Pictorial index

Search by illustration

1	For safety and security	Make sure to read through them	
2	Instrument cluster	How to read the gauges and meters, the variety of warning lights and indicators, etc.	
3	Operation of each component	Opening and closing the doors and windows, adjustment before driving, etc.	
4	Driving	Operations and advices which are necessary for driving	
5	Interior features	Usage of the interior features, etc.	
6	Maintenance and care	Caring for your vehicle and maintenance procedures	
7	When trouble arises	What to do in case of malfunction or emergency	
8	Vehicle specifications	Vehicle specifications, customizable features, etc.	
9	For owners	Reporting safety defects for U.S. owners, and seat belt and SRS airbag instructions for Canadian owners	
	Index	Search by symptom	
	IIIQGA	Search alphabetically	

For your information	. 8
Reading this manual	
How to search	
Pictorial index	16

For safety and security

1-1. For	safe use
----------	----------

2

	Before driving 28
	For safety drive 30
	Seat belts 32
	SRS airbags 41
	Front passenger occupant
	classification system 54
	Safety information
	for children 61
	Child restraint systems 62
	Installing child restraints 66
	Exhaust gas precautions 80
1-2.	Exhaust gas precautions 80 Hybrid system
1-2.	
1-2.	Hybrid system
1-2.	Hybrid system Hybrid system features 81
1-2. 1-3.	Hybrid system Hybrid system features 81 Hybrid system precautions
	Hybrid system Hybrid system features 81 Hybrid system precautions
	Hybrid system Hybrid system features 81 Hybrid system precautions
	Hybrid system Hybrid system features 81 Hybrid system precautions
	Hybrid system Hybrid system features 81 Hybrid system precautions

Instrument cluster

2

2.	Instrument cluster
	Warning lights and
	indicators98
	Gauge and meters 103
	Multi-information display
	(with monochrome
	display)107
	Multi-information display
	(with color display)111
	Energy monitor/
	consumption screen117
2	Operation of each

component

3-1.	Key information
	Keys124
3-2.	Opening, closing and locking the doors
	Side doors128
	Back door134
	Glass hatch144
	Smart key system148
3-3.	Adjusting the seats
	Front seats156
	Rear seats158
	Driving position
	memory165
	Head restraints169

3-4. Adjusting the steering wheel and mirrors

	Deveragination	470
3-5.	Opening and closing the windows	
	mirrors	177
	Outside rear view	
	Inside rear view mirror	175
	Steering wheel	173

Power windows	179
Moon roof	183
Panoramic moon roof	187

4 Driving

4-1. Before driving

	Driving the vehicle	194
	Cargo and luggage	205
	Vehicle load limits	210
	Trailer towing	211
	Dinghy towing	228
4-2.	Driving procedures	
	Power (ignition) switch	229
	EV drive mode	235
	Hybrid transmission	237
	Turn signal lever	242
	Parking brake	243
4-3.	Operating the lights and wipers	
	Headlight switch	211

mporo	
Headlight switch	244
Automatic High Beam	248
Fog light switch	254
Windshield wipers and	
washer	255
Rear window wiper and	
washer	257

4-5. Using the driving support systems Cruise control264 Dynamic radar cruise LDA (Lane Departure Alert)......283 Driving assist systems291 PCS (Pre-Collision System)297 BSM (Blind Spot Monitor)......304 • The Blind Spot Monitor • The Rear Cross Traffic Alert function311

4-6. Driving tips

4-4. Refueling

Opening the fuel

tank cap.....259

Hybrid vehicle	
driving tips	314
Winter driving tips.	316
Utility vehicle	
precautions	320



5 Interior features

5-1. Using the air conditioning system and defogger

Front automatic air conditioning system 326 Rear automatic air conditioning system 333 Heated steering wheel/ seat heaters/ seat ventilators 336 5-2. Using the interior lights

Personal lights 340

5-3. Using the storage features

- Cup holders 345
- Open tray 348

features
Other interior features351
• Sun visors351
Vanity mirrors
Conversation mirror352
• Clock353
 Outside temperature
display353
Power outlets
• Rear sunshades
• Armrest358
Coat hooks359
Assist grips359
• Side table
Garage door opener
Safety Connect
Compass

5-4. Using the other interior

HIGHLANDER_HV_U (OM48F02U)

4

6 Maintenance and care

6-1.	Maintenance and care
	Cleaning and protecting the vehicle exterior
	Cleaning and protecting the vehicle interior
6-2.	Maintenance
	Maintenance requirements
	General maintenance 389
	Emission inspection and maintenance (I/M)
	programs
6-3.	Do-it-yourself maintenance
	Do-it-yourself service
	precautions394
	Hood
	Positioning a floor jack 398
	Engine compartment 399
	12-volt battery 407
	Tires 412
	Tire inflation pressure 421
	Wheels 424
	Air conditioning filter 426
	Electronic key battery 428
	Checking and replacing
	fuses 430
	Light bulbs 434

When trouble arises

7-1.	Essential information
	Emergency flashers450
	If your vehicle has to be
	stopped in an
	emergency451
7-2.	Steps to take in an
	emergency
	If your vehicle needs
	to be towed452
	If you think something
	is wrong456
	If a warning light turns
	on or a warning buzzer sounds457
	If a warning message is displayed466
	If you have a flat tire
	If the hybrid system will not start510
	If the shift lever cannot
	be shifted from P512
	If the electronic key does
	not operate properly513
	If the 12-volt battery is
	discharged516
	If your vehicle overheats521
	If the vehicle becomes
	stuck

8 Vehicle specifications

8-1. Specifications

	Maintenance data
	(fuel, oil level, etc.) 528
	Fuel information 540
	Tire information 543
8-2.	Customization
	Customizable features 556
8-3.	Initialization
	Items to initialize 567

For owners

9

Index

What to do if
(Troubleshooting)584
Alphabetical index 589

6



7

For your information

Main Owner's Manual

Please note that this manual applies to all models and all equipment, including options. Therefore, you may find some explanations for equipment not installed on your vehicle.

All specifications provided in this manual are current at the time of printing. However, because of the Toyota policy of continual product improvement, we reserve the right to make changes at any time without notice.

Depending on specifications, the vehicle shown in the illustrations may differ from your vehicle in terms of color and equipment.

Noise from under vehicle after turning off the hybrid system

Approximately five hours after the hybrid system is turned off, you may hear sound coming from under the vehicle for several minutes. This is the sound of a fuel evaporation leakage check and, it does not indicate a malfunction.

Accessories, spare parts and modification of your Toyota

A wide variety of non-genuine spare parts and accessories for Toyota vehicles are currently available in the market. You should know that Toyota does not warrant these products and is not responsible for their performance, repair, or replacement, or for any damage they may cause to, or adverse effect they may have on, your Toyota vehicle.

This vehicle should not be modified with non-genuine Toyota products. Modification with non-genuine Toyota products could affect its performance, safety or durability, and may even violate governmental regulations. In addition, damage or performance problems resulting from the modification may not be covered under warranty.

Installation of a mobile two-way radio system

The installation of a mobile two-way radio system in your vehicle could affect electronic systems such as:

- Multiport fuel injection system/sequential multiport fuel injection system
- Dynamic radar cruise control system (if equipped)
- Cruise control system (if equipped)
- Anti-lock brake system
- SRS airbag system
- Seat belt pretensioner system

Be sure to check with your Toyota dealer for precautionary measures or special instructions regarding installation of a mobile two-way radio system.

High voltage parts and cables on the hybrid vehicles emit approximately the same amount of electromagnetic waves as the conventional gasoline powered vehicles or home electronic appliances despite of their electromagnetic shielding.

Unwanted noise may occur in the reception of the mobile two-way radio.

Vehicle data recordings

Your Toyota is equipped with several sophisticated computers that will record certain data, such as:

- Engine speed
- Electric motor speed (traction motor speed)
- Accelerator status
- · Brake status
- · Vehicle speed
- Shift position
- Hybrid battery (traction battery) status

The recorded data varies according to the vehicle grade level and options with which it is equipped. Furthermore, these computers do not record conversations, sounds or pictures.

Data usage

Toyota may use the data recorded in these computers to diagnose malfunctions, conduct research and development, and improve quality.

Toyota will not disclose the recorded data to a third party except:

- With the consent of the vehicle owner or with the consent of the lessee if the vehicle is leased
- In response to an official request by the police, a court of law or a government agency
- For use by Toyota in a law suit
- For research purposes where the data is not tied to a specific vehicle or vehicle owner
- Usage of data collected through Safety Connect (U.S. mainland only) If your Toyota has Safety Connect and if you have subscribed to those services, please refer to the Safety Connect Telematics Subscription Service Agreement for information on data collected and its usage.

Event data recorder

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.

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 non-trivial 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, 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.

Disclosure of the EDR data

Toyota will not disclose the data recorded in an EDR to a third party except when:

- An agreement from the vehicle's owner (or the lessee for a leased vehicle) is obtained
- In response to an official request by the police, a court of law or a government agency
- For use by Toyota in a law suit

However, if necessary, Toyota may:

- · Use the data for research on vehicle safety performance
- Disclose the data to a third party for research purposes without disclosing information about the specific vehicle or vehicle owner

Scrapping of your Toyota

The SRS airbag and seat belt pretensioner devices in your Toyota contain explosive chemicals. If the vehicle is scrapped with the airbags and seat belt pretensioners left as they are, this may cause an accident such as fire. Be sure to have the systems of the SRS airbag and seat belt pretensioner removed and disposed of by a qualified service shop or by your Toyota dealer before you scrap your vehicle.

Perchlorate Material

Special handling may apply, See www.dtsc.ca.gov/hazardouswaste/perchlorate.

Your vehicle has components that may contain perchlorate. These components may include airbag, seat belt pretensioners, and wireless remote control batteries.

🛕 WARNING

General precautions while driving

Driving under the influence: Never drive your vehicle when under the influence of alcohol or drugs that have impaired your ability to operate your vehicle. Alcohol and certain drugs delay reaction time, impair judgment and reduce coordination, which could lead to an accident that could result in death or serious injury.

Defensive driving: Always drive defensively. Anticipate mistakes that other drivers or pedestrians might make and be ready to avoid accidents.

Driver distraction: Always give your full attention to driving. Anything that distracts the driver, such as adjusting controls, talking on a cellular phone or reading can result in a collision with resulting death or serious injury to you, your occupants or others.

General precaution regarding children's safety

Never leave children unattended in the vehicle, and never allow children to have or use the key.

Children may be able to start the vehicle or shift the vehicle into neutral. There is also a danger that children may injure themselves by playing with the windows, the moon roof, or other features of the vehicle. In addition, heat build-up or extremely cold temperatures inside the vehicle can be fatal to children.

Reading this manual

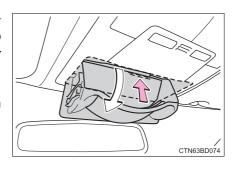
WARNING:

Explains something that, if not obeyed, could cause death or serious injury to people.

NOTICE:

Explains something that, if not obeyed, could cause damage to or a malfunction in the vehicle or its equipment.

- $1_{2_{3}}$ ··· Indicates operating or working procedures. Follow the steps in numerical order.
- Indicates the action (pushing, turning, etc.) used to operate switches and other devices.
- □ Indicates the outcome of an operation (e.g. a lid opens).
- Indicates the component or position being explained.
- Means "Do not", "Do not do this", or "Do not let this happen".

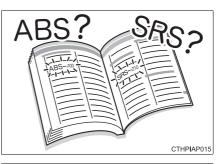




How to search

Searching by name

• Alphabetical index P. 589



- Searching by installation position
 - Pictorial index.....P. 16

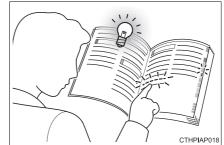


- Searching by symptom or sound
 - What to do if... (Troubleshooting)......P. 584

Searching by title

• Table of contentsP. 2

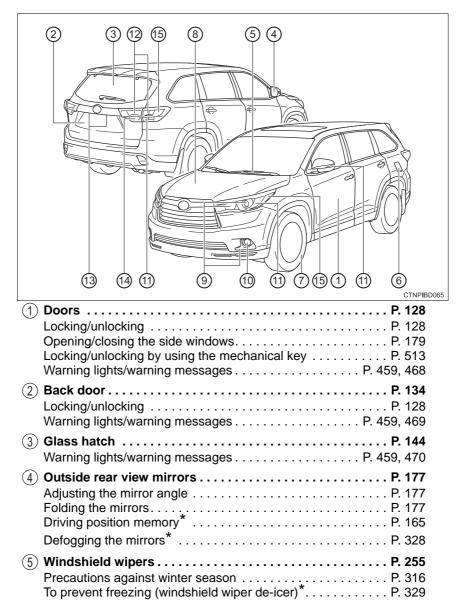




16 Pictorial index

Pictorial index

Exterior



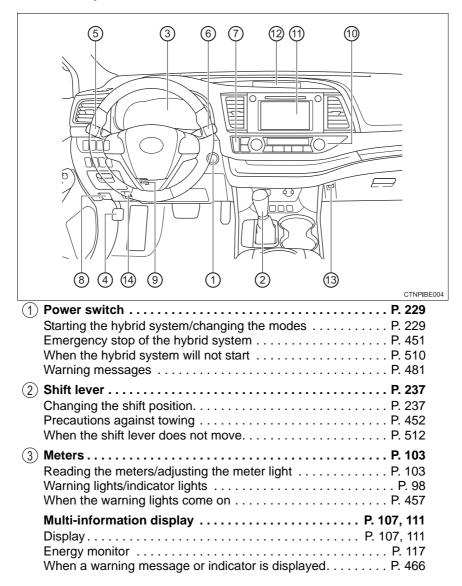
6Fuel filler doorP. 259Refueling method.P. 259Fuel type/fuel tank capacityP. 531
Tires P. 412 Tire size/inflation pressure P. 536 Winter tires/tire chain P. 316 Checking/rotation/tire pressure warning system P. 412 Coping with flat tires P. 486
B Hood P. 396 Opening P. 396 Engine oil P. 532 Coping with overheat P. 521 Warning messages P. 469
Light bulbs of the exterior lights for driving (Replacing method: P. 434, Watts: P. 539)

9	Headlights/daytime running lights	P.	244
10	Front fog lights	P.	254
(11)	Turn signal lights	P.	242
(12)	Stop/tail lights	P. P.	244 292
(13)	License plate lights	P.	244
14)	Back-up lights Shifting the shift lever to R	P.	237
(15)	Side marker lights	P.	244

*: If equipped

18 Pictorial index

Instrument panel

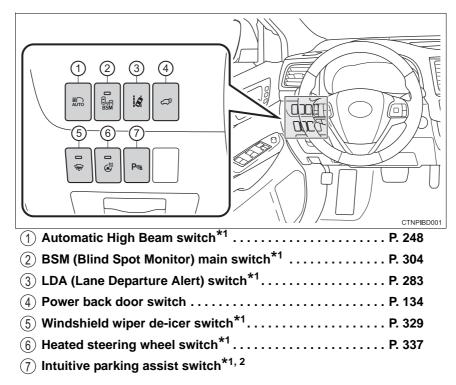


4	Parking brakeP. 243Applying/releasingP. 243Precautions against winter seasonP. 317Warning buzzer/messageP. 466
5	Turn signal leverP. 242Headlight switchP. 244Headlights/tail lights/daytime running lightsP. 244Front fog lightsP. 254
6	Wiper and washer switch P. 255, 257 Usage P. 255, 257 Adding washer fluid P. 406 Warning messages P. 476
(7)	Emergency flasher switch P. 450
8	Hood lock release lever
9	Tilt and telescopic steering lock release leverP. 173AdjustmentP. 173
10	Usage
(11)	Audio system*
(12)	Clock P. 353
(13)	Power back door main switch P. 136
(14)	Fuel filler door opener switch P. 261

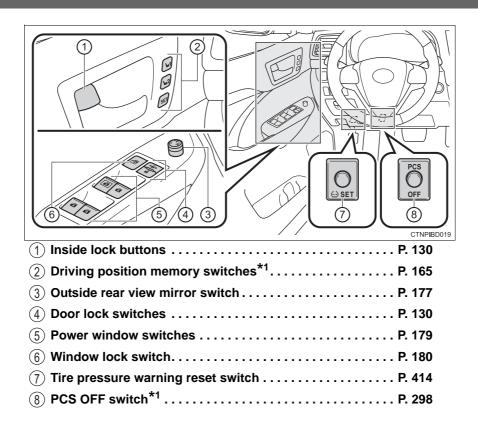
*: Refer to "Navigation and Multimedia System Owner's Manual".

20 Pictorial index

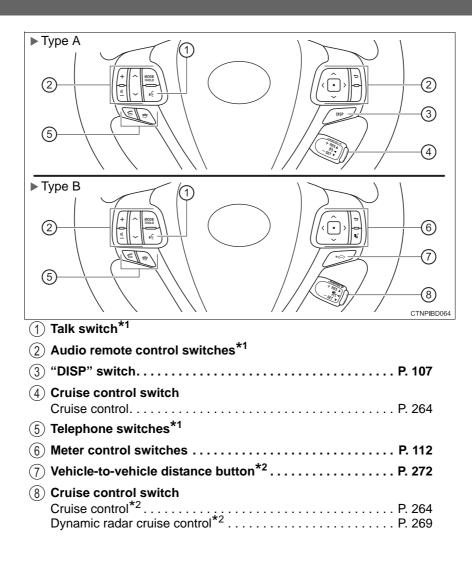
Switches



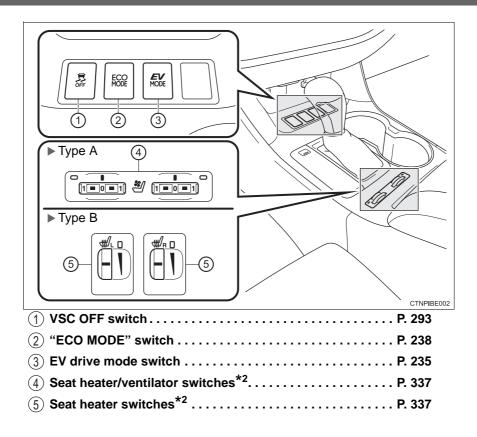
21



*1: If equipped *2: Refer to "Navigation and Multimedia System Owner's Manual".



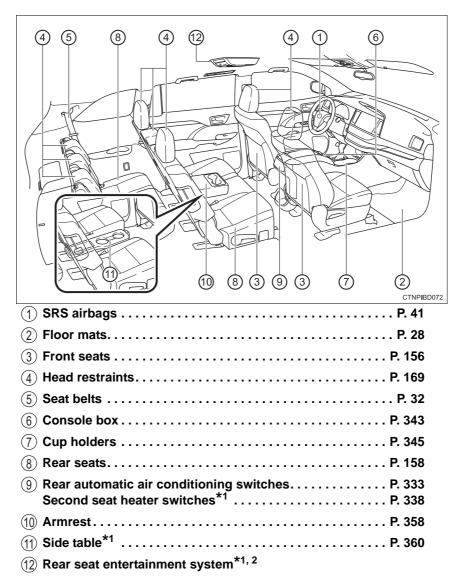
23



*1: Refer to "Navigation and Multimedia System Owner's Manual".

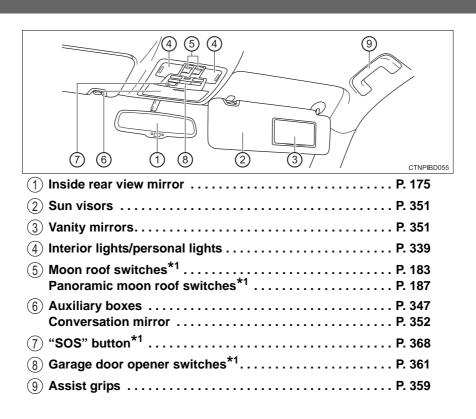
24 Pictorial index

Interior



Pictorial index

25



*²: Refer to "Navigation and Multimedia System Owner's Manual".

For safety and security

1

1-1. For safe use

	Before driving 28
	For safety drive 30
	Seat belts 32
	SRS airbags 41
	Front passenger occupant classification system 54
	Safety information for
	children 61
	Child restraint systems 62
	Installing child restraints 66
	Exhaust gas precautions 80
1-2.	Hybrid system
	Hybrid system features 81
	Hybrid system
	precautions85
1-3.	Theft deterrent system
	Immobilizer system 91
	Alarm
	Theft prevention labels
	(U.S.A.)

27

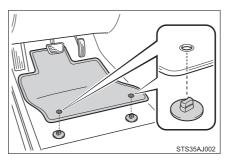
28 1-1. For safe use

Before driving

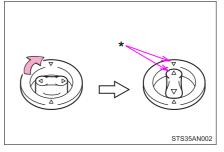
Floor mat

Use only floor mats designed specifically for vehicles of the same model and model year as your vehicle. Fix them securely in place onto the carpet.

1 Insert the retaining hooks (clips) into the floor mat eyelets.



- 2 Turn the upper knob of each retaining hook (clip) to secure the floor mats in place.
 - *: Always align the \triangle marks.



The shape of the retaining hooks (clips) may differ from that shown in the illustration.

1-1. For safe use

Observe the following precautions.

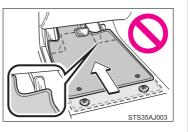
Failure to do so may cause the driver's floor mat to slip, possibly interfering with the pedals while driving. An unexpectedly high speed may result or it may become difficult to stop the vehicle, leading to an accident, or leading to death or a serious injury.

When installing the driver's floor mat

- Do not use floor mats designed for other models or different model year vehicles, even if they are Toyota Genuine floor mats.
- Only use floor mats designed for the driver's seat.
- Always install the floor mat securely using the retaining hooks (clips) provided.
- Do not use two or more floor mats on top of each other.
- Do not place the floor mat bottom-side up or upside-down.

Before driving

- Check that the floor mat is securely fixed in the correct place with all the provided retaining hooks (clips). Be especially careful to perform this check after cleaning the floor.
- With the hybrid system stopped and the shift lever in P, fully depress each pedal to the floor to make sure it does not interfere with the floor mat.



For safety drive

For safe driving, adjust the seat and mirror to an appropriate position before driving.

Correct driving posture

- (1) Adjust the angle of the seatback so that you are sitting straight up and so that you do not have to lean forward to steer. (\rightarrow P. 156)
- (2) Adjust the seat so that you can depress the pedals fully and so that your arms bend slightly at the elbow when gripping the steering wheel. (→P. 156)



- (3) Lock the head restraint in place with the center of the head restraint closest to the top of your ears. (\rightarrow P. 169)
- (4) Wear the seat belt correctly. (\rightarrow P. 32)

Correct use of the seat belts

Make sure that all occupants are wearing their seat belts before driving the vehicle. (\rightarrow P. 32)

Use a child restraint system appropriate for the child until the child becomes large enough to properly wear the vehicle's seat belt. $(\rightarrow P. 62)$

Adjusting the mirrors

Make sure that you can see backward clearly by adjusting the inside and outside rear view mirrors properly. (\rightarrow P. 175, 177)

WARNING		
Observe the following precautions. Failure to do so may result in death or serious injury.		
Do not adjust the position of the driver's seat while driving. Doing so could cause the driver to lose control of the vehicle.	1	For
 Do not place a cushion between the driver or passenger and the seatback. A cushion may prevent correct posture from being achieved, and reduce the effectiveness of the seat belt and head restraint. 		safety and
Do not place anything under the front seats. Objects placed under the front seats may become jammed in the seat tracks and stop the seat from locking in place. This may lead to an acci- dent and the adjustment mechanism may also be damaged.		id security
 When driving over long distances, take regular breaks before you start to feel tired. Also, if you feel tired or sleepy while driving, do not force yourself to con- tinue driving and take a break immediately. 		

32 1-1. For safe use

Seat belts

Make sure that all occupants are wearing their seat belts before driving the vehicle.

Correct use of the seat belts

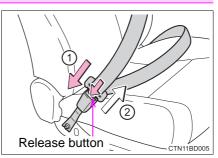
- Extend the shoulder belt so that it comes fully over the shoulder, but does not come into contact with the neck or slide off the shoulder.
- Position the lap belt as low as possible over the hips.
- Adjust the position of the seatback. Sit up straight and well back in the seat.

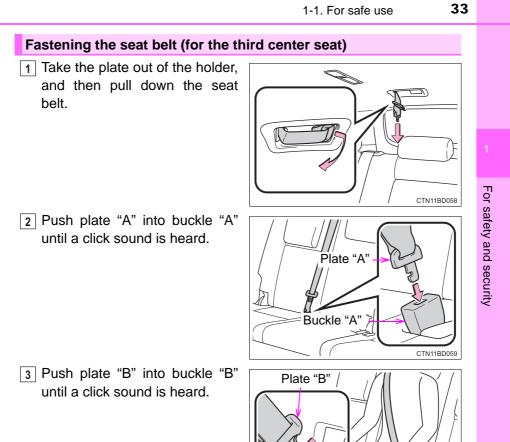


• Do not twist the seat belt.

Fastening and releasing the seat belt (except for the third center seat)

- (1) To fasten the seat belt, push the plate into the buckle until a click sound is heard.
- (2) To release the seat belt, press the release button.





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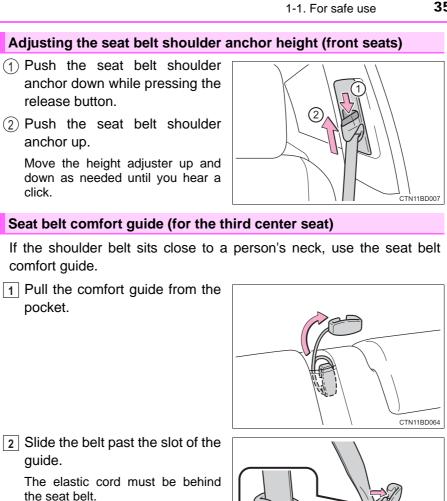
Buckle "B" CTN11BD060

34 1-1. For safe use

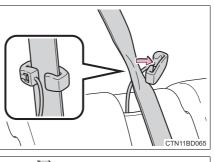
Releasing and stowing the seat belt (for the third center seat)

1 To release plate "B", press the Release release button on buckle "B" Plate "B" button Buckle "B" CTN11BD061 2 To release plate "A", insert the Plate "A" key (\rightarrow P. 124) or plate "B" into the hole on buckle "A". Buckle "A Retract the belt slowly when Plate "A releasing and stowing the seat belt. Buckle "A" -Plate "B" CTN11BD157 3 Holding plate "A" and "B" together, insert both plates into the holder on the roof.

CTN11BD063



3 Buckle the seat belt and position it comfortably.





35

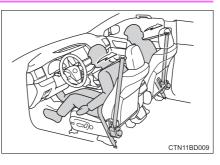
For safety and security

36 1-1. For safe use

Seat belt pretensioners (front seats)

The pretensioners help the seat belts to quickly restrain the occupants by retracting the seat belts when the vehicle is subjected to certain types of severe frontal collision or a vehicle rollover.

The pretensioners do not activate in the event of a minor frontal impact, a side impact or a rear impact.



Emergency locking retractor (ELR)

The retractor will lock the belt during a sudden stop or on impact. It may also lock if you lean forward too quickly. A slow, easy motion will allow the belt to extend so that you can move around fully.

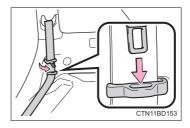
Automatic locking retractor (ALR)

When a passenger's shoulder belt is completely extended and then retracted even slightly, the belt is locked in that position and cannot be extended. This feature is used to hold the child restraint system (CRS) firmly. To free the belt again, fully retract the belt and then pull the belt out once more. (\rightarrow P. 66)

When not using the rear seat belts

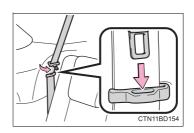
Second seat belts

Pass the outer seat belts through the seat belt hangers and secure the seat belt plates to prevent the shoulder belts from being damaged.



Third seat belts

Pass the outer seat belts through the seat belt hangers and secure the seat belt plates to prevent the shoulder belts from being damaged.



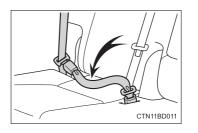
Child seat belt usage

The seat belts of your vehicle were principally designed for persons of adult size.

- Use a child restraint system appropriate for the child, until the child becomes large enough to properly wear the vehicle's seat belt. (\rightarrow P. 62)
- ●When the child becomes large enough to properly wear the vehicle's seat belt, follow the instructions regarding seat belt usage. (→P. 32)
- Replacing the belt after the pretensioner has been activated (front seats) If the vehicle is involved in multiple collisions, the pretensioner will activate for the first collision, but will not activate for the second or subsequent collisions.

Seat belt extender

If your seat belts cannot be fastened securely because they are not long enough, a personalized seat belt extender is available from your Toyota dealer free of charge.



MARNING

Observe the following precautions to reduce the risk of injury in the event of sudden braking, sudden swerving or an accident. Failure to do so may cause death or serious injury.

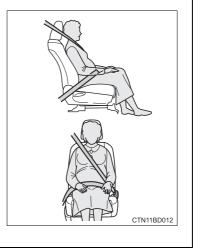
- Wearing a seat belt
 - Ensure that all passengers wear a seat belt.
 - Always wear a seat belt properly.
 - Each seat belt should be used by one person only. Do not use a seat belt for more than one person at once, including children.
 - Toyota recommends that children be seated in the rear seat and always use a seat belt and/or an appropriate child restraint system.
 - To achieve a proper seating position, do not recline the seat more than necessary. The seat belt is most effective when the occupants are sitting up straight and well back in the seats.
 - Do not wear the shoulder belt under your arm.
 - Always wear your seat belt low and snug across your hips.

Pregnant women

Obtain medical advice and wear the seat belt in the proper way. $(\rightarrow P. 32)$

Women who are pregnant should position the lap belt as low as possible over the hips in the same manner as other occupants, extending the shoulder belt completely over the shoulder and avoiding belt contact with the rounding of the abdominal area.

If the seat belt is not worn properly, not only the pregnant woman, but also the fetus could suffer death or serious injury as a result of sudden braking or a collision.



WARNING

People suffering illness

Obtain medical advice and wear the seat belt in the proper way. (\rightarrow P. 32)

When children are in the vehicle

Do not allow children to play with the seat belt. If the seat belt becomes twisted around a child's neck, it may lead to choking or other serious injuries that could result in death.

If this occurs and the buckle cannot be unfastened, scissors should be used to cut the belt.

Seat belt pretensioners (front seats)

If the pretensioner has activated, the SRS warning light will come on. In that case, the seat belt cannot be used again and must be replaced at your Toyota dealer.

Adjustable shoulder anchor (front seats)

Always make sure the shoulder belt is positioned across the center of your shoulder. The belt should be kept away from your neck, but not falling off your shoulder. Failure to do so could reduce the amount of protection in an accident and cause death or serious injuries in the event of a sudden stop, sudden swerve or accident. (\rightarrow P. 35)

Seat belt damage and wear

- Do not damage the seat belts by allowing the belt, plate, or buckle to be jammed in the door.
- Inspect the seat belt system periodically. Check for cuts, fraying, and loose parts. Do not use a damaged seat belt until it is replaced. Damaged seat belts cannot protect an occupant from death or serious injury.
- Ensure that the belt and plate are locked and the belt is not twisted. If the seat belt does not function correctly, immediately contact your Toyota dealer.
- Replace the seat assembly, including the belts, if your vehicle has been involved in a serious accident, even if there is no obvious damage.
- Do not attempt to install, remove, modify, disassemble or dispose of the seat belts. Have any necessary repairs carried out by your Toyota dealer. Inappropriate handling may lead to incorrect operation.

WARNING

Using a seat belt comfort guide (third center seat)

Failure to observe the following precautions could reduce the effectiveness of the seat belt in an accident, causing death or serious injury.

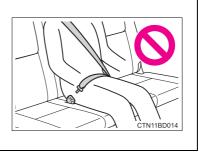
- Make sure the belt is not twisted and that it lies flat. The elastic cord must be behind the belt and the guide must be on the front.
- To reduce the chance of injury in case of a sudden stop, sudden swerve or accident while driving, remove and store the comfort guide in its pocket when it is not in use.
- Always make sure the shoulder belt is positioned across the center of the shoulder. The belt should be kept away from the neck, and should not fall off the shoulder.

Using a seat belt extender

- Do not wear the seat belt extender if you can fasten the seat belt without the extender.
- Do not use the seat belt extender when installing a child restraint system because the belt will not securely hold the child restraint system, increasing the risk of death or serious injury in the event of an accident.
- The personalized extender may not be safe on another vehicle, when used by another person, or at a different seating position other than the one originally intended.

When using the third center seat belt

Do not use the third center seat belt with either buckle released. Fastening only one of the buckles may result in death or serious injury in case of sudden braking, sudden swerving or a collision.



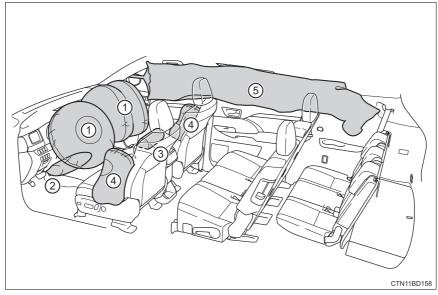
When using a seat belt extender

When releasing the seat belt, press on the buckle release button on the extender, not on the seat belt.

This helps prevent damage to the vehicle interior and the extender itself.

SRS airbags

The SRS airbags inflate when the vehicle is subjected to certain types of severe impacts that may cause significant injury to the occupants. They work together with the seat belts to help reduce the risk of death or serious injury.



SRS front airbags

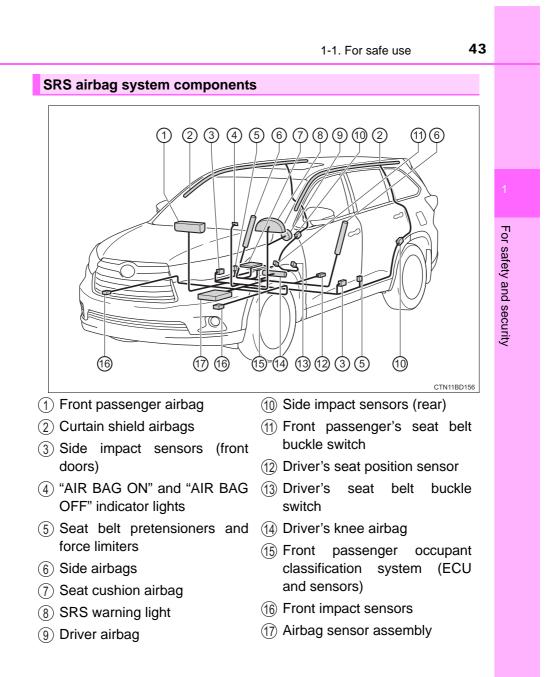
- SRS driver airbag/front passenger airbag
 Can help protect the head and chest of the driver and front passenger from impact with interior components
- (2) SRS driver's knee airbag
 Can help provide driver protection
- (3) SRS seat cushion airbagCan help restrain the front passenger

SRS side and curtain shield airbags

④ SRS front side airbagsCan help protect the torso of the front seat occupants

(5) SRS curtain shield airbags

- Can help protect primarily the head of occupants in the outer seats
- Can prevent the occupants from being thrown from the vehicle in the event of vehicle rollover



Your vehicle is equipped with ADVANCED AIRBAGS designed based on the US motor vehicle safety standards (FMVSS208). The airbag sensor assembly (ECU) controls airbag deployment based on information obtained from the sensors etc. shown in the system components diagram above. This information includes crash severity and occupant information. As the airbags deploy, a chemical reaction in the inflators quickly fills the airbags with non-toxic gas to help restrain the motion of the occupants.

🛕 WARNING

SRS airbag precautions

Observe the following precautions regarding the SRS airbags. Failure to do so may cause death or serious injury.

- The driver and all passengers in the vehicle must wear their seat belts properly.
 - The SRS airbags are supplemental devices to be used with the seat belts.
- The SRS driver airbag deploys with considerable force, and can cause death or serious injury especially if the driver is very close to the airbag. The National Highway Traffic Safety Administration (NHTSA) advises:

Since the risk zone for the driver's airbag is the first 2 - 3 in. (50 - 75 mm) of inflation, placing yourself 10 in. (250 mm) from your driver airbag provides you with a clear margin of safety. This distance is measured from the center of the steering wheel to your breastbone. If you sit less than 10 in. (250 mm) away now, you can change your driving position in several ways:

- Move your seat to the rear as far as you can while still reaching the pedals comfortably.
- Slightly recline the back of the seat. Although vehicle designs vary, many drivers can achieve the 10 in. (250 mm) distance, even with the driver seat all the way forward, simply by reclining the back of the seat somewhat. If reclining the back of your seat makes it hard to see the road, raise yourself by using a firm, non-slippery cushion, or raise the seat if your vehicle has that feature.
- If your steering wheel is adjustable, tilt it downward. This points the airbag toward your chest instead of your head and neck.

The seat should be adjusted as recommended by NHTSA above, while still maintaining control of the foot pedals, steering wheel, and your view of the instrument panel controls.

WARNING

SRS airbag precautions

If the seat belt extender has been connected to the front seat belt buckles but the seat belt extender has not also been fastened to the latch plate of the seat belt, the SRS front airbags will judge that the driver and front passenger are wearing the seat belt even though the seat belt has not been connected. In this case, the SRS front airbags may not activate correctly in a collision, resulting in death or serious injury in the event of a collision. Be sure to wear the seat belt with the seat belt extender.



- The SRS front passenger airbag also deploys with considerable force, and can cause death or serious injury especially if the front passenger is very close to the airbag. The front passenger seat should be as far from the airbag as possible with the seatback adjusted, so the front passenger sits upright.
- Improperly seated and/or restrained infants and children can be killed or seriously injured by a deploying airbag. An infant or child who is too small to use a seat belt should be properly secured using a child restraint system. Toyota strongly recommends that all infants and children be placed in the rear seats of the vehicle and properly restrained. The rear seats are safer for infants and children than the front passenger seat. (→P. 62)
- Do not sit on the edge of the seat or lean against the dashboard.



45

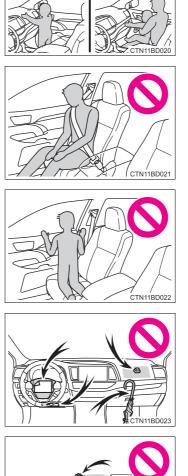
For safety and security

WARNING

46

SRS airbag precautions

- Do not allow a child to stand in front of the SRS front passenger airbag unit or sit on the knees of a front passenger.
- Do not allow the front seat occupants to hold items on their knees.
- Do not lean against the door, the roof side rail or the front, side and rear pillars.
- Do not allow anyone to kneel on the passenger seats toward the door or put their head or hands outside the vehicle.
- Do not attach anything to or lean anything against areas such as the dashboard, steering wheel pad and lower portion of the instrument panel.
 These items can become projectiles when the SRS driver, front passenger and driver's knee airbag deploy.
- Do not attach anything to areas such as a door, windshield, side window, front or rear pillar, roof side rail and assist grip.





WARNING

SRS airbag precautions

- Do not hang coat hangers or other hard objects on the coat hooks. All of these items could become projectiles and may cause death or serious injury, should the SRS curtain shield airbags deploy.
- If a vinyl cover is put on the area where the SRS driver's knee airbag will deploy, be sure to remove it.
- Do not use seat accessories which cover the parts where the SRS side airbags and SRS seat cushion airbag inflate as they may interfere with inflation of the airbags. Such accessories may prevent the side airbags and seat cushion airbag from activating correctly, disable the system or cause the side airbags and seat cushion airbag to inflate accidentally, resulting in death or serious injury.
- Do not strike or apply significant levels of force to the area of the SRS airbag components.
 - Doing so can cause the SRS airbags to malfunction.
- Do not touch any of the component parts immediately after the SRS airbags have deployed (inflated) as they may be hot.
- If breathing becomes difficult after the SRS airbags have deployed, open a door or window to allow fresh air in, or leave the vehicle if it is safe to do so. Wash off any residue as soon as possible to prevent skin irritation.
- If the areas where the SRS airbags are stored, such as the steering wheel pad and front and rear pillar garnishes are damaged or cracked, have them replaced by your Toyota dealer.
- Do not place anything, such as a cushion, on the front passenger's seat. Doing so will disperse the passenger's weight, which prevents the sensor from detecting the passenger's weight properly. As a result, the SRS front airbags for the front passenger may not deploy in the event of a collision.

For safety and security

WARNING

Modification and disposal of SRS airbag system components

Do not dispose of your vehicle or perform any of the following modifications without consulting your Toyota dealer. The SRS airbags may malfunction or deploy (inflate) accidentally, causing death or serious injury.

