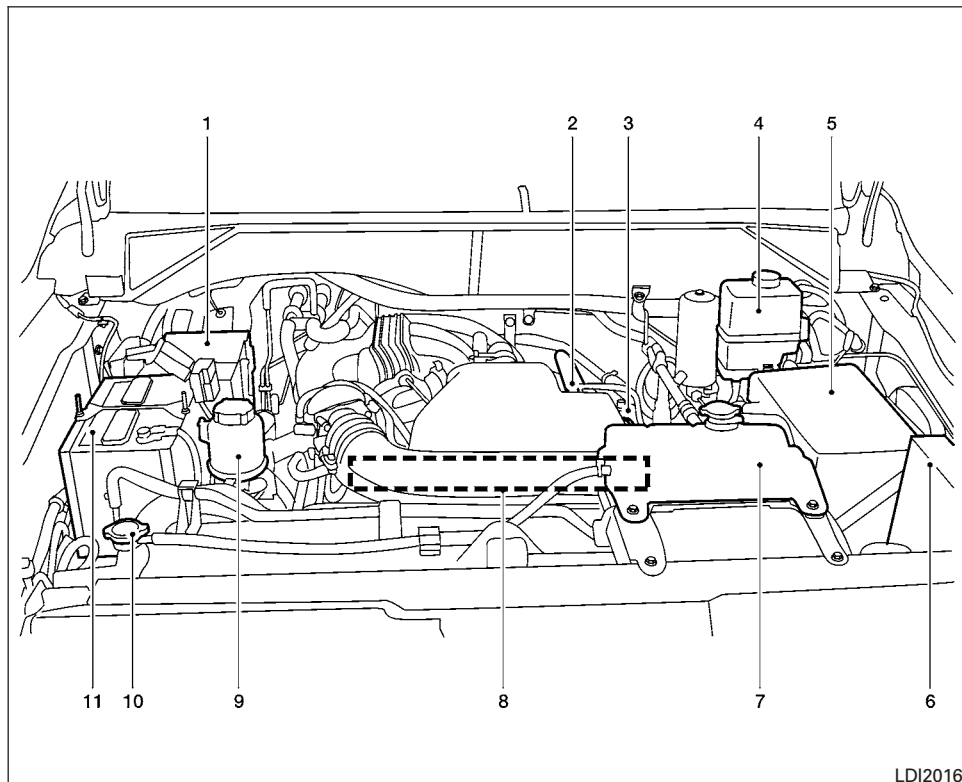
- **Never leave the engine or automatic transmission related component harnesses disconnected while the ignition switch is in the ON position.**
- **Never connect or disconnect the battery or any transistorized component while the ignition switch is in the ON position.**

This "Maintenance and do-it-yourself" section gives instructions regarding only those items which are relatively easy for an owner to perform.

A genuine NISSAN service manual is also available. See "Owner's Manual/Service Manual order information" in the "Technical and consumer information" section of this manual.

You should be aware that incomplete or improper servicing may result in operating difficulties or excessive emissions, and could affect warranty coverage. **If in doubt about any servicing, have it done by a NISSAN dealer.**

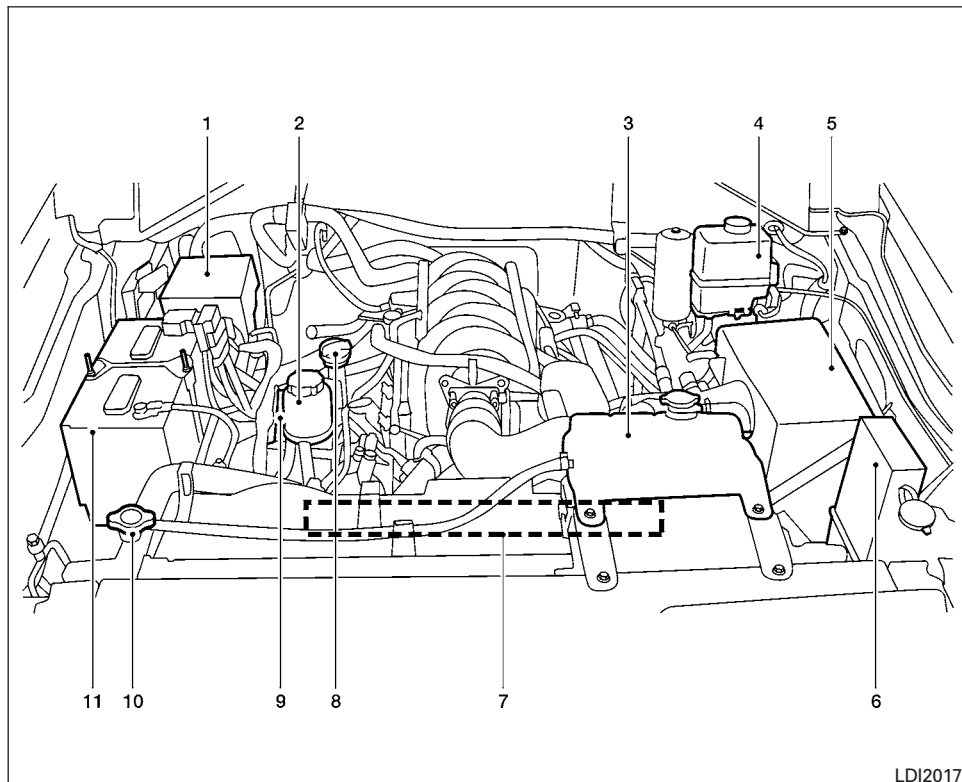
ENGINE COMPARTMENT CHECK LOCATIONS



VQ40DE engine

1. Fuse/fusible link box
2. Engine oil filler cap
3. Engine oil dipstick
4. Brake fluid reservoir
5. Air cleaner
6. Windshield-washer fluid reservoir
7. Engine coolant reservoir
8. Drive belt location
9. Power steering fluid reservoir
10. Radiator cap
11. Battery

LDI2016



VK56DE engine

1. Fuse/fusible link box
2. Power steering fluid reservoir
3. Engine coolant reservoir
4. Brake fluid reservoir
5. Air cleaner
6. Windshield-washer fluid reservoir
7. Drive belt location
8. Engine oil filler cap
9. Engine oil dipstick
10. Radiator cap
11. Battery

NOTE:

Engine cover removed for clarity.

ENGINE COOLING SYSTEM

The engine cooling system is filled at the factory with a pre-diluted mixture of 50% Genuine NISSAN Long Life Antifreeze/Coolant (blue) and 50% water to provide year-round anti-freeze and coolant protection. The antifreeze solution contains rust and corrosion inhibitors. Additional engine cooling system additives are not necessary.

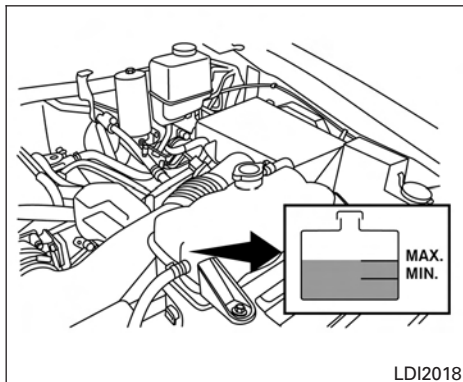
WARNING

- **Never remove the radiator or coolant reservoir cap when the engine is hot. Wait until the engine and radiator cool down. Serious burns could be caused by high pressure fluid escaping from the radiator. See precautions in “If your vehicle overheats” found in the “In case of emergency” section of this manual.**
- **The radiator is equipped with a pressure type radiator cap. To prevent engine damage, use only a genuine NISSAN radiator cap.**

CAUTION

- **Never use any cooling system additives such as radiator sealer. Additives may clog the cooling system and cause damage to the engine, transmission and/or cooling system.**
- **When adding or replacing coolant, be sure to use only Genuine NISSAN Long Life Antifreeze/Coolant (blue) or equivalent. Genuine NISSAN Long Life Antifreeze/Coolant (blue) is pre-diluted to provide antifreeze protection to -34° F (-37° C). If additional freeze protection is needed due to weather where you operate your vehicle, add Genuine NISSAN Long Life Antifreeze/Coolant (blue) concentrate following the directions on the container. If an equivalent coolant other than Genuine NISSAN Long Life Antifreeze/Coolant (blue) is used, follow the coolant manufacturer's instructions to maintain minimum antifreeze protection to -34° F (-37° C). The use of other types of coolant solutions other than Genuine NISSAN Long Life Antifreeze/Coolant (blue) or equivalent may damage the engine cooling system.**

- **The life expectancy of the factory-fill coolant is 105,000 miles (168,000 km) or 7 years. Mixing any other type of coolant other than Genuine NISSAN Long Life Antifreeze/Coolant (blue), including Genuine NISSAN Long Life Antifreeze/Coolant (green), or the use of non-distilled water will reduce the life expectancy of the factory-fill coolant. Refer to the Nissan Service and Maintenance Guide for more details.**



CHECKING ENGINE COOLANT LEVEL

Check the coolant level **in the reservoir when the engine is cold**. If the coolant level is below the MIN level, add coolant to the MAX level. If the reservoir is empty, check the coolant level in the radiator **when the engine is cold**. If there is insufficient coolant in the radiator, fill the radiator with coolant up to the filler opening and also add it to the reservoir up to the MAX level.

This vehicle contains Genuine NISSAN Long Life Antifreeze/Coolant (blue). The life expectancy of the factory-fill coolant is 105,000 miles (168,000 km) or 7 years. Mixing any other type of coolant or the use of non-distilled water will reduce the life expectancy of the factory-fill coolant. Refer to the NISSAN Service and Maintenance Guide for more details.

The engine coolant reservoir is a pressurized tank. When installing the cap, tighten.

If the cooling system frequently requires coolant, have it checked by a NISSAN dealer.

CHANGING ENGINE COOLANT

A NISSAN dealer can change the engine coolant. The service procedure can be found in the NISSAN Service Manual.

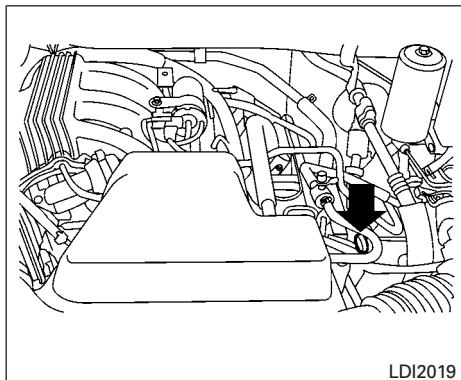
Improper servicing can result in reduced heater performance and engine overheating.

WARNING

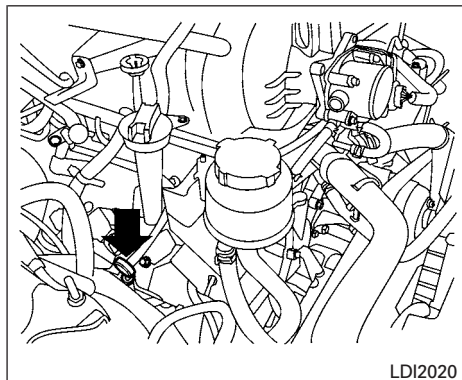
- **To avoid the danger of being scalded, never change the coolant when the engine is hot.**
- **Never remove the radiator or engine coolant reservoir cap when the engine is hot. Serious burns could be caused by high pressure fluid escaping from the radiator.**
- **Avoid direct skin contact with used coolant. If skin contact is made, wash thoroughly with soap or hand cleaner as soon as possible.**
- **Keep coolant out of the reach of children and pets.**

Engine coolant must be disposed of properly. Check your local regulations.

ENGINE OIL



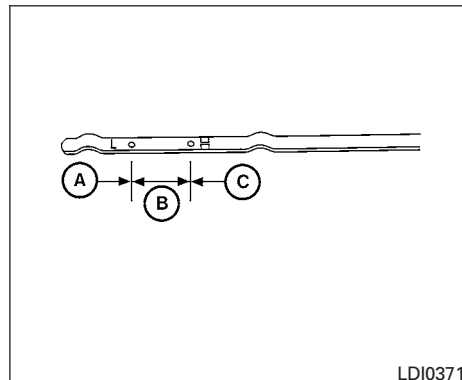
VQ40DE engine



VK56DE engine

CHECKING ENGINE OIL LEVEL

1. Park the vehicle on a level surface and apply the parking brake.
2. Start the engine and let it idle until it reaches operating temperature.
3. Turn off the engine. **Wait more than 10 minutes for the oil to drain back into the oil pan.**
4. Remove the dipstick and wipe it clean. Re-insert it all the way.

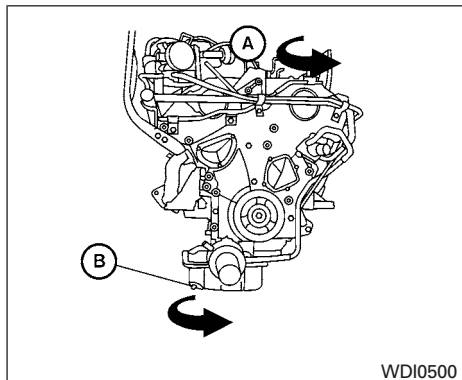


5. Remove the dipstick again and check the oil level. It should be between the H (High) and L (Low) marks (B). This is the normal operating oil level range. If the oil level is below the L (Low) mark (A), remove the oil filler cap and pour recommended oil through the opening. **Do not overfill (C).**
6. Recheck oil level with the dipstick.

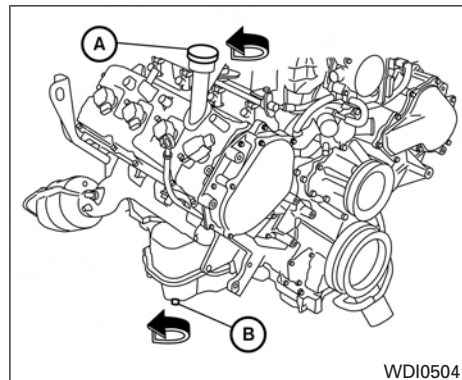
It is normal to add some oil between oil maintenance intervals or during the break-in period, depending on the severity of operating conditions.

⚠ CAUTION

Oil level should be checked regularly. Operating the engine with an insufficient amount of oil can damage the engine, and such damage is not covered by warranty.



VQ40DE engine



VK56DE engine

CHANGING ENGINE OIL

1. Park the vehicle on a level surface and apply the parking brake.
2. Start the engine and let it idle until it reaches operating temperature, then turn it off.
3. Remove the oil filler (A) cap by turning it counterclockwise.
4. Place a large drain pan under the drain plug (B).
5. Remove the drain plug (B) with a wrench by turning it counterclockwise and completely drain the oil.

If the oil filter is to be changed, remove and replace it at this time. See "Changing engine oil filter" later in this section.

- **Waste oil must be disposed of properly.**
- **Check your local regulations.**

WARNING

- **Prolonged and repeated contact with used engine oil may cause skin cancer.**
- **Try to avoid direct skin contact with used oil. If skin contact is made, wash thoroughly with soap or hand cleaner as soon as possible.**
- **Keep used engine oil out of reach of children.**

CAUTION

Be careful not to burn yourself. The engine oil may be hot.

6. Clean and reinstall the drain plug and a new washer. Securely tighten the drain plug with a wrench. Do not use excessive force.

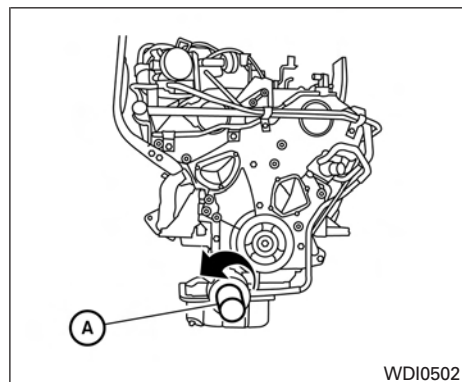
Drain plug tightening torque:
22 - 29 ft-lb (29 - 39 N·m)

7. Refill engine with recommended oil through the oil filler opening, then install the oil filler cap securely.

See "Capacities and recommended fuel/lubricants" in the "Technical and consumer information" section of this manual for drain and refill capacity.

The drain and refill capacity depends on the oil temperature and drain time. Use these specifications for reference only. Always use the dipstick to determine when the proper amount of oil is in the engine.

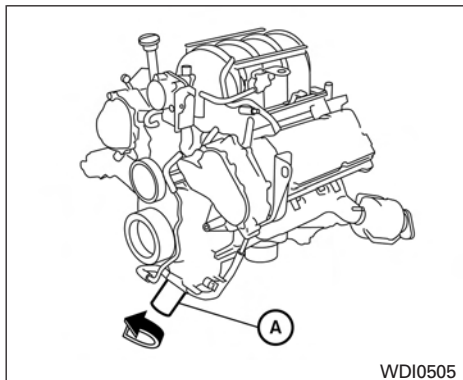
8. Start the engine. Check for leakage around the drain plug and oil filter. Correct as required.
9. Turn the engine off and wait more than 10 minutes. Check the oil level with the dipstick. Add engine oil if necessary.



VQ40DE

CHANGING ENGINE OIL FILTER

1. Park the vehicle on a level surface and apply the parking brake.
2. Turn the engine off.
3. Place a large drain pan under the oil filter.
4. Unscrew the plate covering the oil filter exposing the filter.
5. Loosen the oil filter **(A)** with an oil filter wrench by turning it counterclockwise. Then remove the oil filter by turning it by hand.



VK56DE

⚠ CAUTION

Be careful not to burn yourself. The engine oil may be hot.