- Installation, removal, disassembly and repair of the SRS airbags
- Repairs, modifications, removal or replacement of the steering wheel, instrument panel, dashboard, seats or seat upholstery, front, side and rear pillars or roof side rails
- Repairs or modifications of the front fender, front bumper, or side of the occupant compartment
- Installation of a grille guard (bull bars, kangaroo bar, etc.), snow plows, winches or roof luggage carrier
- Modifications to the vehicle's suspension system
- Installation of electronic devices such as mobile two-way radios and CD players
- Modifications to your vehicle for a person with a physical disability

If the SRS airbags deploy (inflate)

- Bruising and slight abrasions may result from contact with a deploying (inflating) SRS airbag.
- A loud noise and white powder will be emitted.
- Parts of the airbag module (steering wheel hub, airbag cover and inflator) as well as the front seats, parts of the front and rear pillars, and roof side rails may be hot for several minutes. The airbag itself may also be hot.
- The windshield may crack.
- For U.S.A.: For Safety Connect subscribers, if the SRS airbags deploy or in the event of a severe rear-end collision, the system is designed to send an emergency call to the response center, notifying them of the vehicle's location (without needing to push the "SOS" button) and an agent will attempt to speak with the occupants to ascertain the level of emergency and assistance required. If the occupants are unable to communicate, the agent automatically treats the call as an emergency and helps to dispatch the necessary emergency services. (→P. 368)

HIGHLANDER_HV_U (OM48F02U)

SRS airbag deployment conditions (SRS front airbags)

 The SRS front airbags will deploy in the event of an impact that exceeds the set threshold level (the level of force corresponding to an approximately 12 -18 mph [20 - 30 km/h] frontal collision with a fixed wall that does not move or deform).

However, this threshold velocity will be considerably higher in the following situations:

- If the vehicle strikes an object, such as a parked vehicle or sign pole, which can move or deform on impact
- If the vehicle is involved in an underride collision, such as a collision in which the front of the vehicle "underrides", or goes under, the bed of a truck
- Depending on the type of collision, it is possible that only the seat belt pretensioners will activate.
- The SRS front airbags for the front passenger will not activate if there is no passenger sitting in the front passenger seat. However, the SRS front airbags for the front passenger may deploy if luggage is put in the seat, even if the seat is unoccupied. (→P. 54)
- The SRS seat cushion airbag on the front passenger's seat will not operate if the occupant is not wearing a seat belt.

SRS airbag deployment conditions (SRS side and curtain shield airbags)

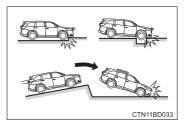
- The SRS side and curtain shield airbags will deploy in the event of an impact that exceeds the set threshold level (the level of force corresponding to the impact force produced by an approximately 3300 lb. [1500 kg] vehicle colliding with the vehicle cabin from a direction perpendicular to the vehicle orientation at an approximate speed of 12 18 mph [20 30 km/h]).
- The SRS curtain shield airbags will deploy in the event of vehicle rollover.
- The SRS side and curtain shield airbags may also deploy in the event of a severe frontal collision.

For safety and security

Conditions under which the SRS airbags may deploy (inflate), other than a collision

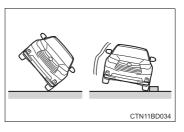
The SRS front airbags and SRS side and curtain shield airbags may also deploy if a serious impact occurs to the underside of your vehicle. Some examples are shown in the illustration.

- Hitting a curb, edge of pavement or hard surface
- Falling into or jumping over a deep hole
- Landing hard or falling



The SRS curtain shield airbags may also deploy under the situations shown in the illustration.

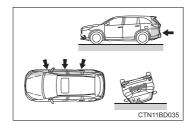
- The angle of vehicle tip-up is marginal
- The vehicle skids and hits a curb stone



Types of collisions that may not deploy the SRS airbags (SRS front airbags)

The SRS front airbags do not generally inflate if the vehicle is involved in a side or rear collision, if it rolls over, or if it is involved in a low-speed frontal collision. But, whenever a collision of any type causes sufficient forward deceleration of the vehicle, deployment of the SRS front airbags may occur.

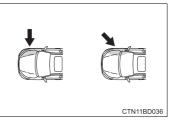
- Collision from the side
- Collision from the rear
- Vehicle rollover



Types of collisions that may not deploy the SRS airbags (SRS side and curtain shield airbags)

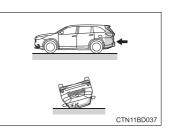
The SRS side and curtain shield airbags may not activate if the vehicle is subjected to a collision from the side at certain angles, or a collision to the side of the vehicle body other than the passenger compartment.

- Collision from the side to the vehicle body other than the passenger compartment
- Collision from the side at an angle



The SRS side airbags do not generally inflate if the vehicle is involved in a rear collision, if it rolls over, or if it is involved in a low-speed side or low-speed frontal collision.

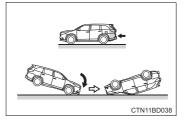
- Collision from the rear
- Vehicle rollover



The SRS curtain shield airbags do not generally inflate if the vehicle is involved in a rear collision, if it pitches end over end, or if it is involved in a low-speed side or low-speed frontal collision.

Collision from the rear

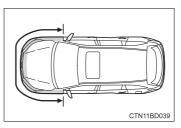
Pitching end over end



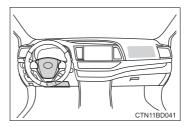
When to contact your Toyota dealer

In the following cases, the vehicle will require inspection and/or repair. Contact your Toyota dealer.

- Any of the SRS airbags have been inflated.
- The front of the vehicle is damaged or deformed, or was involved in an accident that was not severe enough to cause the SRS front airbags to inflate.

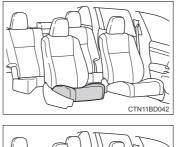


- A portion of a door or its surrounding area is damaged or deformed, or the vehicle was involved in an accident that was not severe enough to cause the SRS side and curtain shield airbags to inflate.
- The pad section of the steering wheel, dashboard near the front passenger airbag or lower portion of the instrument panel is scratched, cracked, or otherwise damaged.



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- The front passenger's seat cushion surface is scratched, cracked, or otherwise damaged.
- The surface of the seats with the side airbag is scratched, cracked, or otherwise damaged.
- The portion of the front pillars, rear pillars or roof side rail garnishes (padding) containing the curtain shield airbags inside is scratched, cracked, or otherwise damaged.



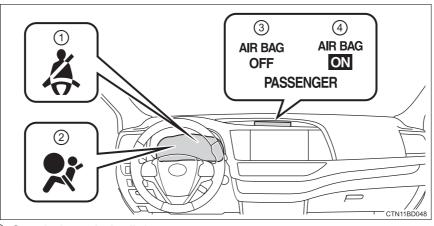




HIGHLANDER_HV_U (OM48F02U)

Front passenger occupant classification system

Your vehicle is equipped with a front passenger occupant classification system. This system detects the conditions of the front passenger seat and activates or deactivates the devices for the front passenger.



- ① Seat belt reminder light
- 2 SRS warning light
- (3) "AIR BAG OFF" indicator light
- (4) "AIR BAG ON" indicator light

Condition and operation in the front passenger occupant classification system

Adult*1

Indicator/ warning light	"AIR BAG ON" and "AIR BAG OFF" indicator lights	"AIR BAG ON"
	SRS warning light	Off
	Seat belt reminder light	Off ^{*2} or flashing ^{*3}
Devices	Front passenger airbag	
	Side airbag on the front passenger seat	Activated
	Curtain shield airbag in the front passenger side	
	Front passenger seat cushion airbag	Activated ^{*2} or deactivated ^{*3}
	Front passenger's seat belt pretensioner and force limiter	Activated

For safety and security

■ Child*4

Indicator/ warning light	"AIR BAG ON" and "AIR BAG OFF" indicator lights	"AIR BAG OFF" or "AIR BAG ON" ^{*4}
	SRS warning light	Off
	Seat belt reminder light	Off ^{*2} or flashing ^{*3}
Devices	Front passenger airbag	Deactivated or activated*4
	Side airbag on the front passenger seat	Activated
	Curtain shield airbag in the front passenger side	
	Front passenger seat cushion airbag	Deactivated or activated ^{*4, 2}
	Front passenger's seat belt pretensioner and force limiter	Activated

■ Child restraint system with infant*5

Indicator/ warning light	"AIR BAG ON" and "AIR BAG OFF" indicator lights	"AIR BAG OFF" ^{*6}
	SRS warning light	Off
	Seat belt reminder light	Off ^{*2} or flashing ^{*3}
Devices	Front passenger airbag	Deactivated
	Side airbag on the front passenger seat	Activated
	Curtain shield airbag in the front passenger side	
	Front passenger seat cushion airbag	Deactivated
	Front passenger's seat belt pretensioner and force limiter	Activated

Unoccupied			
Indicator/ warning light	"AIR BAG ON" and "AIR BAG OFF" indicator lights	"AIR BAG OFF"	
	SRS warning light	Off	
	Seat belt reminder light		
Devices	Front passenger airbag	Deactivated	
	Side airbag on the front passenger seat	Activated	
	Curtain shield airbag in the front passenger side		
	Front passenger seat cushion airbag	Deactivated	
	Front passenger's seat belt pretensioner and force limiter	Activated	

- For safety and security

1-1. F

■ There is a malfunction in the system

Indicator/ warning light	"AIR BAG ON" and "AIR BAG OFF" indicator lights	"AIR BAG OFF"
	SRS warning light	On
	Seat belt reminder light	Off
Devices	Front passenger airbag	Deactivated
	Side airbag on the front passenger seat	Activated
	Curtain shield airbag in the front passenger side	
	Front passenger seat cushion airbag	Deactivated
	Front passenger's seat belt pretensioner and force limiter	Activated

*1: The system judges a person of adult size as an adult. When a smaller adult sits in the front passenger seat, the system may not recognize him/ her as an adult depending on his/her physique and posture.

- *2: In the event the front passenger is wearing a seat belt.
- *3: In the event the front passenger does not wear a seat belt.
- *4: For some children, child in seat, child in booster seat or child in convertible seat, the system may not recognize him/her as a child. Factors which may affect this can be the physique or posture.
- *5: Never install a rear-facing child restraint system on the front passenger seat. A forward-facing child restraint system should only be installed on the front passenger seat when it is unavoidable. (→P. 62)
- *6: In case the indicator light is not illuminated, consult this manual on how to install the child restraint system properly. (\rightarrow P. 66)

WARNING Front passenger occupant classification system precautions Observe the following precautions regarding the front passenger occupant classification system. Failure to do so may cause death or serious injury. Wear the seat belt properly. Make sure the front passenger's seat belt plate has not been left inserted into the buckle before someone sits in the front passenger seat. Make sure the "AIR BAG OFF" indicator light is not illuminated when using the seat belt extender for the front passenger seat. If the "AIR BAG OFF" indicator light is illuminated, disconnect the extender tongue from the seat belt buckle, and reconnect the seat belt. Reconnect the seat belt extender after making sure the "AIR BAG ON" indicator light is illuminated. If you use the seat belt extender while the "AIR BAG OFF" indicator light is illuminated, the SRS airbags for the front passenger will not activate, which could cause death or serious injury in the event of a collision. Do not apply a heavy load to the front passenger seat or equipment (e.g. seatback pockets). Do not put weight on the front passenger seat by putting your hands or feet on the front passenger seat seatback from the rear passenger seat. • Do not let a rear passenger lift the front passenger seat with their feet or press on the seatback with their legs. Do not put objects under the front passenger seat.

59

For safety and security

🛕 WARNING

60

Front passenger occupant classification system precautions

- Do not recline the front passenger seatback so far that it touches a rear seat. This may cause the "AIR BAG OFF" indicator light to be illuminated, which indicates that the SRS airbags for the front passenger will not activate in the event of a severe accident. If the seatback touches the rear seat, return the seatback to a position where it does not touch the rear seat. Keep the front passenger seatback as upright as possible when the vehicle is moving. Reclining the seatback excessively may lessen the effectiveness of the seat belt system.
- If an adult sits in the front passenger seat, the "AIR BAG ON" indicator light is illuminated. If the "AIR BAG OFF" indicator is illuminated, ask the passenger to sit up straight, well back in the seat, feet on the floor, and with the seat belt worn correctly. If the "AIR BAG OFF" indicator still remains illuminated, either ask the passenger to move to the rear seat, or if that is not possible, move the front passenger seat fully rearward.
- When it is unavoidable to install a forward-facing child restraint system on the front passenger seat, install the child restraint system on the front passenger seat in the proper order. (→P. 66)
- Do not modify or remove the front seats.
- Do not kick the front passenger seat or subject it to severe impact. Otherwise, the SRS warning light may come on to indicate a malfunction of the front passenger occupant classification system. In this case, contact your Toyota dealer immediately.
- Child restraint systems installed on the rear seat should not contact the front seatbacks.
- Do not use a seat accessory, such as a cushion and seat cover, that covers the seat cushion surface.
- Do not modify or replace the upholstery of the front seat.

Safety information for children

Observe the following precautions when children are in the vehicle.

Use a child restraint system appropriate for the child, until the child becomes large enough to properly wear the vehicle's seat belt.

- It is recommended that children sit in the rear seats to avoid accidental contact with the shift lever, wiper switch etc.
- Use the rear door child-protector lock or the window lock switch to avoid children opening the door while driving or operating the power window accidentally.
- Do not let small children operate equipment which may catch or pinch body parts, such as the power window, hood, back door, seats etc.

WARNING

Never leave children unattended in the vehicle, and never allow children to have or use the key.

Children may be able to start the vehicle or shift the vehicle into neutral. There is also a danger that children may injure themselves by playing with the windows or other features of the vehicle. In addition, heat build-up or extremely cold temperatures inside the vehicle can be fatal to children.

Child restraint systems

A child restraint system for a small child or baby must itself be properly restrained on the seat with the LATCH anchors or the lap portion of the lap/shoulder belt.

The laws of all 50 states of the U.S.A. and Canada now require the use of child restraint systems.

Points to remember

Studies have shown that installing a child restraint on a rear seat is much safer than installing one on the front passenger seat.

- Choose a child restraint system that suits your vehicle and is appropriate to the age and size of the child.
- For installation details, follow the instructions provided with the child restraint system.

General installation instructions are provided in this manual. $(\rightarrow P. 66)$

Types of child restraints

Child restraint systems are classified into the following 3 types according to the age and size of the child:

Rear facing — Infant seat/con Forward facing — Convertible vertible seat





Booster seat





- Use a child restraint system appropriate for the child until the child becomes large enough to properly wear the vehicle's seat belt.
- If the child is too large for a child restraint system, sit the child on a rear seat and use the vehicle's seat belt. (→P. 32)

WARNING

Child restraint precautions

- For effective protection in automobile accidents and sudden stops, a child must be properly restrained, using a seat belt or child restraint system depending on the age and size of the child. Holding a child in your arms is not a substitute for a child restraint system. In an accident, the child can be crushed against the windshield, or between you and the vehicle's interior.
- Toyota strongly urges the use of a proper child restraint system that conforms to the size of the child, installed on the rear seat. According to accident statistics, the child is safer when properly restrained in the rear seat than in the front seat.
- Never install a rear-facing child restraint system on the front passenger seat even if the "AIR BAG OFF" indicator light is illuminated. In the event of an accident, the force of the rapid inflation of the front passenger airbag can cause death or serious injury to the child if the rear-facing child restraint system is installed on the front passenger seat.
- A forward-facing child restraint system may be installed on the front passenger seat only when it is unavoidable. A child restraint system that requires a top tether strap should not be used in the front passenger seat since there is no top tether strap anchor for the front passenger seat. Adjust the seatback as upright as possible and always move the seat as far back as possible even if the "AIR BAG OFF" indicator light is illuminated, because the front passenger airbag could inflate with considerable speed and force. Otherwise, the child may be killed or seriously injured.
- Do not use the seat belt extender when installing a child restraint system on the front or rear passenger seat. If installing a child restraint system with the seat belt extender connected to the seat belt, the seat belt will not securely hold the child restraint system, which could cause death or serious injury to the child or other passengers in the event of an accident.

WARNING

Child restraint precautions

- Do not allow the child to lean his/her head or any part of his/her body against the door or the area of the seat, front and rear pillars or roof side rails from which the SRS side airbags or SRS curtain shield airbags deploy even if the child is seated in the child restraint system. It is dangerous if the SRS side airbags and curtain shield airbags inflate, and the impact could cause death or serious injury to the child.
- Make sure you have complied with all installation instructions provided by the child restraint manufacturer and that the system is properly secured. If it is not secured properly, it may cause death or serious injury to the child in the event of a sudden stop or accident.

When children are in the vehicle

Do not allow children to play with the seat belt. If the seat belt becomes twisted around a child's neck, it may lead to choking or other serious injuries that could result in death.

If this occurs and the buckle cannot be unfastened, scissors should be used to cut the belt.

When the child restraint system is not in use

• Keep the child restraint system properly secured on the seat even if it is not in use. Do not store the child restraint system unsecured in the passenger compartment.

If it is necessary to detach the child restraint system, remove it from the vehicle or store it securely in the luggage compartment. If a head restraint was removed when installing a child restraint system, always install the head restraint before driving. This will prevent it from injuring passengers in the event of a sudden stop or accident.

Installing child restraints

Follow the child restraint system manufacturer's instructions. Firmly secure child restraints to the seats using the LATCH anchors or a seat belt. Attach the top tether strap when installing a child restraint.

The lap/shoulder belt can be used if your child restraint system is not compatible with the LATCH (Lower Anchors and Tethers for Children) system.

Child restraint LATCH anchors

8-seat models

LATCH anchors are provided for the outboard second seats. (Buttons displaying the location of the anchors are attached to the seats.)



7-seat models

LATCH anchors are provided for both second seats. (Buttons displaying the location of the anchors are attached to the seats.)

Seat belts equipped with a child restraint locking mechanism (ALR/ELR belts except driver's seat belt) (\rightarrow P. 36)





HIGHLANDER_HV_U (OM48F02U)

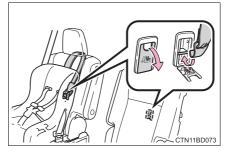
Anchor brackets (for top tether strap) ► Second seats (8-seat models)

An anchor bracket is provided for each second seat.



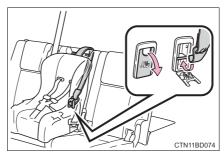
Second seats (7-seat models)

An anchor bracket is provided for both second seats.



▶ Third seats

An anchor bracket is provided for the third center seat.



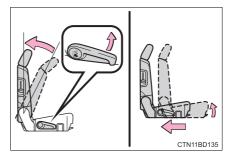
For safety and security

Installation with LATCH system

1 Fold the seatback while pulling the lever. Return the seatback and secure it at the 1st lock position (most upright position).

Move the seat as far back as possible.

If your child restraint system interferes with a head restraint and cannot be installed properly, install the child restraint system after removing the head restraint. (\rightarrow P. 170)

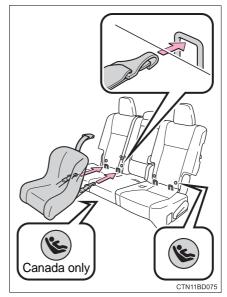


- 2 Widen the gap between the seat cushion and seatback slightly.
- ▶ Type A
- 3 Latch the hooks of the lower straps onto the LATCH anchors.

If the child restraint has a top tether strap, the top tether strap should be latched onto the top tether strap anchor.

For owners in Canada:

The symbol on a child restraint system indicates the presence of a lower connector system.

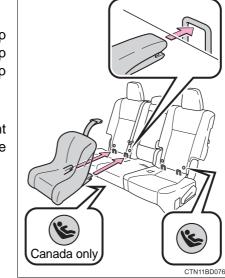


- ► Type B
- 3 Latch the buckles onto the LATCH anchors.

If the child restraint has a top tether strap, the top tether strap should be latched onto the top tether strap anchor.

For owners in Canada:

The symbol on a child restraint system indicates the presence of a lower connector system.



For safety and security

Installing child restraints using a seat belt (child restraint lock function belt)

■ Rear-facing — Infant seat/convertible seat

- 1 Adjusting the seat
 - Second seats

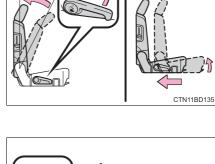
Fold the seatback while pulling the lever. Return the seatback and secure it at the 1st lock position (most upright position).

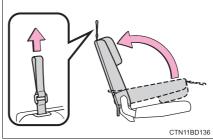
Move the seat as far back as possible.

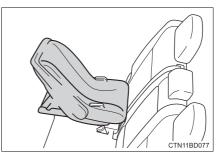
Third seats

Fold the seatback while pulling the strap. Return the seatback and secure it at the 1st lock position (most upright position).

2 Place the child restraint system on the rear seat facing the rear of the vehicle.

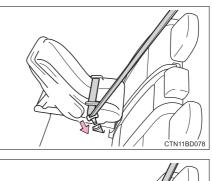


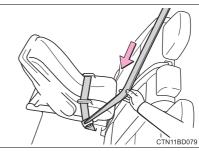




- 3 Run the seat belt through the child restraint system and insert the plate into the buckle. Make sure that the belt is not twisted.
- 4 Fully extend the shoulder belt and allow it to retract to put it in lock mode. In lock mode, the belt cannot be extended.
- 5 While pushing the child restraint system down into the rear seat, allow the shoulder belt to retract until the child restraint system is securely in place.

After the shoulder belt has retracted to a point where there is no slack in the belt, pull the belt to check that it cannot be extended.





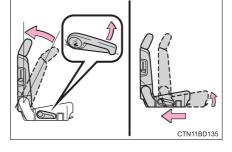
CTM11BD080

■ Forward-facing — Convertible seat

- 1 Adjusting the seat
 - Second seats

Fold the seatback while pulling the lever. Return the seatback and secure it at the 1st lock position (most upright position).

Move the seat as far back as possible.



Third seats

Fold the seatback while pulling the strap. Return the seatback and secure it at the 1st lock position (most upright position).

- CTN11BD136
- 2 Place the child restraint system on the seat facing the front of the vehicle.

If your child restraint system interferes with a head restraint and cannot be installed properly, install the child restraint system after removing the head restraint. (\rightarrow P. 170)



HIGHLANDER_HV_U (OM48F02U)

3 Run the seat belt through the child restraint system and insert the plate into the buckle. Make sure that the belt is not twisted.

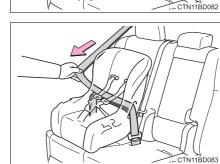
- 4 Fully extend the shoulder belt and allow it to retract to put it in lock mode. In lock mode, the belt cannot be extended.
- 5 While pushing the child restraint system into the rear seat, allow the shoulder belt to retract until the child restraint system is securely in place.

After the shoulder belt has retracted to a point where there is no slack in the belt, pull the belt to check that it cannot be extended.

5 While pushing the chil restraint system into the rea



1-1. For safe use



73



6 If the child restraint has a top tether strap, the top tether strap should be latched onto the top tether strap anchor. (\rightarrow P. 76)

HIGHLANDER_HV_U (OM48F02U)

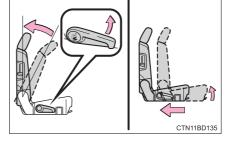
Booster seat

1 Adjusting the seat

Second seats

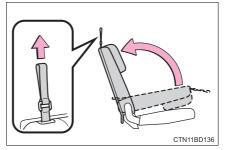
Fold the seatback while pulling the lever. Return the seatback and secure it at the 1st lock position (most upright position).

Move the seat as far back as possible.



Third seats

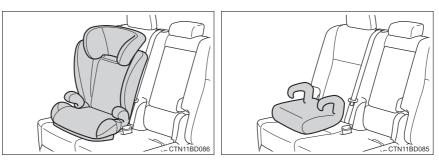
Fold the seatback while pulling the strap. Return the seatback and secure it at the 1st lock position (most upright position).



2 Place the child restraint system on the seat facing the front of the vehicle.

If your child restraint system interferes with a head restraint and cannot be installed properly, install the child restraint system after removing the head restraint. (\rightarrow P. 170)

- ► High back type
- Booster type



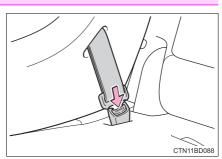
3 Sit the child in the child restraint system. Fit the seat belt to the child restraint system according to the manufacturer's instructions and insert the plate into the buckle. Make sure that the belt is not twisted.



Check that the shoulder belt is correctly positioned over the child's shoulder and that the lap belt is as low as possible. (\rightarrow P. 32)

Removing a child restraint installed with a seat belt

Push the buckle release button and fully retract the seat belt.



For safety and security

HIGHLANDER_HV_U (OM48F02U)

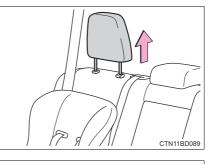
76 1-1. For safe use

Child restraint systems with a top tether strap

1 Raise the head restraint so that the top tether strap can easily be passed between the head restraint and seatback.

If your child restraint system interferes with a head restraint and cannot be installed properly, install the child restraint system after removing the head restraint. (\rightarrow P. 170)

2 Secure the child restraint system using the seat belt or LATCH anchors.

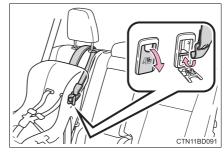




3 Open the anchor bracket cover, latch the hook onto the anchor bracket and tighten the top tether strap.

Run the top tether strap under the head restraint.

Make sure the top tether strap is securely latched.



HIGHLANDER_HV_U (OM48F02U)

1-1. For safe use

Laws and regulations pertaining to anchorages

The LATCH system conforms to FMVSS225 or CMVSS210.2. Child restraint systems conforming to FMVSS213 or CMVSS213 specifications can be used.

This vehicle is designed to conform to the SAE J1819.

WARNING

When installing a booster seat

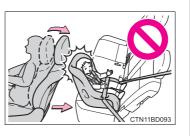
To prevent the belt from going into ALR lock mode, do not fully extend the shoulder belt. ALR mode causes the belt to tighten only. This could cause injury or discomfort to the child. (\rightarrow P. 36)

When installing a child restraint system

Follow the directions given in the child restraint system installation manual and fix the child restraint system securely in place.

If the child restraint system is not correctly fixed in place, the child or other passengers may be seriously injured or even killed in the event of a sudden braking, sudden swerving or an accident.

- If the driver's seat interferes with the child restraint system and prevents it from being attached correctly, attach the child restraint system to the right-hand second seat.
- Adjust the front passenger seat so that it does not interfere with the child restraint system.
- Only put a forward-facing child restraint system on the front seat when unavoidable. When installing a forward-facing child restraint system on the front passenger seat, move the seat as far back as possible even if the "AIR BAG OFF" indicator light is illuminated. Failure to do so may result in death or serious injury if the airbags deploy (inflate).





78 1-1. For safe use

WARNING

When installing a child restraint system

- When installing a child restraint system on the center second and third seat, adjust both seat cushions to the same position (second seat only) and align both seatbacks at the same angle. The seatbacks must be adjusted to the same angle. Otherwise, the child restraint system cannot be securely restrained and this may cause death or serious injury in the event of sudden braking, sudden swerving or an accident.
- When using the LATCH anchors for a child restraint system, move the seat as far back as possible (second seat only), with the seatback close to the child restraint system.
- When a booster seat is installed, always ensure that the shoulder belt is positioned across the center of the child's shoulder. The belt should be kept away from the child's neck, but not so that it could fall off the child's shoulder. Failing to do so may result in death or serious injury in the event of sudden braking, sudden swerving or an accident.
- Ensure that the belt and plate are securely locked and the seat belt is not twisted.
- Shake the child restraint system left and right, and forward and backward to ensure that it has been securely installed.
- After securing a child restraint system, never adjust the seat.
- Follow all installation instructions provided by the child restraint system manufacturer.
- When using the right-hand second and third seat for the child restraint system, do not sit in the center second and third seat. Seat belt function may be impaired, such as being positioned overly high or loose-fitting, which may result in death or serious injury in the event of sudden braking, sudden swerving or an accident.



1-1. For safe use

MARNING

Do not use a seat belt extender

If a seat belt extender is used when installing a child restraint system, the seat belt will not securely hold the child restraint system, which could cause death or serious injury to the child or other passengers in the event of sudden braking, sudden swerving or an accident.

To correctly attach a child restraint system to the anchors

When using the LATCH anchors, be sure that there are no foreign objects around the anchors and that the seat belt is not caught behind the child restraint system. Make sure the child restraint system is securely attached, or it may cause death or serious injury to the child or other passengers in the event of sudden braking, sudden swerving or an accident.

79

HIGHLANDER_HV_U (OM48F02U)

Exhaust gas precautions

Harmful substance to the human body is included in exhaust gases if inhaled.

Exhaust gases include harmful carbon monoxide (CO), which is colorless and odorless. Observe the following precautions.

Failure to do so may cause exhaust gases enter the vehicle and may lead to an accident caused by light-headedness, or may lead to death or a serious health hazard.

Important points while driving

- Keep the back door and glass hatch closed.
- If you smell exhaust gases in the vehicle even when the back door and glass hatch are closed, open the windows and have the vehicle inspected at your Toyota dealer as soon as possible.

When parking

- If the vehicle is in a poorly ventilated area or a closed area, such as a garage, stop the hybrid system.
- Do not leave the vehicle with the hybrid system on for a long time. If such a situation cannot be avoided, park the vehicle in an open space and ensure that exhaust fumes do not enter the vehicle interior.
- Do not leave the hybrid system operating in an area with snow build-up, or where it is snowing. If snowbanks build up around the vehicle while the hybrid system is operating, exhaust gases may collect and enter the vehicle.

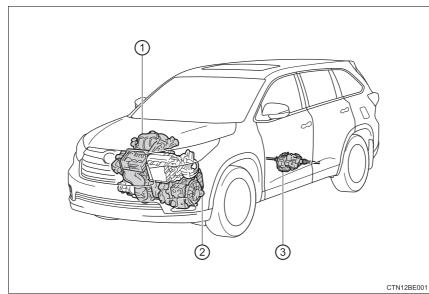
Exhaust pipe

The exhaust system needs to be checked periodically. If there is a hole or crack caused by corrosion, damage to a joint or abnormal exhaust noise, be sure to have the vehicle inspected and repaired by your Toyota dealer.

Hybrid system features

Your vehicle is a hybrid vehicle. It has characteristics different from conventional vehicles. Be sure you are closely familiar with the characteristics of your vehicle, and operate with care.

The hybrid system combines the use of a gasoline engine and an electric motor (traction motor) according to driving conditions, improving fuel efficiency and reducing exhaust emissions.



(1) Gasoline engine

(2) Front electric motor (traction motor)

(3) Rear electric motor (traction motor)

82 1-2. Hybrid system

When stopped/during start off

The gasoline engine stops when the vehicle is stopped. During start off, the electric motor (traction motor) drives the vehicle. At slow speeds or when traveling down a gentle slope, the engine is stopped and the electric motor (traction motor) is used.

During normal driving

The gasoline engine is predominantly used. The electric motor (traction motor) charges the hybrid battery (traction battery) as necessary.

When accelerating sharply

When the accelerator pedal is depressed heavily, the power of the hybrid battery (traction battery) is added to that of the gasoline engine via the electric motor (traction motor).

When braking (regenerative braking)

The electric motor (traction motor) charges the hybrid battery (traction battery).

Vehicle Proximity Notification System

When the gasoline engine is off while driving, a sound is produced to warn pedestrians, people riding bicycles or other people and vehicles in the surrounding area that the vehicle is approaching. The pitch of the sound adjusts according to vehicle speed. When vehicle speed is approximately 16 mph (25 km/h) or more, the warning system turns off.

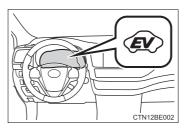
Regenerative braking

In the following situations, kinetic energy is converted to electric energy and deceleration force can be obtained in conjunction with the recharging of the hybrid battery (traction battery).

- The accelerator pedal is released while driving with the shift lever in D or S.
- The brake pedal is depressed while driving with the shift lever in D or S.

EV indicator

The EV indicator comes on when the vehicle is driven using only the electric motor (traction motor) or the gasoline engine is stopped.



Conditions in which the gasoline engine may not stop

The gasoline engine starts and stops automatically. However, it may not stop automatically in the following conditions:

- During gasoline engine warm-up
- During hybrid battery (traction battery) charging
- When the temperature of the hybrid battery (traction battery) is high or low
- When the heater is switched on

Charging the hybrid battery (traction battery)

- As the gasoline engine charges the hybrid battery (traction battery), the battery does not need to be charged from an outside source. However, if the vehicle is left parked for a long time the hybrid battery will slowly discharge. For this reason, be sure to drive the vehicle at least once every few months for at least 30 minutes or 10 miles (16 km). If the hybrid battery becomes fully discharged and you are unable to jump-start the vehicle with the 12-volt battery, contact your Toyota dealer.
- If the shift lever is in N, the hybrid battery (traction battery) will not be charged. Always shift the shift lever in P when the vehicle is stopped. When driving in heavy traffic, operate the vehicle with the shift lever in D or S to avoid discharging the hybrid battery (traction battery).
- To help prevent the 12-volt battery from becoming discharged, drive the vehicle at least once a month, and operate the accessories only when the "READY" indicator is on. When parking the vehicle, make sure the doors are closed and all lights are turned off.

84 1-2. Hybrid system

Charging the 12-volt battery

→P. 518

After the 12-volt battery has discharged or has been changed or removed

The gasoline engine may not stop even if the vehicle is running on the hybrid battery (traction battery). If this continues for a few days, contact your Toyota dealer.

Sounds and vibrations specific to a hybrid vehicle

There may be no engine sounds or vibration even though the vehicle is able to move. Always shift the shift lever to P when parked.

The following sounds or vibrations may occur when the hybrid system is operating and are not a malfunction:

Motor sounds may be heard from the engine compartment.

- Sounds may be heard from the hybrid battery (traction battery) under the rear seats when the hybrid system starts or stops.
- Sounds from the hybrid system may be heard when the back door is open.
- Sounds may be heard from the hybrid transmission when the gasoline engine starts or stops, or during idling.
- Engine sounds may be heard when accelerating sharply.
- Sounds may be heard due to regenerative braking when the brake pedal is depressed or accelerator is loosened.
- Vibration may be felt when the gasoline engine starts or stops.
- Cooling fan sounds may be heard from the air intake vents under the rear seat.

Vehicle Proximity Notification System

In the following cases, the Vehicle Proximity Notification System sound may be difficult for pedestrians, people riding bicycles or other people and vehicles in the surrounding area to hear:

- When there is a lot of noise in the vicinity
- When it is raining or during strong winds
- When in the area surrounding the rear of the vehicle, rather than in front of the vehicle

Maintenance, repair, recycling, and disposal

Contact your Toyota dealer regarding maintenance, repair, recycling and disposal. Do not dispose of the vehicle yourself.

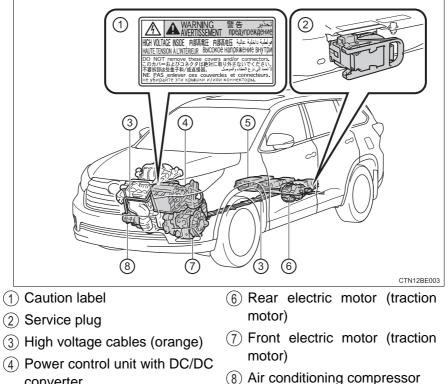
Customization

Settings (e.g. on/off operation of the EV indicator) can be changed. (Customizable features \rightarrow P. 556)

HIGHLANDER_HV_U (OM48F02U)

Hybrid system precautions

Take care when handling the hybrid system, as it contains a high voltage system (about 650 V at maximum) as well as parts that become extremely hot when the hybrid system is operating. Obey the caution labels attached to the vehicle.



tery)

converter (5) Hybrid battery (traction bat(8) Air conditioning compressor

86 1-2. Hybrid system

Hybrid battery (traction battery) air vents

There are air intake vents under the second seats for the purpose of cooling the hybrid battery (traction battery). If the vents become blocked, the hybrid battery may overheat, leading to a reduction in hybrid battery output.



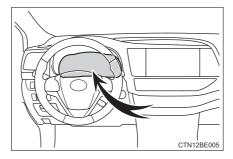
Emergency shut off system

When a certain level of impact is detected by the impact sensor, the emergency shut off system blocks off the high voltage current and stops the fuel pump to minimize the risk of electrocution and fuel leakage. If the emergency shut off system activates, your vehicle will not restart. To restart the hybrid system, contact your Toyota dealer.

Hybrid warning message

A message is automatically displayed when a malfunction occurs in the hybrid system or an improper operation is attempted.

If a warning message is shown on the multi-information display, read the message and follow the instructions. (\rightarrow P. 466)



If a warning light comes on, a warning message is displayed, or the 12volt battery is disconnected

The hybrid system may not start. In that case, try to start the system again. If the "READY" indicator does not come on, contact your Toyota dealer.

When refueling, the fuel filler door may take a few moments to open

As part of emission system operation, it may take up to 10 seconds for the fuel filler door to automatically release after the opener switch is pressed. Before refueling is possible, a message will be shown on the multi-information display. (\rightarrow P. 259)

Running out of fuel

When the vehicle has run out of fuel and the hybrid system cannot be started, refuel the vehicle with at least enough gasoline to make the low fuel level warning light (\rightarrow P. 459) go off. If there is only a small amount of fuel, the hybrid system may not be able to start. (The minimum amount of fuel to add to make the low fuel level warning light go out is about 2.6 gal. [9.7 L, 2.1 Imp. gal.], when the vehicle is on a level surface. This value may vary when the vehicle is on a slope.)

Electromagnetic waves

- High voltage parts and cables on the hybrid vehicles incorporate electromagnetic shielding, and therefore emit approximately the same amount of electromagnetic waves as conventional gasoline powered vehicles or home electronic appliances.
- Your vehicle may cause sound interference in some third party-produced radio parts.

Hybrid battery (traction battery)

The hybrid battery (traction battery) has a limited service life. The lifespan of the hybrid battery (traction battery) can change in accordance with driving style and driving conditions.

1-2. Hybrid system

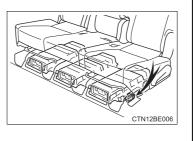
WARNING

88

High voltage precautions

The vehicle has high voltage DC and AC systems as well as a 12-volt system. DC and AC high voltage is very dangerous and can cause severe burns and electric shock that may result in death or serious injury.

- Never touch, disassemble, remove or replace the high voltage parts, cables or their connectors.
- The hybrid system will become hot after starting as the system uses high voltage. Be careful of both the high voltage and the high temperature, and always obey the caution labels attached to the vehicle.
- Never try to open the service plug access hole located on the left-hand side of the second seat base. The service plug is used only when the vehicle is serviced and is subject to high voltage.



1-2. Hybrid system

WARNING

Road accident cautions

Observe the following precautions to reduce the risk of death or serious injury:

- Pull your vehicle off the road, shift the shift lever to P, apply the parking brake, and turn the hybrid system off.
- Do not touch the high voltage parts, cables or connectors.
- If electric wires are exposed inside or outside your vehicle, an electric shock may occur. Never touch exposed electric wires.
- If a fluid leak occurs, do not touch the fluid as it may be strong alkaline electrolyte from the hybrid battery (traction battery). If it comes into contact with your skin or eyes, wash it off immediately with a large amount of water or, if possible, boric acid solution. Seek immediate medical attention.
- If a fire occurs in the hybrid vehicle, leave the vehicle as soon as possible. Never use a fire extinguisher that is not meant for electric fires. Using even a small amount of water may be dangerous.
- If your vehicle needs to be towed, do so with all four wheels raised. If the wheels connected to the electric motor (traction motor) are on the ground when towing, the motor may continue to generate electricity. This may cause a fire. (→P. 452)
- Carefully inspect the ground under the vehicle. If you find that liquid has leaked onto the ground, the fuel system may have been damaged. Leave the vehicle as soon as possible.

1-2. Hybrid system

MARNING

90

Hybrid battery (traction battery)

Your vehicle contains a sealed nickel-metal hydride battery. Never resell, hand over or modify the hybrid battery. To prevent accidents, hybrid batteries that have been removed from a disposed vehicle are collected through your Toyota dealer. Do not dispose of the battery yourself.

Unless the battery is properly collected, the following may occur, resulting in death or serious injury:

- The hybrid battery may be illegally disposed of or dumped, and someone may touch a high voltage part, resulting in an electric shock.
- The hybrid battery is intended to be used exclusively with your hybrid vehicle. If the hybrid battery is used outside of your vehicle or modified in any way, accidents such as electric shock, heat generation, smoke generation, an explosion and electrolyte leakage may occur.

When reselling or handing over your vehicle, the possibility of an accident is extremely high because the person receiving the vehicle may not be aware of these dangers.

If your vehicle is disposed of without the hybrid battery having been removed, there is a danger of serious electric shock if high voltage parts, cables and their connectors are touched. In the event that your vehicle must be disposed of, the hybrid battery must be disposed of by your Toyota dealer. If the hybrid battery is not disposed of properly, it may cause electric shock that can result in death or serious injury.

Hybrid battery air vents

- Do not put foreign objects over the air vents. The hybrid battery (traction battery) may overheat and be damaged.
- Clean the air vents regularly to prevent the hybrid battery (traction battery) from overheating.
- Do not wet or allow foreign substances to enter the air vents as this may cause a short circuit and damage the hybrid battery (traction battery).
- Do not carry large amounts of water such as water cooler bottles in the vehicle. If water spills onto the hybrid battery (traction battery), the battery may be damaged.

HIGHLANDER_HV_U (OM48F02U)

Immobilizer system

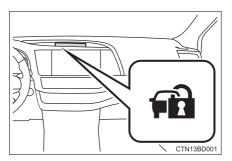
The vehicle's keys have built-in transponder chips that prevent the hybrid system from starting if a key has not been previously registered in the vehicle's on-board computer.

Never leave the keys inside the vehicle when you leave the vehicle.

This system is designed to help prevent vehicle theft but does not guarantee absolute security against all vehicle thefts.

The indicator light flashes after the power switch has been turned off to indicate that the system is operating.

The indicator light stops flashing after the power switch has been turned to ACCESSORY or ON mode to indicate that the system has been canceled.



For safety and security

91

System maintenance

The vehicle has a maintenance-free type immobilizer system.

Conditions that may cause the system to malfunction

- If the grip portion of the key is in contact with a metallic object
- If the key is in close proximity to or touching a key to the security system (key with a built-in transponder chip) of another vehicle

Certification for the engine immobilizer system

▶ For vehicles sold in the U.S.A.

FCC ID: NI4TMIMB-3

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.

FCC WARNING

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

92 1-3. Theft deterrent system

▶ For vehicles sold in Canada

This device complies with Industry Canada licence-exempt RSS standard(s). 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.

To ensure the system operates correctly

Do not modify or remove the system. If modified or removed, the proper operation of the system cannot be guaranteed.

Alarm^{*}

The alarm

The alarm uses light and sound to give an alert when an intrusion is detected.

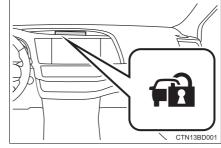
The alarm is triggered in the following situations when the alarm is set:

- A locked door is unlocked or opened in any way other than using the entry function, wireless remote control or mechanical key.
- The hood is opened.
- The locked glass hatch is opened in any way other than using the entry function.
- The battery is reconnected.

Setting the alarm system

Close the doors, glass hatch and hood, and lock all the doors. The system will be set automatically after 30 seconds.

The indicator light changes from being on to flashing when the system is set.



93

*: If equipped

94 1-3. Theft deterrent system

Deactivating or stopping the alarm

Do one of the following to deactivate or stop the alarm:

- Unlock the doors.
- Turn the power switch to ACCESSORY or ON mode, or start the hybrid system. (The alarm will be deactivated or stopped after a few seconds.)
- Open the glass hatch using the entry function.

System maintenance

The vehicle has a maintenance-free type alarm system.

Items to check before locking the vehicle

To prevent unexpected triggering of the alarm and vehicle theft, make sure of the following:

Nobody is in the vehicle.

- The windows and following openings are closed before the alarm is set.
 - · The glass hatch
 - The moon roof (if equipped)
 - The panoramic moon roof (if equipped)
- No valuables or other personal items are left in the vehicle.

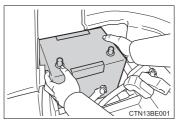
Triggering of the alarm

The alarm may be triggered in the following situations: (Stopping the alarm deactivates the alarm system.)

 A person inside the vehicle opens a door or the hood, or unlocks the vehicle using a inside lock button.



 The 12-volt battery is recharged or replaced when the vehicle is locked. (→P. 518)



Alarm-operated door lock

In the following situations, the doors are locked automatically:

- When a person inside the vehicle triggers the alarm by unlocking a door or the back door.
- When a person inside the vehicle unlocks a door or the back door while the alarm is operating.

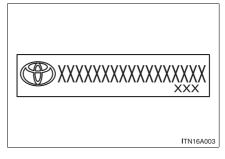
To ensure the system operates correctly

Do not modify or remove the system. If modified or removed, the proper operation of the system cannot be guaranteed.

96 1-3. Theft deterrent system

Theft prevention labels (U.S.A.)

These labels are attached to the vehicle to reduce vehicle theft by facilitating the tracing and recovery of parts from stolen vehicles. Do not remove under penalty of law.



Instrument cluster	2	
	2	Instrument clus

2. Instrument cluster Warning lights and

Warning lights and	
indicators	. 98
Gauge and meters	103
Multi-information display	
(with monochrome	
display)	107
Multi-information display	
(with color display)	111
Energy monitor/	
consumption screen	117

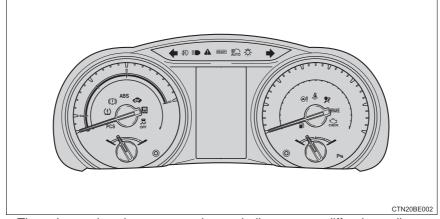
Warning lights and indicators

The warning lights and indicators on the instrument cluster and center panel inform the driver of the status of the vehicle's various systems.

For the purpose of explanation, the following illustration displays all warning lights and indicators illuminated.

- ► Vehicles with monochrome display

Vehicles with color display



The units used on the meters and some indicators may differ depending on the target region.

Warning lights

Warning lights inform the driver of malfunctions in the indicated vehicle's systems.

*1 BRAKE (U.S.A.)	Brake system warning light (→P. 457)	*1 (Canada)	ABS warning light (→P. 458)	
*1 (Canada)	Brake system warning light (→P. 457)	*1	Electric power steering system warning light (→P. 458)	2
*1 (Yellow)	Brake system warning light (→P. 457)	*1, 2, 3 PCS	Pre-collision system warning light (→P. 458)	Instrument cluster
*1, 2	Charging system warning light (\rightarrow P. 457)	*1	Slip indicator (\rightarrow P. 458)	er
*1, 2	Low engine oil pressure warning light (\rightarrow P. 457)	*2	Open door warning light (→P. 459)	
*1 CHECK (U.S.A.)	Malfunction indicator lamp (→P. 457)		Low fuel level warning light (→P. 459)	
*1 ICI (Canada)	Malfunction indicator lamp (→P. 457)	×.	Seat belt reminder light (→P. 459)	
*1	SRS warning light (→P. 458)	*1	Master warning light (→P. 459)	
*1 ABS (U.S.A.)	ABS warning light (→P. 458)	*1	Tire pressure warning light (→P. 459)	



4 Vehicle proximity notification system warning light (\rightarrow P. 459)

*1: These lights turn on when the power switch is turned to ON mode to indicate that a system check is being performed. They will turn off after the hybrid system is on, or after a few seconds. There may be a malfunction in a system if a light does not come on, or if the lights do not turn off. Have the vehicle inspected by your Toyota dealer.

*2: If equipped

 *3 : The light flashes to indicate a malfunction.

*4: This light illuminates on the center panel.

Indicators

The indicators inform the driver of the operating state of the vehicle's various systems.



Turn signal indicator $(\rightarrow P. 242)$



Headlight indicator $(\rightarrow P. 244)$



Tail light indicator $(\rightarrow P. 244)$



Headlight high beam indicator (\rightarrow P. 245)



Automatic High Beam indicator (\rightarrow P. 248)



Front fog light indicator $(\rightarrow P. 254)$



Cruise control indicator $(\rightarrow P. 264)$



Cruise control "SET" indicator (\rightarrow P. 264)



LDA (Lane Departure Alert) indicator $(\rightarrow P. 283)$



Intuitive parking assist indicator

*2 ECO MODE	"ECO MODE" indicator (→P. 238)
*1	Slip indicator (\rightarrow P. 293)
*1	VSC OFF indicator $(\rightarrow P. 293)$
*1, 2, 4	Pre-collision system warning light (\rightarrow P. 298)
*2, 5, 6	BSM (Blind Spot Monitor) outside rear view mirror indicators $(\rightarrow P. 304)$
*7	Security indicator (→P. 91, 93)
READY	"READY" indicator (→P. 229)
	EV indicator (→P. 83)
	EV drive mode indicator



AIR BAG AIR BAG OFF ON PASSENGER

EV drive mode indicator $(\rightarrow P. 235)$



"AIR BAG ON/ OFF" indicator $(\rightarrow P. 54)$ 2

Instrument cluster

- *1: These lights turn on when the power switch is turned to ON mode to indicate that a system check is being performed. They will turn off after the hybrid system is on, or after a few seconds. There may be a malfunction in a system if a light does not come on, or if the lights do not turn off. Have the vehicle inspected by your Toyota dealer.
- *2: If equipped
- *3: Refer to "Navigation and Multimedia System Owner's Manual".
- *4: The light comes on when the system is turned off. The light flashes faster than usual to indicate that the system is operating.
- *5: In order to confirm operation, the BSM outside rear view mirror indicators illuminate in the following situations:
 - When the power switch is turned to ON mode while the BSM main switch is set to ON.
 - When the BSM main switch is set to ON while the power switch is in ON mode.

If the system is functioning correctly, the BSM outside rear view mirror indicators will turn off after a few seconds.

If the BSM outside rear view mirror indicators do not illuminate or do not turn off, there may be a malfunction in the system.

If this occurs, have the vehicle inspected by your Toyota dealer.

- *6: This light illuminates on the outside rear view mirrors.
- *7: This light illuminates on the center panel.

WARNING

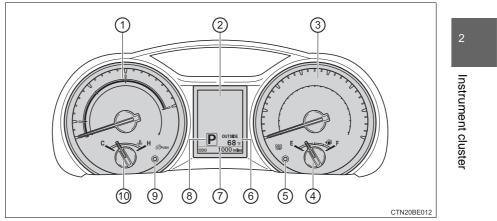
If a safety system warning light does not come on

Should a safety system light such as the ABS and SRS warning lights not come on when you start the engine, this could mean that these systems are not available to help protect you in an accident, which could result in death or serious injury. Have the vehicle inspected by your Toyota dealer immediately if this occurs.

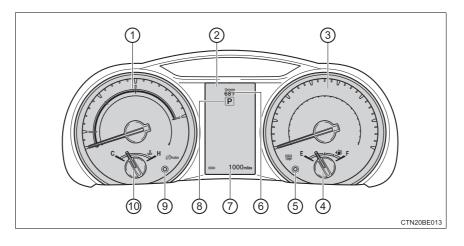
Gauge and meters

The displayed content may differ depending on the type of meter.

Vehicles with monochrome display



Vehicles with color display



1 Hybrid System Indicator

Displays hybrid system output or regeneration level.

(2) Multi-information display

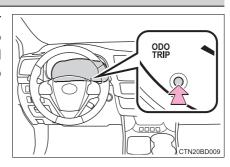
Presents the driver with a variety of driving-related data.

- ③ Speedometer
- 4 Fuel gauge
- (5) Trip meter reset knob Switches the trip information.
- 6 Outside temperature
- (7) Odometer and trip meter display
- (8) Shift position and shift range
 - Displays the selected shift position or selected shift range. (\rightarrow P. 237)
- (9) Meter panel lights control button
- (1) Engine coolant temperature gauge

Displays the engine coolant temperature.

Changing the trip meter display

Switches between the trip meter "A" and "B" displays. When the trip meter is displayed, pressing and holding the knob will reset the trip meter.

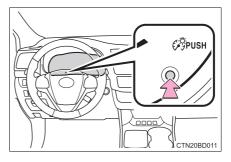


Instrument panel light control

The brightness of the meter panel lights can be adjusted.

Pressing the button will adjust the brightness of the meter panel lights.

The brightness level of the meters when the surroundings are bright (day mode) and dark (night mode) can be adjusted individually. However, when in day mode, adjusting the brightness level will also change the brightness level of night mode.



HIGHLANDER_HV_U (OM48F02U)

The meters and display illuminate when The power switch is in ON mode.

Hybrid System Indicator

1 Charge area

Shows regenerative charging.

2 Hybrid Eco area

Shows that gasoline engine power is not being used very often.

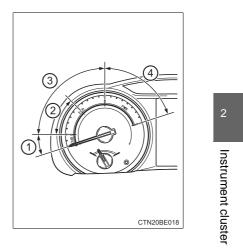
The gasoline engine will automatically stop and restart under various conditions.

③ Eco area

Shows that the vehicle is being driven in an Eco-friendly manner.

④ Power area

Shows that an Eco-friendly driving range is being exceeded (during full power driving etc.)



- By keeping the indicator needle within Eco area, more Eco-friendly driving can be achieved.
- Charge area indicates regeneration^{*} status. Regenerated energy will be used to charge the battery.
- *: When used in this manual, "regeneration" refers to the conversion of energy created by the movement of the vehicle into electrical energy.

Engine speed

On hybrid vehicles, engine speed is precisely controlled in order to help improve fuel efficiency and reduce exhaust emissions etc.

There are times when the engine speed that is displayed may differ even when vehicle operation and driving conditions are the same.

Outside temperature display

In the following situations, the correct outside temperature may not be displayed, or the display may take longer than normal to change.

- When stopped, or driving at low speeds (less than 12 mph [20 km/h])
- When the outside temperature has changed suddenly (at the entrance/exit of a garage, tunnel, etc.)

106 2. Instrument cluster

To prevent damage to the engine and its components

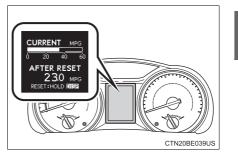
- Do not let the indicator needle of the tachometer enter the red zone, which indicates the maximum engine speed.
- The engine may be overheating if the engine coolant temperature gauge is in the red zone (H). In this case, immediately stop the vehicle in a safe place, and check the engine after it has cooled completely. (→P. 521)

Multi-information display (with monochrome display)

Display contents

The multi-information display presents the driver with a variety of driving-related data.

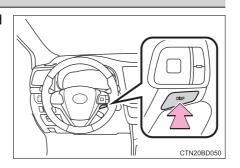
- Drive information
- Warning messages (\rightarrow P. 466)
- Energy monitor (\rightarrow P. 117)



Instrument cluster

Drive information

Items displayed can be switched by pressing the "DISP" switch.



Current fuel consumption

Displays the current rate of fuel consumption.

Average fuel economy (after reset*)

Displays the average fuel economy since the function was reset respectively

Use the displayed average fuel economy as a reference.

Distance (driving range)

Displays the estimated maximum distance that can be driven with the quantity of fuel remaining and the distance driven after the function was reset respectively

- This distance is computed based on your average fuel consumption. As a result, the actual distance that can be driven may differ from that displayed.
- When only a small amount of fuel is added to the tank, the display may not be updated.

When refueling, turn the power switch off. If the vehicle is refueled without turning the power switch off, the display may not be updated.

Average fuel economy (after refuel)

Displays the average fuel economy since the vehicle was refueled respectively

Use the displayed average fuel economy as a reference.

Distance (after reset*)

Displays the estimated maximum distance driven after the function was reset respectively

Average vehicle speed (after reset^{*})

Displays the average vehicle speed since the function was reset

Customization

EV Indicator Light, Language and Units settings can be changed. $(\rightarrow P. 110)$

Energy monitor

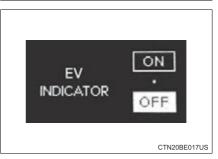
→P. 117

*: Press and hold the "DISP" switch to reset.

Settings display

Changing the settings

- 1 Press the "DISP" switch to display the setting display while the vehicle is stopped, and then press and hold the "DISP" switch to display the customize mode display.
- 2 Press the "DISP" switch to select the item to be set, then press and hold the "DISP" switch.
- 3 Press the "DISP" switch to select the desired setting, and then press and hold the "DISP" switch.



EV INDICATOR

LANGUAGE UNITS EXIT

To go back to the previous screen or exit the customize mode, press the "DISP" switch to select "EXIT", and then press and hold the "DISP" switch.

109

2

Instrument cluster

SETTINGS

PRESS AND HOLD

CTN20BD033US

CTN20BE016US

Customizable items

• EV Indicator Light

Select to activate/deactivate the EV Indicator Light.

Language

Select to change the language on the display.

Units

Select to change the unit of measure for fuel consumption.

Settings can be changed. (Customizable features: \rightarrow P. 557)

Setting display automatic cancelation

In the following situations, setting display in which the settings can be changed through the "DISP" switch will automatically be turned off.

 \blacksquare When a warning message appears while the setting display is displayed

• When the vehicle begins to move while the setting display is displayed

Liquid crystal display

Small spots or light spots may appear on the display. This phenomenon is characteristic of liquid crystal displays, and there is no problem continuing to use the display.

WARNING

The information display at low temperatures

Allow the interior of the vehicle to warm up before using the liquid crystal information display. At extremely low temperatures, the display monitor may respond slowly, and display changes may be delayed.

For example, there is a lag between the driver's shifting and the new gear number appearing on the display. This lag could cause the driver to downshift again, causing rapid and excessive engine braking and possibly an accident resulting in death or injury.

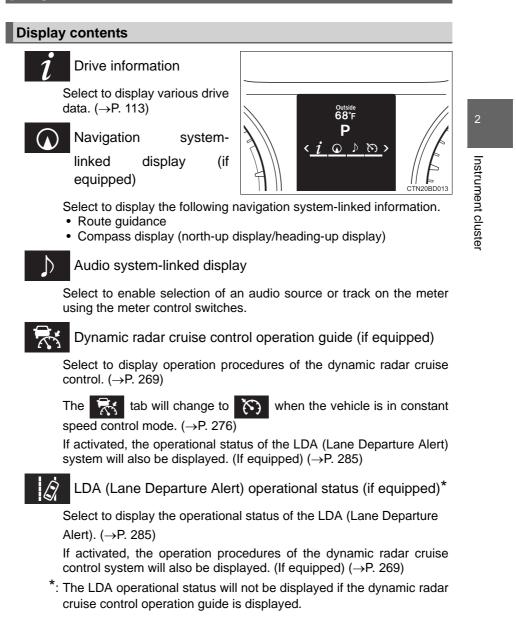
Cautions during setting up the display

As the hybrid system needs to be running during setting up the display, ensure that the vehicle is parked in a place with adequate ventilation. In a closed area such as a garage, exhaust gases including harmful carbon monoxide (CO) may collect and enter the vehicle. This may lead to death or a serious health hazard.

During setting up the display

To prevent 12-volt battery discharge, ensure that the hybrid system is operating while setting up the display features.

Multi-information display (with color display)



111



Warning message display

Select to display warning messages and measures to be taken if a malfunction is detected. (\rightarrow P. 466)



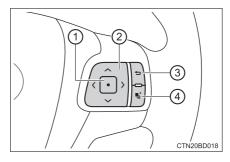
Settings display

Select to change the meter display settings. (\rightarrow P. 114)

Operating the meter control switches

- (1) Enter/Set/Reset
- (2) Select an item/change pages
- ③ Return to the previous screen
- (4) Press: Displays the screen registered as the top screen

When no screen has been registered, the drive information screen will be displayed.



Press and hold: Registers the currently displayed screen as the top screen

When the confirmation screen is displayed, select yes to register the screen. If the selected screen cannot be registered, a registration failure message will be shown.

Drive information

Current fuel consumption^{*1}

Displays the current rate of fuel consumption

Average fuel economy (after reset^{*2}/after start/after refuel)^{*1}

Displays the average fuel economy since the function was reset, the engine was started, and the vehicle was refueled, respectively

Use the displayed average fuel economy as a reference.

Average vehicle speed (after reset^{*2}/after start)^{*1}

Displays the average vehicle speed since the function was reset and the engine was started, respectively

Elapsed time (after reset^{*2}/after start)^{*1}

Displays the elapsed time since the function was reset and the engine was started, respectively

Distance (driving range/after start/after reset^{*2})^{*1}

Displays the estimated maximum distance that can be driven with the quantity of fuel remaining and the distance driven after the

- engine was started, respectively. • This distance is computed based on your average fuel consumption. As a result, the actual distance that can be driven may differ from that displayed.
- When only a small amount of fuel is added to the tank, the display may not be updated.

When refueling, turn the power switch off. If the vehicle is refueled without turning the power switch off, the display may not be updated.

Energy monitor

→P. 117

- *1: Can be registered to Drive information 1 through 3. (\rightarrow P. 114)
- *2: Resetting procedures
 - Select a function to be reset using the meter control switches and then press and hold to reset.
 - If there are two functions that can be reset, check boxes will be displayed next to those functions.

113

Settings display

Changing the settings

- 1 Select 🔅 using the meter control switches.
- 2 Select an item and then set it with the center button.

Customizable items

Language

Select to change the language on the display.

Units

Select to change the unit of measure for fuel consumption.

Maintenance system (for U.S.A)

Select to reset the maintenance data after the required maintenance is performed. (\rightarrow P. 387)

EV Indicator Light

Select to activate/deactivate the EV Indicator Light.

switch settings

You can register 1 screen as the top screen. To register, press and hold ', while the desired screen is displayed.

Drive information 1 through 3

Select to select up to 2 items that will be displayed on a Drive information screen, up to 3 Drive information screens can be set.

Pop-up display

Select to set the following pop-up displays, which may appear in some situations, on/off.

- Route guidance display of the navigation system-linked system (if equipped)
- · Incoming call display of the hands-free phone system
- Dynamic radar cruise control operation display (if equipped)
- Instrument panel brightness adjustment display
- Accent color

Select to change the accent colors on the screen, such as the cursor color.

Eco mode linked color display

When the "ECO MODE" indicator light is displayed, the shift position indicator will be highlighted with a colored background.

115

2

Instrument cluster

Speed limit display*

Select to set the display of speed limit information stored in the navigation system to on with the speed limit caution indicator (yellow) enabled, on with the speed limit caution not enabled, or off. If enabled, the speed limit caution indicator will come on if the vehicle speed exceeds the displayed speed limit.

Initialization

Registered or changed meter settings will be deleted or returned to their default setting.

Settings can be changed. (Customizable features: \rightarrow P. 557)

*: Speed limit display may not be available for some regions.

Pop-up display

In some situations, such as when a switch operation is performed, a pop-up display, such as the operating cruise control switch, will be temporarily displayed on the multi-information display.

The pop-up display function can be set on/off.

Setting display automatic cancelation

In the following situations, setting display in which the settings can be changed through the meter control switch will automatically be turned off.

• When a warning message appears while the setting display is displayed

• When the vehicle begins to move while the setting display is displayed

Liquid crystal display

Small spots or light spots may appear on the display. This phenomenon is characteristic of liquid crystal displays, and there is no problem continuing to use the display.

MARNING

The information display at low temperatures

Allow the interior of the vehicle to warm up before using the liquid crystal information display. At extremely low temperatures, the display monitor may respond slowly, and display changes may be delayed.

For example, there is a lag between the driver's shifting and the new gear number appearing on the display. This lag could cause the driver to downshift again, causing rapid and excessive engine braking and possibly an accident resulting in death or injury.

Cautions during setting up the display

As the engine needs to be running during setting up the display, ensure that the vehicle is parked in a place with adequate ventilation. In a closed area such as a garage, exhaust gases including harmful carbon monoxide (CO) may collect and enter the vehicle. This may lead to death or a serious health hazard.

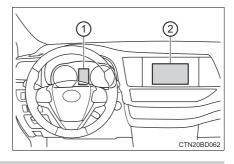
During setting up the display

To prevent 12-volt battery discharge, ensure that the hybrid system is operating while setting up the display features.

Energy monitor/consumption screen

You can view the status of the hybrid system on the multi-information display or audio system screen.

- (1) Multi-information display
- (2) Audio system screen



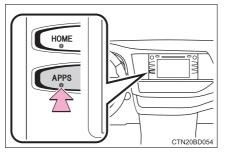
Instrument cluster

2

Energy monitor

- Audio system screen
- 1 Press the "APPS" button.
- 2 Touch "ECO" on the "Apps" screen.

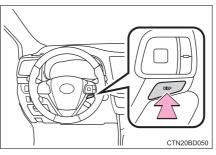
If the "Trip Information" or "Past Record" screen is displayed, touch "Energy".



118 2. Instrument cluster

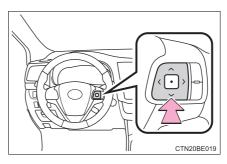
Multi-information display (with monochrome display)

To select the energy monitor display, push the "DISP" switch several times



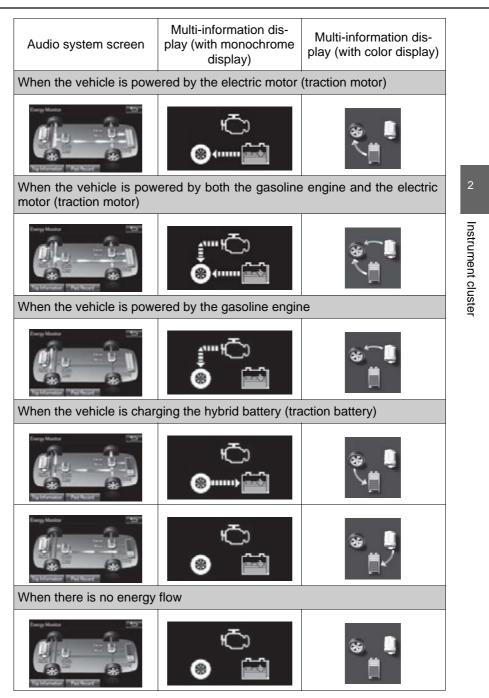
Multi-information display (with color display)

To select the energy monitor display, push the meter control switches several times



2. Instrument cluster

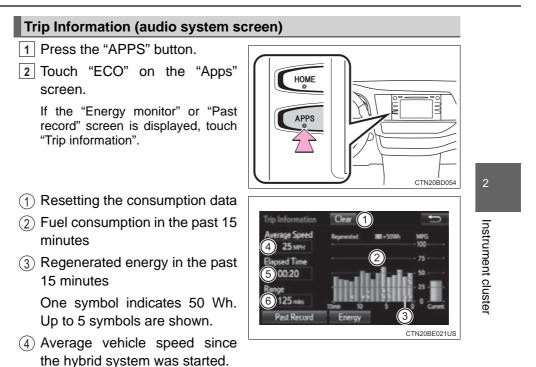
119



120 2. Instrument cluster

Audio system screen		Multi-information dis- play (with monochrome display)		Multi-information dis- play (with color display)	
Hybrid battery (traction battery) status					
Low	Full	Low	Full	Low	Full
<u> </u>	•	.	•		→ []

These images are examples only.



- (5) Elapsed time since the hybrid system was started.
- (6) Cruising range

This image is an example only, and may vary slightly from actual conditions.

Past Record screen (audio system screen)

1 Press the "APPS" button.

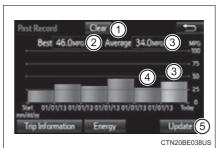
2 Touch "ECO" on the "Apps" screen.

If the "Energy monitor" or "Trip information" screen is displayed, touch "Past record".

- (1) Resetting the past record data
- (2) Best past fuel consumption
- (3) Average fuel consumption

Displays a maximum of five past records of the average fuel consumption.

(4) Previous fuel consumption record



The average fuel consumption and graph are updated, and a new average fuel consumption record begins.

This image is an example only, and may vary slightly from actual conditions.

Resetting the consumption data

(5) Update

Selecting "Clear" on the "Trip information" screen will reset the fuel consumption and regenerated energy for the last 15 minutes. Selecting "Clear" on the "Past record" screen will reset the past records and best past fuel consumption. Selecting "Yes" on the following screen will confirm resetting of all the data.

Operation of each component 3

3-1.	Key information
	Keys 124
3-2.	Opening, closing and locking the doors
	Side doors 128
	Back door 134
	Glass hatch 144
	Smart key system 148
3-3.	Adjusting the seats
	Front seats 156
	Rear seats 158
	Driving position memory 165
	Head restraints 169
3-4.	Adjusting the steering wheel and mirrors
	Steering wheel 173
	Inside rear view mirror 175
	Outside rear view
	mirrors 177
3-5.	Opening and closing the windows
	Power windows 179
	Moon roof 183
	Panoramic moon roof 187

HIGHLANDER_HV_U (OM48F02U)

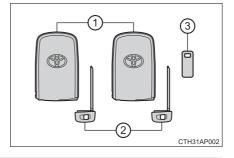
124 3-1. Key information

Keys

The keys

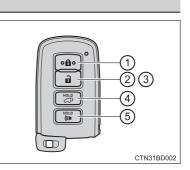
The following keys are provided with the vehicle.

- 1 Electronic keys
 - Operating the smart key system (→P. 148)
 - Operating the wireless remote control function
- (2) Mechanical keys
- (3) Key number plate



Wireless remote control

- (1) Locks the doors (\rightarrow P. 129)
- (2) Unlocks the doors (\rightarrow P. 129)
- ③ Opens the windows and moon roof* (→P. 129)
- ④ Opens and closes the power back door (→P. 135)
- (5) Sounds the alarm (\rightarrow P. 125)



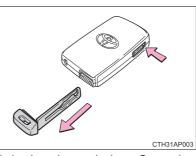
*: This setting must be customized at your Toyota dealer.

3-1. Key information

Using the mechanical key

To take out the mechanical key, push the release button and take the key out.

The mechanical key can only be inserted in one direction, as the key only has grooves on one side. If the key cannot be inserted in a lock cylinder, turn it over and reattempt to insert it.



After using the mechanical key, store it in the electronic key. Carry the mechanical key together with the electronic key. If the electronic key battery is depleted or the entry function does not operate properly, you will need the mechanical key. (\rightarrow P. 513)

Panic mode

When (() is pressed for longer than about one second, an alarm will sound intermittently and the vehicle lights will flash to deter any person from trying to break into or damage your vehicle.

To stop the alarm, press any button on the electronic key.



When required to leave the vehicle's key with a parking attendant

Lock the glove box as circumstances demand. (\rightarrow P. 343)

Remove the mechanical key for your own use and provide the attendant with the electronic key only.

If you lose your keys

New genuine keys can be made by your Toyota dealer using the mechanical key and the key number stamped on your key number plate. Keep the plate in a safe place such as your wallet, not in the vehicle.

125

When riding in an aircraft

When bringing an electronic key onto an aircraft, make sure you do not press any button on the electronic key while inside the aircraft cabin. If you are carrying an electronic key in your bag etc., ensure that the buttons are not likely to be pressed accidentally. Pressing a button may cause the electronic key to emit radio waves that could interfere with the operation of the aircraft.

Conditions affecting operation

→P. 151

Electronic key battery depletion

- The standard battery life is 1 to 2 years.
- If the battery becomes low, an alarm will sound in the cabin when the hybrid system stops. (→P. 482)
- As the electronic key always receives radio waves, the battery will become depleted even if the electronic key is not used. The following symptoms indicate that the electronic key battery may be depleted. Replace the battery when necessary. (→P. 428)
 - The smart key system or the wireless remote control does not operate.
 - The detection area becomes smaller.
 - The LED indicator on the key surface does not turn on.
- To avoid serious deterioration, do not leave the electronic key within 3 ft. (1 m) of the following electrical appliances that produce a magnetic field:
 - TVs
 - Personal computers
 - · Cellular phones, cordless phones and battery chargers
 - Recharging cellular phones or cordless phones
 - Table lamps
 - Induction cookers

When the electronic key battery is fully depleted

→P. 428

Confirmation of the registered key number

The number of electronic keys already registered to the vehicle can be confirmed. Ask your Toyota dealer for details.

If a wrong key is used

The key cylinder rotates freely to isolate inside mechanism.

Customization

Settings (e.g. wireless remote control system) can be changed. (Customizable features: \rightarrow P. 556)

Certification for the wireless remote control

→P. 154

3-1. Key information

NOTICE To prevent key damage Do not drop the keys, subject them to strong shocks or bend them. • Do not expose the keys to high temperatures for long periods of time. • Do not get the keys wet or wash them in an ultrasonic washer etc. Do not attach metallic or magnetic materials to the keys or place the keys close to such materials. Do not disassemble the keys. • Do not attach a sticker or anything else to the surface of the electronic key. Do not place the keys near objects that produce magnetic fields, such as TVs, audio systems and induction cookers, or medical electrical equipment, such as low-frequency therapy equipment. Carrying the electronic key on your person Carry the electronic key 3.9 in. (10 cm) or more away from electric appliances that are turned on. Radio waves emitted from electric appliances within 3.9 in. (10 cm) of the electronic key may interfere with the key, causing the key to not function properly. In case of a smart key system malfunction or other key-related problems Take your vehicle with all the electronic keys provided with your vehicle to your Toyota dealer. When an electronic key is lost If the electronic key remains lost, the risk of vehicle theft increases significantly. Visit your Toyota dealer immediately with all remaining electronic keys that was provided with your vehicle.

Operation of each component

127

Side doors

Unlocking and locking the doors from the outside

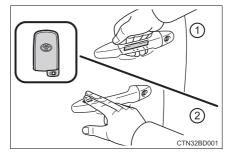
Entry function

Carry the electronic key to enable this function.

- Front doors
- Grip the driver's door handle to unlock the door. Grip the passenger's door handle to unlock all the doors.*

Make sure to touch the sensor on the back of the handle.

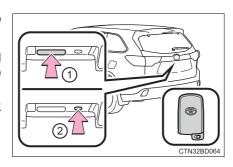
The doors cannot be unlocked for 3 seconds after the doors are locked.



- *: The door unlock settings can be changed. (\rightarrow P. 132)
- 2 Touch the lock sensor (indentation on the upper part of the door handle) to lock all the doors.
- Back door
- (1) Press the unlock button to unlock all the doors.

The doors cannot be unlocked for 3 seconds after the doors are locked.

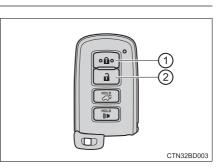
(2) Press the lock button to lock all the doors.



Wireless remote control

- 1 Locks all the doors
- (2) Unlocks the door.

Pressing the button unlocks the driver's door. Pressing the button again within 5 seconds unlocks the other doors. Press and hold to open the windows and moon roof.* $(\rightarrow P. 181, 184)$



*: This setting must be customized at your Toyota dealer.

Operation signals

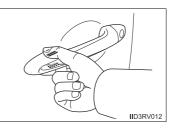
- Doors: A buzzer sounds and the emergency flashers flash to indicate that the doors have been locked/unlocked. (Locked: once; Unlocked: twice)
- Windows and moon roof: A buzzer sounds to indicate that the windows and moon roof are operating.

Security feature

If a door is not opened within approximately 60 seconds after the doors are unlocked, the security feature automatically locks the doors again.

When the door cannot be locked by the lock sensor on the upper part of the front door handle

If the door will not lock even when the topside sensor area is touched, try touching both the topside and underside sensor areas at the same time.



Door lock buzzer

If an attempt to lock the doors is made when a door is not fully closed, a buzzer will sound continuously for 5 seconds. Fully close the door to stop the buzzer, and lock the doors again.

Power back door reservation lock

If the wireless remote control is used to lock the doors while the power back door is closing with all side doors fully closed, a buzzer will sound and the emergency flashers will flash to indicate that the reservation lock is activated. At this time the side doors are locked. The back door will be locked when it is fully closed.

Alarm (if equipped)

Locking the doors will set the alarm system. (\rightarrow P. 93)

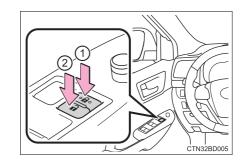
If the smart key system or the wireless remote control does not operate properly

Use the mechanical key to lock and unlock the doors. (\rightarrow P. 513) Replace the key battery with a new one if it is depleted. (\rightarrow P. 428)

Unlocking and locking the doors from the inside

Door lock switch

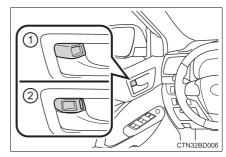
- 1 Locks all the doors
- (2) Unlocks all the doors



Inside lock buttons

- 1 Locks the doors
- (2) Unlocks the doors

The front doors can be opened by pulling the inside handle even if the lock buttons are in the lock position.



Locking the front doors from the outside without a key

1 Move the inside lock button to the lock position.

2 Close the door.

The door cannot be locked if the power switch is in ACCESSORY or ON mode, or the electronic key is left inside the vehicle.

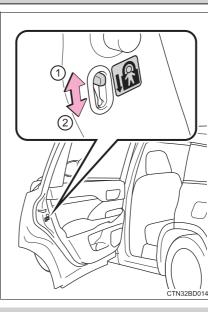
The key may not be detected correctly and the door may be locked.

Rear door child-protector lock

The door cannot be opened from inside the vehicle when the lock is set.

- 1 Unlock
- (2) Lock

These locks can be set to prevent children from opening the rear doors. Push down on each rear door switch to lock both rear doors.



Automatic door locking and unlocking systems

The following functions can be set or canceled:

For instructions on customizing, refer to P. 556.

Function	Operation	
Speed linked door locking function	All doors are automatically locked when vehicle speed is approxi- mately 12 mph (20 km/h) or higher.	
Shift position linked door locking function	All doors are automatically locked when shifting the shift lever to a position other than P.	
Shift position linked door unlocking function	All doors are automatically unlocked when shifting the shift lever to P.	
Driver's door linked door unlocking function	All doors are automatically unlocked when the driver's door is opened.	

Switching the door unlock function

It is possible to set which doors the entry function unlocks using the wireless remote control.

1 Turn the power switch off.

or (() for approximately 5 seconds while pressing and holding $\mathbf{\hat{f}}$.

The setting changes each time an operation is performed, as shown below. (When changing the setting continuously, release the buttons, wait for at least 5 seconds, and repeat step 2.)

Multi-information display				
Mono- chrome display	Color display	Unlocking function	Веер	
		Holding the driver's door handle unlocks only the driver's door.	Exterior: Beeps 3 times Interior: Pings once	
		Holding a passenger's door handle unlocks all the doors.		
		Holding a door handle unlocks all the doors.	Exterior: Beeps twice Interior: Pings once	

For vehicles with an alarm: To prevent unintended triggering of the alarm, unlock the doors using the wireless remote control and open and close a door once after the settings have been changed. (If a door is not opened within 60 seconds after is pressed, the doors will be locked again and the alarm will automatically be set.)

In case that the alarm is triggered, immediately stop the alarm. (\rightarrow P. 94)

In the event that the vehicle is subject to a strong impact, all the doors are unlocked. Depending on the force of the impact or the type of accident, however, the system may not operate.

Using the mechanical key

The doors can also be locked and unlocked with the mechanical key. (→P. 513)

Conditions affecting the operation of the smart key system or wireless remote control

→P. 151

Customization

Settings (e.g. unlocking function using a key) can be changed. (Customizable features: \rightarrow P. 556)

WARNING

To prevent an accident

Observe the following precautions while driving the vehicle.

Failure to do so may result in a door opening and an occupant falling out of the vehicle, resulting in death or serious injury.

- Ensure that all doors are properly closed and locked.
- Do not pull the inside handle of the doors while driving. Be especially careful for the front doors, as the doors may be opened even if the inside lock buttons are in locked position.
- Set the rear door child-protector locks when children are seated in the rear seats.

Operation of each component

Back door

The back door can be locked/unlocked and opened/closed by the following procedures.

Locking and unlocking the back door

Door lock switch

→P. 130

Entry function

→P. 128

Wireless remote control

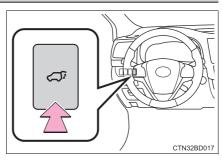
→P. 129

Opening/closing the back door from inside the vehicle

Press and hold the switch to open or close the back door, when the back door is unlocked.

Pressing the switch while the back door is opening/closing stops the operation.

To operate the back door again, press and hold the switch. The back door will then move in the opposite direction.

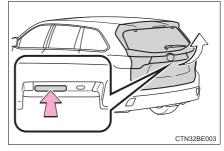


Opening the back door from outside the vehicle

Back door opener

When the back door is unlocked: Press the back door opener switch.

When the back door is locked: While carrying the electronic key on your person, press and hold the back door opener switch.



Pressing the switch while the back door is opening/closing stops the operation.

Wireless remote control

Opens and closes the power back door (press and hold)

Pressing the button while the back door is opening/closing stops the operation.

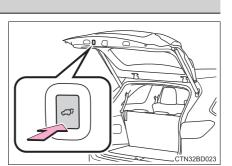
To operate the back door again, press and hold the button. The back door will then move in the opposite direction.

Power back door switch

Quickly press and release the switch to close the back door.

Pressing the switch while the back door is opening/closing stops the operation.

To operate the back door again, quickly press and release the switch. The back door will then move in the opposite direction. (If the back door is stopped at a position close to the fully closed position, the back door will only open when the switch is quickly pressed and released.)



 \square

135

Operation of each component

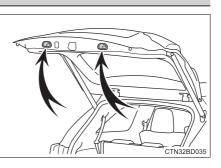
CTN32BD021

136 3-2. Opening, closing and locking the doors

When closing the back door

Lower the back door using either back door handle.

The back door closing assist will activate and the back door will fully close automatically.



Canceling the power back door system

Turn the main switch in the glove box off to disable the power back door system.

- 1 On (enabled)
- 2 Off (disabled)



Adjusting the open position of the back door

The open position of the power back door can be adjusted.

- 1 Open the back door and adjust it to the desired position.
- 2 Press and hold the power back door switch on the back door approximately 2 seconds until a buzzer sounds 4 times.

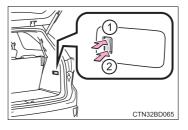
Luggage compartment light

The luggage compartment light turns on when the back door or glass hatch is opened with the luggage compartment light switch on.

 $\textcircled{1} \mathsf{On}$

② Off

When the power switch is turned off, the light will go off automatically after 20 minutes.



After the back door has been opened and then closed

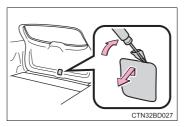
Lock the back door again as the back door will not lock automatically.

If the back door opener is inoperative

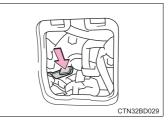
The back door can be unlocked from the inside.

1 Remove the cover on the back door trim.

Use a cloth to prevent scratches.



2 Move the lever for the back door motor.



Operation of each component

The power back door can be operated when

The power back door main switch is turned on and the glass hatch is closed.