6. Wipe the engine oil filter sealing surface with a clean rag.

⚠ CAUTION

Be sure to remove any old gasket material remaining on the sealing surface of the engine. Failure to do so could lead to engine damage.

7. Coat the gasket on the new filter with clean engine oil.
8. Screw on the oil filter until a slight resistance is felt, then tighten an additional 2/3 turn.
9. Start the engine and check for leakage around the oil filter. Correct as required.
10. Turn the engine off and wait more than 10 minutes. Check the oil level. Add engine oil if necessary.

5-SPEED AUTOMATIC TRANSMISSION FLUID

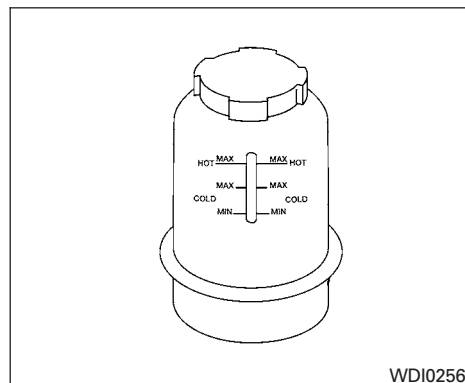
When checking or replacement is required, we recommend your NISSAN dealer for servicing.

⚠ CAUTION

- **Use Genuine NISSAN Matic S ATF. If Genuine NISSAN Matic S ATF is not available, Genuine NISSAN Matic J ATF may also be used.**
- **Using automatic transmission fluid other than Genuine NISSAN Matic S ATF or Matic J ATF will cause deterioration in driveability and automatic transmission durability, and may damage the automatic transmission, which is not covered by the NISSAN new vehicle limited warranty.**

The specified automatic transmission fluid is also described on caution labels located in the engine compartment.

POWER STEERING FLUID



The fluid level should be checked using the HOT MAX range on the power steering fluid reservoir at fluid temperatures of 122° - 176°F (50° - 80°C) or using the COLD MAX range on the power steering fluid reservoir at fluid temperatures of 32° - 86°F (0° - 30°C).

If the fluid is at or below the MIN line, add Genuine NISSAN PSF to HOT MAX or COLD MAX depending on system fluid temperature. Remove the cap and fill through the opening.

⚠ CAUTION

- **DO NOT OVERFILL.**
- **Recommended fluid is Genuine NISSAN PSF or equivalent.**

BRAKE FLUID

For further brake fluid specification information, refer to "Capacities and recommended fuel/lubricants" in the "Technical and consumer information" section of this manual.

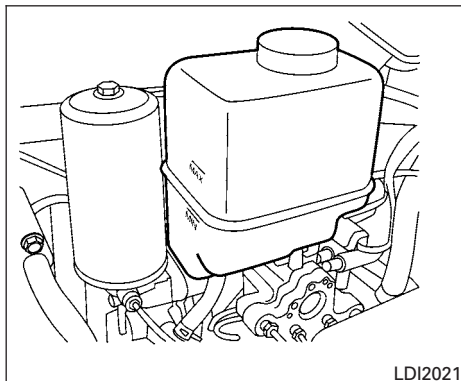
⚠ WARNING

- **Use only new fluid from a sealed container. Old, inferior or contaminated fluid may damage the brake system. The use of improper fluids can damage the brake system and affect the vehicle's stopping ability.**
- **Clean the filler cap before removing.**
- **Brake fluid is poisonous and should be stored carefully in marked containers out of reach of children.**

⚠ CAUTION

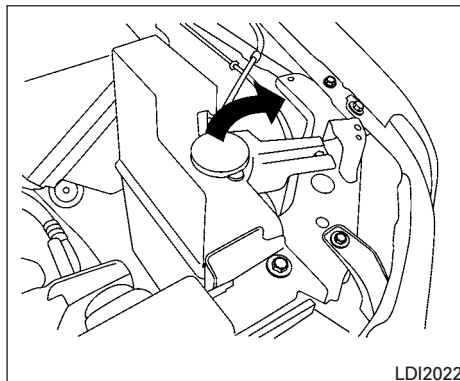
Do not spill the fluid on any painted surfaces. This will damage the paint. If fluid is spilled, immediately wash the surface with water.

WINDSHIELD-WASHER FLUID



BRAKE FLUID

Check the brake fluid level in the reservoir. If the fluid level is below the MIN line or the brake warning light comes on, add Genuine NISSAN Super Heavy Duty Brake Fluid or equivalent **DOT 3** fluid up to the MAX line. If fluid must be added frequently, the system should be checked by a NISSAN dealer.



WINDSHIELD-WASHER FLUID RESERVOIR

Fill the windshield-washer fluid reservoir periodically. Add windshield-washer fluid when the low windshield-washer fluid warning light comes on (if so equipped).

To fill the windshield-washer fluid reservoir, lift the cap off the reservoir and pour the windshield-washer fluid into the reservoir opening.

Add a washer solvent to the washer for better cleaning. In the winter season, add a windshield-washer antifreeze. Follow the manufacturer's instructions for the mixture ratio.

Refill the reservoir more frequently when driving conditions require an increased amount of windshield-washer fluid.

Recommended fluid is Genuine NISSAN Windshield Washer Concentrate Cleaner & Anti-freeze or equivalent.

⚠ CAUTION

- Do not substitute engine anti-freeze coolant for windshield-washer fluid. This may result in damage to the paint.
- Do not fill the windshield-washer fluid reservoir with washer fluid concentrates at full strength. Some methyl alcohol based washer fluid concentrates may permanently stain the grille if spilled while filling the windshield-washer fluid reservoir.
- Pre-mix washer fluid concentrates with water to the manufacturer's recommended levels before pouring the fluid into the windshield-washer fluid reservoir. Do not use the windshield-washer fluid reservoir to mix the washer fluid concentrate and water.

BATTERY

- Keep the battery surface clean and dry. Clean the battery with a solution of baking soda and water.
- Make certain the terminal connections are clean and securely tightened.
- If the vehicle is not to be used for 30 days or longer, disconnect the negative (-) battery terminal cable to prevent discharge.

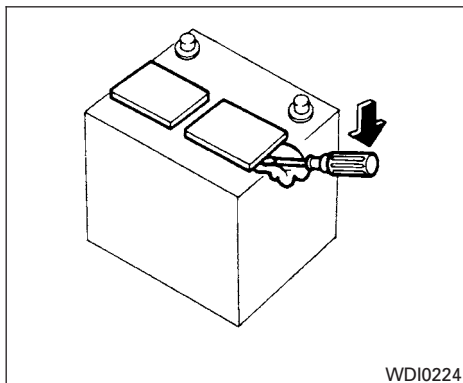
NOTE:

Care should be taken to avoid situations that can lead to potential battery discharge and potential no-start conditions such as: 1. Installation or extended use of electronic accessories that consume battery power when the engine is not running (Phone chargers, GPS, DVD players, etc.) 2. Vehicle is not driven regularly and/or only driven short distances. In these cases, the battery may need to be charged to maintain battery health.

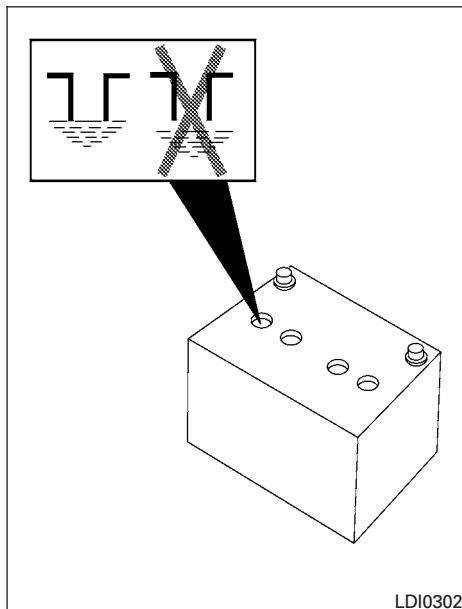
WARNING

- Do not expose the battery to flames, an electrical spark or a cigarette. Hydrogen gas generated by the battery is explosive. Explosive gases can cause blindness or injury. Do not allow battery fluid to contact your skin, eyes, fabrics or painted surfaces. Sulfuric acid can cause blindness or injury. After touching a battery or battery cap, do not touch or rub your eyes. Thoroughly wash your hands. If the acid contacts your eyes, skin or clothing, immediately flush with water for at least 15 minutes and seek medical attention.
- Do not operate the vehicle if the fluid in the battery is low. Low battery fluid can cause a higher load on the battery which can generate heat, reduce battery life, and in some cases lead to an explosion.
- When working on or near a battery, always wear suitable eye protection and remove all jewelry.
- Battery posts, terminals and related accessories contain lead and lead compounds. Wash hands after handling.

- Keep battery out of the reach of children.
- Do not tip the battery. Keep the vent caps tight and the battery level.



1. Remove the vent caps with a screwdriver as shown. Use a cloth to protect the battery case.



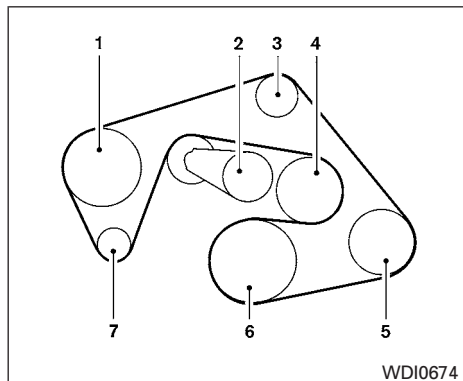
2. Check the fluid level in each cell. If it is necessary to add fluid, add only distilled water to bring the level up to the bottom of the filler opening. **Do not overfill.** Reinstall the vent caps.

Vehicles operated in high temperatures or under severe conditions require frequent checks of the battery fluid level.

JUMP STARTING

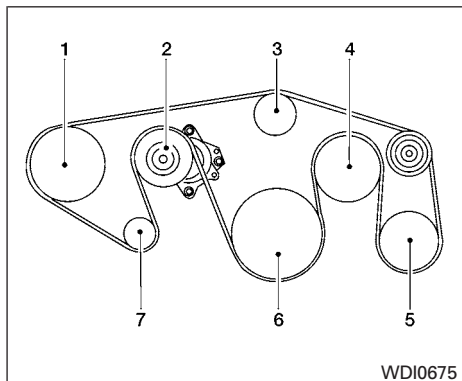
If jump starting is necessary, see "Jump starting" in the "In case of emergency" section of this manual. If the engine does not start by jump starting, the battery may have to be replaced. Contact a NISSAN dealer.

DRIVE BELT



VQ40DE

1. Power steering fluid pump
2. Automatic belt tensioner
3. Idler pulley
4. Cooling fan
5. Air conditioner compressor
6. Crankshaft pulley
7. Generator



VK56DE

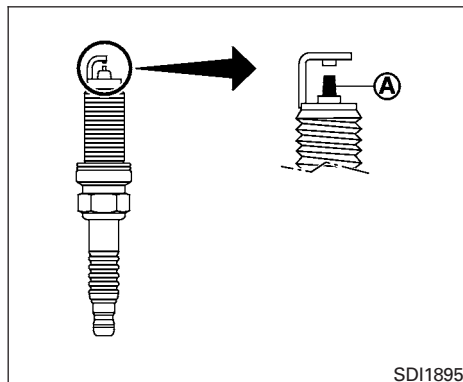
1. Power steering fluid pump
2. Drive belt automatic belt tensioner
3. Water pump pulley
4. Cooling fan pulley
5. Air conditioner compressor
6. Crankshaft pulley
7. Generator pulley

WARNING

Be sure the ignition switch is in the OFF or LOCK position before servicing drive belt. The engine could rotate unexpectedly.

1. Visually inspect the belt for signs of unusual wear, cuts, fraying or looseness. If the belt is in poor condition or is loose, have it replaced or adjusted by a NISSAN dealer.
2. Have the belt checked regularly for condition and tension in accordance with the maintenance schedule found in the "NISSAN Service and Maintenance Guide".

SPARK PLUGS



REPLACING SPARK PLUGS

Iridium-tipped spark plugs

It is not necessary to replace iridium-tipped **(A)** spark plugs as frequently as conventional type spark plugs because they last much longer. Follow the maintenance log shown in the “NISSAN Service and Maintenance Guide”. Do not service iridium-tipped spark plugs by cleaning or regapping.

- **Always replace spark plugs with recommended or equivalent ones.**

⚠ WARNING

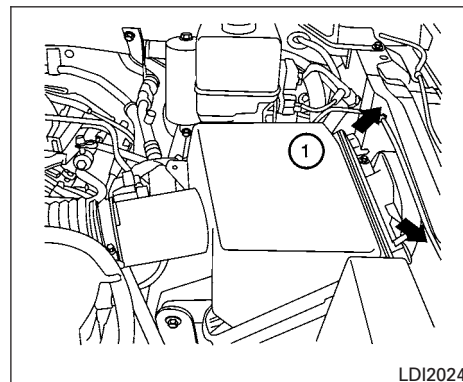
Be sure the engine and ignition switch are off and that the parking brake is engaged securely.

⚠ CAUTION

Be sure to use the correct socket to remove the spark plugs. An incorrect socket can damage the spark plugs.

If replacement is required, see your NISSAN dealer for assistance.

AIR CLEANER



The air cleaner filter should not be cleaned and reused. Replace it according to the maintenance log shown in the “NISSAN Service and Maintenance Guide.”

To remove the air cleaner filter:

- ① Unlatch the clips and move the air cleaner cover upward.
2. Remove the air cleaner filter.
3. Wipe the inside of the air cleaner filter housing and the cover with a damp cloth.

WINDSHIELD WIPER BLADES

NOTE:

After installing a new air cleaner, make sure the air cleaner cover is seated in the housing and latch the clips.

⚠ WARNING

- Operating the engine with the air cleaner removed can cause you or others to be burned. The air cleaner not only cleans the air, it stops the flame if the engine backfires. If it isn't there, and the engine backfires, you could be burned. Do not drive with the air cleaner removed, and be careful when working on the engine with the air cleaner removed.
- Never pour fuel into the throttle body or attempt to start the engine with the air cleaner removed. Doing so could result in serious injury.

CLEANING

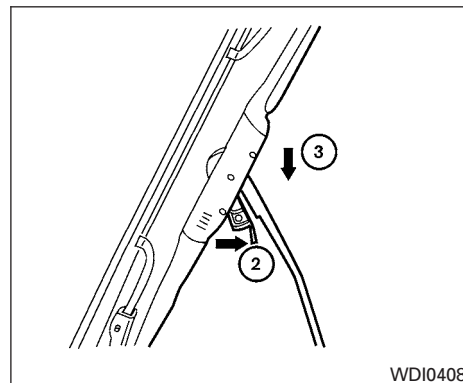
If your windshield is not clear after using the windshield washer or if a wiper blade chatters when running, wax or other material may be on the blade or windshield.

Clean the outside of the windshield with a washer solution or a mild detergent. Your windshield is clean if beads do not form when rinsing with clear water.

Clean each blade by wiping it with a cloth soaked in a washer solution or a mild detergent. Then rinse the blades with clear water. If your windshield is still not clear after cleaning the blades and using the wiper, replace the blades.

⚠ CAUTION

Worn windshield wiper blades can damage the windshield and impair driver vision.



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REPLACING

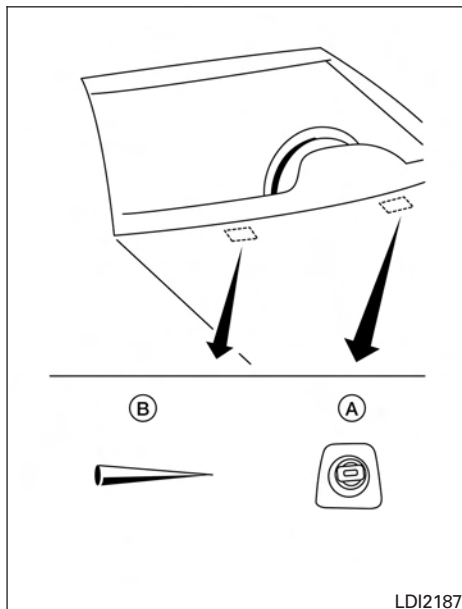
Replace the wiper blades if they are worn.

1. Lift the wiper arm away from the windshield.
- ② Push the release tab, then move the wiper blade down the wiper arm to remove.
- ③ Remove the wiper blade.
4. Insert the new wiper blade onto the wiper arm until it clicks into place.
5. Rotate wiper blade so the dimple is in the groove.

6. Return the wiper to its original position and release it until it has made contact with the windshield.

CAUTION

- After wiper blade replacement, return the wiper arm to its original position; otherwise it may be damaged when the hood is opened.
- Make sure the wiper blades contact the glass; otherwise the arms may be damaged from wind pressure.



Be careful not to let anything get into the washer nozzle (A). This may cause clogging or improper windshield washer operation. If something gets into the nozzle, remove it with a needle or small pin (B).

BRAKES

If the brakes do not operate properly, have the brakes checked by a NISSAN dealer.

Self-adjusting brakes

Your vehicle is equipped with self-adjusting brakes.

The front and rear disc-type brakes self-adjust every time the brake pedal is applied.

WARNING

See a NISSAN dealer for a brake system check if the brake pedal height does not return to normal.