The power back door can be opened when

The power switch is in ON mode and the shift lever is in P.

The power switch is in ACCESSORY mode or off.

Back door closer

In the event that the back door is left slightly open, the back door closer will automatically close it to the fully closed position.

- The back door closer will operate regardless of the power switch mode.
- The back door can be opened while the back door closer is operating by pressing the back door opener button.

Power back door operation

- A buzzer sounds and the emergency flashers flash twice to indicate that the back door is opening/closing.
- The back door can be opened and closed manually even when the power back door main switch is off.

Power back door operation using the entry function or wireless remote control

The back door can be opened even if it is locked. All the doors are unlocked when the power back door is operated. Make sure to lock all the doors again when you leave the vehicle. The doors will not lock automatically after the back door has been closed.

Back door closing assist

If the back door is lowered manually when the back door is stopped at an open position, the back door will fully close automatically.

Jam protection function

- If anything obstructs the power back door while it is closing, the back door will open slightly then stop.
- If anything obstructs the power back door while it is opening, the back door will immediately stop.

Fall-down protection function

While the power back door is opening automatically, applying excessive force to it will stop the opening operation to prevent the power back door from suddenly shutting.

Canceling the adjusted open position of the back door

Press and hold the power back door switch on the back door until a buzzer sounds 4 times, pauses momentarily, and then sounds 2 times. The open position is initialized to the fully opened position.

When reconnecting the 12-volt battery or changing a fuse while the back door is open

To enable the power back door to operate properly, initialize the system by completely closing the back door manually. If the 12-volt battery is reconnected or a fuse is changed while the back door is closed, initializing the system is not necessary.

Customization

Settings (e.g. power back door opening angle) can be changed. (Customizable features: \rightarrow P. 556)

WARNING

Observe the following precautions.

Failure to do so may result in death or serious injury.

Before driving

- Make sure that the back door is fully closed. If the back door is not fully closed, it may open unexpectedly while driving and hit near-by objects or luggage in the luggage compartment may be thrown out, causing an accident.
- Do not allow children to play in the luggage compartment.
 If a child is accidentally locked in the luggage compartment, they could have heat exhaustion or other injuries.
- Do not allow a child to open or close the back door. Doing so may cause the back door to move unexpectedly, or cause the child's hands, head, or neck to be caught by the closing back door.

Important points while driving

Never let anyone sit in the luggage compartment. In the event of sudden braking, sudden swerving or a collision, they are susceptible to death or serious injury.

140 3-2. Opening, closing and locking the doors

🛕 WARNING Operating the back door Observe the following precautions. Failure to do so may cause parts of the body to be caught, resulting in death or serious injury. Remove any heavy loads, such as snow and ice, from the back door before opening it. Failure to do so may cause the back door to suddenly shut again after it is opened. When opening or closing the back door, thoroughly check to make sure the surrounding area is safe. If anyone is in the vicinity, make sure they are safe and let them know that the back door is about to open or close. Use caution when opening or closing the back door in windy weather as it may move abruptly in strong wind. When closing the back door, take extra care to prevent your fingers etc. from being caught. CTN328D031 Do not pull on the back door spindle to close the back door, and do not hang on the back door spindle. Doing so may cause hands to be caught or the back door spindle to break, causing an accident. Back door closer In the event that the back door is left slightly open, the back door closer will automatically close it to the fully closed position. It takes several seconds before the back door closer begins to operate. Be careful not to catch fingers or anything else in the back door, as this may cause bone fractures or other seri-CTN32BD032 ous injuries.

 Use caution when using the back door closer as it still operates when the power back door system is canceled.

Power back door

Observe the following precautions when operating the power back door. Failure to do so may cause death or serious injury.

- Check the safety of the surrounding area to make sure there are no obstacles or anything that could cause any of your belongings to get caught.
- If anyone is in the vicinity, make sure they are safe and let them know that the back door is about to open or close.
- If the power back door system is turned off with the main switch while the back door is operating automatically, the automatic operation is stopped. The back door then has to be operated manually. Take extra care when on an incline, as the back door may open or close unexpectedly.
- If the operating conditions of the power back door are no longer met, a buzzer may sound and the back door may stop opening or closing. The back door then has to be operated manually. Take extra care when on an incline, as the back door may open or close abruptly.
- On an incline, the back door may suddenly shut after it opens. Make sure the back door is fully open and secure.
- In the following situations, the power back door may detect an abnormality and automatic operation may be stopped. In this case, the back door has to be operated manually. Take extra care when on an incline, as the back door may open or close abruptly.
 - When the back door contacts an obstacle
 - When the 12-volt battery voltage suddenly drops, such as when the power switch is turned to ON mode or the hybrid system is started during automatic operation
- If a bicycle carrier or similar object is attached to the back door, the power back door may not operate, causing itself to malfunction, or the back door may move in the closing direction after being opened, causing someone's hands, head or neck to be caught and injured. When installing an accessory part to the back door, ask your Toyota dealer for details.

Operation of each component

142 3-2. Opening, closing and locking the doors

WARNING

Jam protection function

Observe the following precautions.

Failure to do so may cause death or serious injury.

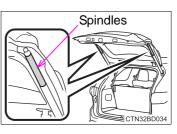
- Never use any part of your body to intentionally activate the jam protection function.
- The jam protection function may not work if something gets caught just before the back door fully closes. Be careful not to catch fingers or anything else.
- The jam protection function may not work depending on the shape of the object that is caught. Be careful not to catch fingers or anything else.

Back door spindles

The back door is equipped with spindles that hold the back door in place. Observe the following precautions.

Failure to do so may cause damage to the back door spindle, resulting in malfunction.

- Do not attach any foreign objects, such as stickers, plastic sheets, or adhesives to the spindle rod.
- Do not touch the spindle rod with gloves or other fabric items.
- Do not attach any accessories to the back door. When attaching, ask your Toyota dealer for details.



• Do not place your hand on the spindle or apply lateral forces to it.

To prevent back door closer malfunction

Do not apply excessive force to the back door while the back door closer is operating.

To prevent damage to the power back door

- Make sure that there is no ice between the back door and frame that would prevent movement of the back door. Operating the power back door when excessive load is present on the back door may cause a malfunction.
- Do not apply excessive force to the back door while the power back door is operating.
- Take care not to damage the sensors (installed on the right and left edges of the power back door) with a knife or other sharp object. If the sensor is disconnected, the power back door will not close automatically.

Glass hatch

Opening the glass hatch

The glass hatch can be opened using the glass hatch opener.

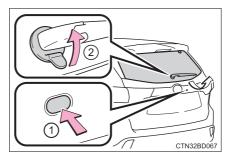
- When the back door is unlocked: Press the button to pop up the glass hatch.
 When the back door is locked:
 While carrying the electronic key on your person, press the button to pop up the glass hatch.
- (2) Raise the glass hatch using the knob

■Luggage compartment light →P. 137

- The glass hatch can be opened when The back door is closed.
- Opening and closing the glass hatch
 - Open the glass hatch slowly and carefully.
 - Make sure that the rear window wiper is switched off.
 - Do not rotate the rear wiper arm when the glass hatch is open. (If the rear wiper arm is rotated, turn the wiper switch on after closing the glass hatch. The rear wiper arm will return to the correct position automatically after operating once.)
 - Make sure that the back door is closed before closing the glass hatch.

After closing the glass hatch

Check that the glass hatch is firmly closed. If it is not firmly closed, the rear window wiper and washer will not operate correctly.



- Function to prevent the glass hatch being locked with the electronic key
 - When all doors are locked, closing the glass hatch with the electronic key left inside the luggage compartment will sound an alarm.

In this case, the glass hatch can be opened by pressing the glass hatch opener.

- If the spare electronic key is put in the luggage compartment with all the doors locked, the key confinement prevention function will activate and the glass hatch can be opened. In order to prevent theft, take all electronic keys with you when leaving the vehicle.
- If the electronic key is put in the luggage compartment with all the doors locked, the key may not be detected depending on the location of the key and the surrounding radio wave conditions. In this case, the key confinement prevention function cannot be activated, causing the doors to lock when the glass hatch is closed. Make sure to check where the key is before closing the glass hatch.

WARNING

Observe the following precautions.

Failure to do so may result in death or serious injury.

Before driving

- Make sure that the glass hatch is fully closed. If the glass hatch is not fully closed, it may open unexpectedly while driving and hit near-by objects or luggage in the luggage compartment may be thrown out, causing an accident.
- Do not allow a child to open or close the glass hatch. Doing so may cause the glass hatch to move unexpectedly, or cause the child's hands, head, or neck to be caught by the closing glass hatch.

Operating the glass hatch

Observe the following precautions.

Failure to do so may cause parts of the body to be caught, resulting in death or serious injury.

- Remove any heavy loads, such as snow and ice, from the glass hatch before opening it. Failure to do so may cause the glass hatch to suddenly shut again after it is opened.
- When opening or closing the glass hatch, thoroughly check to make sure the surrounding area is safe.
- If anyone is in the vicinity, make sure they are safe and let them know that the glass hatch is about to open or close.
- Use caution when opening or closing the glass hatch in windy weather as it may move abruptly in strong wind.

146 3-2. Opening, closing and locking the doors

WARNING

The glass hatch may suddenly shut if it is not opened fully. It is more difficult to open or close the glass hatch on an incline than on a level surface, so beware of the glass hatch unexpectedly open and close by itself. Make sure that the glass hatch is fully open and secure before using the luggage compartment. Also pay attention to your personal belongings such as bags and ties.



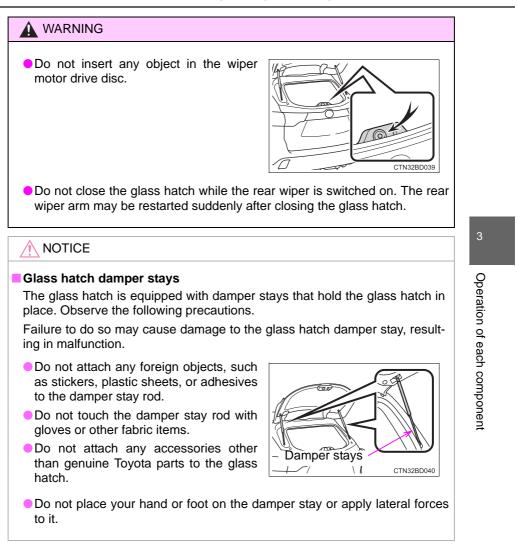
- When closing the glass hatch, take extra care to prevent your fingers etc. from being caught. Also pay attention to your personal belongings such as bags and ties.
- When closing the glass hatch, make sure to press it lightly on its outer surface.



- Do not pull on the glass hatch damper stay to close the glass hatch, and do not hang on the glass hatch damper stay.
 Doing so may cause hands to be caught or the glass hatch damper stay to break, causing an accident.
- Do not attach any accessories other than genuine Toyota parts to the glass hatch. Such additional weight on the glass hatch may cause the glass hatch to suddenly shut again after it is opened, resulting in death or serious injury.
- Do not open the glass hatch while the rear wiper is switched on. (If the rear wiper is switched on while the glass hatch is open, the wiper motor drive disc will be rotating on the door panel.)

HIGHLANDER_HV_U (OM48F02U)

147



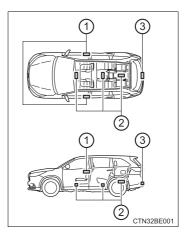
Smart key system

The following operations can be performed simply by carrying the electronic key on your person, for example in your pocket. The driver should always carry the electronic key.

- Locking and unlocking the doors (\rightarrow P. 128)
- Opening the back door (\rightarrow P. 135)
- Opening the glass hatch (\rightarrow P. 144)
- Starting the hybrid system (\rightarrow P. 229)

Antenna location

- 1 Antennas outside the cabin
- ② Antennas inside the cabin
- ③ Antenna outside the luggage compartment

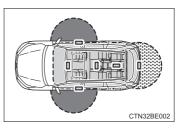


Effective range (areas within which the electronic key is detected)

When locking or unlocking the doors

The system can be operated when the electronic key is within about 2.3 ft. (0.7 m) of an outside front door handle. (Only the doors detecting the key can be operated.)

When starting the hybrid system or changing power switch modes



The system can be operated when the electronic key is inside the vehicle.

When opening the glass hatch and locking or unlocking the doors

This system can be operated when the electronic key is within about 2.3 ft. (0.7 m) of the back door opener switch.

Alarms and warning indicators

An alarm sounds and warning messages are displayed on the multi-information display are used to protect against unexpected accidents or theft of the vehicle resulting from erroneous operation. When a warning message is displayed, take appropriate measures based on the displayed message. $(\rightarrow P. 466)$

When only an alarm sounds, circumstances and correction procedures are as follows:

Alarm	Situation	Correction procedure
Exterior alarm sounds once for 5 seconds	The glass hatch was closed while the elec- tronic key was still inside the vehicle and all the doors were locked.	Retrieve the electronic key from the vehicle and close the glass hatch.
	An attempt was made to lock the vehicle while a door was open.	Close all of the doors and lock the doors again.
Interior alarm sounds continuously	The power switch was turned to ACCESSORY mode while the driver's door was open (or the driver's door was opened while the power switch was in ACCESSORY mode).	Turn the power switch off and close the driver's door.

Battery-saving function

The battery-saving function will be activated in order to prevent the electronic key battery and the vehicle battery from being discharged while the vehicle is not in operation for a long time.

- In the following situations, the smart key system may take some time to unlock the doors.
 - The electronic key has been left in an area of approximately 6 ft. (2 m) of the outside of the vehicle for 10 minutes or longer.
 - The smart key system has not been used for 5 days or longer.
- If the smart key system has not been used for 14 days or longer, the doors cannot be unlocked at any doors except the driver's door. In this case, take hold of the driver's door handle, or use the wireless remote control or the mechanical key, to unlock the doors.

Electronic key battery-saving function

When battery-saving mode is set, battery depletion is minimized by stopping the electronic key from receiving radio waves.

Press 2 twice while pressing and

holding **A** . Confirm that the electronic key indicator flashes 4 times.

While the battery-saving mode is set, the smart key system cannot be used. To cancel the function, press any of the electronic key buttons.



Conditions affecting operation

The smart key system uses weak radio waves. In the following situations, the communication between the electronic key and the vehicle may be affected, preventing the smart key system, wireless remote control and immobilizer system from operating properly. (Ways of coping: \rightarrow P. 513)

- When the electronic key battery is depleted
- Near a TV tower, electric power plant, gas station, radio station, large display, airport or other facility that generates strong radio waves or electrical noise
- When carrying a portable radio, cellular phone, cordless phone or other wireless communication devices
- When the electronic key is in contact with, or is covered by the following metallic objects
 - · Cards to which aluminum foil is attached
 - · Cigarette boxes that have aluminum foil inside
 - Metallic wallets or bags
 - Coins
 - · Hand warmers made of metal
 - Media such as CDs and DVDs
- When other wireless keys (that emit radio waves) are being used nearby
- When carrying the electronic key together with the following devices that emit radio waves
 - · Another vehicle's electronic key or a wireless key that emits radio waves
 - Personal computers or personal digital assistants (PDAs)
 - Digital audio players
 - · Portable game systems
- If window tint with a metallic content or metallic objects are attached to the rear window
- When the electronic key is placed near a battery charger or electronic devices

Operation of each component

Note for the entry function

• Even when the electronic key is within the effective range (detection areas), the system may not operate properly in the following cases:

- The electronic key is too close to the window or outside door handle, near the ground, or in a high place when the doors are locked or unlocked.
- The electronic key is near the ground or in a high place, or too close to the rear bumper center when the back door is opened.
- The electronic key is on the instrument panel or floor, or in the auxiliary box of the driver's side instrument panel, door pockets or glove box when the hybrid system is started or power switch modes are changed.
- Do not leave the electronic key on top of the instrument panel or near the door pockets when exiting the vehicle. Depending on the radio wave reception conditions, it may be detected by the antenna outside the cabin and the door will become lockable from the outside, possibly trapping the electronic key inside the vehicle.
- As long as the electronic key is within the effective range, the doors may be locked or unlocked by anyone. However, only the doors detecting the electronic key can be used to unlock the vehicle.
- Even if the electronic key is not inside the vehicle, it may be possible to start the hybrid system if the electronic key is near the window.
- The doors may unlock or lock if a large amount of water splashes on the door handle, such as in the rain or in a car wash when the electronic key is within the effective range. (The doors will automatically be locked after approximately 60 seconds if the doors are not opened and closed.)
- If the wireless remote control is used to lock the doors when the electronic key is near the vehicle, there is a possibility that the door may not be unlocked by the entry function. (Use the wireless remote control to unlock the doors.)
- Touching the door lock or unlock sensor while wearing gloves may prevent lock or unlock operation. Remove the gloves and touch the lock or unlock sensor again.
- When the lock operation is performed using the lock sensor, recognition signals will be shown up to two consecutive times. After this, no recognition signals will be given.
- If the door handle becomes wet while the electronic key is within the effective range, the door may lock and unlock repeatedly. In that case, follow the following correction procedures to wash the vehicle:
 - Place the electronic key in a location 6 ft. (2 m) or more away from the vehicle. (Take care to ensure that the key is not stolen.)
 - Set the electronic key to battery-saving mode to disable the smart key system. (→P. 150)

- If the electronic key is inside the vehicle and a door handle becomes wet during a car wash, a message may be shown on the multi-information display and a buzzer will sound outside the vehicle. To turn off the alarm, lock all the doors.
- The lock sensor may not work properly if it comes into contact with ice, snow, mud, etc. Clean the lock sensor and attempt to operate it again, or use the lock sensor on the lower part of the door handle.
- A sudden handle operation or a handle operation immediately after entering the effective range may prevent the doors from being unlocked. Touch the door unlock sensor and check that the doors are unlocked before pulling the door handle again.
- Unlocking the vehicle may take more time if another electronic key is within the effective range.

When the vehicle is not driven for extended periods

- To prevent theft of the vehicle, do not leave the electronic key within 6 ft. (2 m) of the vehicle.
- The smart key system can be deactivated in advance. (\rightarrow P. 556)

To operate the system properly

Make sure to carry the electronic key when operating the system. Do not get the electronic key too close to the vehicle when operating the system from the outside of the vehicle.

Depending on the position and holding condition of the electronic key, the key may not be detected correctly and the system may not operate properly. (The alarm may go off accidentally, or the door lock prevention function may not operate.)

If the smart key system does not operate properly

• Locking and unlocking the doors: Use the mechanical key. (\rightarrow P. 513)

• Starting the hybrid system: \rightarrow P. 514

Customization

Settings (e. g. smart key system) can be changed. (Customizable features: \rightarrow P. 556)

If the smart key system has been deactivated in a customized setting

- Locking and unlocking the doors:
- Use the wireless remote control or mechanical key. (\rightarrow P. 129, 513)
- Starting the hybrid system and changing power switch modes: \rightarrow P. 514
- Stopping the hybrid system: \rightarrow P. 230

Certification for the smart key system

▶ For vehicles sold in the U.S.A.

FCC ID: HYQ23AAB FCC ID: HYQ14FBA

NOTE:

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

FCC WARNING:

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

► For vehicles sold in Canada

NOTE:

This device complies with Industry Canada licence-exempt RSS standard(s). 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.

► For vehicles sold in the U.S.A.

FCC ID: NI4TMLF12-1 FCC ID: NI4TMLF12-2

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.

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

For vehicles sold in Canada

This device complies with Industry Canada licence-exempt RSS standard(s). 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.

WARNING

Caution regarding interference with electronic devices

 People with implantable cardiac pacemakers, cardiac resynchronization therapy-pacemakers or implantable cardioverter defibrillators should keep away from the smart key system antennas. (→P. 148)

The radio waves may affect the operation of such devices. If necessary, the entry function can be disabled. Ask your Toyota dealer for details, such as the frequency of radio waves and timing of the emitted radio waves. Then, consult your doctor to see if you should disable the entry function.

Users of any electrical medical device other than implantable cardiac pacemakers, cardiac resynchronization therapy-pacemakers or implantable cardioverter defibrillators should consult the manufacturer of the device for information about its operation under the influence of radio waves.

Radio waves could have unexpected effects on the operation of such medical devices.

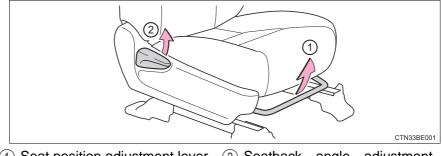
Ask your Toyota dealer for details on disabling the entry function.

156 3-3. Adjusting the seats

Front seats

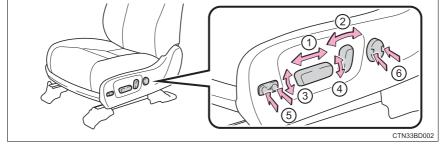
Adjustment procedure

Manual seat

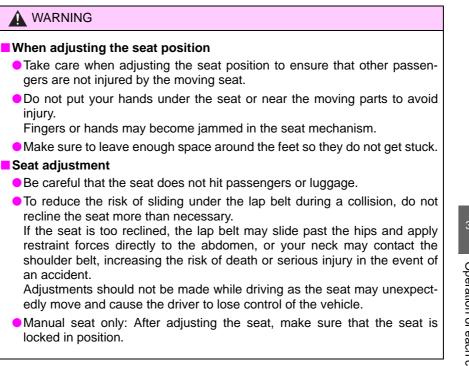


(1) Seat position adjustment lever (2) Seatback angle adjustment lever

Power seat



- (1) Seat position adjustment switch
- switch
- (3) Seat cushion (front) angle adjustment switch (driver's (6) Lumbar support adjustment side only)
- (4) Vertical height adjustment switch (driver's side only)
- (2) Seatback angle adjustment (5) Seat cushion length adjustment switch (if equipped, for driver's seat only)
 - switch (driver's side only)



157

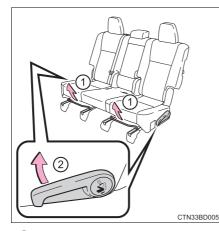
158 3-3. Adjusting the seats

Rear seats

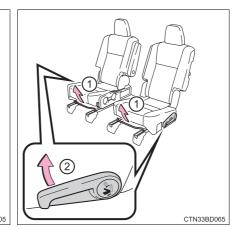
Adjustment procedure

Second seats

Without a side table



With a side table

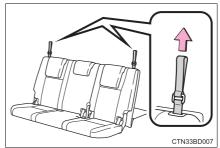


- (1) Seat position adjustment lever
- Seatback angle adjustment lever

Pull the lever until the lock is completely released.

Third seats

Seatback angle adjustment strap

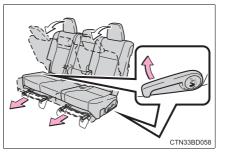


Moving a second seat for third seat access

Getting in the vehicle

Pull the lever and tilt the seatback forward.

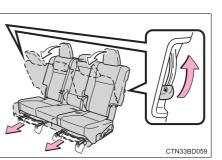
Move the seat to the front-most position.



Getting out of the vehicle

Pull the lever on the side of the seatback and tilt the seatback forward.

Move the seat to the front-most position.



After passengers have entered/exited the vehicle

Lift up the seatback and slide the seat backward until it locks.

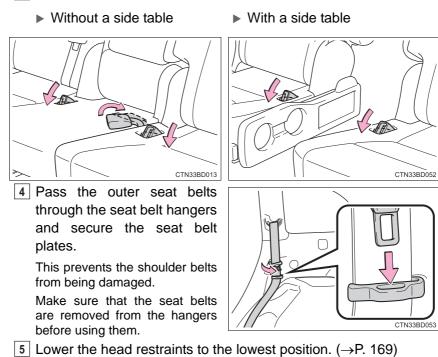
159

Operation of each component

Folding down the second seats

Before folding down the second seats

- 1 Stow the armrest. (\rightarrow P. 358)
- 2 With a side table: Stow the side table. (\rightarrow P. 360)
- 3 Stow the second seat belt buckles.

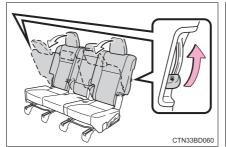


Folding down the second seats

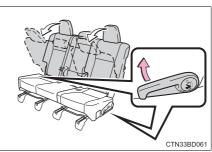
1 Pull the lever and tilt the seatback forward.

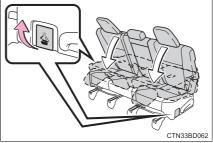
Each seatback may be folded separately.

- ▶ From inside
- ▶ From outside



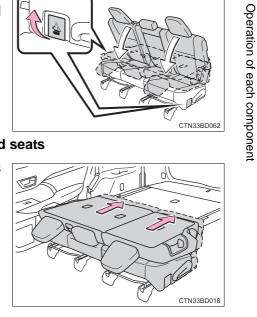
2 Pull the lever to unlock the seatback. The seatback will be folded down.





After folding down the second seats

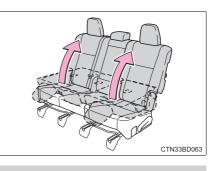
Slide the folded second seats backward until they lock.



162 3-3. Adjusting the seats

Returning the second seats

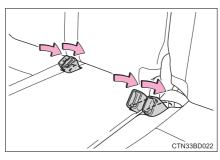
Lift up the seatbacks until they lock.



Folding down the third seats

Before folding down the third seats

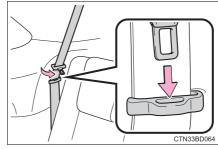
1 Stow the third seat belt buckles.



2 Pass the outer seat belts through the seat belt hangers and secure the seat belt plates.

This prevents the shoulder belts from being damaged.

Make sure that the seat belts are removed from the hangers before using them.



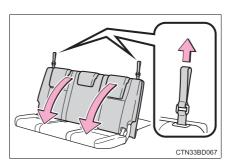
3 Lower the head restraints to the lowest position. (\rightarrow P. 169)

163

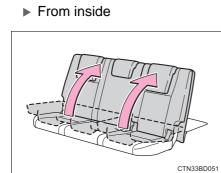
Operation of each component

Folding down the third seats

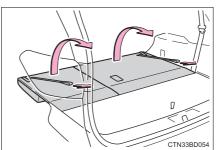
While pulling the straps, fold down the seatbacks.



Returning the third seats



From outside



Lift up the seatbacks until they lock.

Pull the straps and raise the seatbacks until they lock.

After using either strap, use the Velcro on the end of the strap to attach it to the seatback.

WARNING	
When folding the rear seatbacks down	
Observe the following precautions. Failure to do so may result in dea serious injury.	th or
Do not fold the seatbacks down while driving.	
 Stop the vehicle on level ground, set the parking brake and shift the lever to P. 	e shift
 Do not allow anyone to sit on a folded seatback or in the luggage con ment while driving. 	npart-
Do not allow children to enter the luggage compartment.	
Do not fold down a rear seatback when there are passengers sitting rear seats or when there is luggage placed on the rear seats.	in the
Be careful not to catch your hand when folding the rear seatbacks.	
Seat adjustment	
 To reduce the risk of sliding under the lap belt during a collision, directine the seat more than necessary. If the seat is too reclined, the lap belt may slide past the hips and restraint forces directly to the abdomen, or your neck may contact shoulder belt, increasing the risk of death or serious injury in the even an accident. Adjustments should not be made while driving as the seat may unexperimental structure. 	apply ct the ent of
edly move and cause the driver to lose control of the vehicle.	
Be careful that the seat does not hit passengers or luggage.	
Be careful not to get your hands or feet caught in the seat.	
After adjusting or returning the seats Observe the following precautions. Failure to do so may result in dea serious injury.	th or
 Make sure that the seat and seatback are securely locked in positivilightly rocking them back and forth. 	on by
Check that the seat belts are not twisted or caught in the seatback.	

Driving position memory^{*}

This feature automatically adjusts the driver's seat and outside rear view mirrors to make entering and exiting the vehicle easier or to suit your preferences.

Driving position memory

Your preferred driving position (the position of the driver's seat and outside rear view mirrors) can be recorded and recalled by pressing a button.

Two different driving positions can be recorded into memory.

Recording procedure

- 1 Turn the power switch to ON mode.
- 2 Adjust the driver's seat and outside rear view mirrors to the desired positions.
- 3 While pressing the "SET" button, or within 3 seconds after the "SET" button is pressed, press button "1" or "2" until the buzzer sounds.

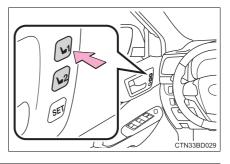
If the selected button has already been preset, the previously recorded position will be overwritten.



*: If equipped

Recall procedure

- 1 Check that the shift lever is in P.
- 2 Turn the power switch to ON mode.
- 3 Press one of the buttons for the driving position you want to recall until the buzzer sounds.



- To stop the position recall operation part-way through Perform any of the following:
 - Press the "SET" button.
 - Press button "1" or "2".
 - Operate any of the seat adjustment switches (only cancels seat position recall).
- Seat positions that can be memorized (\rightarrow P. 156)

The seat position, with the exception of the portions adjusted by the seat cushion length switch and lumbar support switch, can be recorded.

- Operating the driving position memory after turning the power switch off Recorded seat positions can be activated up to 180 seconds after the driver's door is opened and another 60 seconds after it is closed again.
- In order to correctly use the driving position memory function

If a seat position is already in the furthest possible position and the seat is operated in the same direction, the recorded position may be slightly different when it is recalled.

Memory recall function

Each electronic key can be registered to recall your preferred driving position.

Registering procedure

Record your driving position to button "1" or "2" before performing the following:

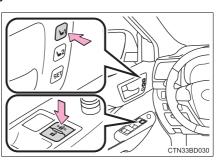
Carry only the key you want to register, and then close the driver's door.

If 2 or more keys are in the vehicle, the driving position cannot be recorded properly.

1 Check that the shift lever is in P.

- 2 Turn the power switch to ON mode.
- 3 Recall the driving position that you want to record.
- 4 While pressing the recalled button, press and hold the door lock switch (either lock or unlock) until the buzzer sounds.

If the button could not be registered, the buzzer sounds continuously for approximately 3 seconds.



Operation of each component

Recall procedure

Carry the electronic key that has been registered to the driving position, and then unlock and open the driver's door using the smart key system or wireless remote control.

The driving position will move to the recorded position.

If the driving position is in a position that has already been recorded, the seat and outside rear view mirrors will not move.

Cancelation procedure

Carry only the key you want to cancel and then close the driver's door.

If 2 or more keys are in the vehicle, the driving position cannot be canceled properly.

- 1 Check that the shift lever is in P.
- 2 Turn the power switch to ON mode.
- 3 While pressing the "SET" button, press and hold the door lock switch (either lock or unlock) until the buzzer sounds twice.

If the button could not be canceled, the buzzer sounds continuously for approximately 3 seconds.

Recalling the driving position using the memory recall function

- Different driving positions can be registered for each electronic key. Therefore, the driving position that is recalled may be different depending on the key being carried.
- If a door other than the driver's door is unlocked with the smart key system, the driving position cannot be recalled. In this case, press the driving position button which has been set.

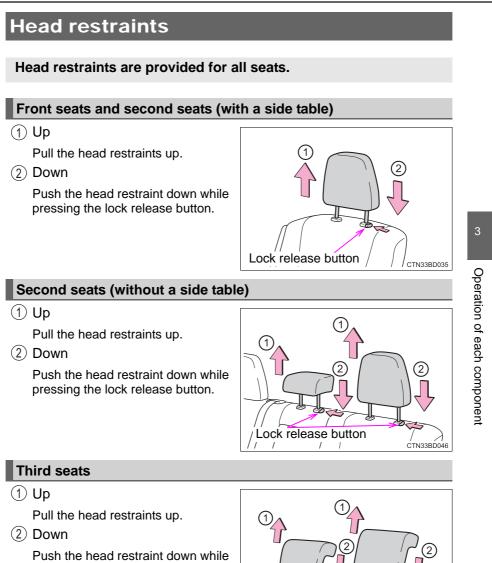
Customization

The unlock door settings of the memory recall function can be customized. (Customizable features: \rightarrow P. 556)

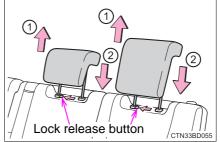
WARNING

Seat adjustment caution

Take care during seat adjustment so that the seat does not strike the rear passenger or squeeze your body against the steering wheel.



pressing the lock release button.



Removing the head restraints

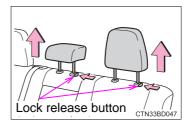
Front seats and second seats (with a side table)

Pull the head restraint up while pressing the lock release button.



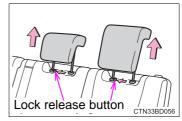
Second seats (without a side table)

Pull the head restraint up while pressing the lock release button.



Third seats

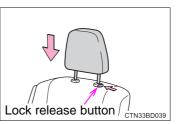
Pull the head restraint up while pressing the lock release button.



Installing the head restraints

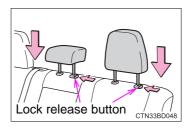
Front seats and second seats (with a side table)

Align the head restraint with the installation holes and push it down while pressing the lock release button.



Second seats (without a side table)

Align the head restraint with the installation holes and push it down while pressing the lock release button.



Operation of each component

► Third seats

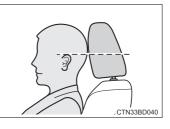
Align the head restraint with the installation holes and push it down while pressing the lock release button.

Lock release button

171

Adjusting the height of the head restraints

Make sure that the head restraints are adjusted so that the center of the head restraint is closest to the top of your ears.



Adjusting the third seat head restraints

Always raise the head restraint one level from the stowed position when using.

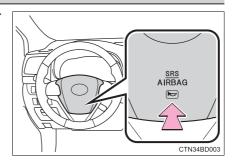
Head restraint precautions

Observe the following precautions regarding the head restraints. Failure to do so may result in death or serious injury.

- Use the head restraints designed for each respective seat.
- Adjust the head restraints to the correct position at all times.
- After adjusting the head restraints, push down on them and make sure they are locked in position.
- Do not drive with the head restraints removed.

<section-header><section-header><text><text><text><text>

To sound the horn, press on or close to the mark.



Operation of each component

174 3-4. Adjusting the steering wheel and mirrors

WARNING Caution while driving Do not adjust the steering wheel while driving. Doing so may cause the driver to mishandle the vehicle and cause an accident, resulting in death or serious injury. After adjusting the steering wheel Make sure that the steering wheel is securely locked. Otherwise, the steering wheel may move suddenly, possibly causing an accident, and resulting in death or serious injury. Also, the horn may not sound if the steering wheel is not securely locked.

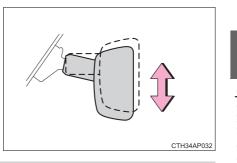
Inside rear view mirror

The rear view mirror's position can be adjusted to enable sufficient confirmation of the rear view.

Adjusting the height of rear view mirror

The height of the rear view mirror can be adjusted to suit your driving posture.

Adjust the height of the rear view mirror by moving it up and down.



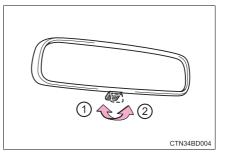
Operation of each component

Anti-glare function

Manual anti-glare inside rear view mirror

Reflected light from the headlights of vehicles behind can be reduced by operating the lever.

- (1) Normal position
- (2) Anti-glare position



175

Auto anti-glare inside rear view mirror

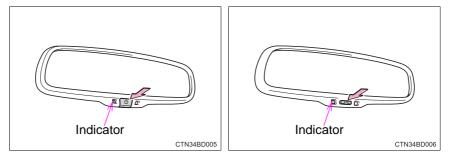
Responding to the level of brightness of the headlights of vehicles behind, the reflected light is automatically reduced.

Changing automatic anti-glare function mode

ON/OFF

Type A:

Type B:



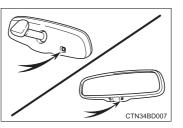
When the automatic anti-glare function is in ON mode, the indicator illuminates.

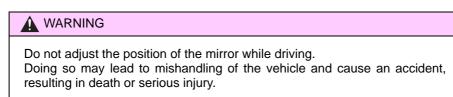
The function will set to ON mode each time the power switch is turned to ON mode.

Pressing the button turns the function to OFF mode. (The indicator also turns off.)

To prevent sensor error (vehicles with an auto anti-glare inside rear view mirror)

To ensure that the sensors operate properly, do not touch or cover them.



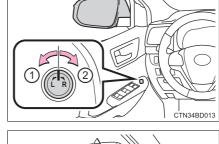


Outside rear view mirrors

Adjustment procedure

1 To select a mirror to adjust, turn the switch.

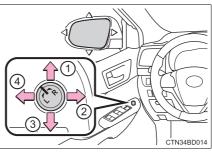
- (1) Left
- (2) Right



- 2 To adjust the mirror, move the switch.
 - ① Up
 - 2 Right
 - ③ Down
 - (4) Left

Folding the mirrors

Push the mirror back in the direction of the vehicle's rear.



Operation of each component



Mirror angle can be adjusted when

The power switch is in ACCESSORY or ON mode.

When the mirrors are fogged up (vehicles with outside rear view mirror defoggers)

The outside rear view mirrors can be cleared using the mirror defoggers. Turn on the rear window defogger to turn on the outside rear view mirror defoggers. (\rightarrow P. 328)

Automatic adjustment of the mirror angle (if equipped)

A desired mirror face angle can be entered to memory and recalled automatically by the driving position memory. (\rightarrow P. 165)

MARNING

Important points while driving

Observe the following precautions while driving. Failure to do so may result in loss of control of the vehicle and cause an accident, resulting in death or serious injury.

- Do not adjust the mirrors while driving.
- Do not drive with the mirrors folded.
- Both the driver and passenger side mirrors must be extended and properly adjusted before driving.
- When the mirror defoggers are operating (vehicles with outside rear view mirror defoggers)

Do not touch the rear view mirror surfaces, as they can become very hot and burn you.

Power windows

Opening and closing procedures

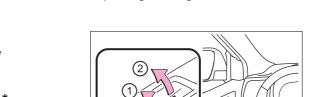
The power windows can be opened and closed using the switches. Operating the switch moves the windows as follows:

Models available with one touch opening/closing on the front side windows

▶ Models available with one touch opening/closing on all side win-

- (1) Closing
- ② One-touch closing (front side windows only)*
- ③ Opening
- ④ One-touch opening (front side windows only)*
 - *: To stop the window partway, operate the switch in the opposite direction.
- 3

CTN35BD00



② One-touch closing*

HIGHLANDER_HV_U (OM48F02U)

③ Opening

dows
(1) Closing

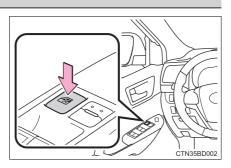
- (4) One-touch opening*
 - *: To stop the window partway, operate the switch in the opposite direction.

Window lock switch

Press the switch to lock the passenger window switches.

Use this switch to prevent children from accidentally opening or closing a passenger window.

Models available with one touch opening/closing on the front side windows: If the lock switch is on, the passenger window switches on the driver's side are also locked.



Models available with one touch opening/closing on all side windows: If the lock switch is on, the passenger windows can still be opened and closed using the power window switches on the driver's side.

The power windows can be operated when

The power switch is in ON mode.

Operating the power windows after turning the hybrid system off

The power windows can be operated for approximately 45 seconds even after the power switch is turned to ACCESSORY mode or turned off. They cannot, however, be operated once either front door is opened.

Jam protection function (windows with one-touch closing function only) If an object becomes caught between the window and the window frame, window travel is stopped and the window is opened slightly.

When the power window does not close normally (windows with onetouch closing function only)

If the jam protection function is operating abnormally and a window cannot be closed, perform the following operations using the power window switch on the relevant door.

- After stopping the vehicle, the window can be closed by holding the power window switch in the one-touch closing position while the power switch is turned to ON mode.
- If the window still cannot be closed even by carrying out the operation explained above, initialize the function by performing the following procedure.
- Hold the power window switch in the one-touch closing position. Continue holding the switch for a further 6 seconds after the window has closed.
- 2 Hold the power window switch in the one-touch opening position. Continue holding the switch for a further 2 seconds after the window has opened completely.
- 3 Hold the power window switch in the one-touch closing position once again. Continue holding the switch for a further 2 seconds after the window has closed.

If you release the switch while the window is moving, start again from the beginning.

If the window continues to close but then re-open slightly even after performing the above procedure correctly, have the vehicle inspected by your Toyota dealer.

Door lock linked window operation (windows with one-touch closing function only)

- The power windows can be opened and closed using the mechanical key.* (→P. 513)
- The power windows can be opened using the wireless remote control.^{*} (→P. 129)
- *: These settings must be customized at your Toyota dealer.

Customization

Settings (e.g. linked door lock operation) can be changed. (Customizable features: \rightarrow P. 556)

182 3-5. Opening and closing the windows

WARNING
Observe the following precautions.
Failure to do so may result in death or serious injury. Closing the windows
-
Check to make sure that all passengers do not have any part of their body in a position where it could be caught when a window is being operated.
 Do not allow children to operate the power windows. Closing a power window on someone can cause death or serious injury. The driver is responsible for instructing children not to operate the power windows.
Jam protection function (windows with one-touch closing function only)
Never use any part of your body to intentionally activate the jam protection function.
The jam protection function may not work if something gets caught just before the window fully closes.