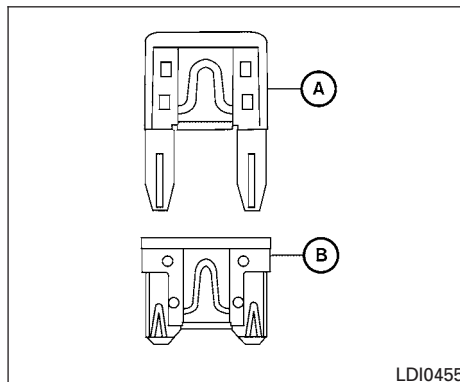
Brake pad wear indicators

The disc brake pads on your vehicle have audible wear indicators. When a brake pad requires replacement, a high pitched scraping or screeching sound will be heard when the vehicle is in motion. The noise will be heard whether or not the brake pedal is depressed. Have the brakes checked as soon as possible if the wear indicator sound is heard.

Under some driving or climate conditions, occasional brake squeak, squeal or other noise may be heard. Occasional brake noise during light to moderate stops is normal and does not affect the function or performance of the brake system.

FUSES

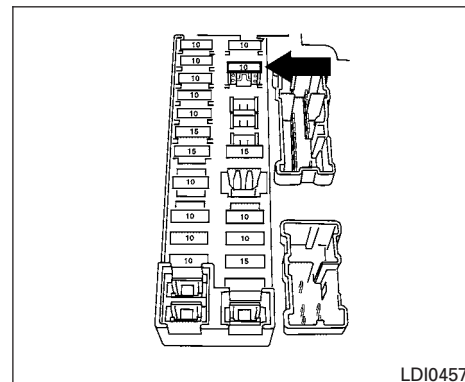
Proper brake inspection intervals should be followed. For more information regarding brake inspections, see the appropriate maintenance schedule information in the “NISSAN Service and Maintenance Guide”.



Two types of fuses are used. Type **A** is used in the fuse boxes in the engine compartment. Type **B** is used in the passenger compartment fuse box.

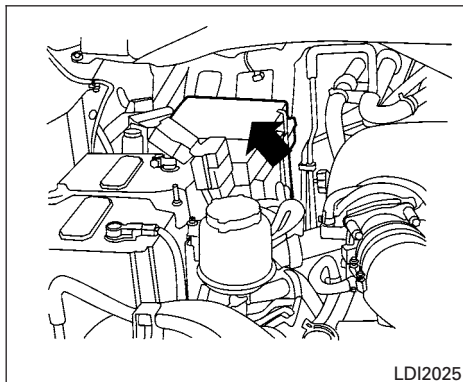
Type A fuses are provided as spare fuses. They are stored in the passenger compartment fuse box.

Type A fuses can be installed in the engine compartment and passenger compartment fuse boxes.



If a type A fuse is used to replace a type B fuse, the type A fuse will not be level with the fuse pocket as shown in the illustration. This will not affect the performance of the fuse. Make sure the fuse is installed in the fuse box securely.

Type B fuses cannot be installed in the underhood fuse boxes. Only use type A fuses in the underhood fuse boxes.



ENGINE COMPARTMENT

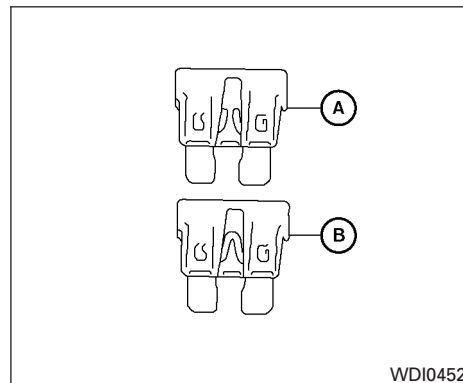
CAUTION

Never use a fuse of a higher or lower amperage rating than specified on the fuse box cover. This could damage the electrical system or cause a fire.

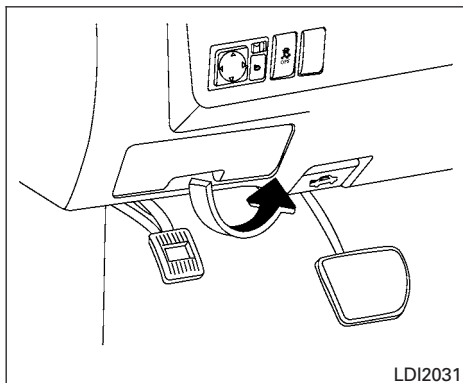
If any electrical equipment does not come on, check for an open fuse.

1. Be sure the ignition switch and the headlight switch are OFF.
2. Open the engine hood.

3. Remove the fuse box cover by pushing the tab and lifting the cover up.
4. Remove the fuse with the fuse puller. The fuse puller is located in the center of the fuse block in the passenger compartment.



5. If the fuse is open (A), replace it with a new fuse (B).
6. If a new fuse also opens, have the electrical system checked and repaired by a NISSAN dealer.



Fusible links

If the electrical equipment does not operate and fuses are in good condition, check the fusible links. If any of these fusible links are melted, replace with only Genuine NISSAN parts.

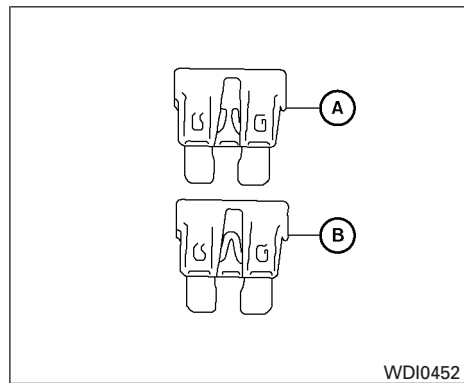
PASSENGER COMPARTMENT

CAUTION

Never use a fuse of a higher or lower amperage rating than specified on the fuse box cover. This could damage the electrical system or cause a fire.

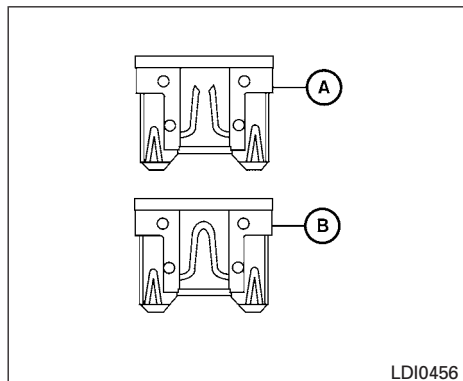
If any electrical equipment does not operate, check for an open fuse.

1. Be sure the ignition switch and the headlight switch are OFF.
2. Pull the fuse box cover to remove.
3. Remove the fuse with the fuse puller.

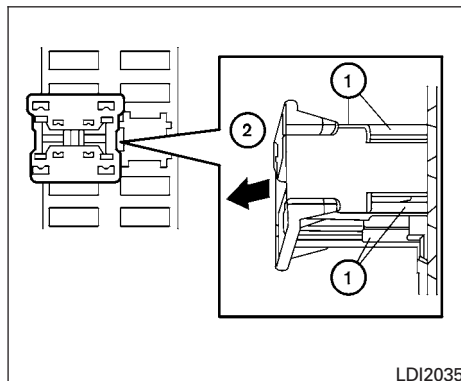


Type A

4. If the fuse is open (A), replace it with an equivalent good fuse (B).
5. Push the fuse box cover to install.
6. If a new fuse also opens, have the electrical system checked and repaired by a NISSAN dealer.



Type B



Extended storage switch (if so equipped)

If any electrical equipment does not operate, remove the extended storage switch and check for an open fuse.

NOTE:

The extended storage switch is used for long term vehicle storage. Even if the extended storage switch is broken it is not necessary to replace it. Replace only the open fuse in the switch with a new fuse.

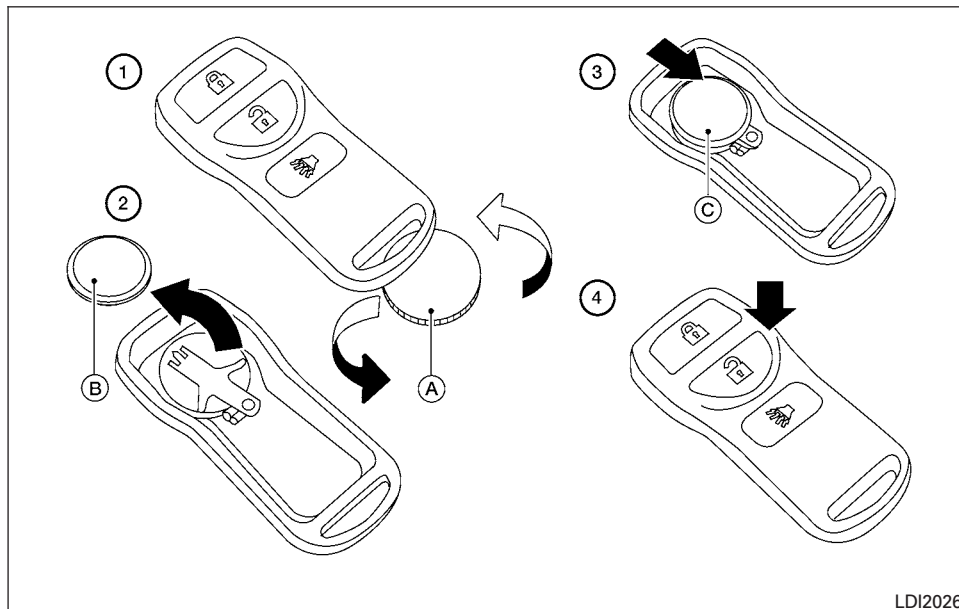
How to replace the extended storage switch:

1. To remove the extended storage switch, be sure the ignition switch is in the OFF or LOCK position.
2. Be sure the headlight switch is in the OFF position.
3. Remove the fuse box cover.
4. Pinch the locking tabs ① found on each side of the storage switch.
5. Pull the storage switch straight out from the fuse box ②.

BATTERY REPLACEMENT

⚠ CAUTION

Be careful not to allow children to swallow the battery or removed parts.



LDI2026

KEYFOB (if so equipped)

Replace the battery in the keyfob as follows:

- ① Open the lid using a coin (A).
- ② Remove the battery (B).

- ③ Install a new battery (C) with the "+" facing down.
 - Hold the battery by the edges. Holding the battery across the contact points will seriously deplete the storage capacity.

- Do not touch the internal circuit and electric terminals as it could cause a malfunction.
- When changing the battery, do not let dust or oil get on the keyfob.
- There is danger of explosion if a lithium battery is incorrectly replaced. Replace only with the same or equivalent type.

Recommended battery: CR2025 or equivalent.

④ Close the lid securely.

5. Press the  button, then the  button two or three times to check the keyfob operation.

If the battery is removed for any reason other than replacement, perform step 5.

- **An improperly disposed battery can hurt the environment. Always confirm local regulations for battery disposal.**
- **The keyfob is water-resistant; however, if it does get wet, immediately wipe completely dry.**
- **The operational range of the keyfob extends to approximately 33 ft (10 m) from the vehicle. This range may vary with conditions.**

FCC Notice:

For USA:

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

For Canada:

This device complies with RSS-210 of Industry Canada. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

LIGHTS

HEADLIGHTS

Replacing the halogen headlight bulb

The headlight is a semi-sealed beam type which uses a replaceable headlight (halogen) bulb. See your NISSAN dealer.

If the vehicle is equipped with aftermarket accessories, it may be necessary to re-aim the head lamps. See Nissan NV2500/3500 Body Builders Guide for aiming instructions. An electronic copy of the Nissan NV2500/3500 Body Builders Guide is available at www.nissancommercialvehicles.com or contact a NISSAN dealer.

CAUTION

- **High pressure halogen gas is sealed inside the halogen bulb. The bulb may break if the glass envelope is scratched or the bulb is dropped.**
- **When handling the bulb, do not touch the glass envelope.**
- **DO NOT TOUCH THE BULB WITH BARE HANDS.**
- **Do not leave the bulb out of the headlight reflector for a long period of time as dust, moisture and smoke may enter the headlight body and affect the performance of the headlight.**
- **Aiming is not necessary after replacing the bulb. When aiming is necessary, contact a NISSAN dealer.**

NOTE:

Use the same number and wattage as shown in the chart.

Fog may temporarily form inside the lens of the exterior lights in the rain or in a car wash. A temperature difference between the inside and the outside of the lens causes the fog. This is not a malfunction. If large drops of water collect inside the lens, contact a NISSAN dealer.

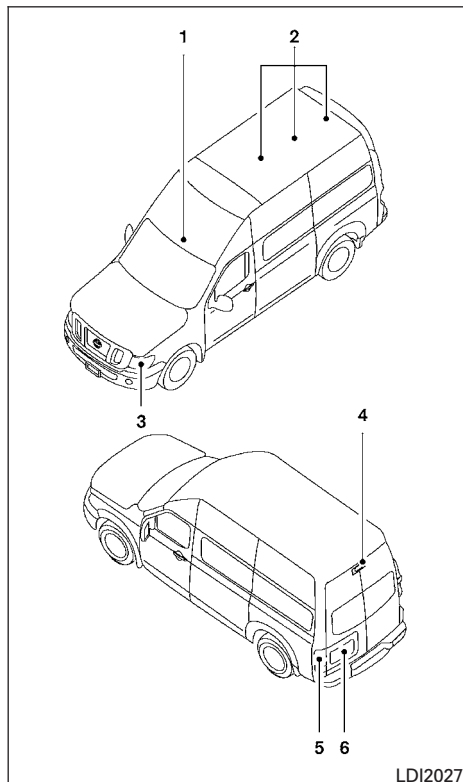
8-28 Maintenance and do-it-yourself

EXTERIOR AND INTERIOR LIGHTS

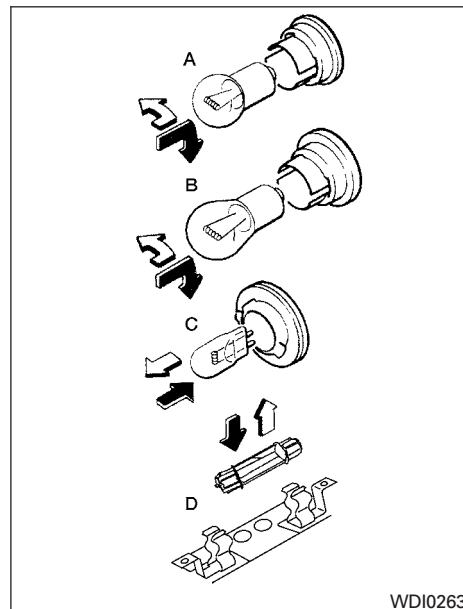
Item	Wattage (W)	Bulb No.
Headlight assembly		
High	65	H13
Low	55	H13
Park/Turn	8/27	3157AK
Sidemarker	3.8	194K
Interior lights (front)	6	—
Interior lights (rear)	8	—
High-mounted stop light	16	921
Rear combination light		
Tail/Stop	8/27	3157XKRD
Backup (reversing)	18	921LF
Turn	27	3156AK
License plate light	5	W5W

* See a NISSAN dealer for replacement.

Always check with the Parts Department at a NISSAN dealer for the latest parts information.



1. Interior lights (front)
2. Interior lights (rear)
3. Headlight assembly
4. High-mounted stoplight
5. Rear combination assembly
6. License plate light



Replacement procedures

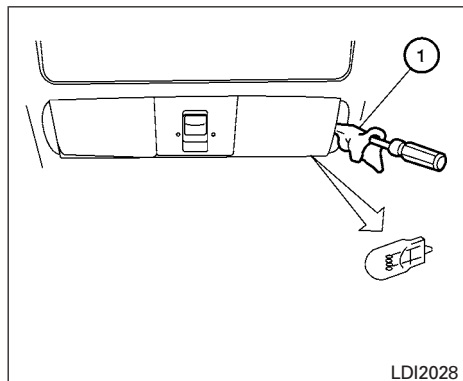
All other lights are either type A, B, C or D. When replacing a bulb, first remove the lens, lamp and/or cover.



Indicates bulb removal

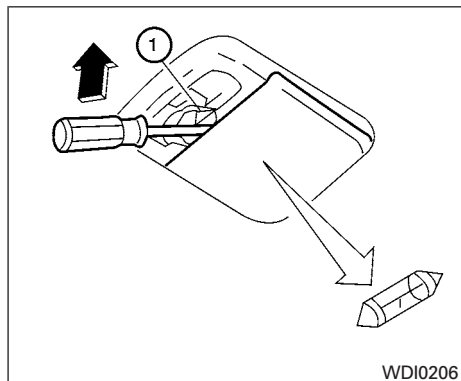


Indicates bulb installation



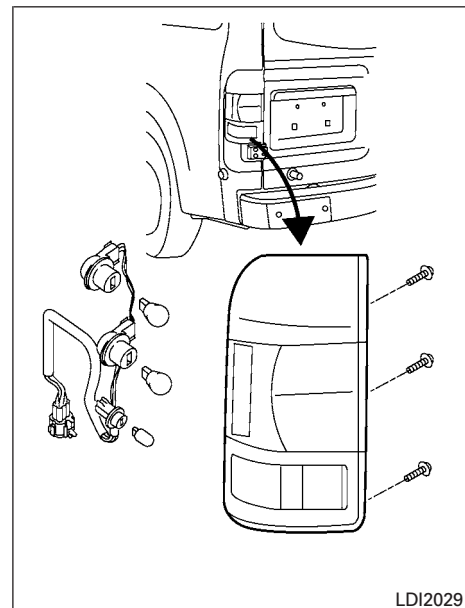
Interior lights (front)

Use a cloth ① to protect the housing.



Interior lights (rear)

Use a cloth ① to protect the housing.



Rear combination light

WHEELS AND TIRES

If you have a flat tire, see “Flat tire” in the “In case of emergency” section of this manual.

TIRE PRESSURE

Tire Pressure Monitoring System (TPMS)

This vehicle is equipped with the Tire Pressure Monitoring System (TPMS). It monitors tire pressure of all 4 tires except the spare. When the low tire pressure warning light is lit and the CHECK TIRE warning appears in the vehicle information display, one or more of your tires is significantly under-inflated.

The TPMS will activate only when the vehicle is driven at speeds above 16 MPH (25 km/h). Also, this system may not detect a sudden drop in tire pressure (for example a flat tire while driving).

For more details, refer to “Warning/Indicator Lights and Audible Reminders” in the “Instruments and controls” section, “Tire pressure information” in the “Display screen, heater, air conditioner, audio and phone systems” section,

“Tire Pressure Monitoring System (TPMS)” in the “Starting and driving” section, and “Flat tire” in the “In case of emergency” section.

Tire inflation pressure

Check the tire pressures (including the spare) often and always prior to long distance trips. The recommended tire pressure specifications are shown on the F.M.V.S.S./C.M.V.S.S. certification label or the Tire and Loading Information label under the “Cold Tire Pressure” heading. The Tire and Loading Information label is affixed to the driver side center pillar. Tire pressures should be checked regularly because:

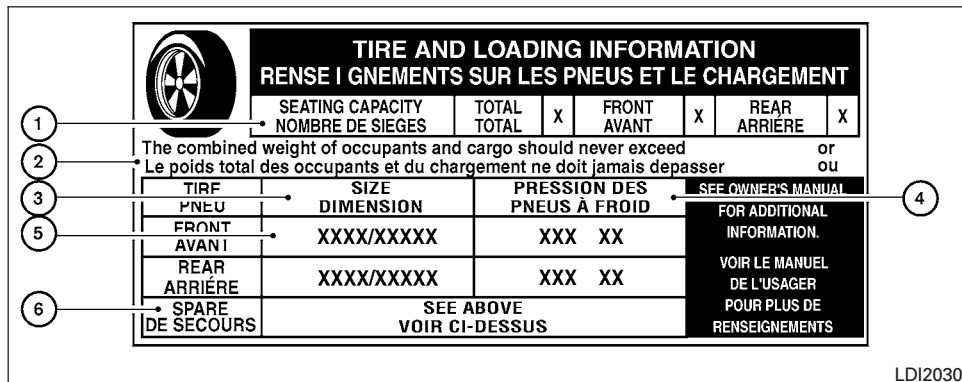
- Most tires naturally lose air over time.
- Tires can lose air suddenly when driven over potholes or other objects or if the vehicle strikes a curb while parking.

The tire pressures should be checked when the tires are cold. The tires are considered COLD after the vehicle has been parked for 3 or more hours, or driven less than 1 mile (1.6 km) at moderate speeds.

Incorrect tire pressure, including under inflation, may adversely affect tire life and vehicle handling.

WARNING

- **Improperly inflated tires can fail suddenly and cause an accident.**
- **The Gross Vehicle Weight Rating (GVWR) is located on the F.M.V.S.S./C.M.V.S.S. certification label. The vehicle weight capacity is indicated on the Tire and Loading Information label. Do not load your vehicle beyond this capacity. Overloading your vehicle may result in reduced tire life, unsafe operating conditions due to premature tire failure, or unfavorable handling characteristics and could also lead to a serious accident. Loading beyond the specified capacity may also result in failure of other vehicle components.**
- **Before taking a long trip, or whenever you heavily load your vehicle, use a tire pressure gauge to ensure that the tire pressures are at the specified level.**
- **For additional information regarding tires, refer to “Important Tire Safety Information” (US) or “Tire Safety Information” (Canada) in the Warranty Information Booklet.**



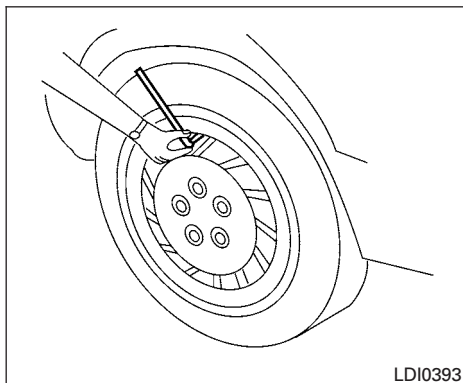
⑤ Tire size - refer to "Tire labeling" later in this section.

⑥ Spare tire size.

Tire and loading information label

- ① Seating capacity: The maximum number of occupants that can be seated in the vehicle.
- ② Vehicle load limit: See loading information in the "Technical and consumer information" section.
- ③ Original tire size: The size of the tires originally installed on the vehicle at the factory.

- ④ Cold tire pressure: Inflate the tires to this pressure when the tires are cold. Tires are considered COLD after the vehicle has been parked for 3 or more hours, or driven less than 1 mile (1.6 km) at moderate speeds. The recommended cold tire inflation is set by the manufacturer to provide the best balance of tire wear, vehicle handling, driveability, tire noise, etc., up to the vehicle's GVWR.

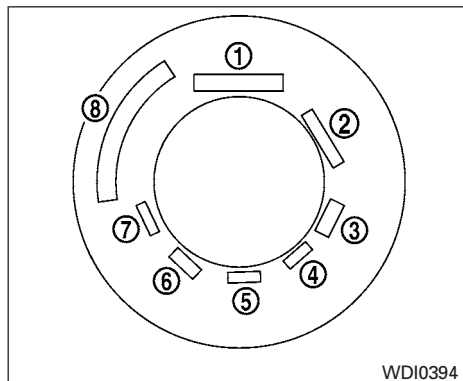


Checking tire pressure

1. Remove the valve stem cap from the tire.
2. Press the pressure gauge squarely onto the valve stem. Do not press too hard or force the valve stem sideways, or air will escape. If the hissing sound of air escaping from the tire is heard while checking the pressure, reposition the gauge to eliminate this leakage.
3. Remove the gauge.

4. Read the tire pressure on the gauge stem and compare to the specification shown on the Tire and Loading Information label.
5. Add air to the tire as needed. If too much air is added, press the core of the valve stem briefly with the tip of the gauge stem to release pressure. Recheck the pressure and add or release air as needed.
6. Install the valve stem cap.
7. Check the pressure of all other tires, including the spare.

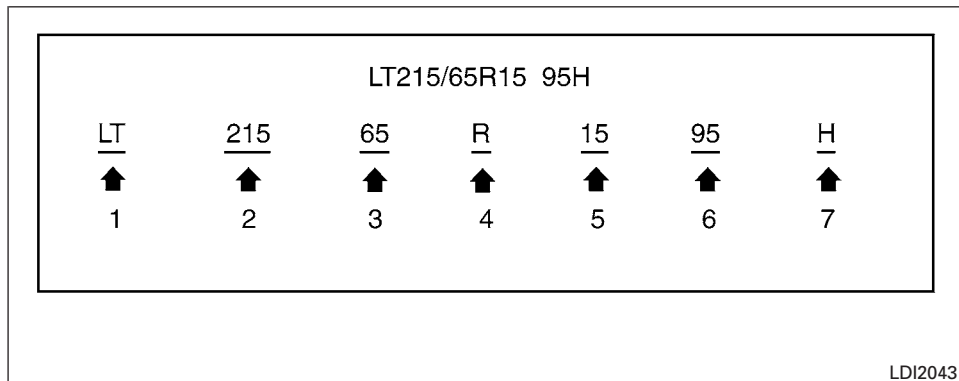
Size	Cold Tire Inflation Pressure
Front Original Tire: LT245/70R17 LT245/75R17	350 kPa, 50 PSI
Rear Original Tire: LT245/70R17 LT245/75R17	550 kPa, 80 PSI
Spare Tire (Front): LT245/70R17 LT245/75R17	350 kPa, 50 PSI
Spare Tire (Rear): LT245/70R17 LT245/75R17	550 kPa, 80 PSI



Example

TIRE LABELING

Federal law requires tire manufacturers to place standardized information on the sidewall of all tires. This information identifies and describes the fundamental characteristics of the tire and also provides the tire identification number (TIN) for safety standard certification. The TIN can be used to identify the tire in case of a recall.



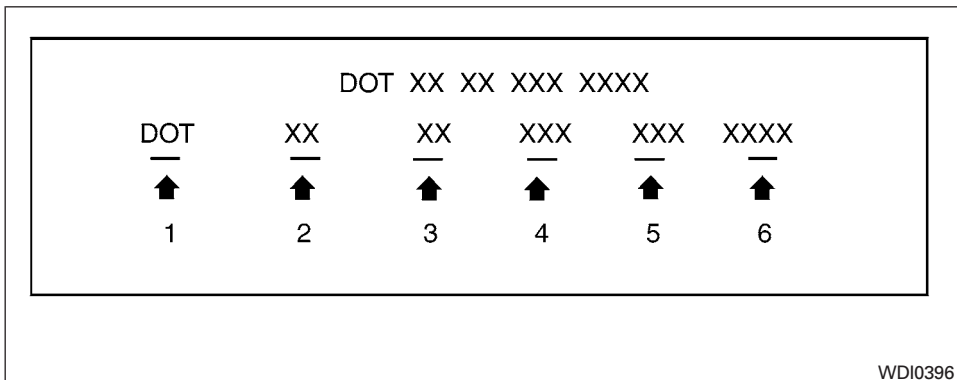
Example

① Tire size (example: P215/65R15 95H)

1. LT: The "LT" indicates the tire is designed for light truck vehicles (not all tires have this information).
2. Three-digit number (215): This number gives the width in millimeters of the tire from sidewall edge to sidewall edge.
3. Two-digit number (65): This number, known as the aspect ratio, gives the tire's ratio of height to width.

4. R: The "R" stands for radial.

5. Two-digit number (15): This number is the wheel or rim diameter in inches.
6. Two- or three-digit number (95): This number is the tire's load index. It is a measurement of how much weight each tire can support. You may not find this information on all tires because it is not required by law.
7. H: Tire speed rating. You should not drive the vehicle faster than the tire speed rating.



Example

② TIN (Tire Identification Number) for a new tire (example: DOT XX XX XXX XXXX)

1. DOT: Abbreviation for the “Department Of Transportation”. The symbol can be placed above, below or to the left or right of the Tire Identification Number.
2. Two-digit code: Manufacturer's identification mark.
3. Two-digit code: Tire size.

4. Three-digit code: Tire type code (Optional).
5. Three-digit code: Date of Manufacture.
6. Four numbers represent the week and year the tire was built. For example, the numbers 3103 means the 31st week of 2003. If these numbers are missing, then look on the other sidewall of the tire.

③ Tire ply composition and material

The number of layers or plies of rubber-coated fabric in the tire. Tire manufacturers also must indicate the materials in the tire, which include steel, nylon, polyester, and others.

④ Maximum permissible inflation pressure

This number is the greatest amount of air pressure that should be put in the tire. Do not exceed the maximum permissible inflation pressure.

⑤ Maximum load rating

This number indicates the maximum load in kilograms and pounds that can be carried by the tire. When replacing the tires on the vehicle, always use a tire that has the same load rating as the factory installed tire.

⑥ Term of “tubeless” or “tube type”

Indicates whether the tire requires an inner tube (“tube type”) or not (“tubeless”).

⑦ The word “radial”

The word “radial” is shown if the tire has radial structure.

⑧ Manufacturer or brand name

Manufacturer or brand name is shown.

Other Tire-related Terminology

In addition to the many terms that are defined throughout this section, Intended Outboard Sidewall is (1) the sidewall that contains a whitewall, bears white lettering or bears manufacturer, brand, and/or model name molding that is higher or deeper than the same molding on the other sidewall of the tire, or (2) the outward facing sidewall of an asymmetrical tire that has a particular side that must always face outward when mounted on a vehicle.

TYPES OF TIRES

WARNING

- **When changing or replacing tires, be sure all four tires are of the same type (i.e., Summer, All Season or Snow) and construction. A NISSAN dealer may be able to help you with information about tire type, size, speed rating and availability.**
- **Replacement tires may have a lower speed rating than the factory equipped tires, and may not match the potential maximum vehicle speed. Never exceed the maximum speed rating of the tire.**
- **Replacing tires with those not originally specified by NISSAN could affect the proper operation of the low tire pressure warning system.**
- **For additional information regarding tires, refer to “Important Tire Safety Information” (US) or “Tire Safety Information” (Canada) in the Warranty Information Booklet.**

All season tires

NISSAN specifies All Season tires on some models to provide good performance all year, includ-

ing snowy and icy road conditions. All Season tires are identified by ALL SEASON and/or M&S on the tire sidewall. Snow tires have better snow traction than All Season tires and may be more appropriate in some areas.

Summer tires

NISSAN specifies summer tires on some models to provide superior performance on dry roads. Summer tire performance is substantially reduced in snow and ice. Summer tires do not have the tire traction rating “M&S” on the tire sidewall.

If you plan to operate your vehicle in snowy or icy conditions, NISSAN recommends the use of SNOW tires or ALL SEASON tires on all four wheels.

Snow tires

If snow tires are needed, it is necessary to select tires equivalent in size and load rating to the original equipment tires. If you do not, it can adversely affect the safety and handling of your vehicle.

Generally, snow tires have lower speed ratings than factory equipped tires and may not match the potential maximum vehicle speed. Never exceed the maximum speed rating of the tire.

If you install snow tires, they must be the same size, brand, construction and tread pattern on all four wheels.

For additional traction on icy roads, studded tires may be used. However, some U.S. states and Canadian provinces prohibit their use. Check local, state and provincial laws before installing studded tires. Skid and traction capabilities of studded snow tires on wet or dry surfaces may be poorer than that of non-studded snow tires.

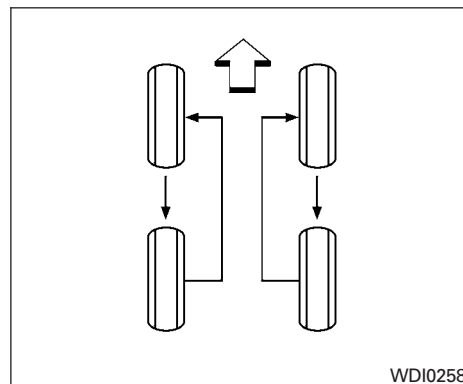
TIRE CHAINS

Use of tire chains may be prohibited according to location. Check the local laws before installing tire chains. When installing tire chains, make sure they are the proper size for the tires on your vehicle and are installed according to the chain manufacturer's suggestions. **Use only SAE class "S" chains.** Class "S" chains are used on vehicles with restricted tire to vehicle clearance. Vehicles that can use Class "S" chains are designed to meet the minimum clearances between the tire and the closest vehicle suspension or body component required to accommodate the use of a winter traction device (tire chains or cables). The minimum clearances are determined using the factory equipped tire size. Other types may damage your vehicle. Use chain tensioners when recommended by the tire chain manufacturer to ensure a tight fit. Loose end links of the

tire chain must be secured or removed to prevent the possibility of whipping action damage to the fenders or underbody. If possible, avoid fully loading your vehicle when using tire chains. In addition, drive at a reduced speed. Otherwise, your vehicle may be damaged and/or vehicle handling and performance may be adversely affected.

Tire chains must be installed only on the rear wheels and not on the front wheels.

Do not use tire chains on dry roads. Driving with chains in such conditions can cause damage to the various mechanisms of the vehicle due to some overstress.



CHANGING WHEELS AND TIRES

Tire rotation

NISSAN recommends rotating the tires every 7,500 miles (12,000 km).

See "Flat tire" in the "In case of emergency" section in this manual for tire replacing procedures.

As soon as possible, tighten the wheel nuts to the specified torque with a torque wrench.

Wheel nut tightening torque:

138 ft-lb (187 N-m)

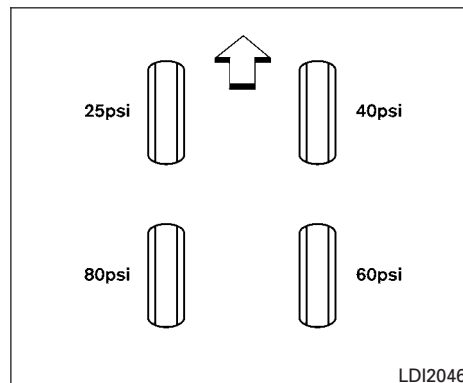
The wheel nuts must be kept tightened to specifications at all times. It is recommended that wheel nuts be tightened to specification at each tire rotation interval.

Because the tire pressures are different between the front and rear tires, the Tire Pressure Monitoring System (TPMS) must be reset after tire rotation. For instructions on resetting the TPMS, see “TPMS sensor reset” in this section.

WARNING

- After rotating the tires, check and adjust the tire pressure.
- Retighten the wheel nuts when the vehicle has been driven for 600 miles (1,000 km) (also in cases of a flat tire, etc.).
- Do not include the spare tire in the tire rotation.

- For additional information regarding tires, refer to “Important Tire Safety Information” (US) or “Tire Safety Information” (Canada) in the Warranty Information Booklet.



TPMS sensor reset

After rotating the tires, the TPMS sensor position needs to be relearned. Contact the closest NISSAN Dealer or follow the steps below.

1. After rotating the tires, adjust the tire pressure as shown above. Decrease air pressure for at least 30 seconds continuously for each tire (more than 10 psi within 30 seconds) to place the TPMS system into relearn mode for 30 minutes.
2. On the meter, start the relearn procedure using the INFO  knob as follows:
SETTINGS → RESET TPMS → RE-LEARN
→ RESETTING

The TPMS warning light (!) flashes continuously when the system is relearning the tire positions.