Moon roof*

Use the overhead switches to open and close the moon roof and tilt it up and down.

Opening and closing

(1) Opens the moon roof*

The moon roof stops slightly before the fully open position to reduce wind noise.

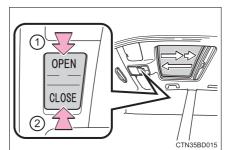
Press the switch again to fully open the moon roof.

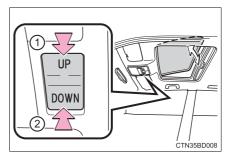
(2) Closes the moon roof*

*: Lightly press either side of the moon roof switch to stop the moon roof partway.

Tilting up and down

- (1) Tilts the moon roof up^*
- (2) Tilts the moon roof down*
- *: Lightly press either side of the moon roof switch to stop the moon roof partway.





*: If equipped

Operation of each component

The moon roof can be operated when

The power switch is in ON mode.

Operating the moon roof after turning the hybrid system off

The moon roof can be operated for approximately 45 seconds after the power switch is turned to ACCESSORY mode or turned off. It cannot, however, be operated once either front door is opened.

■ Jam protection function

If an object is detected between the moon roof and the frame while the moon roof is closing or tilting down, travel is stopped and the moon roof opens slightly.

Sunshade

The sunshade can be opened and closed manually. However, the sunshade will open automatically when the moon roof is opened.

Door lock linked moon roof operation

• The moon roof can be opened and closed using the mechanical key.* $(\rightarrow P. 513)$

- The moon roof can be opened using the wireless remote control.*
 (→P. 129)
- *: These settings must be customized at your Toyota dealer.

When the moon roof does not close normally

Perform the following procedure:

• If the moon roof closes but then re-opens slightly

- 1 Stop the vehicle.
- 2 Press and hold the "CLOSE" switch.*1
 - The moon roof will close, reopen and pause for approximately 10 seconds.^{*2} Then it will close again, tilt up and pause for approximately 1 second. Finally, it will tilt down, open and close.
- 3 Check to make sure that the moon roof is completely closed and then release the switch.
- If the moon roof tilts down but then tilts back up
- 1 Stop the vehicle.
- 2 Press and hold the "UP" switch^{*1} until the moon roof moves into the tilt up position and stops.
- Release the "UP" switch once and then press and hold the "UP" switch again.*1

The moon roof will pause for approximately 10 seconds in the tilt up position.^{*2} Then it will adjust slightly and pause for approximately 1 second. Finally, it will tilt down, open and close.

- 4 Check to make sure that the moon roof is completely closed and then release the switch.
- *1: If the switch is released at the incorrect time, the procedure will have to be performed again from the beginning.
- *2: If the switch is released after the above mentioned 10 second pause, automatic operation will be disabled. In that case, press and hold the open/close switch in the close position or press and hold the "UP" switch. The moon roof will tilt up and pause for approximately 1 second. Then it will tilt down, open and close. Check to make sure that the moon roof is completely closed and then release the switch.

If the moon roof does not fully close even after performing the above procedure correctly, have the vehicle inspected by your Toyota dealer.

Moon roof open warning buzzer

The buzzer sounds and a message is shown on the multi-information display in the instrument cluster when the power switch is turned off and the driver's door is opened with the moon roof open.

Customization

Settings (e.g. linked door lock operation) can be changed. (Customizable features: \rightarrow P. 556)

186 3-5. Opening and closing the windows

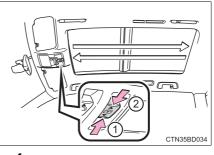
WARNING					
Observe the following precautions.					
Failure to do so may cause death or serious injury.					
Opening the moon roof					
Do not allow any passengers to put their hands or heads outside the vehi- cle while it is moving.					
Do not sit on top of the moon roof.					
Closing the moon roof					
Check to make sure that all passengers do not have any part of their bod- ies in a position where they could be caught when the moon roof is being operated.					
Do not allow children to operate the moon roof. Closing the moon roof on someone can cause death or serious injury. The driver is responsible for instructing children not to operate the moon roof.					
Jam protection function					
 Never use any part of your body to intentionally activate the jam protection function. 					
 The jam protection function may not work if something gets caught just before the moon roof fully closes. 					

Panoramic moon roof*

Use the overhead switches to operate the panoramic moon roof.

Opening and closing the shade

- (1) Open*
- (2) Close*
 - *: To stop operation partway, quickly slide and release the switch again.



Tilting up and down the moon roof

Tilt up (press)*

If the moon roof is open, pressing the switch closes it up to the tilt-up position.

If the shade is closed past the half-open position when the switch is pressed, it will open up to the half-open position.

Tilt down (press and hold)

The moon roof can be tilted down only when it is in the tilt-up position.

*: To stop operation partway, lightly press the switch again.



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CTN35BD035

*: If equipped

Operation of each component

188 3-5. Opening and closing the windows

Opening and closing the moon roof

Open (slide backward)*

The moon roof stops slightly before the fully open position to reduce wind noise and the shade opens fully.

Slide the switch again to fully open the moon roof.

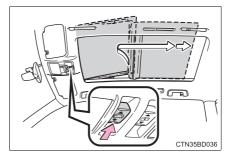
The moon roof can also be opened from the tilt-up position.

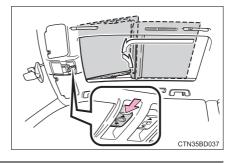
Close (slide forward)*

The moon roof stops at the tiltup position.

Slide and hold the switch again to fully close the moon roof.

*: To stop operation partway, quickly slide and release the switch again.





The shade and moon roof can be operated when

The power switch is in ON mode.

Operating the shade and moon roof after turning the hybrid system off The shade and moon roof can be operated for approximately 45 seconds after the power switch is turned to ACCESSORY mode or turned off. It cannot, however, be operated once either front door is opened.

Closing the shade when the moon roof is open

1 Slide the shade switch forward.

The shade closes up to its half-closed position and then the moon roof closes up to the tilt-up position.

2 Slide and hold the shade switch again.

The moon roof closes as long as the switch is being held. After the moon roof is fully closed, the shade will fully close automatically.

Jam protection function

▶ Shade

If an object is detected between the shade and the roof frame while the shade is closing, the shade stops and then opens slightly.

Moon roof

If an object is detected between the moon roof and the roof frame while the moon roof is closing or tilting down, the moon roof stops and then opens slightly. At this time, if the shade is closed past the half-open position, it may also open slightly.

When the moon roof does not close normally

Perform the following procedure:

- If the moon roof closes but then re-opens slightly
- 1 Stop the vehicle.
- 2 Slide the moon roof switch forward and hold it.*

The moon roof will close then reopen and pause for approximately 10 seconds. Then it will close up to the tilt-up position.

3 Release the switch and then slide it forward and hold it again.

The moon roof will close as long as the switch is being held.

4 Check to make sure that the moon roof is completely closed and then release the switch.

If the moon roof tilts down but then tilts back up

- 1 Stop the vehicle.
- 2 Slide the moon roof switch forward and hold it.*
 - The moon roof will tilt down then tilt up and pause for approximately 10 seconds. Then it will close.
- 3 Check to make sure that the moon roof is completely closed and then release the switch.
- *: If the switch is released at the incorrect time, the procedure will have to be performed again from the beginning.

If the moon roof does not fully close even after performing the above procedure correctly, have the vehicle inspected by your Toyota dealer.

When the shade does not close normally

Perform the following procedure:

- 1 Stop the vehicle.
- ² Close the moon roof.
- 3 Slide the shade switch forward and hold it.*

The shade will close then reopen and pause for approximately 10 seconds. Then it will close.

- 4 Check to make sure that the shade is completely closed and then release the switch.
- *: If the switch is released at the incorrect time, the procedure will have to be performed again from the beginning.

If the shade continues to close but then reopens slightly even after performing the above procedure correctly, have the vehicle inspected by your Toyota dealer.

Moon roof open warning buzzer

The buzzer sounds and a message is shown on the multi-information display in the instrument cluster when the power switch is turned off and the driver's door is opened with the moon roof open.

WARNING	
Observe the following precautions. Failure to do so may result in death or serious injury.	
Closing the shade	
• Check to make sure that all passengers do not have any part of their body in a position where it could be caught when the shade is being operated.	
Do not allow children to operate the shade. Closing a shade on someone can cause death or serious injury. The driver is responsible for instructing children not to operate the shade.	
Opening the moon roof	
Do not allow any passengers to put their hands or heads outside the vehi- cle while it is moving.	
Do not sit on top of the moon roof.	
Closing the moon roof	
Check to make sure that all passengers do not have any part of their body in a position where it could be caught when the moon roof is being oper- ated.	
Do not allow children to operate the moon roof. Closing the moon roof on someone can cause death or serious injury. The driver is responsible for instructing children not to operate the moon roof.	
Jam protection function	
 Never use any part of your body to intentionally activate the jam protection function. 	
 The jam protection function may not work if something gets caught just before the shade or moon roof is fully closed. 	
NOTICE	-
To prevent damage to the moon roof]
 Before opening, make sure that there are no foreign objects such as 	

- Before opening, make sure that there are no foreign objects such as stones or ice around the opening.
- Do not hit the face or edge of the moon roof with hard objects.

HIGHLANDER_HV_U (OM48F02U)

Driving

4

4-1. Before driving

	Driving the vehicle	194
	Cargo and luggage	205
	Vehicle load limits	210
	Trailer towing	211
	Dinghy towing	228
4-2.	Driving procedures	
	Power (ignition) switch	229
	EV drive mode	235
	Hybrid transmission	237
	Turn signal lever	242
	Parking brake	243
4-3.	Operating the lights and wipers	
	Headlight switch	244
	Automatic High Beam	248
	Fog light switch	254
	Windshield wipers and washer	255
	Rear window wiper and washer	

4-4. Refueling

Opening the fuel tank cap259

4-5.	Using the driving support systems
	Cruise control 264
	Dynamic radar cruise control
	LDA
	(Lane Departure Alert) 283
	Driving assist systems 291 PCS
	(Pre-Collision System) 297
	BSM
	(Blind Spot Monitor) 304
	The Blind Spot Monitor function
	The Rear Cross Traffic
	Alert function 311
4-6.	Driving tips
	Hybrid vehicle driving
	tips 314
	Winter driving tips 316
	Utility vehicle
	precautions 320

193

Driving the vehicle

The following procedures should be observed to ensure safe driving:

Starting the hybrid system

→P. 229

Driving

1 With the brake pedal depressed, shift the shift lever to D. $(\rightarrow P. 237)$

- 2 Release the parking brake. (\rightarrow P. 243)
- 3 Gradually release the brake pedal and gently depress the accelerator pedal to accelerate the vehicle.

Stopping

1 With the shift lever in D, depress the brake pedal.

2 If necessary, set the parking brake.

If the vehicle is to be stopped for an extended period of time, shift the shift lever to P. (\rightarrow P. 237)

Parking the vehicle

- 1 With the shift lever in D, depress the brake pedal.
- 2 Shift the shift lever to P. (\rightarrow P. 237)
- 3 Set the parking brake. (\rightarrow P. 243)
- 4 Press the power switch off to stop the hybrid system.
- **5** Lock the door, making sure that you have the key on your person.

If parking on a hill, block the wheels as needed.

Starting off on a steep uphill

1 Make sure that the parking brake is set and shift the shift lever to D.

- 2 Gently depress the accelerator pedal.
- 3 Release the parking brake.

When starting off on an uphill

The hill-start assist control will activate. (\rightarrow P. 292)

- Driving in the rain
 - Drive carefully when it is raining, because visibility will be reduced, the windows may become fogged-up, and the road will be slippery.
 - Drive carefully when it starts to rain, because the road surface will be especially slippery.
 - Refrain from high speeds when driving on an expressway in the rain, because there may be a layer of water between the tires and the road surface, preventing the steering and brakes from operating properly.

Engine speed while driving

In the following conditions, the engine speed may become high while driving. This is due to automatic up-shifting control or down-shifting implementation to meet driving conditions. It does not indicate sudden acceleration.

The vehicle is judged to be driving uphill or downhill

• When the accelerator pedal is released

Breaking in your new Toyota

To extend the life of the vehicle, observing the following precautions is recommended:

- For the first 186 miles (300 km): Avoid sudden stops.
- For the first 500 miles (800 km): Do not tow a trailer.
- For the first 621 miles (1000 km):
 - Do not drive at extremely high speeds.
 - Avoid sudden acceleration.
 - Do not drive continuously in low gears.
 - Do not drive at a constant speed for extended periods.

Driving

Drum-in-disc type parking brake system

Your vehicle has a drum-in-disc type parking brake system. This type of brake system needs bedding-down of the brake shoes periodically or whenever the parking brake shoes and/or drum are replaced. Have your Toyota dealer perform the bedding down operation.

Operating your vehicle in a foreign country

Comply with the relevant vehicle registration laws and confirm the availability of the correct fuel. (\rightarrow P. 531)

For efficient use

Shift the shift lever to D when driving.

In the N position, the gasoline engine operates but electricity cannot be generated. The hybrid battery (traction battery) will discharge, requiring unnecessary engine power to recharge.

Drive your vehicle smoothly.

Avoid abrupt acceleration and deceleration. Gradual acceleration and deceleration will make more effective use of the electric motor (traction motor) without having to use gasoline engine power.

Avoid repeated acceleration.

Repeated acceleration consumes hybrid battery (traction battery) power, resulting in poor acceleration. Battery power can be restored by driving with the accelerator pedal slightly released.

• Shift the shift lever to P when parking.

In the N position, the hybrid battery (traction battery) does not recharge. Leaving the shift lever in the N position for an extended period of time may discharge the hybrid battery. The vehicle cannot run if the hybrid battery is discharged.

Brake actuator

The brake actuator uses brake fluid pressurized by the pump to power-assist the brakes. If the brake actuator fails during driving, the brake system warning light comes on and the buzzer sounds intermittently. In this case, the brakes may not work properly. If they do not work well, depress the brake pedal firmly. If the brake system warning light comes on, immediately stop your vehicle and contact your Toyota dealer.

In the following conditions, you may hear a sound in the engine compartment. This is not a malfunction.

• The driver's door is opened with the hybrid system turned off.

• The brake pedal is depressed with the hybrid system turned off.

• After the hybrid system is turned on.

• The brake pedal is depressed repeatedly with the hybrid system turned on.

After the hybrid system is turned off.

The brake pedal may be hard to depress or the brake pedal stroke may be short before turning the hybrid system on. This is not a malfunction.

When braking the vehicle

When applying brakes, you may hear a sound coming from the motor generator.

However, this does not indicate any trouble.

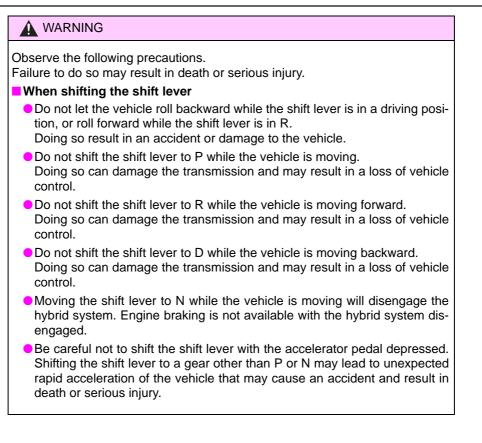
🛕 WARNING Observe the following precautions. Failure to do so may result in death or serious injury. When starting the vehicle Always keep your foot on the brake pedal while stopped with the hybrid system operating. This prevents the vehicle from creeping. When driving the vehicle Do not drive if you are unfamiliar with the location of the brake and accelerator pedals to avoid depressing the wrong pedal. · Accidentally depressing the accelerator pedal instead of the brake pedal will result in sudden acceleration that may lead to an accident. · When backing up, you may twist your body around, leading to a difficulty in operating the pedals. Make sure to operate the pedals properly. • Make sure to keep a correct driving posture even when moving the vehicle only slightly. This allows you to depress the brake and accelerator pedals properly. • Depress the brake pedal using your right foot. Depressing the brake pedal using your left foot may delay response in an emergency, resulting in an accident. The driver should pay extra attention to pedestrians when the vehicle is powered only by the electric motor (traction motor). Because there is no engine noise, the pedestrians may misjudge the vehicle's movement. Do not drive the vehicle over or stop the vehicle near flammable materials. The exhaust system and exhaust gases can be extremely hot. These hot parts may cause a fire if there is any flammable material nearby. During normal driving, do not turn off the hybrid system. Turning the hybrid system off while driving will not cause loss of steering or braking control, however, power assist to the steering will be lost. This will make it more difficult to steer smoothly, so you should pull over and stop the vehicle as soon as it is safe to do so. In the event of an emergency, such as if it becomes impossible to stop the vehicle in the normal way: \rightarrow P. 451

4-1. Before driving

A WARNING Observe the following precautions. Failure to do so may result in death or serious injury. When driving the vehicle Use engine braking (downshift) to maintain a safe speed when driving down a steep hill. Using the brakes continuously may cause the brakes to overheat and lose effectiveness. (\rightarrow P. 237) Do not adjust the positions of the steering wheel, the seat, or the inside or outside rear view mirrors while driving. Doing so may result in a loss of vehicle control. Always check that all passengers' arms, heads or other parts of their body are not outside the vehicle. Do not drive in excess of the speed limit. Even if the legal speed limit permits it, do not drive over 85 mph (140 km/h) unless your vehicle has highspeed capability tires. Driving over 85 mph (140 km/h) may result in tire failure, loss of control and possible injury. Be sure to consult a tire dealer to determine whether the tires on your vehicle are high-speed capability tires or not before driving at such speeds. When driving on slippery road surfaces Sudden braking, acceleration and steering may cause tire slippage and reduce your ability to control the vehicle. Sudden acceleration, engine braking due to shifting, or changes in engine speed could cause the vehicle to skid. After driving through a puddle, lightly depress the brake pedal to make sure that the brakes are functioning properly. Wet brake pads may prevent the brakes from functioning properly. If the brakes on only one side are wet and not functioning properly, steering control may be affected.

Driving

199



MARNING

Observe the following precautions.

Failure to do so may result in death or serious injury.

If you hear a squealing or scraping noise (brake pad wear limit indicators)

Have the brake pads checked and replaced by your Toyota dealer as soon as possible.

Rotor damage may result if the pads are not replaced when needed.

It is dangerous to drive the vehicle when the wear limits of the brake pads and/or those of the brake discs are exceeded.

When the vehicle is stopped

Do not depress the accelerator pedal unnecessarily.

If the vehicle is in any gear other than P or N, the vehicle may accelerate suddenly and unexpectedly, causing an accident.

- In order to prevent accidents due to the vehicle rolling away, always keep depressing the brake pedal while the "READY" indicator is on. Apply the parking brake as necessary.
- If the vehicle is stopped on an incline, in order to prevent accidents caused by the vehicle rolling forward or backward, always depress the brake pedal and securely apply the parking brake as needed.
- Avoid revving or racing the engine. Running the engine at high speed while the vehicle is stopped may cause the exhaust system to overheat, which could result in a fire if combustible material is nearby.

201

🛕 WARNING Observe the following precautions. Failure to do so may result in death or serious injury. When the vehicle is parked Do not leave glasses, cigarette lighters, spray cans, or soft drink cans in the vehicle when it is in the sun. Doing so may result in the following: · Gas may leak from a cigarette lighter or spray can, and may lead to a fire. • The temperature inside the vehicle may cause the plastic lenses and plastic material of glasses to deform or crack. • Soft drink cans may fracture, causing the contents to spray over the interior of the vehicle, and may also cause a short circuit in the vehicle's electrical components. Do not leave cigarette lighters in the vehicle. If a cigarette lighter is in a place such as the glove box or on the floor, it may be lit accidentally when luggage is loaded or the seat is adjusted, causing a fire. Do not attach adhesive discs to the windshield or windows. Do not place containers such as air fresheners on the instrument panel or dashboard. Adhesive discs or containers may act as lenses, causing a fire in the vehicle. Do not leave a door or window open if the curved glass is coated with a metallized film such as a silver-colored one. Reflected sunlight may cause the glass to act as a lens, causing a fire. Always apply the parking brake, shift the shift lever to P, stop the hybrid system and lock the vehicle. Do not leave the vehicle unattended while the hybrid system is operating. Do not touch the exhaust pipe while the hybrid system is operating or immediately after turning the hybrid system off. Doing so may cause burns. When taking a nap in the vehicle Always turn the hybrid system off. Otherwise, if you accidentally move the shift lever or depress the accelerator pedal, this could cause an accident or fire due to hybrid system overheating. Additionally, if the vehicle is parked in a poorly ventilated area, exhaust gases may collect and enter the vehicle, leading to death or a serious health hazard.

MARNING

Observe the following precautions.

Failure to do so may result in death or serious injury.

When braking

- When the brakes are wet, drive more cautiously.
 Braking distance increases when the brakes are wet, and this may cause one side of the vehicle to brake differently than the other side. Also, the parking brake may not securely hold the vehicle.
- If the electronically controlled brake system does not operate, do not follow other vehicles closely and avoid hills or sharp turns that require braking.

In this case, braking is still possible, but the brake pedal should be depressed more firmly than usual. Also, the braking distance will increase. Have your brakes fixed immediately.

The brake system consists of 2 or more individual hydraulic systems; if one of the systems fails, the other(s) will still operate. In this case, the brake pedal should be depressed more firmly than usual and the braking distance will increase. Have your brakes fixed immediately.

If the vehicle becomes stuck

Do not spin the wheels excessively when any of the tires is up in the air, or the vehicle is stuck in sand, mud, etc. This may damage the driveline components or propel the vehicle forward or backward, causing an accident. Driving

203

When driving the vehicle

- Do not depress the accelerator and brake pedals at the same time during driving, as this may restrain driving torque.
- Do not use the accelerator pedal or depress the accelerator and brake pedals at the same time to hold the vehicle on a hill.

🔨 NOTICE

When parking the vehicle

Always shift the shift lever to P. Failure to do so may cause the vehicle to move or the vehicle may accelerate suddenly if the accelerator pedal is accidentally depressed.

Avoiding damage to vehicle parts

 Do not turn the steering wheel fully in either direction and hold it there for an extended period of time.

Doing so may damage the power steering motor.

When driving over bumps in the road, drive as slowly as possible to avoid damaging the wheels, underside of the vehicle, etc.

If you get a flat tire while driving

A flat or damaged tire may cause the following situations. Hold the steering wheel firmly and gradually depress the brake pedal to slow down the vehicle.

- It may be difficult to control your vehicle.
- The vehicle will make abnormal sounds or vibrations.
- The vehicle will lean abnormally.

Information on what to do in case of a flat tire (\rightarrow P. 486)

When encountering flooded roads

Do not drive on a road that has flooded after heavy rain etc. Doing so may cause the following serious damage to the vehicle:

- Engine stalling
- Short in electrical components
- Engine damage caused by water immersion

In the event that you drive on a flooded road and the vehicle is flooded, be sure to have your Toyota dealer check the following:

- Brake function
- Changes in quantity and quality of oil and fluid used for the engine, hybrid transmission, rear electric motor (traction motor), etc.
- Lubricant condition for the bearings and suspension joints (where possible), and the function of all joints, bearings, etc.

Cargo and luggage

Take notice of the following information about storage precautions, cargo capacity and load:

Capacity and distribution

Cargo capacity depends on the total weight of the occupants.

(Cargo capacity) = (Total load capacity) — (Total weight of occupants)

Steps for Determining Correct Load Limit —

- Locate the statement "The combined weight of occupants and cargo should never exceed XXX kg or XXX lbs." 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 kg or XXX lbs.

(4) The resulting figure equals the available amount of cargo and luggage load capacity.

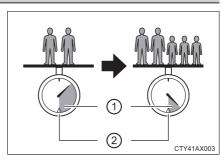
For example, if the "XXX" amount equals 1400 lbs. and there will be five 150 lb passengers in your vehicle, the amount of available cargo and luggage load capacity is 650 lbs. $(1400 - 750 (5 \times 150) = 650 \text{ lbs.})$

- (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.

(→P. 210)

Calculation formula for your vehicle

- 1 Cargo capacity
- ② Total load capacity (vehicle capacity weight) (→P. 528)



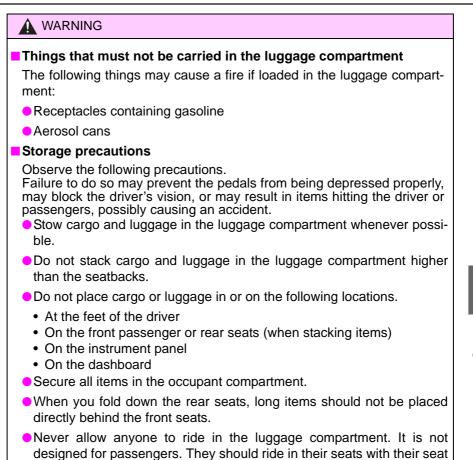
When 2 people with the combined weight of A lb. (kg) are riding in your vehicle, which has a total load capacity (vehicle capacity weight) of B lb. (kg), the available amount of cargo and luggage load capacity will be C lb. (kg) as follows:

 B^{*2} lb. (kg) - A^{*1} lb. (kg) = C^{*3} lb. (kg)

- *1: A =Weight of people
- *2: B =Total load capacity
- *³: C =Available cargo and luggage load
 - In this condition, if 3 more passengers with the combined weight of D
 - Ib. (kg) get on, the available cargo and luggage load will be reduced E lb. (kg) as follows:
- C lb. (kg) D^{*4} lb. (kg) = E^{*5} lb. (kg)
- *⁴: D =Additional weight of people
- *⁵: E =Available cargo and luggage load

As shown in the example above, if the number of occupants increases, the cargo and luggage load will be reduced by an amount that equals the increased weight due to the additional occupants. In other words, if an increase in the number of occupants causes an excess of the total load capacity (combined weight of occupants plus cargo and luggage load), you must reduce the cargo and luggage on your vehicle.

4-1. Before driving



4

207

Driving

belts properly fastened.

WARNING

Capacity and distribution

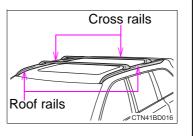
- Do not exceed the maximum axle weight rating or the total vehicle weight rating.
- Even if the total load of occupant's weight and the cargo load is less than the total load capacity, do not apply the load unevenly. Improper loading may cause deterioration of steering or braking control which may cause death or serious injury.

Roof luggage carrier precautions (vehicles with roof rails)

To use the roof rails as a roof luggage carrier, you must fit the roof rails with two or more genuine Toyota cross rails or their equivalent.

When you load cargo on the roof luggage carrier, observe the following:

- Place the cargo so that its weight is distributed evenly between the front and rear axles.
- If loading long or wide cargo, never exceed the vehicle overall length or width. (→P. 528)



- Before driving, make sure the cargo is securely fastened on the roof luggage carrier.
- Loading cargo on the roof luggage carrier will make the center of the vehicle gravity higher. Avoid high speeds, sudden starts, sharp turns, sudden braking or abrupt maneuvers, otherwise it may result in loss of control or vehicle rollover due to failure to operate this vehicle correctly and result in death or serious injury.
- If driving for a long distance, on rough roads, or at high speeds, stop the vehicle now and then during the trip to make sure the cargo remains in its place.
- Do not exceed 165 lb. (75 kg) cargo weight on the roof luggage carrier.

4-1. Before driving

209

WARNING

When installing cross rails (vehicles with roof rails)

Make sure the cross bars are installed securely by pushing them forward and rearward.

Failure to do so may cause an unexpected accident.

When loading cargo

Be careful not to scratch the surface of the moon roof or panoramic moon roof.

Vehicle load limits

Vehicle load limits include total load capacity, seating capacity, TWR (Trailer Weight Rating) and cargo capacity.

◆ Total load capacity (vehicle capacity weight): →P. 528

Total load capacity means the combined weight of occupants, cargo and luggage.

Seating capacity: 7 or 8 occupants (Front 2, Rear 5 or 6)

Seating capacity means the maximum number of occupants whose estimated average weight is 150 lb. (68 kg) per person.

• TWR (Trailer Weight Rating): \rightarrow P. 216, 528

TWR means the maximum gross trailer weight (trailer weight plus its cargo weight) that your vehicle is able to tow.

Cargo capacity

Cargo capacity may increase or decrease depending on the weight and the number of occupants.

■ Total load capacity and seating capacity

These details are also described on the tire and loading information label. (\rightarrow P. 421)

WARNING

Overloading the vehicle

Do not overload the vehicle.

It may not only cause damage to the tires, but also degrade steering and braking ability, resulting in an accident.

Driving

Trailer towing

Your vehicle is designed primarily as a passenger-and-load-carrying vehicle. Towing a trailer can have an adverse impact on handling, performance, braking, durability, and fuel consumption. For your safety and the safety of others, you must not overload your vehicle or trailer. You must also ensure that you are using appropriate towing equipment, that the towing equipment has been installed correctly and used properly, and that you employ the requisite driving habits.

Vehicle-trailer stability and braking performance are affected by trailer stability, brake performance and setting, trailer brakes, the hitch and hitch systems (if equipped).

To tow a trailer safely, use extreme care and drive the vehicle in accordance with your trailer's characteristics and operating conditions.

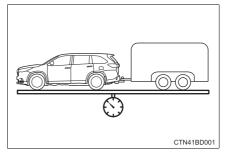
Toyota warranties do not apply to damage or malfunction caused by towing a trailer for commercial purposes.

Contact your Toyota dealer for further information about additional requirements such as a towing kit, etc.

Towing related terms

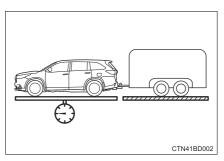
GCWR (Gross Combination Weight Rating)

The maximum allowable gross combination weight. The gross combination weight is the sum of the total vehicle weight (including the occupants, cargo and any optional equipment installed on the vehicle) and the weight of the trailer being towed (including the cargo in the trailer).



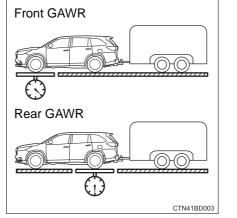
■ GVWR (Gross Vehicle Weight Rating)

The maximum allowable gross vehicle weight. The gross vehicle weight is the total weight of the vehicle. When towing a trailer, it is the sum of the vehicle weight (including the occupants, cargo and any optional equipment installed on the vehicle) and the tongue weight.



GAWR (Gross Axle Weight Rating)

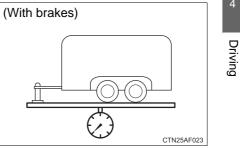
The maximum allowable gross axle weight. The gross axle weight is the load placed on each axle (front and rear).



TWR (Trailer Weight Rating)

The maximum allowable gross trailer weight. The gross trailer weight is the sum of the trailer weight and the weight of the cargo in the trailer.

TWR is calculated assuming base vehicle with one driver, one front passenger, towing package (if available), hitch and hitch systems (if required).

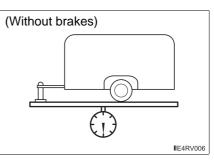


Additional optional equipment, passengers and cargo in the vehicle will reduce the trailer weight rating so as not to exceed GCWR, GVWR and GAWR.

If the gross trailer weight exceeds 3000 lb. (1360 kg), it is recommended to use a trailer with 2 or more axles.

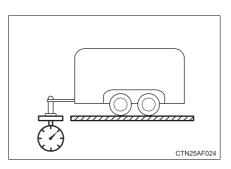
■ Unbraked TWR (Unbraked Trailer Weight Rating)

The trailer weight rating for towing a trailer without a trailer service brake system.



Tongue Weight

The load placed on the trailer hitch ball. (\rightarrow P. 217)



Weight limits

- The gross trailer weight must never exceed the TWR described in the table. (→P. 216)
- The gross combination weight must never exceed the GCWR described in the table. (→P. 216)
- The gross vehicle weight must never exceed the GVWR indicated on the Certification Label.
- The gross axle weight on each axle must never exceed the GAWR indicated on the Certification Label.
- If the gross trailer weight is over the unbraked TWR, trailer service brakes are required.



 If the gross trailer weight is over 2000 lb. (907 kg), a sway control device with sufficient capacity is required. Driving

GCWR, TWR and Unbraked TWR

Confirm that the gross trailer weight, gross combination weight, gross vehicle weight, gross axle weight and tongue weight are all within the limits.

■ GCWR*1 and TWR*1

Model code ^{*2}	Engine	Driving system	GCWR	TWR
GVU58L-ARXNKA	3.5L V6 (2GR-FXE) engine	AWD	8700 lb. (3945 kg)	3500 lb. (1500 kg)
GVU58L-ARXMKA	3.5L V6 (2GR-FXE) engine	AWD	8740 lb. (3960 kg)	3500 lb. (1500 kg)
GVU58L-ARXGKA	3.5L V6 (2GR-FXE) engine	AWD	8780 lb. (3980 kg)	3500 lb. (1500 kg)

■ Unbraked TWR*1

1000 lb. (450 kg)

*1: These models meet the tow-vehicle trailering requirement of SAE International per SAE J2807.

*²: The model code is indicated on the Certification Label. (\rightarrow P. 529)

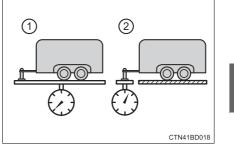
Trailer Tongue Weight

- A recommended tongue weight varies in accordance with the types of trailers or towing as described below.
- To ensure the recommended values shown below, the trailer must be loaded by referring to the following instructions.
 - Tongue Weight

The gross trailer weight should be distributed so that the tongue weight is 9% to 11%.

(Tongue weight /Gross trailer weight x 100 = 9% to 11%)

- 1 Gross trailer weight
- 2 Tongue weight



4 Driving

The gross trailer weight, gross axle weight and tongue weight can be measured with platform scales found at a highway weighing station, building supply company, trucking company, junk yard, etc.

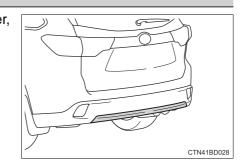
Hitch

Trailer hitch assemblies have different weight capacities. Toyota recommends the use of Toyota hitch/bracket for your vehicle. For details, contact your Toyota dealer.

- If you wish to install a trailer hitch, contact your Toyota dealer.
- Use only a hitch that conforms to the gross trailer weight requirement of your vehicle.
- Follow the directions supplied by the hitch manufacturer.
- Lubricate the hitch ball with a light coating of grease.
- Remove the trailer hitch whenever you are not towing a trailer. After removing the hitch, seal any mounting hole in the vehicle body to prevent entry of any substances into the vehicle.

Hitch cover

When removing the hitch cover, contact your Toyota dealer.

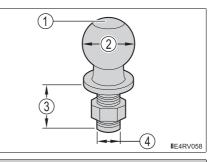


Selecting trailer ball

Use the correct trailer ball for your application.

- 1 Trailer ball load rating
 - Matches or exceeds the gross trailer weight rating of the trailer.
- 2 Ball diameter

Matches the size of the trailer coupler. Most couplers are stamped with the required trailer ball size.



Trailer class	Typical trailer ball size
IV	2 5/16 in.
II and III	2 in.
l	1 7/8 in.

3 Shank length

Protrudes beyond the bottom of the lock washer and nut by at least 2 threads.

4 Shank diameter

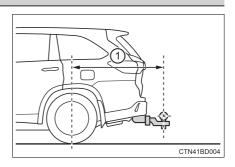
Matches the ball mount hole diameter size.

219

4-1. Before driving

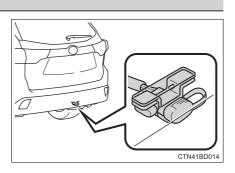
Positions for towing hitch ball

 Weight carrying ball position: 49.73 in. (1263.1 mm)



Connecting trailer lights

Use the wire harness stored in the rear end under body.



Trailer towing tips

Your vehicle will handle differently when towing a trailer. Help to avoid an accident, death or serious injury, keep the following in mind when towing:

- Speed limits for towing a trailer vary by state or province. Do not exceed the posted towing speed limit.
- Toyota recommends that the vehicle-trailer speed limit is 65 mph (104 km/h) on a flat, straight, dry road. Do not exceed this limit, the posted towing speed limit or the speed limit for your trailer as set forth in your trailer owner's manual, whichever is lowest. Instability of the towing vehicle-trailer combination (trailer sway) increases as speed increases. Exceeding speed limits may cause loss of control.
- Before starting out, check the trailer lights, tires and the vehicletrailer connections. Recheck after driving a short distance.
- Practice turning, stopping and reversing with the trailer attached in an area away from traffic until you become accustomed to the feel of the vehicle-trailer combination.
- Reversing with a trailer attached is difficult and requires practice. Grip the bottom of the steering wheel and move your hand to the left to move the trailer to the left. Move your hand to the right to move the trailer to right. (This is generally opposite to reversing without a trailer attached.) Avoid sharp or prolonged turning. Have someone guide you when reversing to reduce the risk of an accident.
- As stopping distance is increased when towing a trailer, vehicle-to vehicle distance should be increased. For each 10 mph (16 km/h) of speed, allow at least one vehicle and trailer length.
- Avoid sudden braking as you may skid, resulting in the trailer jackknifing and a loss of vehicle control. This is especially true on wet or slippery surfaces.
- Avoid jerky starts or sudden acceleration.
- Avoid jerky steering and sharp turns, and slow down before making turn.

221

- Note that when making a turn, the trailer wheels will be closer than the vehicle wheels to the inside of the turn. Compensate by making a wider than normal turning radius.
- Slow down before making a turn, in cross winds, on wet or slippery surfaces, etc.

Increasing vehicle speed can destabilize the trailer.

- Take care when passing other vehicles. Passing requires considerable distance. After passing a vehicle, do not forget the length of your trailer, and be sure you have plenty of room before changing lanes.
- To maintain engine braking efficiency and charging system performance when using engine braking, do not put the transmission in D. If in the S mode, the transmission shift range position must be in 4 or lower.
- Instability happens more frequently when descending steep or long downhill grades. Before descending, slow down and downshift. Do not make sudden downshifts while descending steep or long downhill grades.
- Avoid holding the brake pedal down too long or applying the brakes too frequently. This could cause the brakes to overheat and result in reduced braking efficiency.
- Due to the added load of the trailer, your vehicle's engine may overheat on hot days (at temperatures over 85°F [30°C]) when driving up a long or steep grade. If the engine coolant temperature gauge indicates overheating, immediately turn off the air conditioning (if in use), pull your vehicle off the road and stop in a safe spot.
 (→P. 521)

- Always place wheel blocks under both the vehicle's and the trailer's wheels when parking. Apply the parking brake firmly, and put the transmission in P. Avoid parking on a slope, but if unavoidable, do so only after performing the following:
 - 1 Apply the brakes and keep them applied.
 - 2 Have someone place wheel blocks under both the vehicle's and trailer's wheels.
 - 3 When the wheel blocks are in place, release the brakes slowly until the blocks absorb the load.
 - 4 Apply the parking brake firmly.
 - 5 Shift into P and turn off the hybrid system.

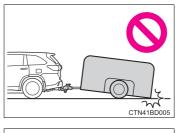
When restarting after parking on a slope:

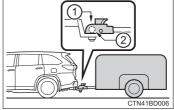
- 1 With the transmission in P, start the hybrid system. Be sure to keep the brake pedal depressed.
- 2 Shift into a forward gear. If reversing, shift into R.
- 3 Release the parking brake and brake pedal, and slowly pull or back away from the wheel blocks. Stop and apply the brakes.
- 4 Have someone retrieve the blocks.

Matching trailer ball height to trailer coupler height

No matter which class of tow hitch applies, for a more safe trailer hookup, the trailer ball setup must be the proper height for the coupler on the trailer.

- 1 Coupler
- 2 Trailer ball





Before towing

Check that the following conditions are met:

- Ensure that your vehicle's tires are properly inflated. (\rightarrow P. 536)
- Trailer tires are inflated according to the trailer manufacturer's recommendation.
- All trailer lights work as required by law.
- All lights work each time you connect them.
- The trailer ball is set at the proper height for the coupler on the trailer.
- The trailer is level when it is hitched.
 Do not drive if the trailer is not level, and check for improper tongue weight, overloading, worn suspension, or other possible causes.
- The trailer cargo is securely loaded.
- The rear view mirrors conform to all applicable federal, state/provincial or local regulations. If they do not, install rear view mirrors appropriate for towing purposes.

Break-in schedule

If your vehicle is new or equipped with any new power train components (such as an engine, transmission, differential or wheel bearing), Toyota recommends that you do not tow a trailer until the vehicle has been driven for over 500 miles (800 km).

After the vehicle has been driven for over 500 miles (800 km), you can start towing. However, for the next 500 miles (800 km), drive the vehicle at a speed of less than 50 mph (80 km/h) when towing a trailer, and avoid full throttle acceleration.

Maintenance

- If you tow a trailer, your vehicle will require more frequent maintenance due to the additional load. (See "Scheduled Maintenance Guide" or "Owner's Manual Supplement".)
- Retighten the fixing bolts of the towing ball and bracket after approximately 600 miles (1000 km) of trailer towing.

If trailer sway occurs

One or more factors (crosswinds, passing vehicles, rough roads, etc.) can adversely affect handling of your vehicle and trailer, causing instability.

- If trailer swaying occurs:
 - Firmly grip the steering wheel. Steer straight ahead.
 - Do not try to control trailer swaying by turning the steering wheel.Begin releasing the accelerator pedal immediately but very gradually to reduce speed.
 - Do not increase speed. Do not apply vehicle brakes.