3. When the relearn procedure is successfully completed:

- The TPMS light (!) illuminates for 3 seconds
- A chime sounds 3 times

4. Adjust the tire pressures to the cold tire pressure specification shown on the tire and loading information label, see “Checking tire pressure” in the “Maintenance and do-it-yourself” section and “Tire and loading information label” in the “Technical and consumer information” section.

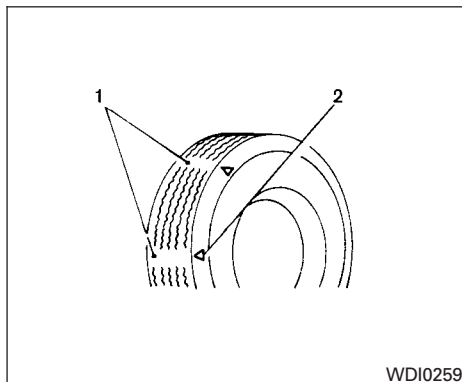
- If the tires pressures are correct, the TPMS light turns off.
- If the tires are not inflated to the correct cold tire pressure, the TPMS warning light illuminates. Recheck the tire pressures and adjust as necessary.

If the relearn procedure does not work, check the following and retry the process:

- If the relearn procedure is stopped before completion, the new tire positions are not learned. Redo the complete relearn procedure to reset the tire positions.
- You must select “RESET TPMS → RE-LEARN” from the “SETTINGS” menu to complete the relearn procedure. Redo the complete relearn procedure to reset the tire positions. Select the TPMS resetting menu, then continue the remaining registration procedure.
- Adjust the tire pressures to the relearn pressures before selecting the TPMS resetting menu on the display. Redo the complete relearn procedure to reset the tire positions.
- If the tire pressure cannot be reduced at least 10 psi to adjust them to the relearn pressures, inflate the tires to at least 10 psi above the specified pressures. Redo the complete relearn procedure starting with step 1.

- Devices which emit electronic interference should be turned off before starting the relearn procedure. The interference may prevent the system from learning the new tire positions. Turn off or remove sources of electrical interference. If necessary, move the vehicle to another location, then redo the complete relearn procedure to reset the tire positions.
- If you have retried the procedure several times and the relearn procedure is not successfully completed, contact your NISSAN dealer.
- Use an air pump that is capable of inflating the tires to the required pressure specifications. The air pump must be capable of inflating a tire at least 10 psi (34.5 kpa) in 30 seconds.
- If the reset TPMS function is unintentionally selected, place the ignition switch in the off position then to the on position to end the relearn procedure.

- If the vehicle is not recognizing the new tire pressure levels, move the vehicle forward 40 inches (1 meter). Place the ignition switch in the off position then to the on position. Redo the relearn procedure beginning at step 1. Make sure that the tire pressures are increased or decreased at least 10 psi.
- When vehicle is in the re-learn mode, the TPMS will not warn of low tire pressures or detect malfunctions.
- If tire pressure is not set to the correct pressure, restart the procedure again.



1. Wear indicator
2. Location mark

Tire wear and damage

⚠ WARNING

- **Tires should be periodically inspected for wear, cracking, bulging or objects caught in the tread. If excessive wear, cracks, bulging or deep cuts are found, the tire(s) should be replaced.**

- **The original tires have built-in tread wear indicators. When the wear indicators are visible, the tire(s) should be replaced.**
- **Tires degrade with age and use. Have tires, including the spare, over 6 years old checked by a qualified technician because some tire damage may not be obvious. Replace the tires as necessary to prevent tire failure and possible personal injury.**
- **Improper service of the spare tire may result in serious personal injury. If it is necessary to repair the spare tire, contact a NISSAN dealer.**
- **For additional information regarding tires, refer to "Important Tire Safety Information" (US) or "Tire Safety Information" (Canada) in the Warranty Information Booklet.**

Replacing wheels and tires

When replacing a tire, use the same size, tread design, speed rating and load carrying capacity as originally equipped. Recommended types and sizes are shown in “Wheels and tires” in the “Technical and consumer information” section of this manual.

WARNING

- The use of tires other than those recommended or the mixed use of tires of different brands, construction (bias, bias-belted or radial), or tread patterns can adversely affect the ride, braking, handling, VDC system, ground clearance, body-to-tire clearance, tire chain clearance, speedometer calibration, headlight aim and bumper height. Some of these effects may lead to accidents and could result in serious personal injury.
- If your vehicle was originally equipped with 4 tires that were the same size and you are only replacing 2 of the 4 tires, install the new tires on the rear axle. Placing new tires on the front axle may cause loss of vehicle control in some driving conditions and cause an accident and personal injury.

- If the wheels are changed for any reason, always replace with wheels which have the same off-set dimension. Wheels of a different off-set could cause premature tire wear, degrade vehicle handling characteristics, affect the VDC system and/or interference with the brake discs. Such interference can lead to decreased braking efficiency and/or early brake pad wear. Refer to “Wheels and tires” in the “Technical and consumer information” section of this manual for wheel off-set dimensions.
- When a spare tire is mounted or a wheel is replaced, tire pressure will not be indicated, the TPMS will not function and the low tire pressure warning light will flash for approximately 1 minute. The light will remain on after 1 minute. Contact your NISSAN dealer as soon as possible for tire replacement and/or system resetting.
- Replacing tires with those not originally specified by NISSAN could affect the proper operation of the TPMS.

- Do not install a damaged or deformed wheel or tire even if it has been repaired. Such wheels or tires could have structural damage and could fail without warning.
- The use of retread tires is not recommended.
- For additional information regarding tires, refer to “Important Tire Safety Information” (US) or “Tire Safety Information” (Canada) in the Warranty Information Booklet.

Wheel balance

Unbalanced wheels may affect vehicle handling and tire life. Even with regular use, wheels can get out of balance. Therefore, they should be balanced as required.

Wheel balance service should be performed with the wheels off the vehicle. Spin balancing the wheels on the vehicle could lead to mechanical damage.

- For additional information regarding tires, refer to “Important Tire Safety Information” (US) or “Tire Safety Information” (Canada) in the Warranty Information Booklet.

Care of wheels

- Wash the wheels when washing the vehicle to maintain their appearance.
- Clean the inner side of the wheels when the wheel is changed or the underside of the vehicle is washed.
- Do not use abrasive cleaners when washing the wheels.
- Inspect wheel rims regularly for dents or corrosion. Such damage may cause loss of pressure or poor seal at the tire bead.
- NISSAN recommends waxing the road wheels to protect against road salt in areas where it is used during winter.

9 Technical and consumer information

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CAPACITIES AND RECOMMENDED FUEL/LUBRICANTS

The following are approximate capacities. The actual refill capacities may be a little different. When refilling, follow the procedure described in the “Maintenance and do-it-yourself” section to determine the proper refill capacity.

	Capacity (Approximate)			Recommended Fluids and Lubricants
	US measure	Imp measure	Liter	
Fuel	28 gal	23-1/4 gal	105.8	See “Fuel Recommendation” in this section.
Engine oil *6				
Drain and Refill				
With oil filter	VQ40DE	5-3/8 qt	4-1/2 qt	5.1
change	VK56DE	6-7/8 qt	5-3/4 qt	6.5
Without oil filter	VQ40DE	5-1/8 qt	4-1/4 qt	4.8
change	VK56DE	6-1/2 qt	5-1/2 qt	6.2
Cooling system				
With reservoir	3-3/8 gal	2-3/4 gal	12.7	Pre-diluted Genuine NISSAN Long Life Antifreeze/Coolant (blue) or equivalent
Automatic transmission fluid	Refill to the proper level according to the instructions in the “Maintenance and do-it-yourself” section.			Genuine NISSAN Matic S ATF *2
Power steering fluid (PSF)				Genuine NISSAN PSF or equivalent *3
Brake fluid				Genuine NISSAN Super Heavy Duty Brake Fluid *4 or equivalent DOT 3
Multi-purpose grease	—	—	—	NLGI No. 2 (Lithium Soap base)
Air conditioning system refrigerant	—	—	—	HFC-134a (R-134a) *5
Air conditioning system oil	—	—	—	Genuine NISSAN A/C System Oil Type S or equivalent *5
Rear final drive oil	5 1/2 pt	4-5/8 pt	2.6	API GL-5 synthetic gear oil, Viscosity SAE 75W-90 *7
Windshield-washer fluid	1-1/4 gal	1 gal	4.5	Genuine NISSAN Windshield Washer Concentrate Cleaner & Anti-freeze or equivalent

*1: For further details, see “Engine oil and oil filter recommendations” in this section.

*2: If Genuine NISSAN Matic S ATF is not available, Genuine NISSAN Matic J ATF may also be used. Using automatic transmission fluid other than Genuine NISSAN Matic S ATF or Genuine NISSAN Matic J ATF will cause deterioration in driveability and automatic transmission durability, and may damage the automatic transmission, which is not covered by the NISSAN new vehicle limited warranty.

*3: DEXRON™ VI type ATF may also be used.

*4: Available in mainland USA through a NISSAN dealer.

*5: For further details, see “Air conditioner specification label” in this section.

*6: For further details, see “Changing engine oil” in the “Maintenance and do-it-yourself” section.

*7: See a NISSAN dealer for service for synthetic oil.

9-2 Technical and consumer information

FUEL RECOMMENDATION

Use unleaded regular gasoline with an octane rating of at least 87 AKI (Anti-Knock Index) number (Research octane number 91).

CAUTION

- **Using a fuel other than that specified could adversely affect the emission control system, and may also affect the warranty coverage.**
- **Under no circumstances should a leaded gasoline be used, because this will damage the three-way catalyst.**
- **Do not use E-15 or E-85 fuel in your vehicle. Your vehicle is not designed to run on E-15 or E-85 fuel. Using E-15 or E-85 fuel in a vehicle not specifically designed for E-15 or E-85 fuel can adversely affect the emission control devices and systems of the vehicle. Damage caused by such fuel is not covered by the NISSAN new vehicle limited warranty.**
- **U.S. government regulations require ethanol dispensing pumps to be identified by a small, square, orange and black label with the common abbreviation or the appropriate percentage for that region.**

Gasoline specifications

NISSAN recommends using gasoline that meets the World-Wide Fuel Charter (WWFC) specifications where it is available. Many of the automobile manufacturers developed this specification to improve emission control system and vehicle performance. Ask your service station manager if the gasoline meets the WWFC specifications.

Reformulated gasoline

Some fuel suppliers are now producing reformulated gasolines. These gasolines are specially designed to reduce vehicle emissions. NISSAN supports efforts towards cleaner air and suggests that you use reformulated gasoline when available.

Gasoline containing oxygenates

Some fuel suppliers sell gasoline containing oxygenates such as ethanol, MTBE and methanol with or without advertising their presence. NISSAN does not recommend the use of fuels of which the oxygenate content and the fuel compatibility for your NISSAN cannot be readily determined. If in doubt, ask your service station manager.

If you use oxygenate-blend gasoline, please take the following precautions as the usage of such fuels may cause vehicle performance problems and/or fuel system damage.

- **The fuel should be unleaded and have an octane rating no lower than that recommended for unleaded gasoline.**
- **If an oxygenate-blend other than methanol blend is used, it should contain no more than 10% oxygenate. (MTBE may, however, be added up to 15%).**
- **E-15 fuel contains more than 10% oxygenate. E-15 fuel will adversely affect the emission control devices and systems of the vehicle and should not be used. Damage caused by such fuel is not covered by the NISSAN new vehicle limited warranty.**
- **If a methanol blend is used, it should contain no more than 5% methanol (methyl alcohol, wood alcohol). It should also contain a suitable amount of appropriate cosolvents and corrosion inhibitors. If not properly formulated with appropriate cosolvents and corrosion inhibitors, such methanol blends may cause fuel system damage and/or vehicle performance problems. At this time, sufficient data is not available to ensure that all methanol blends are suitable for use in NISSAN vehicles.**

If any driveability problems such as engine stalling and difficult hot-starting are experienced after using oxygenate-blend fuels, immediately change to a non-oxygenate fuel or a fuel with a low blend of MTBE.

Take care not to spill gasoline during refueling. Gasoline containing oxygenates can cause paint damage.

E-15 fuel

E-15 fuel is a mixture of approximately 15% fuel ethanol and 85% unleaded gasoline. E-15 can only be used in vehicles designed to run on E-15 fuel. Do not use E-15 in your vehicle. U.S. government regulations require fuel ethanol dispensing pumps to be identified with small, square, orange and black label with the common abbreviation or the appropriate percentage for that region.

E-85 fuel

E-85 fuel is a mixture of approximately 85% fuel ethanol and 15% unleaded gasoline. E-85 can only be used in a Flexible Fuel Vehicle (FFV). Do not use E-85 in your vehicle. U.S. government regulations require fuel ethanol dispensing pumps to be identified by a small, square, orange and black label with the common abbreviation or the appropriate percentage for that region.

9-4 Technical and consumer information

Aftermarket fuel additives

NISSAN does not recommend the use of any aftermarket fuel additives (for example, fuel injector cleaner, octane booster, intake valve deposit removers, etc.) which are sold commercially. Many of these additives intended for gum, varnish or deposit removal may contain active solvents or similar ingredients that can be harmful to the fuel system and engine.

Octane rating tips

Using unleaded gasoline with an octane rating lower than recommended can cause persistent, heavy “spark knock.” (“Spark knock” is a metallic rapping noise.) If severe, this can lead to engine damage. If you detect a persistent heavy spark knock even when using gasoline of the stated octane rating, or if you hear steady spark knock while holding a steady speed on level roads, have a NISSAN dealer correct the condition. Failure to correct the condition is misuse of the vehicle, for which NISSAN is not responsible.

Incorrect ignition timing may result in spark knock, after-run and/or overheating, which may cause excessive fuel consumption or engine

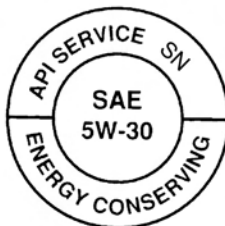
damage. If any of the above symptoms are encountered, have your vehicle checked at a NISSAN dealer.

However, now and then you may notice light spark knock for a short time while accelerating or driving up hills. This is not a cause for concern, because you get the greatest fuel benefit when there is light spark knock for a short time under heavy engine load.

API certification mark



API service symbol



LT12024

ENGINE OIL AND OIL FILTER RECOMMENDATIONS

Selecting the correct oil

It is essential to choose the correct grade, quality and viscosity engine oil to ensure satisfactory engine life and performance. See "Capacities and recommended fuel/lubricants" earlier in this section. NISSAN recommends the use of an energy conserving oil in order to improve fuel economy.

Select only engine oils that meet the American Petroleum Institute (API) certification or International Lubricant Standardization and Approval

Committee (ILSAC) certification and SAE viscosity standard. These oils have the API certification mark on the front of the container. Oils which do not have the specified quality label should not be used as they could cause engine damage.

Oil additives

NISSAN does not recommend the use of oil additives. The use of an oil additive is not necessary when the proper oil type is used and maintenance intervals are followed.

Oil which may contain foreign matter or has been previously used should not be used.

Oil viscosity

The engine oil viscosity or thickness changes with temperature. Because of this, it is important to select the engine oil viscosity based on the temperatures at which the vehicle will be operated before the next oil change. Choosing an oil viscosity other than that recommended could cause serious engine damage.

Selecting the correct oil filter

Your new NISSAN vehicle is equipped with a high-quality genuine NISSAN oil filter. When replacing, use a genuine NISSAN oil filter or its equivalent for the reason described in "Change intervals."

Change intervals

The oil and oil filter change intervals for your engine are based on the use of the specified quality oils and filters. Using engine oil and filters that are not of the specified quality, or exceeding recommended oil and filter change intervals could reduce engine life. Damage to the engine caused by improper maintenance or use of incorrect oil and filter quality and/or viscosity is not covered by the NISSAN new vehicle limited warranty.

Your engine was filled with a high-quality engine oil when it was built. You do not have to change the oil before the first recommended change interval. Oil and filter change intervals depend upon how you use your vehicle.

Operation under the following conditions may require more frequent oil and filter changes:

- repeated short distance driving at cold outside temperatures
- driving in dusty conditions
- extensive idling
- towing a trailer
- stop and go commuting

Refer to the “NISSAN Service and Maintenance Guide” for the maintenance schedule.

AIR CONDITIONER SYSTEM REFRIGERANT AND OIL RECOMMENDATIONS

The air conditioner system in your NISSAN vehicle must be charged with the refrigerant HFC-134a (R-134a) and NISSAN A/C system oil Type S or the exact equivalents.

CAUTION

The use of any other refrigerant or oil will cause severe damage to the air conditioning system and will require the replacement of all air conditioner system components.

The refrigerant HFC-134a (R-134a) in your NISSAN vehicle does not harm the earth's ozone layer. Although this refrigerant does not affect the earth's atmosphere, certain government regulations require the recovery and recycling of any refrigerant during automotive air conditioner system service. A NISSAN dealer has the trained technicians and equipment needed to recover and recycle your air conditioner system refrigerant.

Contact a NISSAN dealer when servicing your air conditioner system.

SPECIFICATIONS

ENGINE

Model	VQ40DE	VK56DE
Type	Gasoline, 4-cycle, DOHC	Gasoline, 4-cycle, DOHC
Cylinder arrangement	6-cylinder, V-block, Slanted at 60°	8-cylinder, V-block, Slanted at 90°
Bore x Stroke	in (mm) 3.76 x 3.622 (95.5 x 92)	in (mm) 3.858 x 3.622 (98 x 92)
Displacement	cu in (cm ³) 241.30 (3,954)	cu in (cm ³) 338.78 (5,552)
Firing order	1-2-3-4-5-6	1-8-7-3-6-5-4-2
Idle speed	No adjustment is necessary.	
A/T (in "N" position)		
Ignition timing (degree B.T.D.C. at idle speed)		
CO % at idle		
Spark plug	DILFR5A-11	
Spark plug gap (Nominal)	in (mm) 0.043 (1.1)	
Camshaft operation	Timing chain	

This spark ignition system complies with the Canadian standard ICES-002.