If you make no extreme correction with the steering or brakes, your vehicle and trailer should stabilize.

After the trailer swaying has stopped:

- Stop in a safe place. Get all occupants out of the vehicle.
- Check the tires of the vehicle and the trailer.
- Check the load in the trailer. Make sure the load has not shifted.
 - Make sure the tongue weight is appropriate, if possible.
- Check the load in the vehicle.

Make sure the vehicle is not overloaded after occupants get in.

If you cannot find any problems, the speed at which trailer swaying occurred is beyond the limit of your particular vehicle-trailer combination. Drive at a lower speed to prevent instability. Remember that swaying of the towing vehicle-trailer increases as speed increases.

🛕 WARNING

Trailer towing precautions

To tow a trailer safely, use extreme care and drive the vehicle in accordance with the trailer's characteristics and operating conditions. Failure to do so could cause an accident resulting in death or serious injury. Vehicle stability and braking performance are affected by trailer stability, brake setting and performance, and the hitch. Your vehicle will handle differently when towing a trailer.

To avoid accident or injury

- Do not exceed the TWR, unbraked TWR, GCWR, GVWR or GAWR.
- If the gross trailer weight is over 2000 lb. (907 kg), a sway control device with sufficient capacity is required.
- Adjust the tongue weight within the appropriate range. Place heavier loads as close to the trailer axle as possible.
- Do not exceed 65 mph (104 km/h), the posted towing speed limit or the speed limit for your trailer as set forth in your trailer owner's manual, whichever is lowest. Slow down sufficiently before making a turn, in cross winds, on wet or slippery surface, etc. to help avoid an accident. If you experience a vehicle-trailer instability from reducing a certain speed, slow down and make sure you keep your vehicle speed under the speed of which you experience the instability.
- Do not make jerky, abrupt or sharp turns.
- Do not apply the brakes suddenly as you may skid, resulting in jackknifing and loss of vehicle control. This is especially true on wet or slippery surfaces.
- Do not exceed the trailer hitch assembly weight, gross vehicle weight, gross axle weight and trailer tongue weight capacities.
- Do not use cruise control when towing.
- Slow down and downshift before descending steep or long downhill grades. Do not make sudden downshifts while descending steep or long downhill grades.
- Vehicle-trailer instability is more likely on steep long downhills. Before descending steep or long downhill grades, slow down and downshift. Do not make sudden downshifts when descending steep or long downhill grades. Avoid holding the brake pedal down too long or applying the brakes too frequently. This could cause the brakes to overheat and result in reduced braking efficiency.
- Do not tow a trailer when the compact spare tire is installed on your vehicle.

WARNING

Hitch

Trailer hitch assemblies have different weight capacities established by the hitch manufacturer. Even though the vehicle may be physically capable of towing a higher weight, the operator must determine the maximum weight rating of the particular hitch assembly and never exceed the maximum weight rating specified for the trailer-hitch. Exceeding the maximum weight rating set by the trailer-hitch manufacturer can cause an accident resulting in death or serious personal injuries.

When towing a trailer

Toyota recommends trailers with brakes that conform to any applicable federal and state/provincial regulations.

- If the gross trailer weight exceeds unbraked TWR, trailer brakes are required. Toyota recommends trailers with brakes that conform to all applicable federal and state/provincial regulations.
- Never tap into your vehicle's hydraulic system, as this will lower the vehicle's braking effectiveness.
- Never tow a trailer without using a safety chain securely attached to both the trailer and the vehicle. If damage occurs to the coupling unit or hitch ball, there is danger of the trailer wandering into another lane.

Driving

When installing a trailer hitch

Use only the position recommended by your Toyota dealer. Do not install the trailer hitch on the bumper; this may cause body damage.

Do not directly splice trailer lights

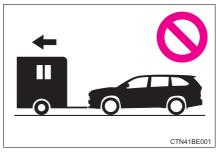
Do not directly splice trailer lights. Directly splicing trailer lights may damage your vehicle's electrical system and cause a malfunction.

HIGHLANDER_HV_U (OM48F02U)

4-1. Before driving

Dinghy towing

Your vehicle is not designed to be dinghy towed (with 4 wheels on the ground) behind a motor home.



NOTICE To avoid serious damage to your vehicle Do not tow your vehicle with 4 wheels on the ground. To prevent causing serious damage to the hybrid transmission and AWD system Never tow this vehicle with any of the wheels on the ground. This may cause serious damage to the hybrid transmission and AWD system.

Power (ignition) switch

Performing the following operations when carrying the electronic key on your person starts the hybrid system or changes power switch modes.

Starting the hybrid system

- 1 Check that the parking brake is set.
- 2 Check that the shift lever is set in P.
- 3 Firmly depress the brake pedal.

Vehicles with monochrome display:

will be displayed on the multi-information display.

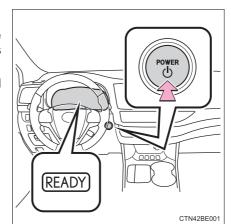
If it is not displayed, the hybrid system cannot be started. Vehicles with color display:

and a message will be displayed on the multi-information display. If it is not displayed, the hybrid system cannot be started.

4 Press the power switch.

Continue depressing the brake pedal until the hybrid system is completely started.

The hybrid system can be started from any power switch mode.



5 Check that the "READY" indicator is on.

The vehicle will not move when the "READY" indicator is off.

229

Stopping the hybrid system

- 1 Stop the vehicle.
- 2 Shift the shift lever to P.
- 3 Set the parking brake. (\rightarrow P. 243)
- 4 Press the power switch.
- 5 Release the brake pedal and check that "ACCESSORY" or "IGNITION ON" on the multi-information display is off.

Changing power switch modes

Modes can be changed by pressing the power switch with brake pedal released. (The mode changes each time the switch is pressed.)

① Off*

The emergency flashers can be used.

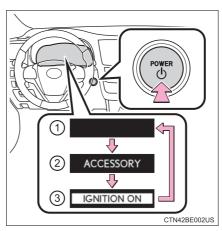
The multi-information display will not be displayed.

(2) ACCESSORY mode

Some electrical components such as the power outlet can be used. "ACCESSORY" will be displayed on the multi-information display.

③ ON mode

All electrical components can be used.



"IGNITION ON" will be displayed on the multi-information display.

*: If the shift lever is in a position other than P when turning off the hybrid system, the power switch will be turned to ACCESSORY mode, not to off.

When stopping the hybrid system with the shift lever in a position other than P

If the hybrid system is stopped with the shift lever in a position other than P, the power switch will not be turned off but instead be turned to ACCESSORY mode. Perform the following procedure to turn the switch off:

- 1 Check that the parking brake is set.
- 2 Shift the shift lever to P.
- 3 Check that "Turn Power OFF" is displayed on the multi-information display and then press the power switch once.
- 4 Check that "Turn Power OFF" on the multi-information display is off.

Message displays

Message illustrations used in this section are intended as examples, and may differ from the image that is actually displayed on the multi-information display.

Auto power off function

If the vehicle is left in ACCESSORY mode for more than 20 minutes or ON mode (the hybrid system is not operating) for more than an hour with the shift lever in P, the power switch will automatically turn off. However, this function cannot entirely prevent 12-volt battery discharge. Do not leave the vehicle with the power switch in ACCESSORY or ON mode for long periods of time when the hybrid system is not operating.

Sounds and vibrations specific to a hybrid vehicle

→P. 84

Electronic key battery depletion

→P. 126

When the ambient temperature is low, such as during winter driving conditions

It may take time until the "READY" indicator comes on.

Conditions affecting operation

→P. 151

Note for the entry function

→P. 152

231

HIGHLANDER_HV_U (OM48F02U)

If the hybrid system does not start

- The immobilizer system may not have been deactivated. (→P. 91) Contact your Toyota dealer.
- Check that the shift lever is securely set in P. The hybrid system may not start if the shift lever is displaced out of P.

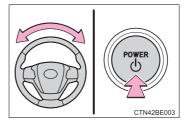
Steering lock

After turning the power switch off and opening and closing the doors, the steering wheel will be locked due to the steering lock function. Operating the power switch again automatically cancels the steering lock.

When the steering lock cannot be released

"Steering Lock active" will be displayed on the multi-information display.

Check that the shift lever is set in P. Press the power switch while turning the steering wheel left and right.



Steering lock motor overheating prevention

To prevent the steering lock motor from overheating, operation of the motor may be suspended if the hybrid system is turned on and off repeatedly in a short period of time. In this case, refrain from operating the hybrid system. After about 10 seconds, the steering lock motor will resume functioning.

When "Check SMART Key System" will be displayed on the multi-information display

The system may be malfunctioning. Have the vehicle inspected by your Toyota dealer immediately.

If the "READY" indicator does not come on

If the "READY" indicator does not come on when you press the power switch with the shift lever in P and the brake pedal depressed, contact your Toyota dealer immediately.

If the hybrid system is malfunctioning

→P. 472

If the electronic key battery is depleted

→P. 428

Operation of the power switch

- When operating the power switch, one short, firm press is enough. If the switch is pressed improperly, the hybrid system may not start or the power switch mode may not change. It is not necessary to press and hold the switch.
- If attempting to restart the hybrid system immediately after turning the power switch off, the hybrid system may not start in some cases. After turning the power switch off, please wait a few seconds before restarting the hybrid system.

If the smart key system has been deactivated in a customized setting \rightarrow P. 513

WARNING

When starting the hybrid system

Always start the hybrid system while sitting in the driver's seat. Do not depress the accelerator pedal while starting the hybrid system under any circumstances.

Doing so may cause an accident resulting in death or serious injury.

Caution while driving

If hybrid system failure occurs while the vehicle is moving, do not lock or open the doors until the vehicle reaches a safe and complete stop. Activation of the steering lock in this circumstance may lead to an accident, resulting in death or serious injury.

Stopping the hybrid system in an emergency

If you want to stop the hybrid system in an emergency while driving the vehicle, press and hold the power switch for more than 2 seconds, or press it briefly 3 times or more in succession. (\rightarrow P. 451)

However, do not touch the power switch while driving except in an emergency. Turning the hybrid system off while driving will not cause loss of steering or braking control, however, power assist to the steering will be lost. This will make it more difficult to steer smoothly, so you should pull over and stop the vehicle as soon as it is safe to do so.

To prevent 12-volt battery discharge

- Do not leave the power switch in ACCESSORY or ON mode for long periods if the hybrid system is not operating.
- If "ACCESSORY" or "IGNITION ON" is displayed on the multi-information display while the hybrid system is not operating, the power switch is not off. Exit the vehicle after turning the power switch off.
- Do not stop the hybrid system when the shift lever is in a position other than P. If the hybrid system is stopped in another shift lever position, the power switch will not be turned off but instead be turned to ACCESSORY mode. If the vehicle is left in ACCESSORY mode, 12-volt battery discharge may occur.

When starting the hybrid system

- Do not depress the accelerator pedal unnecessarily.
- If the hybrid system becomes difficult to start, have your vehicle checked by your Toyota dealer immediately.

Symptoms indicating a malfunction with the power switch

If the power switch seems to be operating somewhat differently than usual, such as the switch sticking slightly, there may be a malfunction. Contact your Toyota dealer immediately.

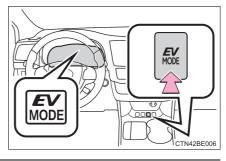
EV drive mode

In EV drive mode the electric motor (traction motor), powered by the hybrid battery (traction battery), is used to drive the vehicle.

This mode allows you to drive in residential areas early in the morning and late at night, or in indoor parking lots etc. without concern for noises and gas emissions.

Turns EV drive mode on/off

When EV drive mode is turned on, the EV drive mode indicator will come on. Pressing the switch when in EV drive mode will return the vehicle to normal driving (using the gasoline engine and electric motor [traction motor]).



Driving

Situations in which EV drive mode cannot be turned on

It may not be possible to turn EV drive mode on in the following situations. If it cannot be turned on, a buzzer will sound and a message will be shown on the multi-information display.

- The temperature of the hybrid system is high. The vehicle has been left in the sun, driven on a hill, driven at high speeds, etc.
- The temperature of the hybrid system is low.
 The vehicle has been left in temperatures lower than about 32°F (0°C) for a long period of time etc.
- The gasoline engine is warming up.
- The hybrid battery (traction battery) is low.

The remaining battery level indicated in the "Energy Monitor" display is low. (\rightarrow P. 117)

- Vehicle speed is about 25 mph (40 km/h) or more.
- Vehicle speed is high.
- The accelerator pedal is depressed firmly or the vehicle is on a hill etc.
- The windshield defogger is in use.

Switching to EV drive mode when the gasoline engine is cold

If the hybrid system is started while the gasoline engine is cold, the gasoline engine will start automatically after a short period of time in order to warm up. In this case, you will become unable to switch to EV drive mode.

After the hybrid system has started and the "READY" indicator has illuminated, press the EV drive mode switch before the gasoline engine starts to switch to EV drive mode.

Automatic cancelation of EV drive mode

When driving in EV drive mode, the gasoline engine may automatically restart in the following situations. When EV drive mode is canceled, a buzzer will sound and the EV drive mode indicator will flash and go off.

• The hybrid battery (traction battery) becomes low.

The remaining battery level indicated in the "Energy Monitor" display is low. (\rightarrow P. 117)

- Vehicle speed becomes more than about 25 mph (40 km/h).
- The accelerator pedal is depressed firmly or the vehicle is on a hill etc.

Possible driving distance when driving in EV drive mode

In EV drive mode, it is possible to drive up to about 0.6 mile (1 km) if driving at a speed of about 25 mph (40 km/h) or less. (The distance that is possible depends on the hybrid battery [traction battery] level and driving conditions.)

Fuel economy

Your Toyota is designed to achieve the best possible fuel economy during normal driving (using the gasoline engine and electric motor [traction motor]). Driving in EV drive mode more than necessary may lower fuel economy.

WARNING

Caution while driving

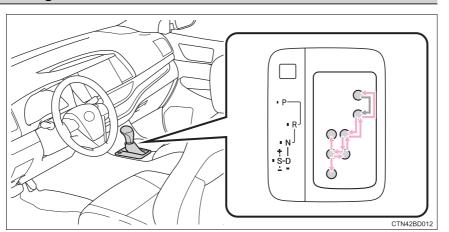
When driving in EV drive mode, pay special attention to the area around the vehicle. Because there is no engine noise, pedestrians, people riding bicycles or other people and vehicles in the area may not be aware of the vehicle starting off or approaching them, so take extra care while driving.

237

Driving

Hybrid transmission

Shifting the shift lever



 While the power switch is in ON mode, depress the brake pedal and move the shift lever.

When shifting the shift lever between P and D, make sure that the vehicle is completely stopped.



Shift position purpose

Shift position	Function
Р	Parking the vehicle/starting the hybrid system
R	Reversing
Ν	Neutral
D	Normal driving ^{*1}
S	S mode driving ^{*2} (\rightarrow P. 239)

*1: Shifting to the D position allows the system to select a gear suitable for the driving conditions. Setting the shift lever to the D position is recommended for normal driving.

*2: Selecting shift ranges using S mode controls engine braking forces.

Selecting Eco drive mode

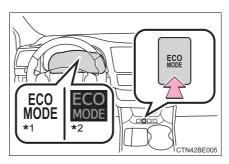
Use Eco drive mode to help achieve low fuel consumption during trips that involve frequent accelerating.

Press the "ECO MODE" switch to select Eco drive mode.

The "ECO MODE" indicator will come on^{*1} or will be displayed on the multi-information display^{*2}.

Press the button again to cancel Eco drive mode.

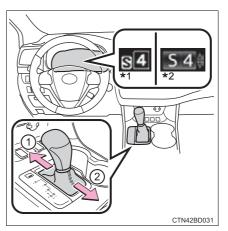
- *1: Vehicles with monochrome display
- *2: Vehicles with color display



Changing shift ranges in S mode

When the shift lever is in the S position, the shift lever can be operated as follows:

- (1) For upshifting
- (2) For downshifting



The initial shift range in S mode is set automatically to 5 or 4 according to vehicle speed.

- *1: Vehicles with monochrome display
- *2: Vehicles with color display
- Shift ranges and their functions
 - You can choose from 6 levels of engine braking force.
 - A lower shift range will provide greater engine braking force than a higher shift range, and the engine speed will also increase.

Operation of the air conditioning system in Eco drive mode

Eco drive mode controls the heating/cooling operations and fan speed of the air conditioning system to enhance fuel efficiency. (\rightarrow P. 326) To improve air conditioning performance, adjust the fan speed or turn off Eco drive mode.

Automatic return to normal driving mode

If EV drive mode is selected, the driving mode will automatically return to normal mode when the hybrid system is turned off.

- S mode
 - When the shift range is 5 or lower, holding the shift lever toward "+" sets the shift range to 6.
 - To prevent the engine from over-revving, upshifting may automatically occur.
- When driving with cruise control or dynamic radar cruise control activated

Even when performing the following actions with the intent of enabling engine braking, engine braking will not activate while driving in S mode and downshifting to 5 or 4 because cruise control or dynamic radar cruise control will not be canceled. (\rightarrow P. 264, 269)

If the shift lever cannot be shifted from P

→P. 512

If S does not come on even after shifting the shift lever to S

This may indicate a malfunction in the hybrid transmission system. Have the vehicle inspected by your Toyota dealer immediately.

(In this situation, the hybrid transmission will operate in the same as manner as when the shift lever is in D.)

Downshift restriction warning buzzer

To help ensure safety and driving performance, downshifting operation may sometimes be restricted. In some circumstances, downshifting may not be possible even when the shift lever is operated. (The buzzer will sound twice.)

WARNING

When driving on slippery road surfaces

Do not accelerate or shift gears suddenly. Sudden changes in engine braking may cause the vehicle to spin or skid, resulting in an accident.

Hybrid battery (traction battery) charge precaution

If the shift lever is in N, the hybrid battery (traction battery) will not be charged even when the engine is running. Therefore, if the vehicle is left with the shift lever in N for a long period of time, the hybrid battery (traction battery) will discharge, and this may result in the vehicle not being able to start.

Driving

241

Turn signal lever

Operating instructions

- 1 Right turn
- (2) Lane change to the right (move the lever partway and release it)

The right hand signals will flash 3 times.

 (3) Lane change to the left (move the lever partway and release it)

The left hand signals will flash 3 times.

(4) Left turn

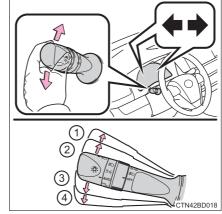
Turn signals can be operated when The power switch is in ON mode.

If the indicator flashes faster than usual

Check that a light bulb in the front or rear turn signal lights has not burned out.

Customization

The number of times the turn signals flash during a lane change can be changed. (Customizable feature \rightarrow P. 563)



Parking brake

Operating instructions

To set the parking brake, fully depress the parking brake pedal with your left foot while depressing the brake pedal with your right foot.

(Depressing the pedal again releases the parking brake.)

*1: For U.S.A.

*2: For Canada

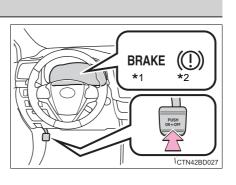
■ Parking brake engaged warning buzzer →P. 472

Usage in winter time \rightarrow P. 316

Before driving

Fully release the parking brake.

Driving the vehicle with the parking brake set will lead to brake components overheating, which may affect braking performance and increase brake wear.



Driving

243

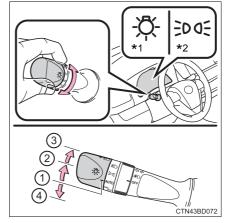
Headlight switch

The headlights can be operated manually or automatically.

Operating instructions

Turning the end of the lever turns on the lights as follows:

- AUTO The headlights, daytime running lights and all the lights listed below turn on and off automatically. (When the power switch is in ON mode)
- (2) SOCE The side marker, parking, tail, license plate, daytime running lights and instrument panel lights turn on.



- (3) The headlights and all the lights listed above (except daytime running lights) turn on.
- Image: Provide the second state of the seco

•² The daytime running lights turn on.

*1: For U.S.A.

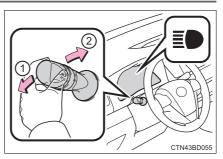
*2: For Canada

Turning on the high beam headlights

(1) With the headlights on, push the lever away from you to turn on the high beams.

Pull the lever toward you to the center position to turn the high beams off.

(2) Pull the lever toward you and release it to flash the high beams once.



You can flash the high beams with the headlights on or off.

Daytime running light system

• Type A: To make your vehicle more visible to other drivers, the headlights turn on automatically (at a reduced intensity) whenever the hybrid system is started and the parking brake is released. Daytime running lights are not designed for use at night.

For the U.S.A.: Daytime running lights can be turned off by operating the switch.

- Driving
- Type B: To make your vehicle more visible to other drivers, the daytime running lights turn on automatically whenever the hybrid system is started and the parking brake is released. Daytime running lights are not designed for use at night.

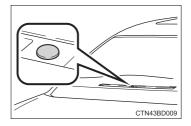
For the U.S.A.: Daytime running lights can be turned off by operating the switch.

• Compared to turning on the headlights, the daytime running light system offers greater durability and consumes less electricity, so it can help improve fuel economy.

Headlight control sensor

The sensor may not function properly if an object is placed on the sensor, or anything that blocks the sensor is affixed to the windshield.

Doing so interferes with the sensor detecting the level of ambient light and may cause the automatic headlight system to malfunction.



Automatic light off system

- When the headlights are on: The headlights and tail lights turn off 30 seconds after the power switch is turned to ACCESSORY mode or turned off and any of the doors is opened and closed. (The lights turn off immediately if
 - on the key is pressed after all the doors are locked.)
- When only the tail lights are on: The tail lights turn off automatically if the power switch is turned to ACCESSORY mode or turned off and the driver's door is opened.

To turn the lights on again, turn the power switch to ON mode, or turn the light

switch off once and then back to $\Rightarrow D \in$ or $\equiv D$. If any of the doors is kept open, the lights automatically turn off after 20 minutes.

Light reminder buzzer

A buzzer sounds when the power switch is turned off or turned to ACCES-SORY mode and the driver's door is opened while the lights are turned on.

Battery-saving function

In the following conditions, the remaining lights will go off automatically after 20 minutes in order to prevent the vehicle battery from being discharged:

• The headlights and/or tail lights are on.

• The power switch is turned to ACCESSORY mode or turned off.

This function will be canceled in any of the following situations:

• When the power switch is turned to ON mode.

• When the light switch is operated.

• When any of the doors is opened or closed.

Customization

Settings (e.g. light sensor sensitivity) can be changed. (Customizable features: \rightarrow P. 563)

To prevent 12-volt battery discharge

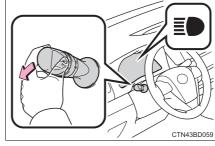
Do not leave the lights on longer than necessary when the hybrid system is off.

Automatic High Beam^{*}

The Automatic High Beam uses an in-vehicle camera sensor to assess the brightness of streetlights, the lights of oncoming and preceding vehicles, etc., and automatically turns the high beam on or off as necessary.

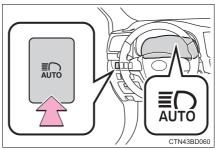
Activating the Automatic High Beam system

1 Push the lever away from you with the headlight switch in the **AUTO** or *∎***○** position.



2 Press the Automatic High Beam switch.

The Automatic High Beam indicator will come on when the headlights are turned on automatically to indicate that the system is active.



*: If equipped

High beam automatic turning on or off conditions

When all of the following conditions are met, high beam will be automatically turned on (after approximately 1 second):

- Vehicle speed is above approximately 21 mph (34 km/h).
- The area ahead of the vehicle is dark.
- There are no oncoming or preceding vehicles with headlights or tail lights turned on.
- There are few streetlights on the road ahead.

If any of the following conditions are met, high beam will be automatically turned off:

- Vehicle speed drops below approximately 17 mph (27 km/h).
- The area ahead of the vehicle is not dark.
- Oncoming or preceding vehicles have headlights or tail lights turned on.
- There are many streetlights on the road ahead.

Turning the high beam on/off manually

Switching to low beam

Pull the lever to original position.

The Automatic High Beam indicator will turn off.

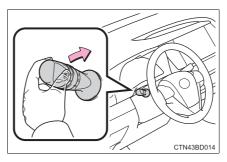
Push the lever away from you to activate the Automatic High Beam system again.

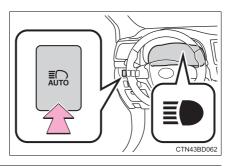
Switching to high beam

Press the Automatic High Beam switch.

The Automatic High Beam indicator will turn off and the high beam indicator will turn on.

Press the switch to activate the Automatic High Beam system again.





The Automatic High Beam can be operated when

The power switch is in ON mode.

Camera sensor detection information

• High beam may not be automatically turned off in the following situations:

- · When oncoming vehicles suddenly appear from a curve
- · When the vehicle is cut in front of by another vehicle
- When oncoming or preceding vehicles are hidden from sight due to repeated curves, road dividers or roadside trees
- High beam may be turned off if an oncoming vehicle that is using fog lights without using the headlights is detected.
- House lights, street lights, red traffic signals, and illuminated billboards or signs may cause the high beam to turn off.

- The following factors may affect the amount of time taken to turn high beam on or off:
 - The brightness of headlights, fog lights, and tail lights of oncoming and preceding vehicles
 - The movement and direction of oncoming and preceding vehicles
 - When an oncoming or preceding vehicle only has operational lights on one side
 - When an oncoming or preceding vehicle is a two-wheeled vehicle
 - The condition of the road (gradient, curve, condition of the road surface etc.)
 - · The number of passengers and amount of luggage
- High beam may be turned on or off when unexpected by the driver.
- Small vehicles, such as bicycles, may not be detected.
- In the situations below, the system may not be able to correctly detect the surrounding brightness levels, and may flash or expose nearby pedestrians to the high beam. Therefore, you should consider turning the high beams on or off manually rather than relying on the Automatic High Beam system.
 - In bad weather (rain, snow, fog, sandstorms etc.)
 - The windshield is obscured by fog, mist, ice, dirt etc.
 - The windshield is cracked or damaged.
 - The camera sensor is deformed or dirty.
 - Surrounding brightness levels are equal to those of headlights, tail lights or fog lights.
 - Vehicles ahead have headlights or tail lights that are either switched off, dirty, changing color, or have improperly adjusted aim.
 - When driving through an area of intermittently changing brightness and darkness.
 - When frequently and repeatedly driving ascending/descending roads, or roads with rough, bumpy or uneven surfaces (such as stone-paved roads, gravel tracks etc.).
 - When frequently and repeatedly taking curves or driving on a winding road.
 - There is a highly reflective object ahead of the vehicle, such as a sign or a mirror.
 - The vehicle's headlights are damaged or dirty.
 - The vehicle is listing or tilting, due to a flat tire, a trailer being towed etc.
 - The driver believes that the high beam may be causing problems or distress to other drivers or pedestrians nearby.

Temporarily lowering sensor sensitivity

The sensitivity of the sensor can be temporarily lowered.

1 Turn the power switch off while the following conditions are met.

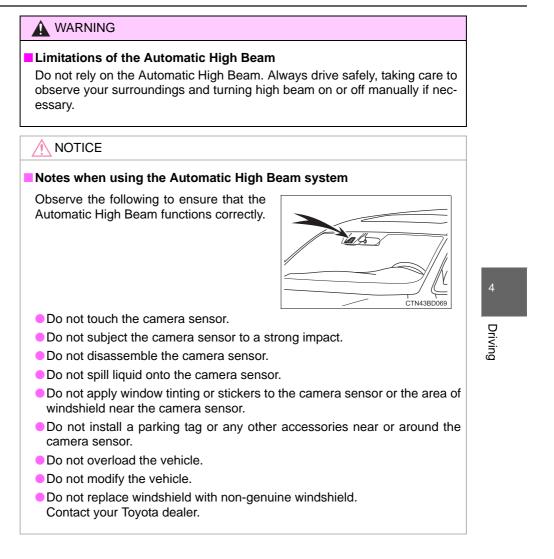
- The headlight switch is in $_{\rm AUTO}$ or $\ensuremath{\not[D \ensuremath{ . \ }}$.
- The headlight switch lever is in high beam position.
- Automatic High Beam switch is on.
- 2 Turn the power switch to ON mode.
- 3 Within 5 seconds after 2, repeat pulling the headlight switch lever to the original position then pushing it to the high beam position quickly 9 times, then leave the lever in high beam position.

Automatic High Beam (headlights) may turn on even the vehicle is stopped.

If the Automatic High Beam indicator turns to yellow

It may indicate a malfunction in the system. Contact your Toyota dealer.

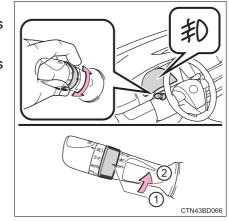
253



Fog light switch

The fog lights secure excellent visibility in difficult driving conditions, such as in rain and fog.

- ① **OFF** ^{*1} or **O** ^{*2} Turns the front fog lights off
- ② ⋬) Turns the front fog lights on
- *1: For U.S.A.
- *2: For Canada



Fog lights can be used when

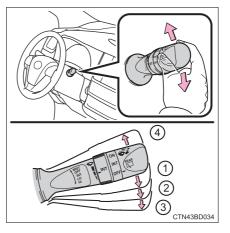
The headlights are on in low beam.

Windshield wipers and washer Operating the wiper lever

The wiper operation is selected by moving the lever as follows.

- INT ^{*1} or [™]√²
 Intermittent windshield wiper operation
- ② LO ^{*1} or ▼ ^{*2} Low speed windshield wiper operation
- ③ **HI** ^{*1} or **¥** ^{*2} High speed windshield wiper operation
- (4) MIST ^{*1} or **A** ^{*2} Temporary operation

*¹: For U.S.A. *²: For Canada

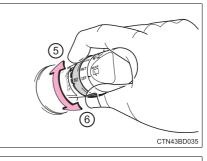


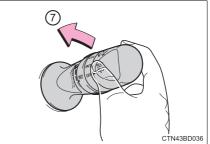
Driving

Wiper intervals can be adjusted when intermittent operation is selected.

- (5) Increases the intermittent windshield wiper frequency
- (6) Decreases the intermittent windshield wiper frequency

(7) Washer/wiper dual operation Wipers will automatically operate a couple of times after the washer squirts.





255

HIGHLANDER_HV_U (OM48F02U)

The windshield wiper and washer can be operated when The power switch is in ON mode.

If no windshield washer fluid sprays

Check that the washer nozzles are not blocked if there is washer fluid in the windshield washer fluid reservoir.

WARNING

Caution regarding the use of washer fluid

When it is cold, do not use the washer fluid until the windshield becomes warm. The fluid may freeze on the windshield and cause low visibility. This may lead to an accident, resulting in death or serious injury.

When the windshield is dry

Do not use the wipers, as they may damage the windshield.

When the washer fluid tank is empty

Do not operate the switch continually as the washer fluid pump may overheat.

When a nozzle becomes blocked

In this case, contact your Toyota dealer.

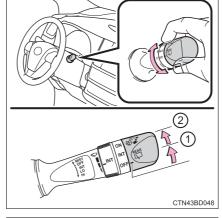
Do not try to clear it with a pin or other object. The nozzle will be damaged.

Rear window wiper and washer

Operating the wiper lever

The wiper operation is selected by moving the lever as follows:

- INT *1 or === *2
 Intermittent window
 wiper operation
- ② ON *1 or *2 Normal window wiper operation
- *1: For U.S.A.
- *2: For Canada

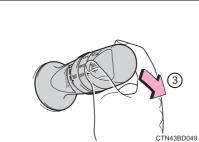


4

Driving

(3) Washer/wiper dual operation

The wiper will automatically operate a couple of times after the washer squirts.



HIGHLANDER_HV_U (OM48F02U)

- The rear window wiper and washer can be operated when
 - The power switch is in ON mode.
 - The glass hatch is closed.

If no washer fluid sprays

Check that the washer nozzle is not blocked if there is washer fluid in the washer fluid reservoir.

When the rear window is dry

Do not use the wiper, as it may damage the rear window.

When the washer fluid tank is empty

Do not operate the switch continually as the washer fluid pump may overheat.

When a nozzle becomes blocked

In this case, contact your Toyota dealer.

Do not try to clear it with a pin or other object. The nozzle will be damaged.

Opening the fuel tank cap

The fuel tank of your vehicle has a special structure, which requires a reduction in fuel tank pressure before refueling. After the opener switch has been pressed, it will take several seconds until the vehicle is ready for refueling.

Before refueling the vehicle

- Close all the doors and windows, and turn the power switch off.
- Confirm the type of fuel.

Fuel types

Unleaded gasoline (Octane rating 87 [Research Octane Number 91] or higher)

Driving

🛕 WARNING When refueling the vehicle Observe the following precautions while refueling the vehicle. Failure to do so may result in death or serious injury. • After exiting the vehicle and before opening the fuel door, touch an unpainted metal surface to discharge any static electricity. It is important to discharge static electricity before refueling because sparks resulting from static electricity can cause fuel vapors to ignite while refueling. Always hold the grips on the fuel tank cap and turn it slowly to remove it. A whooshing sound may be heard when the fuel tank cap is loosened. Wait until the sound cannot be heard before fully removing the cap. In hot weather, pressurized fuel may spray out the filler neck and cause injury. Do not allow anyone that has not discharged static electricity from their body to come close to an open fuel tank. Do not inhale vaporized fuel. Fuel contains substances that are harmful if inhaled. Do not smoke while refueling the vehicle. Doing so may cause the fuel to ignite and cause a fire. Do not return to the vehicle or touch any person or object that is statically charged. This may cause static electricity to build up, resulting in a possible ignition hazard. When refueling Observe the following precautions to prevent fuel overflowing from the fuel tank: Securely insert the fuel nozzle into the fuel filler neck. Stop filling the tank after the fuel nozzle automatically clicks off. Do not top off the fuel tank. Refueling Finish refueling within 30 minutes. If more than 30 minutes passes, the internal valve closes. In this condition, fuel may spill out if you continue to refuel the vehicle. About 5 minutes after the valve is closed, a message "Close Fuel Lid" will appear on the multi-information display. To refuel the

Do not spill fuel during refueling.
 Doing so may damage the vehicle, such as causing the emission control system to operate abnormally or damaging fuel system components or the vehicle's painted surface.

vehicle again, tighten the fuel tank cap and close the fuel filler door, and

then press the opener switch again.

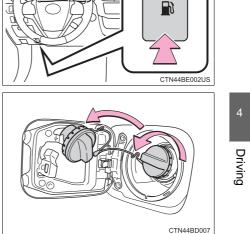
4-4. Refueling

Refuel Ready

Opening the fuel tank cap

- 1 Press the opener switch.
 - When the message "Refuel Ready" appears, the fuel filler door will open.

2 Turn the fuel tank cap slowly to remove it and hang it on the back of the fuel filler door.



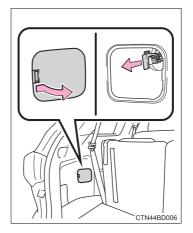
Message displays

Message illustrations used in this section are intended as examples, and may differ from the image that is actually displayed on the multi-information display.

If the fuel filler door does not open and a "Please Wait Now Opening" message appears on the multi-information display

Fuel tank pressure is being reduced. The fuel filler door will open within about 10 seconds of the switch being pressed.

- When the fuel filler door cannot be opened by pressing the inside switch If the fuel filler door opener switch cannot be operated, contact your Toyota dealer. In the event that urgent refueling is required, follow the procedure below.
- 1 Open the fuel filler door using the lever in the luggage compartment.

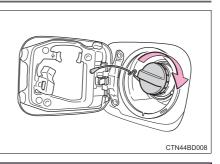


- 2 Remove the cap slowly. Take care to prevent fuel from spilling out, as fuel tank pressure may not have been adequately reduced.
- Fill the fuel tank carefully and slowly. Use caution, as air being discharged from inside the fuel tank may cause fuel to spray out from the filler opening during refueling.

4-4. Refueling **263**

Closing the fuel tank cap

After refueling, turn the fuel tank cap until you hear a click. Once the cap is released, it will turn slightly in the opposite direction.



WARNING

When replacing the fuel tank cap

Do not use anything but a genuine Toyota fuel tank cap designed for your vehicle. Doing so may cause a fire or other incident which may result in death or serious injury.

Driving

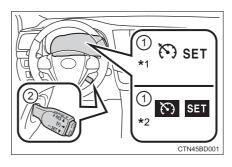
264 4-5. Using the driving support systems

Cruise control*

Summary of functions

Use the cruise control to maintain a set speed without depressing the accelerator pedal.

- 1 Indicators
- 2 Cruise control switch
- *1: Vehicles with monochrome display
- *2: Vehicles with color display



*: If equipped

Setting the vehicle speed

1 Press the "ON-OFF" button to activate the cruise control.

Cruise control indicator will come on *1 or will be displayed on the multi-information display *2 .

Press the button again to deactivate the cruise control.

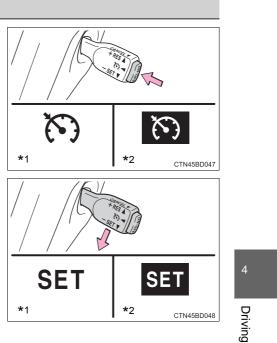
2 Accelerate or decelerate the vehicle to the desired speed, and push the lever down to set the speed.

"SET" indicator will come on *1 or will be displayed on the multi-information display *2 .

The vehicle speed at the moment the lever is released becomes the set speed.

*1: Vehicles with monochrome display

*2: Vehicles with color display



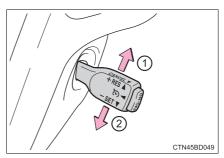
Adjusting the set speed

To change the set speed, operate the lever until the desired set speed is obtained.

- (1) Increases the speed
- (2) Decreases the speed

Fine adjustment: Momentarily move the lever in the desired direction.

Large adjustment: Hold the lever in the desired direction.



The set speed will be increased or decreased as follows:

Fine adjustment: By approximately 1 mph (1.6 km/h) each time the lever is operated.

Large adjustment: The set speed can be increased or decreased continually until the lever is released.

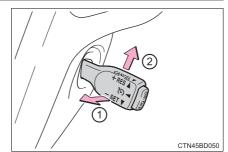
Canceling and resuming the constant speed control

1 Pulling the lever toward you cancels the constant speed control.

The speed setting is also canceled when the brakes are applied.

(2) Pushing the lever up resumes the constant speed control.

Resuming is available when the vehicle speed is more than approximately 25 mph (40 km/h).



Cruise control can be set when

- The shift lever is in the D or range 4 or higher of S has been selected.
- Vehicle speed is above approximately 25 mph (40 km/h).

Accelerating after setting the vehicle speed

- The vehicle can be accelerated normally. After acceleration, the set speed resumes.
- Even without canceling the cruise control, the set speed can be increased by first accelerating the vehicle to the desired speed and then pushing the lever down to set the new speed.

Automatic cruise control cancelation

Cruise control will stop maintaining the vehicle speed in any of the following situations.

 Actual vehicle speed falls more than approximately 10 mph (16 km/h) below the preset vehicle speed.

At this time, the memorized set speed is not retained.

- Actual vehicle speed is below approximately 25 mph (40 km/h).
- Enhanced VSC is activated.
- VSC is activated.

If the warning message for the cruise control is shown on the multiinformation display

Press the "ON-OFF" button once to deactivate the system, and then press the button again to reactivate the system.

If the cruise control speed cannot be set or if the cruise control cancels immediately after being activated, there may be a malfunction in the cruise control system. Have the vehicle inspected by your Toyota dealer. Driving

268 4-5. Using the driving support systems

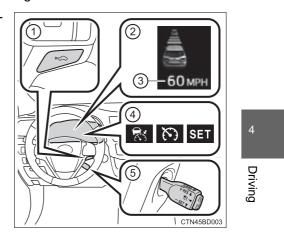
WARNING		
To avoid operating the cruise control by mistake		
Switch the cruise control off using the "ON-OFF" button when not in use.		
Situations unsuitable for cruise control		
Do not use cruise control in any of the following situations. Doing so may result in loss of control and could cause an accident resulting in death or serious injury.		
In heavy traffic		
On roads with sharp bends		
On winding roads		
On slippery roads, such as those covered with rain, ice or snow		
 On steep hills Vehicle speed may exceed the set speed when driving down a steep hill. When your vehicle is towing a trailer or during emergency towing 		

Dynamic radar cruise control*

Summary of functions

Dynamic radar cruise control supplements conventional cruise control with a vehicle-to-vehicle distance control. In vehicle-to-vehicle distance control mode, the vehicle automatically accelerates or decelerates in order to maintain a set following distance from vehicles ahead.

- Vehicle-to-vehicle distance button
- 2 Display
- ③ Set speed
- (4) Indicators
- $(\underline{5})$ Cruise control switch



*: If equipped

HIGHLANDER_HV_U (OM48F02U)



1 Press the "ON-OFF" button to activate the cruise control. Radar cruise control indicator will be displayed. Press the button again to deactivate the cruise control. Radar 3 ready CTN45BD005 2 Accelerate or decelerate the vehicle to the desired speed, and push the lever down to set the speed. "SET" indicator will be displayed. The vehicle speed at the moment the lever is released becomes the SE1 set speed.