WHEELS AND TIRES

Wheels	17 x 7.5 J
Tires	LT245/70R17
	LT245/75R17
Spare tire	Full size

DIMENSIONS AND WEIGHTS

Overall length		in (mm)	240.6 (6,112)
Overall width		in (mm)	79.9 (2,030)
Overall height			
2500 series	Standard Roof	in (mm)	83.9 (2,131)
	High Roof	in (mm)	105.0 (2,667)
3500 series	Standard Roof	in (mm)	84.9 (2,156)
	High Roof	in (mm)	106.0 (2,692)
Front Track		in (mm)	68.7 (1,745)
Rear Track		in (mm)	68.9 (1,750)
Wheelbase		in (mm)	146.1 (3,710)
Gross vehicle weight rating		lb (kg)	See the "F.M.V.S. S./C.M.V.S.S. certification label" on the center pillar between the driver's side front and rear doors.
Gross axle weight rating			
Front		lb (kg)	
Rear		lb (kg)	

WHEN TRAVELING OR REGISTERING YOUR VEHICLE IN ANOTHER COUNTRY

When planning to drive your NISSAN vehicle in another country, you should first find out if the fuel available is suitable for your vehicle's engine.

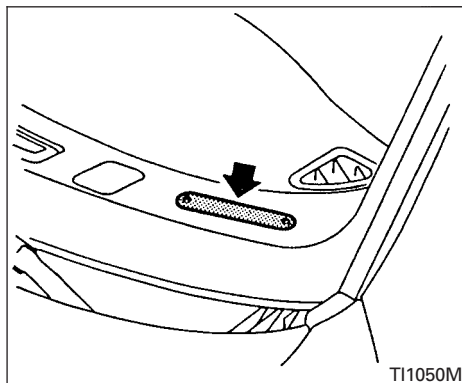
Using fuel with an octane rating that is too low may cause engine damage. All gasoline vehicles must be operated with unleaded gasoline. Therefore, avoid taking your vehicle to areas where appropriate fuel is not available.

When transferring the registration of your vehicle to another country, state, province or district, it may be necessary to modify the vehicle to meet local laws and regulations.

The laws and regulations for motor vehicle emission control and safety standards vary according to the country, state, province or district; therefore, vehicle specifications may differ.

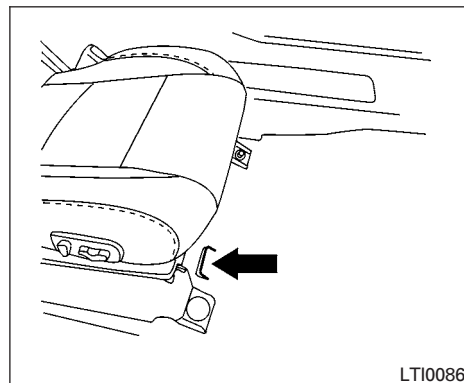
When any vehicle is to be taken into another country, state, province or district and registered, its modifications, transportation, and registration are the responsibility of the user. NISSAN is not responsible for any inconvenience that may result.

VEHICLE IDENTIFICATION



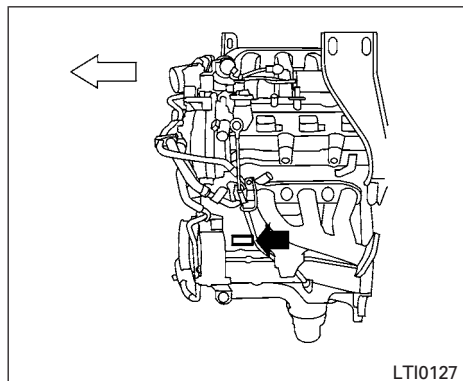
VEHICLE IDENTIFICATION NUMBER (VIN) PLATE

The vehicle identification number (VIN) plate is attached as shown. This number is the identification for your vehicle and is used in the vehicle registration.



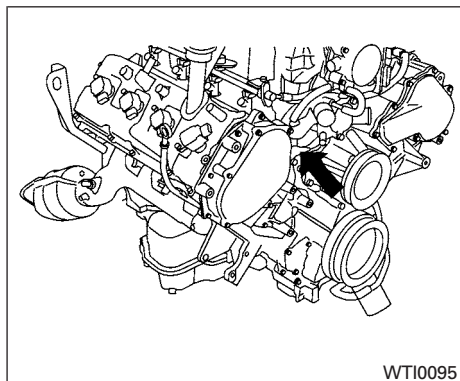
VEHICLE IDENTIFICATION NUMBER (chassis number)

The vehicle identification number is located as shown.



LT10127

VQ40DE engine

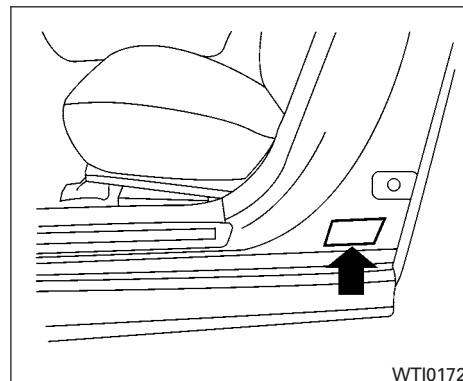


WT10095

VK56DE engine

ENGINE SERIAL NUMBER

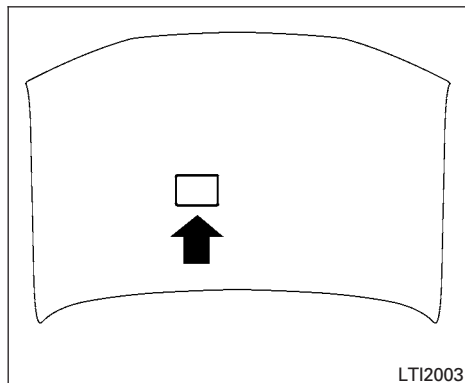
The number is stamped on the engine as shown.



WT10172

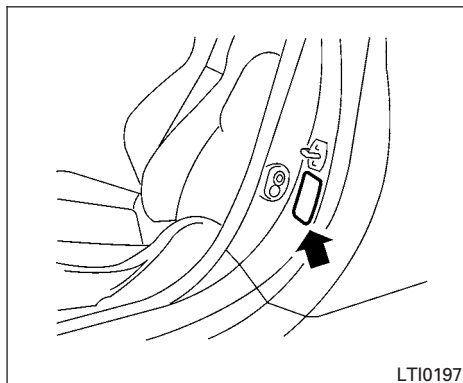
F.M.V.S.S./C.M.V.S.S. CERTIFICATION LABEL

The Federal/Canadian Motor Vehicle Safety Standard (F.M.V.S.S./C.M.V.S.S.) certification label is affixed as shown. This label contains valuable vehicle information, such as: Gross Vehicle Weight Ratings (GVWR), Gross Axle Weight Rating (GAWR), month and year of manufacture, Vehicle Identification Number (VIN), etc. Review it carefully.



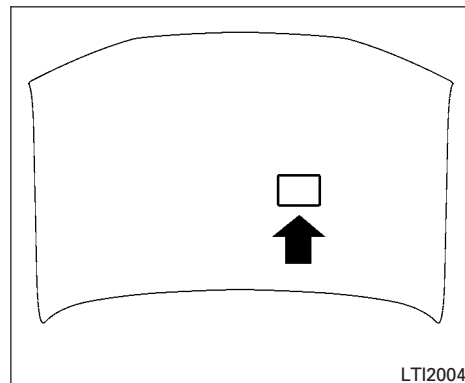
EMISSION CONTROL INFORMATION LABEL

The emission control information label is attached to the underside of the hood as shown.



TIRE AND LOADING INFORMATION LABEL

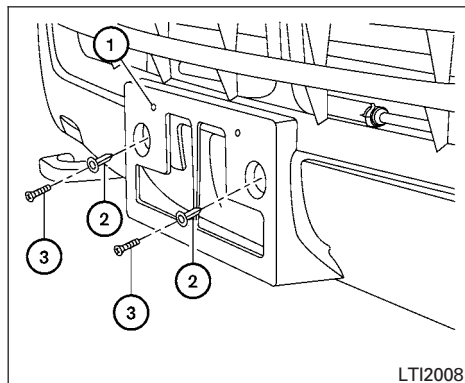
The cold tire pressure is shown on the Tire and Loading Information label. The label is located as shown.



AIR CONDITIONER SPECIFICATION LABEL

The air conditioner specification label is affixed to the underside of the hood as shown.

INSTALLING FRONT LICENSE PLATE



Use the following steps to mount the front license plate:

1. Hold license plate holder (1) against bumper.
2. Line up holes in bumper with license plate holder holes and insert the plastic clips (2).
3. Secure the license plate holder **using two M6-14mm bolts (3)**.

License plate bolt tightening torque:
3.8 - 4.7 ft-lb (5.10 - 6.37 N·m)

VEHICLE LOADING INFORMATION

⚠ WARNING

- **It is extremely dangerous to ride in a cargo area inside a vehicle. In a collision, people riding in these areas are more likely to be seriously injured or killed.**
- **Do not allow people to ride in any area of your vehicle that is not equipped with seats and seat belts.**
- **Be sure everyone in your vehicle is in a seat and using a seat belt properly.**

TERMS

It is important to familiarize yourself with the following terms before loading your vehicle:

- **Curb Weight** (actual weight of your vehicle) - vehicle weight including: standard and optional equipment, fluids, emergency tools, and spare tire assembly. This weight **does not** include passengers and cargo.

- **GVW (Gross Vehicle Weight)** - curb weight plus the combined weight of passengers and cargo.
- **GVWR (Gross Vehicle Weight Rating)** - maximum total combined weight of the unloaded vehicle, passengers, luggage, hitch, trailer tongue load and any other optional equipment. This information is located on the F.M.V.S.S./C.M.V.S.S. certification label.
- **GAWR (Gross Axle Weight Rating)** - maximum weight (load) limit specified for the front or rear axle. This information is located on the F.M.V.S.S./C.M.V.S.S. certification label.
- **GCWR (Gross Combined Weight rating)** - The maximum total weight rating of the vehicle, passengers, cargo, and trailer.

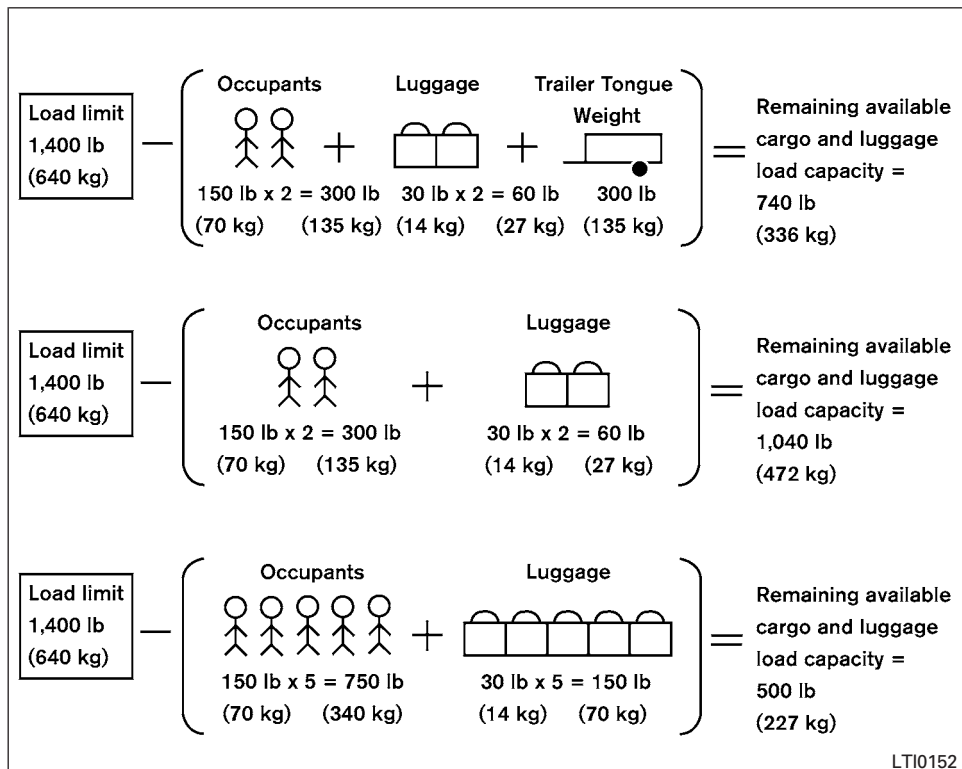
- Vehicle Capacity Weight, Load limit, Total load capacity - maximum total weight limit specified of the load (passengers and cargo) for the vehicle. This is the maximum combined weight of occupants and cargo that can be loaded into the vehicle. If the vehicle is used to tow a trailer, the trailer tongue weight must be included as part of the cargo load. This information is located on the Tire and Loading Information label.
- Cargo capacity - permissible weight of cargo, the subtracted weight of occupants from the load limit.

Do not exceed the load limit of your vehicle shown as "The combined weight of occupants and cargo" on the Tire and Loading Information label. Do not exceed the number of occupants shown as "Seating Capacity" on the Tire and Loading Information label.

To get "the combined weight of occupants and cargo", add the weight of all occupants, then add the total luggage weight. Examples are shown in the following illustration.

VEHICLE LOAD CAPACITY

Before driving a loaded vehicle, confirm that you do not exceed the Gross Vehicle Weight Rating (GVWR) or the Gross Axle Weight Rating (GAWR) for your vehicle. Both the GVWR and GAWR are located on the F.M.V.S.S./C.M.V.S.S. certification label. See "Measurement of weights" later in this section.



LT10152

Example

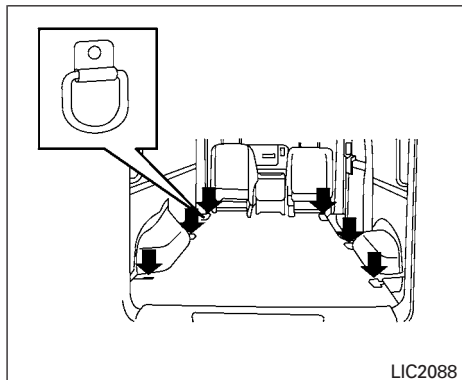
Steps for determining correct load limit

1. Locate the statement "The combined weight of occupants and cargo should never exceed XXX lbs or XXX kg" on your vehicle's placard.
2. Determine the combined weight of the driver and passengers that will be riding in your vehicle.
3. Subtract the combined weight of the driver and passengers from XXX lbs or XXX kg.
4. The resulting figure equals the available amount of cargo and luggage load capacity. For example, if the XXX amount equals 1,400 lbs. and there will be five 150 lb. passengers in your vehicle, the amount of available cargo and luggage load capacity is 650 lbs. (1,400-750 (5 X 150) = 650 lbs) or (640-340 (5 X 70) = 300 kg.)

5. Determine the combined weight of luggage and cargo being loaded on the vehicle. That weight may not safely exceed the available cargo and luggage load capacity calculated in Step 4.
6. If your vehicle will be towing a trailer, load from your trailer will be transferred to your vehicle. Consult this manual to determine how this reduces the available cargo and luggage load capacity of your vehicle.

Before driving a loaded vehicle, confirm that you do not exceed the Gross Vehicle Weight Rating (GVWR) or the Gross Axle Weight Rating (GAWR) for your vehicle. See "Measurement of weights" later in this section.

Also check tires for proper inflation pressures. See the Tire and Loading Information label.



Cargo area D-Ring

SECURING THE LOAD

There are 6 D-rings located in the cargo area as shown and can be used to secure cargo with ropes or other types of straps.

Do not apply a total load of more than 1,124 lbs. (5,000 N) to a single D-ring when securing cargo.

WARNING

- Properly secure all cargo with ropes or straps to help prevent it from sliding or shifting. Do not place cargo higher than the seatbacks. In a sudden stop or collision, unsecured cargo could cause personal injury.
- The child restraint top tether strap may be damaged by contact with items in the cargo area. Secure any items in the cargo area. Your child could be seriously injured or killed in a collision if the top tether strap is damaged.
- Do not load your vehicle any heavier than the GVWR or the maximum front and rear GAWRs. If you do, parts of your vehicle can break, tire damage could occur, or it can change the way your vehicle handles. This could result in loss of control and cause personal injury.

TOWING A TRAILER

LOADING TIPS

- The GVW must not exceed GVWR or GAWR as specified on the F.M.V.S.S./C.M.V.S.S. certification label.
- Do not load the front and rear axle to the GAWR. Doing so will exceed the GVWR.

WARNING

- **Properly secure all cargo with ropes or straps to help prevent it from sliding or shifting. Do not place cargo higher than the seat-backs. In a sudden stop or collision, unsecured cargo could cause personal injury.**
- **Do not load your vehicle any heavier than the GVWR or the maximum front and rear GAWRs. If you do, parts of your vehicle can break, tire damage could occur, or it can change the way your vehicle handles. This could result in loss of control and cause personal injury.**

- **Overloading and improper loading not only can shorten the life of your vehicle and the tire, but can also cause unsafe vehicle handling and longer braking distances. This may cause a premature tire failure which could result in a serious accident and personal injury. Failures caused by overloading are not covered by the vehicle's warranty.**

WARNING

Overloading or improper loading of a trailer and its cargo can adversely affect vehicle handling, braking and performance and may lead to accidents.

CAUTION

- **Do not tow a trailer or haul a heavy load for the first 500 miles (800 km). Your engine, axle or other parts could be damaged.**
- **For the first 500 miles (800 km) that you tow a trailer, do not drive over 50 mph (80 km/h) and do not make starts at full throttle. This helps the engine and other parts of your vehicle wear in at the heavier loads.**

Your new vehicle was designed to be used primarily to carry passengers and cargo. Remember that towing a trailer places additional loads on your vehicle's engine, drive train, steering, braking and other systems.

A NISSAN Towing Guide (U.S. only) is available on the website at www.nissanusa.com. This guide includes information on trailer towing capability and the special equipment required for proper towing.

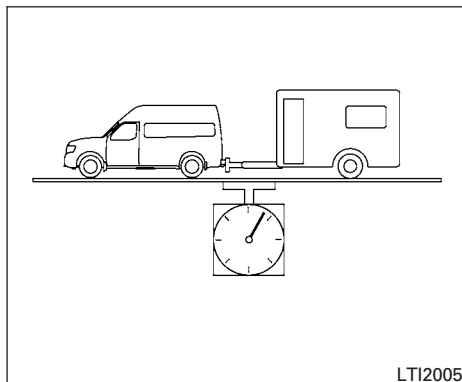
MAXIMUM LOAD LIMITS

Maximum trailer loads

Never allow the total trailer load to exceed the value specified in the “Towing Load/Specification” chart found later in this section. The total trailer load equals trailer weight plus its cargo weight.

- **When towing a trailer load of 3,500 lbs. (1,587 kg) or more, trailers with a brake system MUST be used.**

The maximum Gross Combined Weight Rating (GCWR) should not exceed the value specified in the following “Towing Load/Specification” chart.



The GCWR equals the combined weight of the towing vehicle (including passengers and cargo) plus the total trailer load. Towing loads greater than these or using improper towing equipment could adversely affect vehicle handling, braking and performance.

The ability of your vehicle to tow a trailer is not only related to the maximum trailer loads, but also the places you plan to tow. Tow weights appropriate for level highway driving may have to be reduced for low traction situations (for example, on slippery boat ramps).

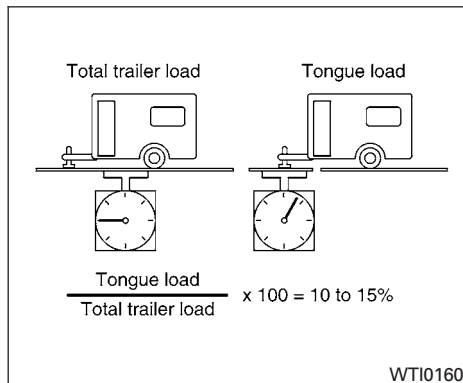
Temperature conditions can also affect towing. For example, towing a heavy trailer in high outside temperatures on graded roads can affect engine performance and cause overheating. The engine protection mode, which helps reduce the chance of engine damage, could activate and automatically decrease engine power. Vehicle speed may decrease under high load. Plan your trip carefully to account for trailer and vehicle load, weather and road conditions.

WARNING

Overheating can result in reduced engine power and vehicle speed. The reduced speed may be lower than other traffic, which could increase the chance of a collision. Be especially careful when driving. If the vehicle cannot maintain a safe driving speed, pull to the side of the road in a safe area. Allow the engine to cool and return to normal operation. See “If your vehicle overheats” in the “In case of emergency” section of this manual.

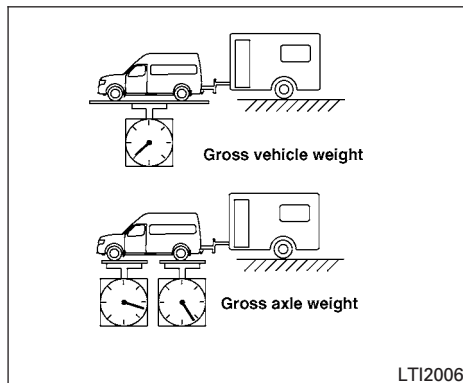
CAUTION

Vehicle damage resulting from improper towing procedures is not covered by NISSAN warranties.



Tongue load

When using a weight carrying or a weight distributing hitch, keep the tongue load between 10 - 15 percent of the total trailer load or use the trailer tongue load specified by the trailer manufacturer. The tongue load must be within the maximum tongue load limits shown in the following "Towing Load/Specification" chart. If the tongue load becomes excessive, rearrange cargo to allow for proper tongue load.



Maximum Gross Vehicle Weight (GVW)/maximum Gross Axle Weight (GAW)

The GVW of the towing vehicle must not exceed the Gross Vehicle Weight Rating (GVWR) shown on the F.M.V.S.S./C.M.V.S.S. certification label. The GVW equals the combined weight of the unloaded vehicle, passengers, luggage, hitch, trailer tongue load and any other optional equipment. In addition, front or rear GAW must not exceed the Gross Axle Weight Rating (GAWR) shown on the F.M.V.S.S./C.M.V.S.S. certification label.

Towing capacities are calculated assuming a base vehicle with driver and any options required to achieve the rating. Additional passengers, cargo and/or optional equipment, such as the trailer hitch, will add weight to the vehicle and reduce your vehicle's maximum towing capacity and trailer tongue load.

The vehicle and trailer need to be weighed to confirm the vehicle is within the GVWR, Front GAWR, Rear GAWR, Gross Combined Weight Rating (GCWR) and Towing capacity.

All vehicle and trailer weights can be measured using platform type scales commonly found at truck stops, highway weigh stations, building supply centers or salvage yards.

To determine the available payload capacity for tongue/king pin load, use the following procedure.

1. Locate the GVWR on the F.M.V.S.S./C.M.V.S.S. certification label.
2. Weigh your vehicle on the scale with all of the passengers and cargo that are normally in the vehicle when towing a trailer.
3. Subtract the actual vehicle weight from the GVWR. The remaining amount is the available maximum tongue/king pin load.

To determine the available towing capacity, use the following procedure.

1. Find the GCWR for your vehicle on the "Towing Load/Specification" chart found later in this section.
2. Subtract the actual vehicle weight from the GCWR. The remaining amount is the available maximum towing capacity.

To determine the Gross Trailer Weight, weigh your trailer on a scale with all equipment and cargo, that are normally in the trailer when it is towed. Make sure the Gross trailer weight is not more than the Gross Trailer Weight Rating shown on the trailer and is not more than the calculated available maximum towing capacity.

Also weigh the front and rear axles on the scale to make sure the Front Gross Axle Weight and Rear Gross Axle Weight are not more than Front Gross Axle Weight and Rear Gross Axle Weight on the F.M.V.S.S./C.M.V.S.S. certification label. The cargo in the trailer and vehicle may need to be moved or removed to meet the specified ratings.

Example:

- Gross Vehicle Weight (GVW) as weighed on a scale - including passengers, cargo and hitch - 6,200 lb. (2,812 kg).

- Gross Vehicle Weight Rating (GVWR) from F.M.V.S.S./C.M.V.S.S. certification label - 7,100 lb. (3,220 kg).
- Gross Combined Weight Rating (GCWR) from "Towing Load/Specification" chart - 15,100 lb. (6,848 kg).
- Maximum Trailer towing capacity from "Towing Load/Specification" chart - 9,200 lb. (4,173 kg).

7,100 lb. (3,220 kg)	GVWR
- 6,200 lb. (2,812 kg)	GVW
= 900 lb. (408 kg)	Available for tongue/ king pin weight
15,100 lb. (6,848 kg)	GCWR
- 6,200 lb. (2,812 kg)	GVW
= 8,900 lb. (4,036 kg)	Capacity available for towing
900 lb. (408 kg)	Available tongue weight
/ 8,900 lb. (4,036 kg)	Available capacity
=	10 % tongue weight

The available towing capacity may be less than the maximum towing capacity due to the passenger and cargo load in the vehicle.

Remember to keep trailer tongue weight between 10 - 15% of the trailer weight or within the trailer tongue load specification recommended by the trailer manufacturer. If the tongue load becomes excessive, rearrange the cargo to obtain the proper tongue load. Do not exceed the maximum tongue weight specification shown in the "Towing load/specification" chart even if the calculated available tongue weight is greater than 15%. If the calculated tongue weight is less than 10% , reduce the total trailer weight to match the available tongue weight.

Always verify that available capacities are within the required ratings.

TOWING LOAD/SPECIFICATION

		VQ40DE	VK56DE
		Standard/High Roof	Standard/High Roof
Maximum Towing Capacity*1 *2	Standard	2,000 lb. (907 kg)	2,000 lb. (907 kg)
	with accessory hitch	7,000 lb. (3,175 kg)	7,000 lb. (3,175 kg)
	with tow package	N/A	9,500 lb. (4,309 kg)
Maximum Tongue Load	Standard	200 lb. (90.7 kg)	200 lb. (90.7 kg)
	with accessory hitch	700 lb (318 kg)	700 lb (318 kg)
	with tow package	N/A	950 lb. (431 kg)
Maximum Gross Combined Weight Rating	Standard	13,400 lb. (6,077 kg)	13,500 lb. (6,123 kg)
	with accessory hitch		
	with tow package	N/A	16,000 lb. (7,257 kg)
*1: The towing capacity values are calculated assuming a base vehicle with driver and any options required to achieve the rating. Additional passengers, cargo and/or optional equipment will add weight to the vehicle and reduce your vehicle's maximum towing capacity.			
*2: Use of a weight-distributing hitch system is recommended when towing over 5,000 lbs.			

TOWING SAFETY

Trailer hitch

Your vehicle may be equipped with an optional trailer tow package. The trailer tow package includes a receiver-type frame mounted hitch. This hitch is rated for the maximum towing capacity of this vehicle when the proper towing equipment is used. Choose a proper ball mount and hitch ball that is rated for the trailer to be towed. Genuine NISSAN ball mounts and hitch balls are available from your NISSAN dealer.

If your vehicle is not equipped with the optional trailer tow package, check the towing capacity of your bumper hitch or receiver-type frame mounted hitch. Choose a proper hitch for your vehicle and trailer. A genuine NISSAN trailer hitch is available from your NISSAN dealer. Make sure the trailer hitch is securely attached to the vehicle to help avoid personal injury or property damage due to sway caused by crosswinds, rough road surfaces or passing trucks.

⚠ WARNING

Trailer hitch components have specific weight ratings. Your vehicle may be capable of towing a trailer heavier than the weight rating of the hitch components. Never exceed the weight rating of the hitch components. Doing so can cause serious personal injury or property damage.

Hitch ball

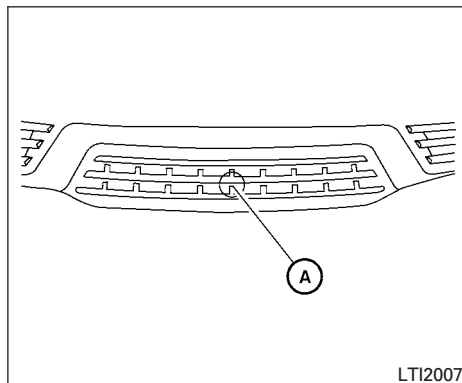
Choose a hitch ball of the proper size and weight rating for your trailer:

- The required hitch ball size is stamped on most trailer couplers. Most hitch balls also have the size printed on the top of the ball.
- Choose the proper class hitch ball based on the trailer weight.
- The diameter of the threaded shank of the hitch ball must be matched to the ball mount hole diameter. The hitch ball shank should be no more than 1/16" smaller than the hole in the ball mount.

- The threaded shank of the hitch ball must be long enough to be properly secured to the ball mount. There should be at least 2 threads showing beyond the lock washer and nut.

Ball mount

The hitch ball is attached to the ball mount and the ball mount is inserted into the hitch receiver. Choose a proper class ball mount based on the trailer weight. Additionally, the ball mount should be chosen to keep the trailer tongue level with the ground.



Bumper towing

The genuine NISSAN step bumper has provisions to install a trailer hitch ball and is designed to tow trailers of a maximum weight of 2,000 lb (907 kg).

To install a trailer hitch ball cut out the circle in the center of the step bumper (A), then remove it to install the trailer hitch ball.

Weight carrying hitches

A weight carrying or "dead weight" ball mount is one that is designed to carry the whole amount of tongue weight and gross weight directly on the ball mount and on the receiver.

Weight distribution hitch

This type of hitch is also called a “load-leveling” or “equalizing” hitch. A set of bars attach to the ball mount and to the trailer to distribute the tongue weight (hitch weight) of your trailer. Many vehicles can’t carry the full tongue weight of a given trailer, and need some of the tongue weight transferred through the frame and pushing down on the front wheels. This gives stability to the tow vehicle.

A weight-distributing hitch system (Class IV) is recommended if you plan to tow trailers with a maximum weight over 5,000 lbs (2,268 kg). Check with the trailer and towing equipment manufacturers to determine if they recommend the use of a weight-distributing hitch system.

NOTE:

A weight-distributing hitch system may affect the operation of trailer surge brakes. If you are considering use of a weight-distributing hitch system with a surge brake-equipped trailer, check with the surge brake, hitch or trailer manufacturer to determine if and how this can be done.

Follow the instructions provided by the manufacturer for installing and using the weight-distributing hitch system.

9-22 Technical and consumer information

General set-up instructions are as follows:

1. Park unloaded vehicle on a level surface. With the ignition on and the doors closed, allow the vehicle to stand for several minutes so that it can level.
2. Measure the height of a reference point on the front and rear bumpers at the center of the vehicle.
3. Attach the trailer to the vehicle and adjust the hitch equalizers so that the front bumper height is within 0 - .5 inches (0 – 13 mm) of the reference height measured in step 2. The rear bumper should be no higher than the reference height measured in step 2.

WARNING

Properly adjust the weight distributing hitch so the rear of the bumper is no higher than the measured reference height when the trailer is attached. If the rear bumper is higher than the measured reference height when loaded, the vehicle may handle unpredictably which could cause a loss of vehicle control and cause serious personal injury or property damage.

Sway control device

Sudden maneuvers, wind gusts, and buffeting caused by other vehicles can affect trailer handling. Sway control devices may be used to help control these affects. If you choose to use one, contact a reputable trailer hitch supplier to make sure the sway control device will work with the vehicle, hitch, trailer and the trailer’s brake system. Follow the instructions provided by the manufacturer for installing and using the sway control device.

Class I hitch

Class I trailer hitch equipment (receiver, ball mount and hitch ball) can be used to tow trailers of a maximum weight of 2,000 lb (907 kg).

Class II hitch

Class II trailer hitch equipment (receiver, ball mount and hitch ball) can be used to tow trailers of a maximum weight of 3,500 lb (1,587 kg).

Class III hitch

Class III trailer hitch equipment (receiver, ball mount and hitch ball) can be used to tow trailers of a maximum weight of 5,000 lb (2,268 kg).

Class IV hitch

Class IV trailer hitch equipment (receiver, ball mount and hitch ball) can be used to tow trailers of a maximum weight of 10,000 lb (4,535 kg). A weight distributing hitch should be used to tow trailers that weigh over 5,000 lb (2,268 kg).

Your vehicle may be equipped with Class IV trailer hitch equipment that has a 10,000 lb (4,535 kg) maximum weight rating, but your vehicle is only capable of towing the maximum trailer weights shown in the "Towing Load/Specification" chart earlier in this section.

Tire pressures

- When towing a trailer, inflate the vehicle tires to the recommended cold tire pressure indicated on the Tire and Loading Information label.
- Trailer tire condition, size, load rating and proper inflation pressure should be in accordance with the trailer and tire manufacturer's specifications.

Safety chains

Always use suitable safety chains between your vehicle and the trailer. The safety chains should be crossed and should be attached to the hitch, not to the vehicle bumper or axle. The safety chains can be attached to the bumper if the hitch ball is mounted to the bumper. Be sure to leave enough slack in the chains to permit turning corners.

Trailer lights

CAUTION

When splicing into the vehicle electrical system, a commercially available power-type module/converter must be used to provide power for all trailer lighting. This unit uses the vehicle battery as a direct power source for all trailer lights while using the vehicle tail light, stoplight and turn signal circuits as a signal source. The module/converter must draw no more than 15 milliamps from the stop and tail lamp circuits. Using a module/converter that exceeds these power requirements may damage the vehicle's electrical system. See a reputable trailer dealer to obtain the proper equipment and to have it installed.

Trailer lights should comply with federal and/or local regulations. For assistance in hooking up trailer lights, contact a NISSAN dealer or reputable trailer dealer. Vehicles equipped with the optional trailer tow package are equipped with a 7-pin trailer harness connector. If your trailer is equipped with a flat 4-pin connector, an adapter will be needed to connect the trailer lights to the vehicle. Adapters are available at NISSAN dealers as well as auto parts stores and hitch retailers.

Trailer brakes

When towing a trailer load of 3,500 lbs. (1,587 kg) or more, trailers with a brake system MUST be used. However, most states require a separate braking system on trailers with a loaded weight above a specific amount. Make sure the trailer meets the local regulations and the regulations where you plan to tow.

Several types of braking systems are available.