CTN45BD006

Adjusting the set speed

To change the set speed, operate the lever until the desired set speed is displayed.

- (1) Increases the speed
- (2) Decreases the speed

Fine adjustment: Momentarily move the lever in the desired direction.

Large adjustment: Hold the lever in the desired direction.



In the vehicle-to-vehicle distance control mode, the set speed will be increased or decreased as follows:

• When the set speed is shown in "MPH"

Fine adjustment: By approximately 1 mph (1.6 km/h) each time the lever is operated

Large adjustment: By approximately 5 mph (8 km/h) for each 0.75 seconds the lever is held

· When the set speed is shown in "km/h"

Fine adjustment: By approximately 0.6 mph (1 km/h) each time the lever is operated

Large adjustment: By approximately 3.1 mph (5 km/h) for each 0.75 seconds the lever is held

In the constant speed control mode (\rightarrow P. 276), the set speed will be increased or decreased as follows:

Fine adjustment: By approximately 1 mph (1.6 km/h) each time the lever is operated

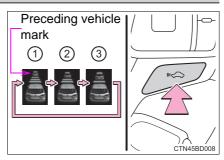
Large adjustment: The set speed can be increased or decreased continually until the lever is released.

Changing the vehicle-to-vehicle distance

Pressing the button changes the vehicle-to-vehicle distance as follows:

- 1 Long
- (2) Medium
- (3) Short

The vehicle-to-vehicle distance is set automatically to long mode when the power switch is turned to ON mode.



If a vehicle is running ahead of you, the preceding vehicle mark will also be displayed.

Vehicle-to-vehicle distance settings

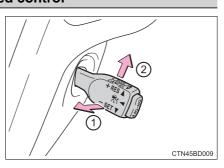
Select a distance from the table below. Note that the distances shown correspond to a vehicle speed of 50 mph (80 km/h). Vehicle-to-vehicle distance increases/decreases in accordance with vehicle speed.

Distance options	Vehicle-to-vehicle distance
Long	Approximately 160 ft. (50 m)
Medium	Approximately 130 ft. (40 m)
Short	Approximately 100 ft. (30 m)

Canceling and resuming the speed control

- 1 Pulling the lever toward you cancels the cruise control.
 - The speed setting is also canceled when the brakes are applied.
- (2) Pushing the lever up resumes the cruise control and returns vehicle speed to the set speed.

Resuming is available when the vehicle speed is more than approximately 25 mph (40 km/h).



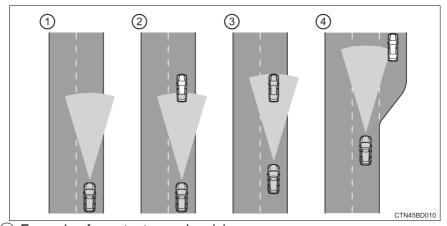
Driving

273

Driving in vehicle-to-vehicle distance control mode

This mode employs a radar sensor to detect the presence of vehicles up to approximately 400 ft. (120 m) ahead, determines the current vehicle-to-vehicle following distance, and operates to maintain a suitable following distance from the vehicle ahead.

Note that vehicle-to-vehicle distance will close in when traveling on long downhill slopes.



(1) Example of constant speed cruising When there are no vehicles ahead

The vehicle travels at the speed set by the driver. The desired vehicle-to-vehicle distance can also be set by operating the vehicle-to-vehicle distance control.

(2) Example of deceleration cruising

When the vehicle ahead is driving slower than the set speed

When a vehicle is detected running ahead of you, the system automatically decelerates your vehicle. When a greater reduction in vehicle speed is necessary, the system applies the brakes. A warning tone warns you when the system cannot decelerate sufficiently to prevent your vehicle from closing in on the vehicle ahead.

③ Example of follow-up cruising

When following a vehicle driving slower than the set speed

The system continues follow-up cruising while adjusting for changes in the speed of the vehicle ahead in order to maintain the vehicle-to-vehicle distance set by the driver.

(4) Example of acceleration

When there are no longer any vehicles ahead driving slower than the set speed

The system accelerates until the set speed is reached. The system then returns to constant speed cruising.

Approach warning

When your vehicle is too close to a vehicle ahead, and sufficient automatic deceleration via the cruise control is not possible, the display will flash and the buzzer will sound to alert the driver. An example of this would be if another driver cuts in front of you while you are following a vehicle. Apply the brakes to ensure an appropriate vehicle-tovehicle distance.

Warnings may not occur when

In the following instances, there is a possibility that the warnings will not occur:

- When the speed of the vehicle ahead matches or exceeds your vehicle speed
- When the vehicle ahead is traveling at an extremely slow speed
- Immediately after the cruise control speed was set
- At the instant the accelerator is applied

Driving

Selecting conventional constant speed control mode

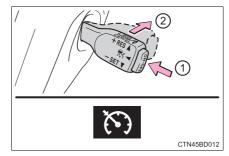
Constant speed control mode differs from vehicle-to-vehicle distance control mode. When constant speed control mode is selected, your vehicle will maintain a set speed regardless of whether or not there are other vehicles in the lane ahead.

1 Press the "ON-OFF" button to activate the cruise control.

Press the button again to deactivate the cruise control.

 Switch to constant speed control mode.

(Push the lever forward and hold for approximately one second.)



Constant speed control mode indicator will be displayed.

When in constant speed control mode, to return to vehicle-to-vehicle distance control mode, push the lever forward again and hold for approximately 1 second.

After the desired speed has been set, it is not possible to return to vehicleto-vehicle distance control mode.

If the power switch is turned off and then turned to ON mode again, the vehicle will automatically return to vehicle-to-vehicle distance control mode.

Adjusting the speed setting: \rightarrow P. 271

Canceling and resuming the speed setting: \rightarrow P. 273

Dynamic radar cruise control can be set when

- The shift lever is in the D or range 4 or higher of S has been selected.
- Vehicle speed is above approximately 30 mph (50 km/h).

Accelerating after setting the vehicle speed

The vehicle can accelerate normally. After acceleration, the set speed resumes. However, during vehicle-to-vehicle distance control mode, the vehicle speed may decrease below the set speed in order to maintain the distance to the vehicle ahead.

Automatic cancelation of vehicle-to-vehicle distance control

Vehicle-to-vehicle distance control driving is automatically canceled in the following situations:

Actual vehicle speed falls below approximately 25 mph (40 km/h).

Enhanced VSC is activated.

- VSC is activated.
- The sensor cannot operate correctly because it is covered in some way.
- The windshield wipers are operating at high speed (when the wiper switch is set to the high speed wiper operation position).

If vehicle-to-vehicle distance control driving is automatically canceled for any other reason, there may be a malfunction in the system. Contact your Toyota dealer.

Automatic cancelation of constant speed control

The cruise control will stop maintaining the vehicle speed in the following situations:

 Actual vehicle speed is more than approximately 10 mph (16 km/h) below the set vehicle speed.

At this time, the memorized set speed is not retained.

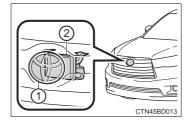
- Vehicle speed falls below approximately 25 mph (40 km/h).
- Enhanced VSC is activated.
- VSC is activated.

278 4-5. Using the driving support systems

Radar sensor and grille cover

Always keep the sensor and grille cover clean to ensure that the vehicle-tovehicle distance control operates properly. (Some obstructions, such as snow, ice and plastic objects, cannot be detected by the obstruction sensor.) Dynamic radar cruise control is canceled if an obstruction is detected.

- 1 Grille cover
- 2 Radar sensor



Operation guide display

When the dynamic radar cruise control switch is operated, a guidance display is shown on the multi-information display for a few seconds as to how to operate the dynamic radar cruise control switch or distance switch. (\rightarrow P. 115)

■ Warning messages and buzzers for dynamic radar cruise control Warning messages and buzzers are used to indicate a system malfunction or to inform the driver of the need for caution while driving. (\rightarrow P. 474)

Certification for the dynamic radar cruise control

► For vehicles sold in the U.S.A.

FCC ID: HYQDNMWR007

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.

FCC WARNING

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

Radiofrequency radiation exposure Information:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

This equipment should be installed and operated with minimum distance of 20 cm between the radiator (antenna) and your body.

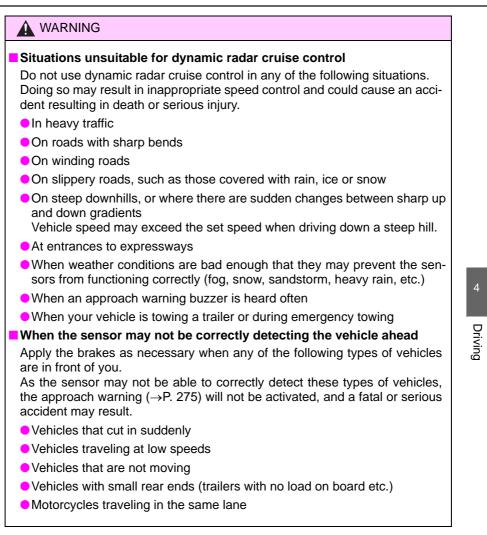
This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

▶ For vehicles sold in Canada

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

280 4-5. Using the driving support systems

🛕 WARNING Before using dynamic radar cruise control Do not overly rely on vehicle-to-vehicle distance control. Be aware of the set speed. If automatic deceleration/acceleration is not appropriate, adjust the vehicle speed, as well as the distance between your vehicle and vehicles ahead by applying the brakes etc. Cautions regarding the driving assist systems Observe the following precautions. Failure to do so may cause an accident resulting in death or serious injury. Assisting the driver to measure following distance The dynamic radar cruise control is only intended to help the driver in determining the following distance between the driver's own vehicle and a designated vehicle traveling ahead. It is not a mechanism that allows careless or inattentive driving, and it is not a system that can assist the driver in low-visibility conditions. It is still necessary for driver to pay close attention to the vehicle's surroundings. Assisting the driver to judge proper following distance The dynamic radar cruise control determines whether the following distance between the driver's own vehicle and a designated vehicle traveling ahead is appropriate or not. It is not capable of making any other type of judgement. Therefore, it is absolutely necessary for the driver to remain vigilant and to determine whether or not there is a possibility of danger in any given situation. Assisting the driver to operate the vehicle The dynamic radar cruise control has no capability to prevent or avoid a collision with a vehicle traveling ahead. Therefore, if there is ever any danger, the driver must take immediate and direct control of the vehicle and act appropriately in order to ensure the safety of all involved. To avoid inadvertent cruise control activation Switch the cruise control off using the "ON-OFF" button when not in use.



281

282 4-5. Using the driving support systems

Conditions under which the vehicle-to-vehicle distance control may not function correctly

Apply the brakes as necessary in the following conditions as the radar sensor may not be able to correctly detect vehicles ahead, and a fatal or serious accident may result:

- When water or snow thrown up by the surrounding vehicles hinders the functioning of the sensor
- When your vehicle is pointing upwards (caused by a heavy load in the luggage compartment etc.)
- When the road curves or when the lanes are narrow
- When steering wheel operation or your position in the lane is unstable
- When the vehicle ahead of you decelerates suddenly

Handling the radar sensor

Observe the following to ensure the cruise control system can function effectively.

Otherwise, the system may not function correctly and could result in an accident.

- Keep the sensor and grille cover clean at all times.
 Clean the sensor and grille cover with a soft cloth so you do not mark or damage them.
- Do not subject the sensor or surrounding area to a strong impact. If the sensor moves even slightly off position, the system may malfunction. If the sensor or surrounding area is subject to a strong impact, always have the area inspected and adjusted by your Toyota dealer.
- Do not disassemble the sensor.
- Do not attach accessories or stickers to the sensor, grille cover or surrounding area.
- Do not modify or paint the sensor and grille cover.
- Do not replace them with non-genuine parts.

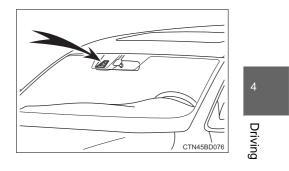
LDA (Lane Departure Alert)*

Summary of function

While driving on a road that has lane markers, this system recognizes the lane markers using a camera as a sensor to alert the driver when the vehicle deviates from its lane.

If the system judges that the vehicle has deviated from its lane, it alerts the driver using a buzzer and indications on the multi-information display.

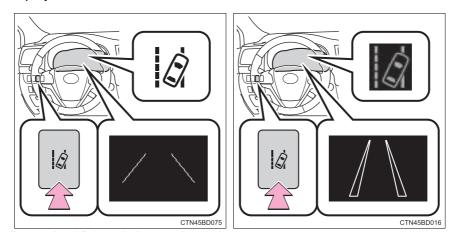
Camera sensor



*: If equipped

Turning the LDA system on

 Vehicles with monochrome dis Vehicles with color display play



Press the LDA switch to activate the system.

The LDA indicator and lane lines will come on.

Press the switch again to turn the LDA system off.

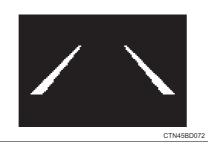
The LDA system will remain on or off even if the power switch is turned to ON mode.

Operating conditions

- When the vehicle speed is approximately 32 mph (50 km/h) or more
- When the lane width is more than approximately 8.2 ft. (2.5 m)
- When driving on a straight road or through a curve with a radius of more than approximately 328 ft. (100 m)

Indication on the multi-information display

 Vehicles with monochrome dis Vehicles with color display play





When the inside of both lane lines turn white:

Indicates that both right and left lane markers are recognized.

- If the vehicle deviates from the lane, the lane line on the side the vehicle has deviated from will flash. (\rightarrow P. 468)
- Vehicles with monochrome dis Vehicles with color display play





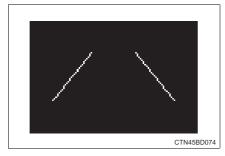
When the inside of either lane line turns white:

Indicates that the lane marker on the white-marked side is recognized.

If the vehicle deviates from the side of a lane with recognized lane markers, the lane line will flash. (\rightarrow P. 468)

Driving

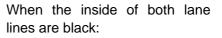
Vehicles with monochrome dis Vehicles with color display play



CTN45BD020

When both lane lines are shown in fine lines:

Indicates that no lane markers are recognized or the LDA system is temporarily canceled.



Indicates that no lane markers are recognized or the LDA system is temporarily canceled.

HIGHLANDER_HV_U (OM48F02U)

Temporary cancelation of the LDA system functions

If any of the following occurs, the LDA system functions will be temporarily canceled. The functions will resume after the necessary operating conditions have returned.

- The turn signal lever is operated.
- The vehicle speed deviates from the operating range of the LDA system functions.
- When the lane lines cannot be recognized while driving.
- When the lane departure warning function is activated.
 The lane departure warning function will not operate again for a several seconds after it has been activated, even if the vehicle leaves the lane again.

The lane departure warning

Depending on the audio system sound level or air conditioning fan noise while the audio system or air conditioning system is in use, it may be difficult to hear the warning sound.

After the vehicle has been parked in the sun

The LDA system may not be available and a warning message (\rightarrow P. 474) will be displayed for a while after driving has started. When the temperature in the cabin decreases and the temperature around the camera sensor (\rightarrow P. 283) becomes suitable for its operation, the functions will begin to operate.

If there are lane markers on only one side of the vehicle

The lane departure warning will not operate for the side on which lane markers could not be recognized. Driving

Conditions in which the function may not operate correctly

In the following situations, the camera sensor may be unable to recognize lane markers causing the lane departure warning function to operate incorrectly. However, this does not indicate a malfunction.

- When driving through an area with no lane markers, such as a tollbooth, a crossing or before a ticket checkpoint
- When driving on a sharp curve
- When lane markers are extremely narrow or extremely wide
- When the vehicle leans to one side an unusual amount due to a heavy load or improper tire inflation pressure
- When the following distance between your vehicle and the vehicle ahead is extremely short
- When the lane markers are yellow (These may be more difficult for the system to recognize compared to white markers.)
- When the lane markers are broken, Botts' dots (raised pavement markers) or stones
- When the lane markers are on a curb etc.
- When lane markers are obscured or partially obscured by sand, dirt, etc.
- When there are shadows on the road running parallel with lane markers, or if a shadow covers the lane markers
- When driving on a particularly bright road surface, such as concrete
- When driving on a road surface that is bright due to reflected light
- When driving in a location where the light level changes rapidly, such as the entrance to or exit from a tunnel
- When sunlight or the headlights of oncoming vehicles are shining directly into the camera lens
- When driving on roads that are branching or merging
- When driving on a road surface that is wet due to rain, previous rainfall, standing water, etc.
- When the vehicle experiences strong up-and-down motion such as when driving on an extremely rough road or on a seam in the pavement
- When headlight brightness at nighttime is reduced due to dirt on the lenses, or when the headlights are misaligned
- When driving on winding roads or roads that are uneven
- When driving on rough or unpaved roads

When changing the tires

Depending on the tires used, sufficient performance may not be maintainable.

Warning messages for the LDA system

Warning messages are used to indicate a system malfunction or to inform the driver of the need for caution while driving. (\rightarrow P. 473)

MARNING

Before using the LDA system

Do not rely solely on the LDA system. The LDA system does not drive the vehicle automatically, nor does it reduce the amount of care you need to take. As such, the driver must always assume full responsibility for understanding his/her surroundings, for operating the steering wheel to correct the driving line, and for driving safely.

Inappropriate or negligent driving could lead to an accident.

To avoid operating the LDA by mistake

Switch the LDA system off using the LDA switch when not in use.

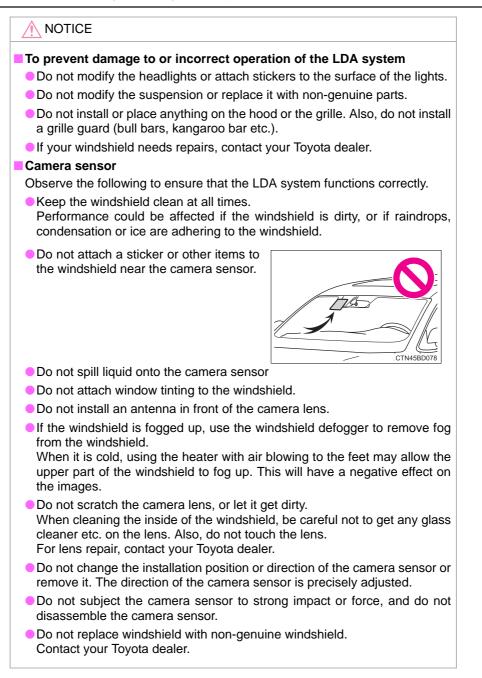
Situations unsuitable for LDA system

Do not use the LDA system in any of the following situations.

Otherwise, the system may not function correctly and could result in an accident.

- When driving with tire chains, a spare tire, or similar equipment
- When there are objects or structures along the roadside that might be misinterpreted as lane markers (such as guardrails, a curb, reflector posts, etc.)
- When driving on snowy roads
- When pavement lane markers are difficult to see due to rain, snow, fog, sand dust, etc.
- When there are visible lines on the pavement from road repairs, or if the remains of old lane markers are still visible on the road
- When driving on a road with lane closures due to maintenance, or when driving in a temporary lane

290 4-5. Using the driving support systems



Driving assist systems

To help enhance driving safety and performance, the following systems operate automatically in response to various driving situations. Be aware, however, that these systems are supplementary and should not be relied upon too heavily when operating the vehicle.

ABS (Anti-lock Brake System)

Helps to prevent wheel lock when the brakes are applied suddenly, or if the brakes are applied while driving on a slippery road surface

Brake assist

Generates an increased level of braking force after the brake pedal is depressed when the system detects a panic stop situation

VSC (Vehicle Stability Control)

Helps the driver to control skidding when swerving suddenly or turning on slippery road surfaces

Enhanced VSC (Enhanced Vehicle Stability Control)

Provides cooperative control of the ABS, TRAC, VSC and EPS. Helps to maintain directional stability when swerving on slippery road surfaces by controlling steering performance.

TRAC (Traction Control)

Helps to maintain drive power and prevent the drive wheels from spinning when starting the vehicle or accelerating on slippery roads

Hill-start assist control

Prevents the vehicle from rolling backward when starting on an incline or slippery slope

EPS (Electric Power Steering)

Employs an electric motor to reduce the amount of effort needed to turn the steering wheel

VDIM (Vehicle Dynamics Integrated Management)

Provides integrated control of the ABS, brake assist, TRAC, VSC, hill-start assist control, and EPS systems

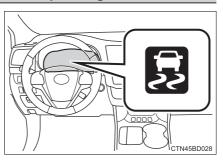
Helps to maintain vehicle stability when swerving on slippery road surfaces by controlling the brakes and hybrid system output

PCS (Pre-Collision System) (if equipped)

→P. 297

When the TRAC/VSC/ABS systems are operating

The slip indicator light will flash while the TRAC/VSC/ABS systems are operating.



Disabling the TRAC system

If the vehicle gets stuck in mud, dirt or snow, the TRAC system may

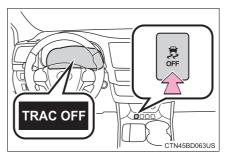
reduce power from the hybrid system to the wheels. Pressing to turn the system off may make it easier for you to rock the vehicle in order to free it.

To turn the TRAC system off,

quickly press and release | -

The "TRAC OFF" will be shown on the multi-information display. Press

again to turn the system back on.



Turning off both TRAC and VSC systems

To turn the TRAC and VSC systems off, press and hold a for more than 3 seconds while the vehicle is stopped.

The VSC OFF indicator light will come on and the "TRAC OFF" will be shown on the multi-information display.*

Press $|\frac{1}{2}|$ again to turn the systems back on.

- *: On vehicles with pre-collision safety system, pre-collision brake assist and pre-collision braking will also be disabled. The pre-collision safety system warning light will come on and the message will be shown on the multi-information display. (→P. 297)
- Sounds and vibrations caused by the ABS, brake assist, TRAC, VSC, hill-start assist control systems

A sound may be heard from the engine compartment when the brake pedal is depressed repeatedly, when the hybrid system is started or just after the vehicle begins to move. This sound does not indicate that a malfunction has occurred in any of these systems.

Any of the following conditions may occur when the above systems are operating. None of these indicates that a malfunction has occurred.

- Vibrations may be felt through the vehicle body and steering.
- A motor sound may be heard after the vehicle comes to a stop.

EPS operation sound

When the steering wheel is operated, a motor sound (whirring sound) may be heard. This does not indicate a malfunction.

Automatic reactivation of TRAC and VSC systems

After turning the TRAC and VSC systems off, the systems will be automatically re-enabled in the following situations:

When the power switch is turned off

 If only the TRAC system is turned off, the TRAC will turn on when vehicle speed increases

If both the TRAC and VSC systems are turned off, automatic re-enabling will not occur when vehicle speed increases.

Reduced effectiveness of the EPS system

The effectiveness of the EPS system is reduced to prevent the system from overheating when there is frequent steering input over an extended period of time. The steering wheel may feel heavy as a result. Should this occur, refrain from excessive steering input or stop the vehicle and turn the hybrid system off. The EPS system should return to normal within 10 minutes.

Operating conditions of hill-start assist control

When the following four conditions are met, the hill-start assist control will operate:

- The shift lever is in a position other than P or N (when starting off forward/ backward on an upward incline).
- The vehicle is stopped.
- The accelerator pedal is not depressed.
- The parking brake is not engaged.

Automatic system cancelation of hill-start assist control

- The hill-start assist control will turn off in any of the following situations:
- The shift lever is moved to P or N.
- The accelerator pedal is depressed.
- The parking brake is engaged.
- Approximately 2 seconds elapse after the brake pedal is released.

Driving

WARNING

The ABS does not operate effectively when

- The limits of tire gripping performance have been exceeded (such as excessively worn tires on a snow covered road).
- The vehicle hydroplanes while driving at high speed on wet or slick roads.
- Stopping distance when the ABS is operating may exceed that of normal conditions

The ABS is not designed to shorten the vehicle's stopping distance. Always maintain a safe distance from the vehicle in front of you, especially in the following situations:

- When driving on dirt, gravel or snow-covered roads
- When driving with tire chains
- When driving over bumps in the road
- When driving over roads with potholes or uneven surfaces

296 4-5. Using the driving support systems

WARNING

TRAC may not operate effectively when

Directional control and power may not be achievable while driving on slippery road surfaces, even if the TRAC system is operating.

Drive the vehicle carefully in conditions where stability and power may be lost.

Hill- start assist control

 Do not overly rely on hill-start assist control. Hill-start assist control may not operate effectively on steep inclines and roads covered with ice.

 Unlike the parking brake, hill-start assist control is not intended to hold the vehicle stationary for an extended period of time. Do not attempt to use hill-start assist control to hold the vehicle on an incline, as doing so may lead to an accident.

When the VSC is activated

The slip indicator light flashes. Always drive carefully. Reckless driving may cause an accident. Exercise particular care when the indicator light flashes.

When the TRAC/VSC systems are turned off

Be especially careful and drive at a speed appropriate to the road conditions. As these are the systems to help ensure vehicle stability and driving force, do not turn the TRAC/VSC systems off unless necessary.

Replacing tires

Make sure that all tires are of the specified size, brand, tread pattern and total load capacity. In addition, make sure that the tires are inflated to the recommended tire inflation pressure level.

The ABS, TRAC and VSC systems will not function correctly if different tires are installed on the vehicle.

Contact your Toyota dealer for further information when replacing tires or wheels.

Handling of tires and the suspension

Using tires with any kind of problem or modifying the suspension will affect the driving assist systems, and may cause a system to malfunction.

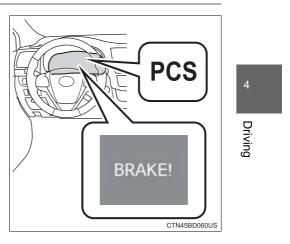
PCS (Pre-Collision System)*

When the radar sensor detects that a frontal collision is highly likely or even unavoidable, safety systems such as the brakes and seat belts are automatically engaged to lessen impact as well as vehicle damage.

The pre-collision system can be turned on and off as necessary by operating the switch. (\rightarrow P. 298)

Pre-collision warning

When a high possibility of a frontal collision is detected, the pre-collision system warning light flashes, a buzzer sounds and a message is shown on the multi-information display to urge the driver to take evasive action.



Pre-collision brake assist

When there is a high possibility of a frontal collision, the system applies greater braking force in relation to how strongly the brake pedal is depressed.

The system may not warn the driver using a warning light, warning display and buzzer when the system detects and judges braking operations.

Pre-collision braking

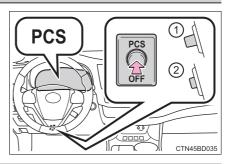
When there is a high possibility of a frontal collision, the system warns the driver using a warning light, warning display and buzzer. If the system determines that a collision is unavoidable, the brakes are automatically applied to reduce the collision speed.

*: If equipped

Disabling pre-collision system

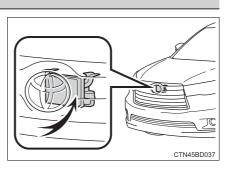
- (1) Enabled
- (2) Disabled

The pre-collision system warning light comes on when pre-collision system is disabled.



Radar sensor

The radar sensor detects vehicles or other obstacles on or near the road ahead and determines whether a collision is imminent based on the position, speed, and heading of the obstacles.



The pre-collision system is operational when

The PCS OFF switch is not pressed and the following conditions are met:

Pre-collision warning:

- Vehicle speed is greater than about 10 mph (15 km/h).
- The speed at which your vehicle is approaching the obstacle or the vehicle running ahead of you is greater than about 10 mph (15 km/h).
- Pre-collision brake assist:
 - The VSC OFF switch is not pressed.
 - Vehicle speed is greater than about 19 mph (30 km/h).
 - The speed at which your vehicle is approaching the obstacle or the vehi-
 - cle running ahead of you is greater than about 19 mph (30 km/h).The brake pedal is depressed.
- Pre-collision braking:
 - The VSC OFF switch is not pressed.
 - Vehicle speed is greater than about 10 mph (15 km/h).
 - The speed at which your vehicle is approaching the obstacle or the vehicle running ahead of you is greater than about 10 mph (15 km/h).
- Conditions that may trigger the system even if there is no danger of a collision
 - When there is an object by the roadside at the entrance to a curve
 - When passing an oncoming vehicle on a curve
 - When driving over a narrow iron bridge
 - When there is a metal object on the road surface
 - When driving on an uneven road surface
 - When passing an oncoming vehicle on a left-turn
 - When your vehicle rapidly closes on the vehicle in front
 - When a grade separation/interchange, sign, billboard, or other structure appears to be directly in the vehicle's line of travel
 - When there is a metal plate in the road in front of the vehicle on a downhill slope
 - When climbing a steep hill causes an overhead billboard or other metallic structure to appear directly in the vehicle's line of travel
 - When driving under an overpass
 - When an extreme change in vehicle height occurs
 - When passing through certain toll gates
 - When passing through a tunnel
 - When the radar sensor moves off position due to its surrounding area being subjected to a strong impact
 - When the system is activated in the situations described above, there is also a possibility that the brakes will be applied with a force greater than normal.

Obstacles not detected

The sensor cannot detect plastic obstacles such as traffic cones. There may also be occasions when the sensor cannot detect pedestrians, animals, bicycles, motorcycles, trees, or snowdrifts.

Situations in which the pre-collision system does not function properly

The system may not function effectively in situations such as the following:

On roads with sharp bends or uneven surfaces

 If a vehicle suddenly moves in front of your vehicle, such as at an intersection

• If a vehicle suddenly cuts in front of your vehicle, such as when overtaking

- In inclement weather such as heavy rain, fog, snow or sand storms
- If the vehicle is skidding when VSC is not operating
- When an extreme change in vehicle height occurs
- When only part of your vehicle's front end collides with, or contacts, a vehicle or object in a frontal collision
- When the radar sensor moves off position due to its surrounding area being subjected to a strong impact

Automatic cancelation of the pre-collision system

When a malfunction occurs due to sensor contamination, etc. that results in the sensors being unable to detect obstacles, the pre-collision system will be automatically disabled. In this case, the system will not activate even if there is a collision possibility.

When there is a malfunction in the system

The pre-collision system warning light will flash and warning messages will be displayed. (\rightarrow P. 458, 474)

Certification for the pre-collision system

► For vehicles sold in the U.S.A.

FCC ID : HYQDNMWR007

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.

FCC WARNING

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

Radiofrequency radiation exposure Information:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

This equipment should be installed and operated with minimum distance of 20 cm between the radiator (antenna) and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

▶ For vehicles sold in Canada

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

302 4-5. Using the driving support systems

WARNING
Limitations of the pre-collision system
Do not overly rely on the pre-collision system. Always drive safely, taking care to observe your surroundings and checking for any obstacles or other road hazards.
Failure to do so may cause an accident resulting in death or serious injury.
When the sensor may not be correctly detecting the vehicle ahead
Apply the brakes as necessary in any of the following situations:
When water or snow thrown up by the surrounding vehicles hinders the functioning of the sensor
 When your vehicle is pointing upwards (caused by a heavy load in the lug- gage compartment etc.)
Vehicles that cut in suddenly
Vehicles with small rear ends (trailers with no load on board etc.)
Motorcycles traveling in the same lane
Handling the radar sensor
Observe the following to ensure the pre-collision system can function effec- tively.
Otherwise, the system may not function correctly and could result in an accident.
Keep the sensor and grille cover clean at all times. Clean the sensor and grille cover with a soft cloth so you do not mark or damage them.
 Do not subject the sensor or surrounding area to a strong impact. If the sensor moves even slightly off position, the system may malfunction. If the sensor or surrounding area is subject to a strong impact, always have the area inspected and adjusted by your Toyota dealer.
Do not disassemble the sensor.
Do not attach accessories or stickers to the sensor, grille cover or surrounding area.
Do not modify or paint the sensor and grille cover.
Do not replace them with non-genuine parts.

MARNING

Cautions regarding the assist contents of the system

bility of collision in any given situation.

By means of alarms and brake control, the pre-collision system is intended to assist the driver in avoiding collisions through the process of LOOK-JUDGE-ACT. There are limits to the degree of assistance the system can provide, so please keep in mind the following important points.

- Assisting the driver in watching the road The pre-collision system is only able to detect obstacles directly in front of the vehicle, and only within a limited range. It is not a mechanism that allows careless or inattentive driving, and it is not a system that can assist the driver in low-visibility conditions. It is still necessary for the driver to pay close attention to the vehicle's surroundings.
- Assisting the driver in making correct judgment When attempting to estimate the possibility of a collision, the only data available to the pre-collision system is that from obstacles it has detected directly in front of the vehicle. Therefore, it is absolutely necessary for the driver to remain vigilant and to determine whether or not there is a possi-
- Assisting the driver in taking action The pre-collision system's braking assist feature is designed to help reduce the severity of a collision, and so only acts when the system has judged that a collision is unavoidable. This system by itself is not capable of automatically avoiding a collision or bringing the vehicle to a stop safely. For this reason, when encountering a dangerous situation the driver must take direct and immediate action in order to ensure the safety of all involved.

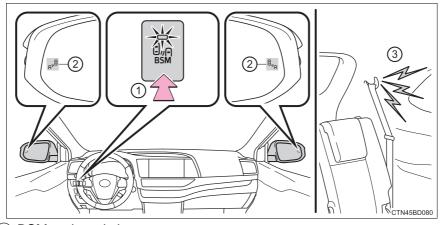
BSM (Blind Spot Monitor)*

Summary of the Blind Spot Monitor

The Blind Spot Monitor is a system that has 2 functions;

- The Blind Spot Monitor function
 - Assists the driver in making the decision when changing lanes
- The Rear Cross Traffic Alert function Assists the driver when backing up

These functions use same sensors.



1 BSM main switch

Pressing the switch turns the system on or off. When the switch is set to on, the switch's indicator illuminates and the buzzer sounds. Common switch for Blind Spot Monitor function and Rear Cross Traffic Alert function.

*: If equipped

(2) Outside rear view mirror indicators

Blind Spot Monitor function:

When a vehicle is detected in the blind spot, the outside rear view mirror indicator comes on while the turn signal lever is not operated and the outside rear view mirror indicator flashes while the turn signal lever is operated.

Rear Cross Traffic Alert function:

When a vehicle approaching from the right or left rear of the vehicle is detected, the outside rear view mirror indicators flash.

③ Rear Cross Traffic Alert buzzer (Rear Cross Traffic Alert function only)

When a vehicle approaching from the right or left rear of the vehicle is detected, a buzzer sounds from behind the left-hand third seat.

The outside rear view mirror indicators visibility

When under strong sunlight, the outside rear view mirror indicator may be difficult to see.

Rear Cross Traffic Alert buzzer hearing

Rear Cross Traffic Alert function may be difficult to hear over loud noises such as high audio volume.

Driving

When there is a malfunction in the Blind Spot Monitor

If a system malfunction is detected due to any of the following reasons, warning message will be displayed: (\rightarrow P. 473, 474)

- There is a malfunction with the sensors
- The sensors have become dirty
- The outside temperature is extremely high or low
- The sensor voltage has become abnormal

305

Certification for the Blind Spot Monitor

▶ For vehicles sold in the U.S.A.

FCC ID: OAYSRR2A

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.

FCC Warning

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

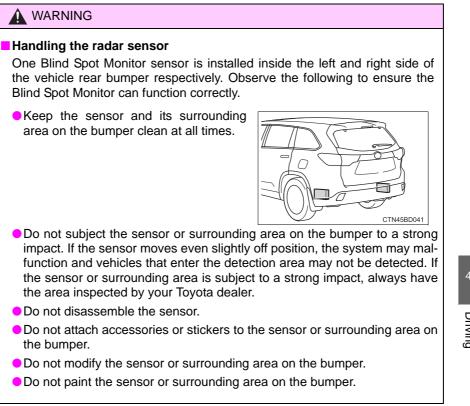
▶ For vehicles sold in Canada

Applicable law: Canada 310

This device complies with Industry Canada licence-exempt RSS standard(s). 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.

Frequency bands: 24.05-24.25 GHz

Output power: less than 20 milliwatts



307

The Blind Spot Monitor function

The Blind Spot Monitor function uses radar sensors to detect vehicles that are traveling in an adjacent lane in the area that is not reflected in the outside rear view mirror (the blind spot), and advises the driver of the vehicles existence via the outside rear view mirror indicator.

The Blind Spot Monitor function detection areas

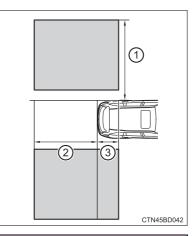
The areas that vehicles can be detected in are outlined below.

The range of the detection area extends to:

(1) Approximately 11.5 ft. (3.5 m) from the side of the vehicle

The first 1.6 ft. (0.5 m) from the side of the vehicle is not in the detection area

- (2) Approximately 9.8 ft. (3 m) from the rear bumper
- ③ Approximately 3.3 ft. (1 m) forward of the rear bumper



WARNING

Cautions regarding the use of the system

The driver is solely responsible for safe driving. Always drive safely, taking care to observe your surroundings.

The Blind Spot Monitor function is a supplementary function which alerts the driver that a vehicle is present in the blind spot. Do not overly rely on the Blind Spot Monitor function. The function cannot judge if it is safe to change lanes, therefore over reliance could cause an accident resulting in death or serious injury.

According to conditions, the system may not function correctly. Therefore the driver's own visual confirmation of safety is necessary.

- The Blind Spot Monitor function is operational when
 - The BSM main switch is set to on
 - Vehicle speed is greater than approximately 10 mph (16 km/h).
- The Blind Spot Monitor function will detect a vehicle when
 - A vehicle in an adjacent lane overtakes your vehicle.
 - Another vehicle enters the detection area when it changes lanes.
- Conditions under which the Blind Spot Monitor function will not detect a vehicle
 - The Blind Spot Monitor function is not designed to detect the following types of vehicles and/or objects:
 - Small motorcycles, bicycles, pedestrians etc.*
 - Vehicles traveling in the opposite direction
 - Guardrails, walls, signs, parked vehicles and similar stationary objects*
 - Following vehicles that are in the same lane*
 - Vehicles driving 2 lanes across from your vehicle*
 - *: Depending on conditions, detection of a vehicle and/or object may occur.

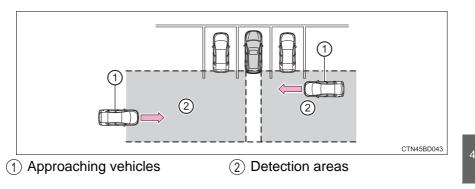
- Conditions under which the Blind Spot Monitor function may not function correctly
 - The Blind Spot Monitor function may not detect vehicles correctly in the following conditions:
 - During bad weather such as heavy rain, fog, snow etc.
 - When ice or mud etc. is attached to the rear bumper
 - When driving on a road surface that is wet due to rain, standing water etc.
 - When there is a significant difference in speed between your vehicle and the vehicle that enters the detection area
 - When a vehicle is in the detection area from a stop and remains in the detection area as your vehicle accelerates
 - When driving up or down consecutive steep inclines, such as hills, a dip in the road etc.
 - When multiple vehicles approach with only a small gap between each vehicle
 - When vehicle lanes are wide, and the vehicle in the next lane is too far away from your vehicle
 - When the vehicle that enters the detection area is traveling at about the same speed as your vehicle
 - When there is a significant difference in height between your vehicle and the vehicle that enters the detection area
 - Directly after the BSM main switch is set to on
 - When towing a trailer

 Instances of the Blind Spot Monitor function unnecessarily detecting a vehicle and/or object may increase under the following conditions:

- When there is only a short distance between your vehicle and a guardrail, wall etc.
- When there is only a short distance between your vehicle and a following vehicle
- When vehicle lanes are narrow and a vehicle driving 2 lanes across from your vehicle enters the detection area
- When items such as a bicycle carrier are installed on the rear of the vehicle

The Rear Cross Traffic Alert function

The Rear Cross Traffic Alert functions when your vehicle is in reverse. It can detect other vehicles approaching from the right or left rear of the vehicle. It uses radar sensors to alert the driver of the other vehicle's existence through flashing the outside rear view mirror indicators and sounding a buzzer.



WARNING

Cautions regarding the use of the system

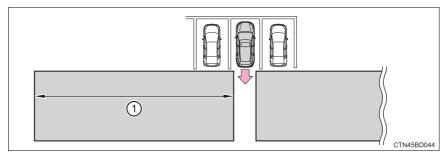
The driver is solely responsible for safe driving. Always drive safely, taking care to observe your surroundings.

The Rear Cross Traffic Alert function is only an assist and is not a replacement for careful driving. Driver must be careful when backing up, even when using Rear Cross Traffic Alert function. The driver's own visual confirmation of behind you and your vehicle is necessary and be sure there are no pedestrians, other vehicles etc. before backing up. Failure to do so could cause death or serious injury.

According to conditions, the system may not function correctly. Therefore the driver's own visual confirmation of safety is necessary.

The Rear Cross Traffic Alert function detection areas

The areas that vehicles can be detected in are outlined below.



To give the driver a more consistent time to react, the buzzer can alert for faster vehicles from farther away.