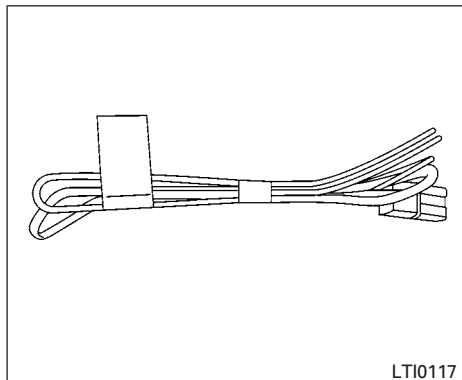
Surge Brakes -The surge brake actuator is mounted on the trailer tongue with a hydraulic line running to each trailer wheel. Surge brakes are activated by the trailer pushing against the hitch ball when the tow vehicle is braking. Hydraulic surge brakes are common on rental trailers and some boat trailers. In this type of system, there is no hydraulic or electric connection for brake operation between the tow vehicle and the trailer.

Electric Trailer Brakes -Electric braking systems are activated by an electronic signal sent from a trailer brake controller (special brake-sensing module). If electric trailer brakes are used, see "Electric trailer brake controller" in this section.

Have a professional supplier of towing equipment make sure the trailer brakes are properly installed and demonstrate proper brake function testing.

⚠ WARNING

Never connect a trailer brake system directly to the vehicle brake system.



example

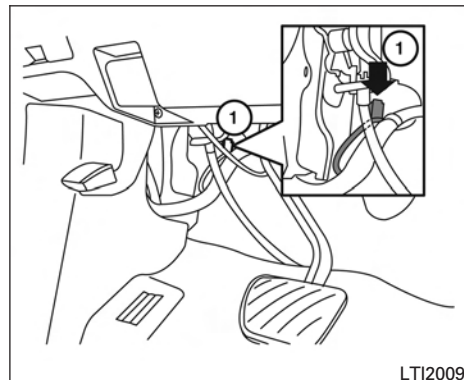
Electric trailer brake controller

Trailers equipped with electric brakes may require the installation of an aftermarket trailer brake controller.

Your vehicle is equipped with a connector and jumper harness (if so equipped) that is specifically designed to be used when installing an aftermarket brake controller.

To install the electric trailer brake controller jumper harness, perform the following procedure:

1. Open the driver door. Move the seat to the rearmost position.



2. Locate the jumper harness connector ① under the lower portion of the instrument panel behind the parking brake. The connector is taped to the wiring harness.
3. Peel off the tape and connect the jumper harness to the connector ①.

Wire color designation for electric trailer brake controller jumper harness.

WIRE COLOR	NOTE
RED/GREEN	Vehicle stop lamp switch to trailer brake controller.
BLACK	Brake controller ground (-).
BROWN/WHITE	Trailer brake controller switched output.
RED/BLUE	Trailer brake controller illumination (not used).
RED	Fused trailer brake controller battery feed (B+).

4. Install the aftermarket electric trailer brake controller according to the manufacturer's instructions.

Pre-towing tips

- Be certain your vehicle maintains a level position when a loaded and/or unloaded trailer is hitched. Do not drive the vehicle if it has an abnormal nose-up or nose-down condition; check for improper tongue load, overload, worn suspension or other possible causes of either condition.
- Always secure items in the trailer to prevent load shift while driving.

- Keep the cargo load as low as possible in the trailer to keep the trailer center of gravity low.
- Load the trailer so approximately 60% of the trailer load is in the front half and 40% is in the back half. Also make sure the load is balanced side to side.
- Check your hitch, trailer tire pressure, vehicle tire pressure, trailer light operation, and trailer wheel lug nuts every time you attach a trailer to the vehicle.
- Be certain your rearview mirrors conform to all federal, state or local regulations. If not, install any mirrors required for towing before driving the vehicle.
- Determine the overall height of the vehicle and trailer so the required clearance is known.

Trailer towing tips

In order to gain skill and an understanding of the vehicle's behavior, you should practice turning, stopping and backing up in an area which is free from traffic. Steering stability and braking performance will be somewhat different than under normal driving conditions.

- Always secure items in the trailer to prevent load shift while driving.

- Lock the trailer hitch coupler with a pin or lock to prevent the coupler from inadvertently becoming unlatched.
- Avoid abrupt starts, acceleration or stops.
- Avoid sharp turns or lane changes.
- Always drive your vehicle at a moderate speed.
- When backing up, hold the bottom of the steering wheel with one hand. Move your hand in the direction in which you want the trailer to go. Make small corrections and back up slowly. If possible, have someone guide you when you are backing up.

Always block the wheels on both vehicle and trailer when parking. Parking on a slope is not recommended; however, if you must do so:

CAUTION

If you move the shift selector to the P (Park) position before blocking the wheels and applying the parking brake, transmission damage could occur.

1. Apply and hold the brake pedal.
2. Have someone place blocks on the downhill side of the vehicle and trailer wheels.

3. After the wheel blocks are in place, slowly release the brake pedal until the blocks absorb the vehicle load.
4. Apply the parking brake.
5. Shift the transmission into P (Park).
6. Turn off the engine.

To drive away:

1. Start the vehicle.
2. Apply and hold the brake pedal.
3. Shift the transmission into gear.
4. Release the parking brake.
5. Drive slowly until the vehicle and trailer are clear from the blocks.
6. Apply and hold the brake pedal.
7. Have someone retrieve and store the blocks.

- While going downhill, the weight of the trailer pushing on the tow vehicle may deteriorate overall handling characteristics. Therefore, to maintain adequate control, reduce your speed and shift to a lower gear. Avoid long or repeated use of the brakes when descending a hill, as this reduces their effectiveness and could cause overheating. Shifting to a lower gear instead provides “engine braking” and reduces the need to brake as frequently.
- If the engine coolant temperature rises to a high temperature, refer to “If your vehicle overheats” in the “In case of emergency” section of this owner’s manual.
- Trailer towing requires more fuel than normal circumstances.
- Avoid towing a trailer for your vehicle’s first 500 miles (805 km).
- For the first 500 miles (805 km) that you do tow, do not drive over 50 MPH (80 km/h).
- Have your vehicle serviced more often than at intervals specified in the recommended Maintenance Schedule in the “NISSAN Service and Maintenance Guide”.

- When making a turn, your trailer wheels will be closer to the inside of the turn than your vehicle wheels. To compensate for this, make a larger than normal turning radius during the turn.
- Crosswinds and rough roads will adversely affect vehicle/trailer handling, possibly causing vehicle sway. When being passed by larger vehicles, be prepared for possible changes in crosswinds that could affect vehicle handling.

Do the following if the trailer begins to sway:

1. Take your foot off the accelerator pedal to allow the vehicle to coast and steer as straight ahead as the road conditions allow. This combination will help stabilize the vehicle
 - Do not correct trailer sway by steering or applying the brakes.
2. When the trailer sway stops, gently apply the brakes and pull to the side of the road in a safe area.
3. Try to rearrange the trailer load so it is balanced as described earlier in this section.

- Be careful when passing other vehicles. Passing while towing a trailer requires considerably more distance than normal passing. Remember, the length of the trailer must also pass the other vehicle before you can safely change lanes.
- Use the Tow Mode or downshift the transmission to a lower gear for engine braking when driving down steep or long hills. This will help slow the vehicle without applying the brakes.
- Avoid holding the brake pedal down too long or too frequently. This could cause the brakes to overheat, resulting in reduced braking efficiency.
- Increase your following distance to allow for greater stopping distances while towing a trailer. Anticipate stops and brake gradually.
- NISSAN recommends that the cruise control not be used while towing a trailer.
- Some states or provinces have specific regulations and speed limits for vehicles that are towing trailers. Obey the local speed limits.
- Check your hitch, trailer wiring harness connections, and trailer wheel lug nuts after 50 miles (80 km) of travel and at every break.

- When launching a boat, don't allow the water level to go over the exhaust tail pipe or rear bumper.
- Make sure you disconnect the trailer lights before backing the trailer into the water or the trailer lights may burn out.

When towing a trailer, final drive gear oil should be replaced and transmission oil/fluid should be changed more frequently. For additional information, see the "Maintenance and do-it-yourself" section earlier in this manual.

Tow mode (if so equipped)

Using tow mode is recommended when pulling a heavy trailer or hauling a heavy load. Press the TOW MODE switch to activate tow mode. The indicator light on the TOW MODE switch illuminates when tow mode is selected. Press the TOW MODE switch again to turn tow mode off. Tow mode is automatically cancelled when the ignition switch is turned OFF.

Tow mode includes the following features:

- Grade logic — Adjusts transmission shifts when pulling a trailer or hauling a load up a grade.

- Downhill Speed Control (DSC) — automatically downshifts when driving down a grade with a trailer or heavy load to help control vehicle speed.

Driving the vehicle in the tow mode with no trailer/load or light trailer/light load will not cause any damage. However, fuel economy may be reduced and the transmission/engine driving characteristics may feel unusual.

When towing a trailer, final drive gear oil should be replaced and transmission oil/fluid should be changed more frequently. For additional information, see the "Maintenance and do-it-yourself" section earlier in this manual.

FLAT TOWING

Towing your vehicle with all four wheels on the ground is sometimes called flat towing. This method is sometimes used when towing a vehicle behind a recreational vehicle, such as a motor home.

UNIFORM TIRE QUALITY GRADING

CAUTION

- **Failure to follow these guidelines can result in severe transmission damage.**
- **Whenever flat towing your vehicle, always tow forward, never backward.**
- **DO NOT tow any automatic transmission vehicle with all four wheels on the ground (flat towing). Doing so WILL DAMAGE internal transmission parts due to lack of transmission lubrication.**
- **For emergency towing procedures refer to "Towing recommended by NISSAN" in the "In case of emergency" section of this manual.**

Automatic Transmission

To tow a vehicle equipped with an automatic transmission, an appropriate vehicle dolly **MUST** be placed under the towed vehicle's drive wheels. **Always** follow the dolly manufacturer's recommendations when using their product.

DOT (Department of Transportation) Quality Grades: All passenger car tires must conform to federal safety requirements in addition to these grades.

Quality grades can be found where applicable on the tire sidewall between tread shoulder and maximum section width. For example:

Treadwear 200 Traction AA Temperature A

Treadwear

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

Traction AA, A, B and C

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

WARNING

The traction grade assigned to this tire is based on straight-ahead braking traction tests, and does not include acceleration, cornering, hydroplaning, or peak traction characteristics.

Temperature A, B and C

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

WARNING

The temperature grade for this tire is established for a tire that is properly inflated and not overloaded. Excessive speed, under-inflation, or excessive loading, either separately or in combination, can cause heat build-up and possible tire failure.

EMISSION CONTROL SYSTEM WARRANTY

Your NISSAN vehicle is covered by the following emission warranties:

For USA

1. Emission Defects Warranty
2. Emissions Performance Warranty

Details of this warranty may be found with other vehicle warranties in your Warranty Information Booklet which comes with your NISSAN vehicle. If you did not receive a Warranty Information Booklet, or it is lost, you may obtain a replacement by writing to:

- Nissan North America, Inc.
Consumer Affairs Department
P.O. Box 685003
Franklin, TN 37068-5003

For Canada

Emission Control System Warranty

Details of this warranty may be found with other vehicle warranties in your Warranty Information Booklet which comes with your NISSAN vehicle. If you did not receive a Warranty Information Booklet, or it is lost, you may obtain a replacement by writing to:

- Nissan Canada Inc.
5290 Orbitor Drive
Mississauga, Ontario, L4W 4Z5

REPORTING SAFETY DEFECTS

For USA

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying NISSAN.

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer, or NISSAN.

To contact NHTSA, you may call the Vehicle Safety Hotline toll-free at 1-888-327-4236 (TTY: 1-800-424-9153); go to <http://www.safercar.gov>; or write to: Administrator, NHTSA, 400 Seventh Street, SW., Washington, D.C. 20590. You can also obtain other information about motor vehicle safety from <http://www.safercar.gov>.

You may notify NISSAN by contacting our Consumer Affairs Department, toll-free, at 1-877-NIS-NCV1 (1-877-647-6281).

For Canada

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform Transport Canada in addition to notifying NISSAN.

If Transport Canada receives complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may request that NISSAN conduct a recall campaign. However, Transport Canada cannot become involved in individual problems between you, your dealer, or NISSAN.

You may contact Transport Canada's Defect Investigations and Recalls Division toll free at 1-800-333-0510. You may also report safety defects online at: <https://www.wapps.tc.gc.ca/Saf-Sec-Sur/7/PCDB-BDPP/Index.aspx>.

Additional information concerning motor vehicle safety may be obtained from Transport Canada's Road Safety Information Centre at 1-800-333-0371 or online at www.tc.gc.ca/roadsafety (English speakers) or www.tc.gc.ca/securiteroutiere (French speakers).

To notify NISSAN of any safety concerns please contact our Consumer Information Centre toll free at 1-800-387-0122.

READINESS FOR INSPECTION/ MAINTENANCE (I/M) TEST

Due to legal requirements in some states and Canadian Provinces, your vehicle may be required to be in what is called the "ready condition" for an Inspection/Maintenance (I/M) test of the emission control system.

The vehicle is set to the "ready condition" when it is driven through certain driving patterns. Usually, the ready condition can be obtained by ordinary usage of the vehicle.

If a powertrain system component is repaired or the battery is disconnected, the vehicle may be reset to a "not ready" condition. Before taking the I/M test, check the vehicle's inspection/maintenance test readiness condition. Place the ignition switch in the ON position without starting the engine. If the Malfunction Indicator Light (MIL) comes on steady for 20 seconds and then blinks for 10 seconds, the I/M test condition is "not ready". If the MIL does not blink after 20 seconds, the I/M test condition is "ready". Contact a NISSAN dealer to set the "ready condition" or to prepare the vehicle for testing.

EVENT DATA RECORDERS (EDR)

This vehicle is equipped with an Event Data Recorder (EDR). The main purpose of an EDR is to record, in certain crash or near crash-like situations, such as an air bag deployment or hitting a road obstacle, data that will assist in understanding how a vehicle's systems performed. The EDR is designed to record data related to vehicle dynamics and safety systems for a short period of time, typically 30 seconds or less. The EDR in this vehicle is designed to record such data as:

- How various systems in your vehicle were operating;
- Whether or not the driver and passenger safety belts were buckled/fastened;
- How far (if at all) the driver was depressing the accelerator and/or brake pedal; and,
- How fast the vehicle was traveling.
- Sounds are not recorded.

These data can help provide a better understanding of the circumstances in which crashes and injuries occur. NOTE: EDR data are recorded by your vehicle only if a nontrivial crash situation occurs; no data are recorded by the EDR under normal driving conditions and no personal data (e.g. name, gender, age and crash location) are recorded. However, other parties, such as law enforcement, could combine the EDR data with the type of personally identifying data routinely acquired during a crash investigation.

To read data recorded by an EDR, special equipment is required and access to the vehicle or the EDR is needed. In addition to the vehicle manufacturer and NISSAN dealer, other parties, such as law enforcement, that have the special equipment, can read the information if they have access to the vehicle or the EDR. EDR data will only be accessed with the consent of the vehicle owner or lessee or as otherwise required or permitted by law.

OWNER'S MANUAL/SERVICE MANUAL ORDER INFORMATION

Genuine NISSAN Service Manuals for this model year and prior can be purchased. A genuine NISSAN Service Manual is the best source of service and repair information for your vehicle. This manual is the same one used by the factory-trained technicians working at NISSAN dealerships. Genuine NISSAN Owner's Manuals can also be purchased.

For USA

For current pricing and availability of genuine **NISSAN Service Manuals**, contact:

1-800-450-9491
www.nissan-techinfo.com

For current pricing and availability of genuine **NISSAN Owner's Manuals**, contact:

1-800-247-5321

For Canada

To purchase a copy of a genuine NISSAN Service Manual or Owner's Manual, for this model year and prior, please contact your nearest NISSAN dealer. For the phone number and location of a NISSAN dealer in your area, call the NISSAN Information Center at 1-800-387-0122 and a bilingual NISSAN representative will assist you.

MEMO

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GAS STATION INFORMATION

RECOMMENDED FUEL:

Use unleaded regular gasoline with an octane rating of at least 87 AKI (Anti-Knock Index) number (Research octane number 91).

CAUTION

- **Using a fuel other than that specified could adversely affect the emission control system, and may also affect the warranty coverage.**
- **Under no circumstances should a leaded gasoline be used, because this will damage the three-way catalyst.**
- **Do not use E-15 or E-85 fuel in your vehicle. Your vehicle is not designed to run on E-15 or E-85 fuel. Using E-15 or E-85 fuel in a vehicle not specifically designed for E-15 or E-85 fuel can adversely affect the emission control devices and systems of the vehicle. Damage caused by such fuel is not covered by the NISSAN new vehicle limited warranty.**

- **U.S. government regulations require ethanol dispensing pumps to be identified by a small, square, orange and black label with the common abbreviation or the appropriate percentage for that region.**

For additional information, see “Capacities and recommended fuel/lubricants” in the “Technical and consumer information” section.

RECOMMENDED ENGINE OIL:

- Engine oil with API Certification Mark
- Viscosity SAE 5W-30

See “Recommended SAE Viscosity Numbers” in the “Technical and consumer information” section of this manual.

COLD TIRE PRESSURE:

See Tire and Loading Information label.

The label is typically located on the driver side center pillar or on the driver's door. For additional information, see “Wheels and tires” in the “Maintenance and do-it-yourself” section of this manual.

RECOMMENDED NEW VEHICLE BREAK-IN PROCEDURE:

During the first 1,200 mi (2,000 km) of vehicle use, follow the recommendations outlined in the “Break-in schedule” information found in the “Starting and driving” section of this manual. Follow these recommendations for the future reliability and economy of your new vehicle. Failure to follow these recommendations may result in vehicle damage or shortened engine life.



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