Example:

Approaching vehicle	Speed	 Approximate alert distance
Fast	18 mph (28 km/h)	65 ft. (20 m)
Slow	5 mph (8 km/h)	18 ft. (5.5 m)

The Rear Cross Traffic Alert function is operational when

• The BSM main switch is set to on.

- The shift lever is in R.
- Vehicle speed is less than approximately 5 mph (8 km/h).
- Approaching vehicle speed is between approximately 5 mph (8 km/h) and 18 mph (28 km/h).

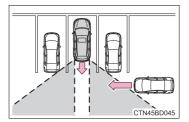
Conditions under which the Rear Cross Traffic Alert function will not detect a vehicle

The Rear Cross Traffic Alert function is not designed to detect the following types of vehicles and/or objects.

- Small motorcycles, bicycles, pedestrians etc.*
- Vehicles approaching from directly behind
- Guardrails, walls, signs, parked vehicles and similar stationary objects*
- Vehicles moving away from your vehicle
- Vehicles approaching from the parking spaces next to your vehicle*
- Vehicles backing up in the parking space next to your vehicle*
- *: Depending on conditions, detection of a vehicle and/or object may occur.
- Conditions under which the Rear Cross Traffic Alert function may not function correctly

The Rear Cross Traffic Alert function may not detect vehicles correctly in the following conditions:

- When ice or mud etc. is attached to the rear bumper
- During bad weather such as heavy rain, fog, snow etc.
- When multiple vehicles approach continuously
- Shallow angle parking
- When a vehicle is approaching at high speed
- When parking on a steep incline, such as hills, a dip in the road etc.
- Directly after the BSM main switch is set to on
- Directly after the engine is started with the BSM main switch on
- When towing a trailer
- Vehicles that the sensors cannot detect because of obstacles



Hybrid vehicle driving tips

For economical and ecological driving, pay attention to the following points:

Using Eco drive mode

When using Eco drive mode, the torque corresponding to the accelerator pedal depression amount can be generated more smoothly than it is in normal conditions. In addition, the operation of the air conditioning system (heating/cooling) will be minimized, improving the fuel economy. (\rightarrow P. 326)

Use of Hybrid System Indicator

The Eco-friendly driving is possible by keeping the indicate of Hybrid System Indicator within Eco area. (\rightarrow P. 105)

When braking the vehicle

Make sure to operate the brakes gently and in good time. A greater amount of electrical energy can be retained when slowing down.

Delays

Repeated acceleration and deceleration, as well as long waits at traffic lights, will lead to bad fuel consumption. Check traffic reports before leaving and avoid delays as much as possible. When encountering a delay, gently release the brake pedal to allow the vehicle to move forward slightly while avoiding overuse of the accelerator pedal. Doing so can help control excessive gasoline consumption.

Highway driving

Control your speed and keep at a constant speed. Also, before stopping at a toll booth or similar, allow plenty of time to release the accelerator and gently apply the brakes. A greater amount of electrical energy can be retained when slowing down.

Air conditioning

Use the air conditioning only when necessary. Doing so can help control excessive gasoline consumption.

In summer: In high temperatures, use the recirculated air mode. Doing so will help to reduce the burden on the air conditioner and reduce fuel consumption as well.

In winter: Because the gasoline engine will not automatically cut out until the gasoline engine and the interior of the vehicle are warm, it will consume fuel. Also, fuel consumption can be improved by avoiding overuse of the heater.

Checking tire inflation pressure

Make sure to check the tire inflation pressure frequently. Improper tire inflation pressure can cause poor fuel consumption.

Also, as snow tires can cause large amounts of friction, their use on dry roads can lead to poor fuel consumption. Use a tire that is appropriate for the season.

Luggage

Carrying heavy luggage can lead to poor fuel consumption. Avoid carrying unnecessary luggage. Installing a large roof rack can also cause poor fuel consumption.

Warming up before driving

Since the gasoline engine starts up and cuts out automatically when cold, warming up the engine is unnecessary. Moreover, frequently driving short distances will cause the engine to repeatedly warm up, which can lead to poor fuel consumption.

Winter driving tips

Carry out the necessary preparations and inspections before driving the vehicle in winter. Always drive the vehicle in a manner appropriate to the prevailing weather conditions.

Preparation for winter

- Use fluids that are appropriate to the prevailing outside temperatures.
 - Engine oil
 - Engine/power control unit coolant
 - Washer fluid
- Have a service technician inspect the condition of the 12-volt battery.
- Have the vehicle fitted with four snow tires or purchase a set of tire chains for the front tires.

Ensure that all tires are the same size and brand, and that chains match the size of the tires.

317

Before driving the vehicle

Perform the following according to the driving conditions:

- Do not try to forcibly open a window or move a wiper that is frozen.
 Pour warm water over the frozen area to melt the ice. Wipe away the water immediately to prevent it from freezing.
- To ensure proper operation of the climate control system fan, remove any snow that has accumulated on the air inlet vents in front of the windshield.
- Check for and remove any excess ice or snow that may have accumulated on the exterior lights, vehicle's roof, chassis, around the tires or on the brakes.
- Remove any snow or mud from the bottom of your shoes before getting in the vehicle.

When driving the vehicle

Accelerate the vehicle slowly, keep a safe distance between you and the vehicle ahead, and drive at a reduced speed suitable to road conditions.

Driving

When parking the vehicle

Park the vehicle and shift lever to P without setting the parking brake. The parking brake may freeze up, preventing it from being released. If necessary, block the wheels to prevent inadvertent sliding or creeping.

Selecting tire chains

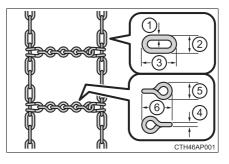
Use the correct tire chain size when mounting the tire chains. Chain size is regulated for each tire size.

Side chain:

- (1) 0.12 in. (3 mm) in diameter
- (2) 0.39 in. (10 mm) in width
- (3) 1.18 in. (30 mm) in length

Cross chain:

- (4) 0.16 in. (4 mm) in diameter
- (5) 0.55 in. (14 mm) in width
- (6) 0.98 in. (25 mm) in length



Regulations on the use of tire chains

Regulations regarding the use of tire chains vary depending on location and type of road. Always check local regulations before installing chains.

Tire chain installation

Observe the following precautions when installing and removing chains: • Install and remove tire chains in a safe location.

- Install tire chains on the front tires. Do not install tire chains on the rear tires.
- Install tire chains on front tires as tightly as possible. Retighten chains after driving 1/4 — 1/2 mile (0.5 — 1.0 km).
- Install tire chains following the instructions provided with the tire chains.

4-6. Driving tips

WARNING Driving with snow tires Observe the following precautions to reduce the risk of accidents. Failure to do so may result in a loss of vehicle control and cause death or serious injury. • Use tires of the specified size. Maintain the recommended level of air pressure. Do not drive in excess of 75 mph (120 km/h), regardless of the type of snow tires being used. Use snow tires on all, not just some wheels. Driving with tire chains Observe the following precautions to reduce the risk of accidents. Failure to do so may result in the vehicle being unable to be driven safely, and may cause death or serious injury. • Do not drive in excess of the speed limit specified for the tire chains being used, or 30 mph (50 km/h), whichever is lower. Avoid driving on bumpy road surfaces or over potholes. • Avoid sudden acceleration, abrupt steering, sudden braking and shifting operations that cause sudden engine braking. Slow down sufficiently before entering a curve to ensure that vehicle control is maintained. Vehicles with LDA (Lane Departure Alert) system: Do not use LDA (Lane Departure Alert) system.

Repairing or replacing snow tires

Request repairs or replacement of snow tires from Toyota dealers or legitimate tire retailers.

This is because the removal and attachment of snow tires affects the operation of the tire pressure warning valves and transmitters.

Fitting tire chains

The tire pressure warning valves and transmitters may not function correctly when tire chains are fitted.

Utility vehicle precautions

This vehicle belongs to the utility vehicle class, which has higher ground clearance and narrower tread in relation to the height of its center of gravity.

Utility vehicle feature

- Specific design characteristics give it a higher center of gravity than ordinary passenger cars. This vehicle design feature causes this type of vehicle to be more likely to rollover. And, utility vehicles have a significantly higher rollover rate than other types of vehicles.
- An advantage of the higher ground clearance is a better view of the road allowing you to anticipate problems.
- It is not designed for cornering at the same speeds as ordinary passenger cars any more than low-slung sports cars designed to perform satisfactorily under off-road conditions. Therefore, sharp turns at excessive speeds may cause the vehicle to rollover.

WARNING

Utility vehicle precautions

Always observe the following precautions to minimize the risk of death, serious injury or damage to your vehicle:

- In a rollover crash, an unbelted person is significantly more likely to die than a person wearing a seat belt. Therefore, the driver and all passengers should fasten their seat belts whenever the vehicle is moving.
- Avoid sharp turns or abrupt maneuvers, if at all possible.
 Failure to operate this vehicle correctly may result in loss of control or vehicle rollover causing death or serious injury.
- Loading cargo on the roof luggage carrier (if equipped) will make the center of the vehicle gravity higher. Avoid high speeds, sudden starts, sharp turns, sudden braking or abrupt maneuvers, otherwise it may result in loss of control or vehicle rollover due to failure to operate this vehicle correctly.
- Always slow down in gusty crosswinds. Because of its profile and higher center of gravity, your vehicle is more sensitive to side winds than an ordinary passenger car. Slowing down will allow you to have better control.
- Do not drive horizontally across steep slopes. Driving straight up or straight down is preferred. Your vehicle (or any similar off-road vehicle) can tip over sideways much more easily than forward or backward.

Off-road driving

Your vehicle is not designed to be driven off-road. However, in the event that off-road driving cannot be avoided, please observe the following precautions to help avoid the areas prohibited to vehicles.

- Drive your vehicle only in areas where off-road vehicles are permitted to travel.
- Respect private property. Get owner's permission before entering private property.
- Do not enter areas that are closed. Honor gates, barriers and signs that restrict travel.
- Stay on established roads. When conditions are wet, driving techniques should be changed or travel delayed to prevent damage to roads.
- Avoid driving on very steep, slippery roads and other surfaces, such as sand, where the tires are liable to lose traction. Your vehicle may not perform as well as conventional AWD on-road vehicles on these surfaces.

Driving

Additional information for off-road driving

▶ For owners in U.S. mainland, Hawaii and Puerto Rico:

To obtain additional information pertaining to driving your vehicle off-road, consult the following organizations.

- State and Local Parks and Recreation Departments
- State Motor Vehicle Bureau
- Recreational Vehicle Clubs
- U.S. Forest Service and Bureau of Land Management

WARNING

Off-road driving precautions

Always observe the following precautions to minimize the risk of death, serious injury or damage to your vehicle:

- Drive carefully when off the road. Do not take unnecessary risks by driving in dangerous places.
- Do not grip the steering wheel spokes when driving off-road. A bad bump could jerk the wheel and injure your hands. Keep both hands and especially your thumbs on the outside of the rim.
- Always check your brakes for effectiveness immediately after driving in sand, mud, water or snow.
- After driving through tall grass, mud, rock, sand, water, etc., check that there is no grass, bush, paper, rags, stone, sand, etc. adhering or trapped on the underbody. Clear off any such matter from the underbody. If the vehicle is used with these materials trapped or adhering to the underbody, a breakdown or fire could occur.
- When driving off-road or in rugged terrain, do not drive at excessive speeds, jump, make sharp turns, strike objects, etc. This may cause loss of control or vehicle rollover causing death or serious injury. You are also risking expensive damage to your vehicle's suspension and chassis.

To prevent water damage

Take all necessary safety measures to ensure that water damage to the hybrid battery, hybrid system or other components does not occur.

- Water entering the engine compartment may cause severe damage to the hybrid system. Water entering the interior may cause the hybrid battery stowed under the rear seats to short circuit.
- Water entering the hybrid transaxle will cause deterioration in transmission quality. The malfunction indicator may come on, and the vehicle may not be drivable.
- Water can wash the grease from wheel bearings, causing rusting and premature failure, and may also enter the transaxle case, reducing the gear oil's lubricating qualities.

When you drive through water

If driving through water, such as when crossing shallow streams, first check the depth of the water and the bottom of the riverbed for firmness. Drive slowly and avoid deep water.

Inspection after off-road driving

- Sand and mud that has accumulated in brake drums and around brake discs may affect braking efficiency and may damage brake system components.
- Always perform a maintenance inspection after each day of off-road driving that has taken you through rough terrain, sand, mud, or water. For scheduled maintenance information, refer to the "Scheduled Maintenance Guide" or "Owner's Manual Supplement".

HIGHLANDER_HV_U (OM48F02U)

Interior features

5

5-1.	Using the air conditioning system and defogger
	Front automatic air conditioning system 326
	Rear automatic air conditioning system 333
	Heated steering wheel/ seat heaters/
	seat ventilators 336
5-2.	Using the interior lights
	Interior lights list 339
	Interior lights 340
	Personal lights 340
5-3.	Using the storage features
	List of storage features 342
	• Glove box 343
	Console box
	Bottle holders
	• Cup holders 345
	Auxiliary boxes
	• Open tray 348
	Luggage compartment features

5-4. Using the other interior features

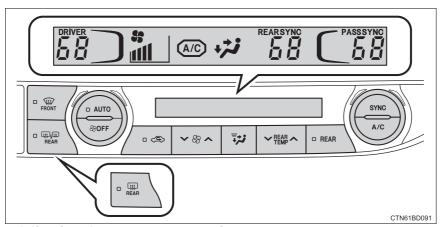
Other interior features 351 • Sun visors 351 Conversation mirror 352 Outside temperature display..... 353 Power outlets 354 • Rear sunshades...... 357 • Armrest 358 • Coat hooks...... 359 • Assist grips 359 • Side table...... 360 Garage door opener...... 361 Safety Connect 368

325

Front automatic air conditioning system

Air outlets and fan speed are automatically adjusted according to the temperature setting.

Air conditioning controls



Adjusting the temperature setting

To adjust the temperature setting, turn $\left(\underbrace{\circ \text{ and }}_{\text{corr}} \right)$ clockwise to increase

the temperature and counterclockwise to decrease the temperature.

The temperature for the driver, front passenger and rear seats can be adjusted separately when:

- ____ is pressed. (The "SYNC" displays disappear.)
- The front passenger side dial is turned. (The "PASS SYNC" display changes to "PASS".)
- The "∧" or "∨" side of is pressed. (The "REAR SYNC" display changes to "REAR".)

The air conditioning system switches between individual and synchronized modes each time $\[mathcal{mathcal{eq}}\]$ is pressed.

Fan speed setting

To adjust the fan speed, press " \wedge " on $\boxed{}$ to increase the fan

58

) (P)

✓ 83 ∧

A/C +7

ن;

Press very to turn the fan off.

Changing airflow modes

To change the airflow mode,

press 💆

The air outlets used are switched each time the button is pressed.

- (1) Air flows to the upper body.
- Air flows to the upper body and feet.
- (3) Air flows to the feet.
- (4) Air flows to the feet and the windshield defogger operates.

Using automatic mode

- 1 Press .
- 2 Adjust the temperature setting.
- **3** To stop the operation, press ().

Automatic mode indicator

If the fan speed setting or air flow modes are operated, the automatic mode indicator goes off. However, automatic mode for functions other than that operated are maintained.

Other functions

Switching between outside air and recirculated air modes

Press / ····· .

The mode switches between outside air mode (indicator off) and recir-

culated air mode (indicator on) each time $\int e^{-i\omega}$ is pressed.



Defogging the windshield

Defoggers are used to defog the windshield and front side windows.

Press $| \cdot | \cdot | / |$.

Set the outside/recirculated air mode button to outside air mode if the recirculated air mode is used. (It may switch automatically.)

To defog the windshield and the side windows early, turn the air flow and temperature up.

To return to the previous mode, press again when the windshield is defogged.

Defogging the rear window and outside rear view mirrors

Vehicles without outside rear view mirror defoggers

A defogger is used to defog the rear window.

Press

The defogger will automatically turn off after a period of time.

Vehicles with outside rear view mirror defoggers

Defoggers are used to defog the rear window, and to remove raindrops, dew and frost from the outside rear view mirrors.

Press

The defoggers will automatically turn off after a period of time.

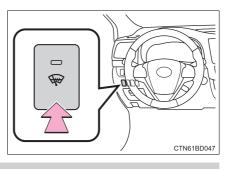
Windshield wiper de-icer (if equipped)

This feature is used to prevent ice from building up on the windshield and wiper blades.

Press the switch to turn the system on/off.

The indicator comes on when the windshield wiper de-icer is on.

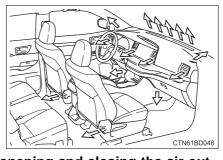
The windshield de-icer will automatically turn off after a period of time.



Air outlets

Location of air outlets

The air outlets and air volume change according to the selected airflow mode.

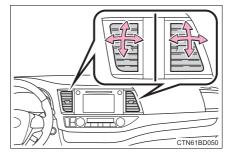


5 Inte

Interior features

- Adjusting the position of and opening and closing the air outlets
 - Front center outlets

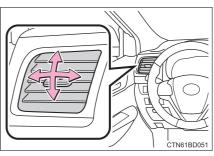
Direct air flow to the left or right, up or down.



330 5-1. Using the air conditioning system and defogger

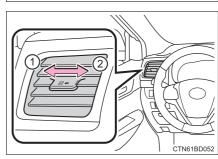
► Front side outlets

Direct air flow to the left or right, up or down.



Closes the vent
 Slide the knob to the most outward position.

(2) Opens the vent



Operation of the air conditioning system in Eco drive mode

In Eco drive mode, the air conditioning system is controlled as follows to prioritize fuel efficiency:

- Engine speed and compressor operation controlled to restrict heating/cooling capacity
- Fan speed restricted when automatic mode is selected

To improve air conditioning performance, perform the following operations:

Adjust the fan speed

• Turn off Eco drive mode (\rightarrow P. 238)

Using automatic mode

Fan speed is adjusted automatically according to the temperature setting and the ambient conditions.

Therefore, the fan may stop for a while until warm or cool air is ready to flow immediately after is pressed.

Fogging up of the windows

- The windows will easily fog up when the humidity in the vehicle is high.
 Turning on will dehumidify the air from the outlets and defog the windshield effectively.
- If you turn 🐨 off, the windows may fog up more easily.
- The windows may fog up if the recirculated air mode is used.

Windshield fog detection function

When automatic mode is set, the humidity sensor (\rightarrow P. 332) detects fog on the windshield and controls the air conditioning system to prevent fog.

Outside/recirculated air mode

- When driving on dusty roads such as tunnels or in heavy traffic, set the outside/recirculated air mode button to the recirculated air mode. This is effective in preventing outside air from entering the vehicle interior. During cooling operation, setting the recirculated air mode will also cool the vehicle interior effectively.
- Outside/recirculated air mode may automatically switch depending on the temperature setting or the inside temperature.

When the outside temperature exceeds 75°F (24°C) and the air conditioning system is on

- In order to reduce the air conditioning power consumption, the air conditioning system may switch to recirculated air mode automatically. This may also reduce fuel consumption.
- Recirculated air mode is selected as a default mode when the power switch is turned to ON mode.

It is possible to switch to outside air mode at any time by pressing

Ventilation and air conditioning odors

- To let fresh air in, set the air conditioning system to the outside air mode.
- During use, various odors from inside and outside the vehicle may enter into and accumulate in the air conditioning system. This may then cause odor to be emitted from the vents.
- To reduce potential odors from occurring:
 - It is recommended that the air conditioning system be set to outside air mode prior to turning the vehicle off.
 - The start timing of the blower may be delayed for a short period of time immediately after the air conditioning system is started in automatic mode.

Air conditioning filter

→P. 426

Customization

HIGHLANDER_HV_U (OM48F02U)

Settings (e.g. A/C auto switch operation) can be changed. (Customizable features \rightarrow P. 556)

Interior features

332 5-1. Using the air conditioning system and defogger

🛕 WARNING To prevent the windshield from fogging up • Do not use *(during cool air operation in extremely humid weather.* The difference between the temperature of the outside air and that of the windshield can cause the outer surface of the windshield to fog up, blocking your vision. Do not place anything on the instrument panel which may cover the air outlets. Otherwise, air flow may be obstructed, preventing the windshield defoggers from defogging. To prevent burns • Do not touch the rear view mirror surfaces when the outside rear view mirror defoggers are on. Do not touch the glass at lower part of the windshield or to the side of the front pillars when the windshield wiper de-icer is on. NOTICE Humidity sensor In order to detect fog on the windshield, a sensor which monitors the temperature of the windshield, the surround humidity, etc. is installed. (\rightarrow P. 331) Follow these points to avoid damaging the sensor: Do not disassemble the sensor CTN61BE001

- Do not spray the glass cleaner on the sensor or subject it to strong impacts
- Do not stick anything on the sensor

To prevent 12-volt battery discharge

Do not leave the air conditioning system on longer than necessary when the hybrid system is off.

Rear automatic air conditioning system

Air outlets and fan speed are automatically adjusted according to the temperature setting.

Air conditioning controls

CTN61BD004	
Adjusting the temperature setting	
To adjust the temperature setting, press " \wedge " on $\begin{bmatrix} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ $	5
 the temperature and "√" to decrease the temperature. ■ Fan speed setting 	Interior features
To adjust the fan speed, press " \land " on $$ to increase the fan speed and " \checkmark " to decrease the fan speed.	atures
Press or to turn the fan off.	

Changing airflow modes

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10	cnange	the	airflow	mode,
	onlango			

The air outlets used are switched each time the button is pressed.

- $(\ensuremath{\textcircled{}})$ Air flows to the upper body.
- ② Air flows to the upper body and feet.
- (3) Air flows to the feet.

Using automatic mode

1 Press AUTO .

press

2 Adjust the temperature setting.

3 To stop the operation, press

Automatic mode indicator

If the fan speed setting or air flow modes are operated, the automatic mode indicator goes off. However, automatic mode for functions other than that operated are maintained.

2

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68

AUTO

(3)

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TEMP

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CTN61BD089

(1)

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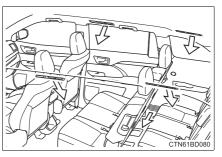
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& OFF

Air outlets

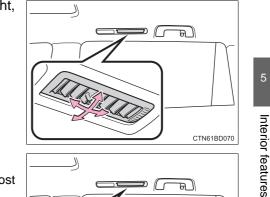
Location of air outlets

The air outlets and air volume change according to the selected airflow mode.

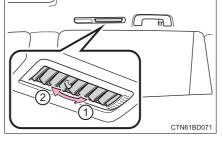


Adjusting the position of and opening and closing the air outlets

Direct air flow to the left or right, forward or backward.



- Closes the vent
 Slide the knob to the rear-most position.
- (2) Opens the vent



To prevent 12-volt battery discharge

Do not leave the air conditioning system on longer than necessary when the hybrid system is off.

Heated steering wheel*/seat heaters*/seat ventilators*

The heated steering wheel and seat heaters heat the side grips of the steering wheel and seats, respectively. Seat ventilators maintain good airflow by blowing air from the seats.

WARNING

- Care should be taken to prevent injury if anyone in the following categories comes in contact with the steering wheel and seats when the heater is on:
 - Babies, small children, the elderly, the sick and the physically challenged
 - Persons with sensitive skin
 - Persons who are fatigued
 - Persons who have taken alcohol or drugs that induce sleep (sleeping drugs, cold remedies, etc.)
- Observe the following precautions to prevent minor burns or overheating
 - Do not cover the seat with a blanket or cushion when using the seat heater.
 - · Do not use the seat heaters more than necessary.

- Do not put heavy objects that have an uneven surface on the seat and do not stick sharp objects (needles, nails, etc.) into the seat.
- To prevent 12-volt battery discharge, do not use the functions when the hybrid system is off.

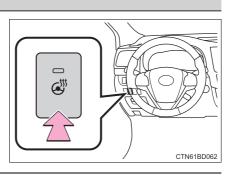
*: If equipped

Heated steering wheel

Turn the heated steering wheel on/off

The indicator light comes on when the heated steering wheel is operating.

The heated steering wheel will automatically turn off after about 30 minutes.



The heated steering wheel can be used when

The power switch is in ON mode.

Front seat heaters and ventilators

Seat heaters

- (1) Turns the seat heater on The indicator light comes on.
- (2) Adjusts the seat temperature

The further you move the dial forward, the warmer the seat becomes.

Seat heaters/ventilators

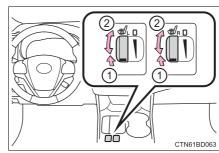
(1) Turns the seat heater on

The indicator light comes on. The higher the number is, the warmer the seat becomes.

(2) Blows air from the seat

The indicator light comes on.

The higher the number is, the stronger the airflow becomes.



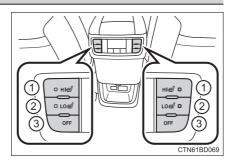
<u></u> 0 1 11 CTN61BD064

- The seat heaters and seat heaters/ventilators can be used when The power switch is in ON mode.
- When not in use
 - Seat heaters
 - Turn the dial fully backward. The indicator light will turn off.
 - Seat heaters/ventilators
 - Set the knob at "0". The indicator light will turn off.

Second seat heaters

- (1) Hi
- (2) Lo
- (3) Off

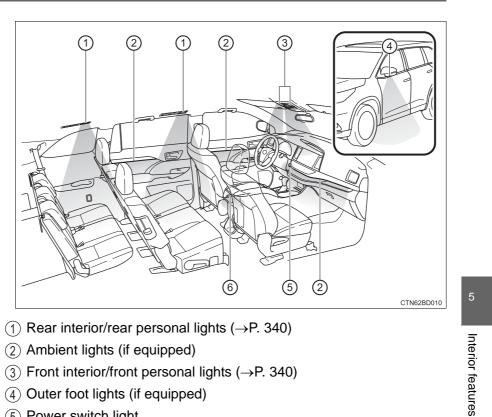
The indicator comes on when the second seat heater is on.



The second seat heaters can be used when

The power switch is in ON mode.

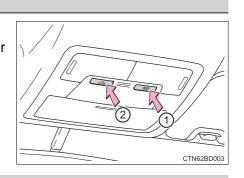
Interior lights list



- (4) Outer foot lights (if equipped)
- 5 Power switch light
- (6) Front door courtesy lights

Interior lights

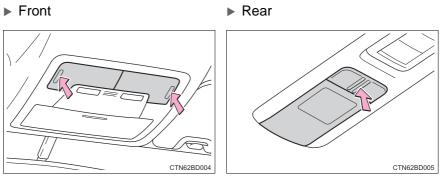
- 1 Turns the lights on/off
- (2) Turns the lights linked to door position on/off



Personal lights

Turn the light on/off

Rear



Illuminated entry system

The lights automatically turn on/off according to power switch mode, the presence of the electronic key, whether the doors are locked/unlocked, and whether the doors are opened/closed.

To prevent 12-volt battery discharge

If the following lights are left on when the power switch is turned off, the lights will go off automatically after 20 minutes:

- Interior lights
- Personal lights
- Front door courtesy lights
- Ambient lights (if equipped)
- Power switch light

Customization

Settings (e.g. the time elapsed before lights turn off) can be changed. (Customizable features: \rightarrow P. 556)

List of storage features

(1)(1) (2) (3) (4) 4 5 0 ٥ 150 *⊃0*)o 6 (5) (5) CTN63BD057 (1) Auxiliary boxes (→P. 347) (4) Bottle holders (→P. 344) (→P. 348) (5) Cup holders (→P. 345) (2) Open tray (3) Glove box (→P. 343) (6) Console box (→P. 343)

WARNING

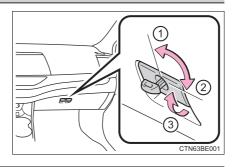
- Do not leave glasses, lighters or spray cans in the storage spaces, as this may cause the following when cabin temperature becomes high:
 - · Glasses may be deformed by heat or cracked if they come into contact with other stored items.
 - · Lighters or spray cans may explode. If they come into contact with other stored items, the lighter may catch fire or the spray can may release gas, causing a fire hazard.
- When driving or when the storage compartments are not in use, keep the lids closed.

In the event of sudden braking or sudden swerving, an accident may occur due to an occupant being struck by an open lid or the items stored inside.

5-3. Using the storage features

Glove box

- 1 Unlock with the mechanical key
- 2 Lock with the mechanical key
- ③ Open (pull lever)

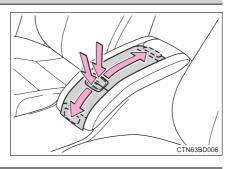


Power back door main switch

The power back door main switch is located in the glove box. (\rightarrow P. 136)

Console box

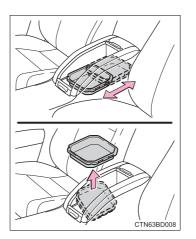
To open the console box lids, press on the knob and slide both lids.



Interior features

Tray in the console box

The tray slides forward/backward and can be removed.

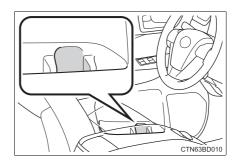


343

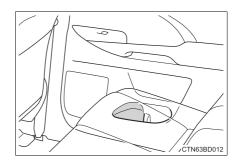
344 5-3. Using the storage features

Bottle holders

Front



Rear



When using the bottle holder

• When storing a bottle, close the cap.

• The bottle may not be stored depending on its size or shape.

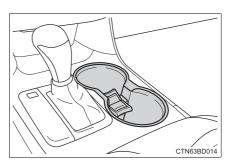
WARNING

Do not place anything other than a bottle in the bottle holders. Other items may be thrown out of the holders in the event of an accident or sudden braking and cause injury.

5-3. Using the storage features

Cup holders

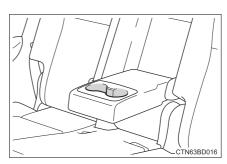
Front



Rear (second seats)

Type A
 Pull the armrest down.

(→P. 358)



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Type B

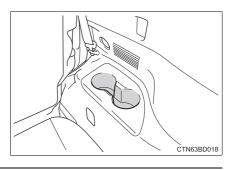
Fold the side table up for use. $(\rightarrow P. 360)$

CTNG3BD046

Interior features

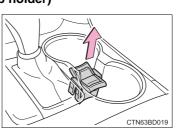
346 5-3. Using the storage features

Rear (third seats)



Removing the cup holder insert (front cup holder)

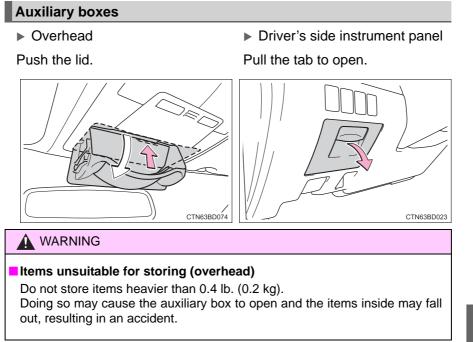
The cup holder insert may be removed for cleaning.



WARNING

Do not place anything other than cups or aluminum cans in the cup holders. Other items may be thrown out of the holders in the event of an accident or sudden braking, causing injury. If possible, cover hot drinks to prevent burns.

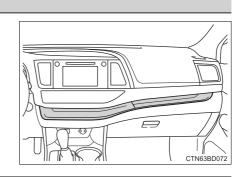
5-3. Using the storage features



Interior features

348 5-3. Using the storage features

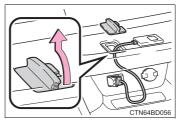
Open tray



Cable pass through

The open tray is provided with a hole that allows cables to be passed through the tray from the USB/AUX port or power outlet.

Remove the cover.



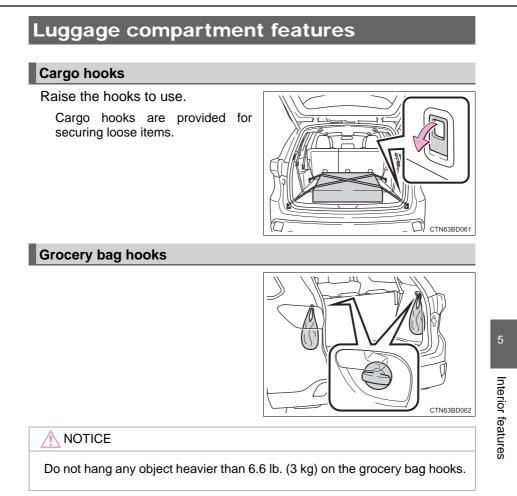
WARNING

Items unsuitable for the open tray

Observe the following precautions when putting items in the open tray. Failure to do so may cause items to be thrown out of the tray in the event of sudden braking or steering. In these cases, the items may interfere with pedal operation or cause driver distraction, resulting in an accident.

- Do not store items in the tray that can easily shift or roll out.
- Do not stack items in the tray higher than the tray's edge.
- Do not put items in the tray that may protrude over the tray's edge.

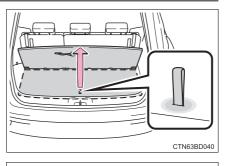
349



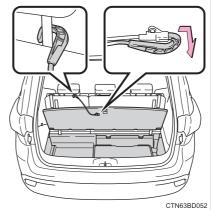
350 5-3. Using the storage features

Center deck under tray

1 Pull the strap upwards to open the center deck board.



2 To secure the center deck board, remove the hook on the backside of the center deck board and attach the hook to the head restraint on the third seats as shown.



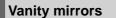
WARNING

Do not drive with the deck board opened. Items may fall out and cause injury.

Other interior features

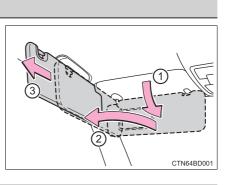
Sun visors

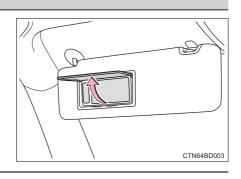
- (1) To set the visor in the forward position, flip it down.
- (2) To set the visor in the side position, flip down, unhook, and swing it to the side.
- (3) To use the side extender, place the visor in the side position, then slide it backward.



Open the cover.

The vanity light turns on.



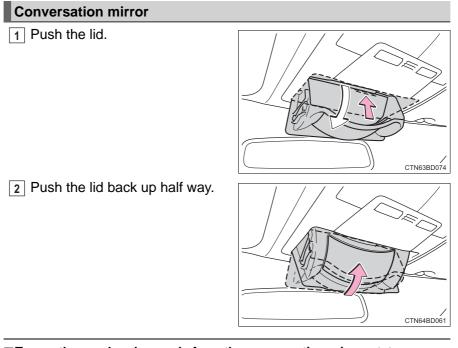


Interior features

To prevent 12-volt battery discharge

If the vanity lights remain on for 20 minutes while the hybrid system is off, the lights will turn off automatically.

352 5-4. Using the other interior features

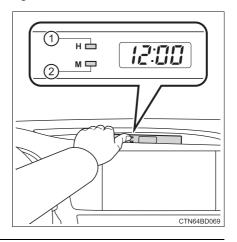


To use the overhead console from the conversation mirror state Fully close the lid, then open it again. (\rightarrow P. 347)

Clock

The clock can be adjusted by pressing the buttons.

- 1 Adjusts the hours
- (2) Adjusts the minutes



The clock is displayed when

The power switch is in ACCESSORY or ON mode.

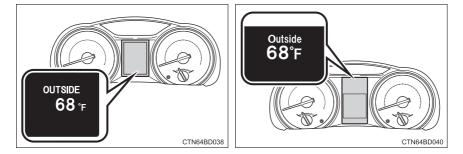
When the 12-volt battery is disconnected

The time display will automatically be set to 1:00.

Outside temperature display

The temperature display shows temperatures within the range of -40°F (-40°C) to 122°F (50°C).

 Vehicles with monochrome dis Vehicles with color display play



HIGHLANDER_HV_U (OM48F02U)

The outside temperature is displayed when

The power switch is in ON mode.

Display

In the following situations, the correct outside temperature may not be displayed, or the display may take longer than normal to change.

• When the vehicle is stopped, or moving at low speeds (less than 15 mph [25 km/h]).

 When the outside temperature has changed suddenly (at the entrance/exit of a garage, tunnel, etc.)

When the outside temperature display flashes

Vehicles with monochrome display

If the outside temperature is 37°F (3°C) or less, the temperature display flashes 10 times, and then illuminates.

Vehicles with color display

If the outside temperature is 37°F (3°C) or less, the ice warning indicator

flashes 10 times, and then illuminates.

When "--" or "E" is displayed

The system may be malfunctioning. Take your vehicle to your Toyota dealer.

Power outlets

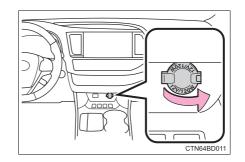
The power outlet can be used for the following components:

12 V: Accessories that run on less than 10 A

120 VAC: Accessories that use less than 100 W

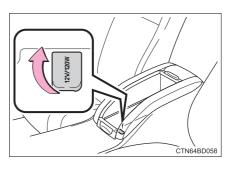
- 12 V
 - Front

Open the lid.



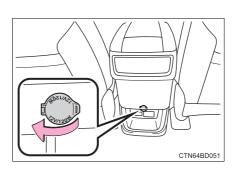
Console box

Open the console box lid $(\rightarrow P. 343)$ and open the lid.

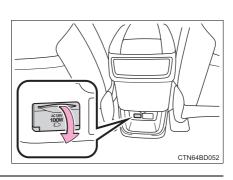


► Rear





120 VAC (if equipped) Open the lid.



The power outlets can be used when

12 V: The power switch is in ACCESSORY or ON mode.

120 VAC: The power switch is in ON mode.

355

Interior features

356 5-4. Using the other interior features

NOTICE To avoid damaging the power outlets Close the power outlet lids when the power outlets are not in use. Foreign objects or liquids that enter the power outlets may cause a short circuit. To prevent blown fuses ▶ 12 V Do not use an accessory that uses more than 12 V 10 A. ▶ 120 VAC Do not use a 120 VAC appliance that requires more than 100 W. If a 120 VAC appliance that consumes more than 100 W is used, the protection circuit will cut the power supply. To prevent 12-volt battery discharge Do not use the power outlet longer than necessary when the hybrid system is off. Appliances that may not operate properly (120 VAC) The following 120 VAC appliances may not operate properly even if their power consumption is under 100 W: Appliances with high initial peak wattage Measuring devices that process precise data • Other appliances that require an extremely stable power supply

Rear sunshades (if equipped) 1 Pull the tab up. CTN64BD036 2 Hook the sunshade on to the G anchors. To lower the sunshade, pull the tab up slightly to unhook the shade from the anchors, and lower it slowly. CTN64BD055 NOTICE Interior features To ensure normal operation of the rear sunshades, observe the following precautions. • Do not place anything where it may hinder the opening/closing of a sunshade.

Do not place anything on the rear sunshades.

357

358 5-4. Using the other interior features

Armrest

► Type A

Fold down the armrest for use.



► Type B

1 Lower the armrest from the highest position to the lowest position.



2 Raise the armrest to the desired angle.

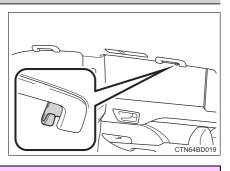
To unlock the armrest, lift the armrest to raise it to the highest position.



To prevent damage to the armrest, do not apply too much load on the arm-rest.

Coat hooks

Coat hooks are provided on the rear assist grips.

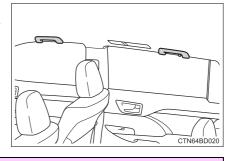


WARNING

Do not hang coat hangers or other hard or sharp objects on the hook. If the SRS curtain shield airbags deploy, these items may become projectiles, causing death or serious injury.

Assist grips

An assist grip installed on the ceiling can be used to support your body while sitting on the seat.



Interior features

WARNING

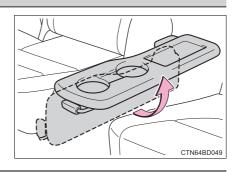
Do not use the assist grip when getting in or out of the vehicle or rising from your seat.

To prevent damage to the assist grip, do not hang any heavy object or put a heavy load on the assist grip.

360 5-4. Using the other interior features

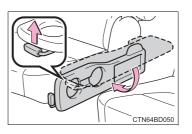
Side table (if equipped)

Fold the side table up for use.



To stowing the side table

To fold down the side table, pull up the lever to release the lock. Hold the table to let it lower slowly until you hear a click.



WARNING

When not in use, store the side table at the fully lowered position.

To prevent damage to the side table, do not place very heavy objects on it.

Garage door opener*

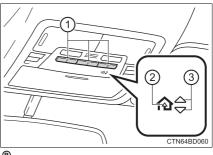
The garage door opener can be programmed to operate garage doors, gates, entry doors, door locks, home lighting systems, security systems, and other devices.

The garage door opener (HomeLink[®] Universal Transceiver) is manufactured under license from HomeLink[®].

Programming the HomeLink®

The HomeLink[®] compatible transceiver in your vehicle has 3 buttons which can be programmed to operate 3 different devices. Refer to the programming method below appropriate for the device.

- 1 Buttons
- (2) HomeLink[®] indicator light
- (3) Garage door operation indicators



Interior features

Before programming HomeLink[®]

- During programming, it is possible that garage doors, gates, or other devices may operate. For this reason, make sure that people and objects are clear of the garage door or other devices to prevent injury or other potential harm.
- It is recommended that a new battery be placed in the remote control transmitter for more accurate programming.
- Garage door openers manufactured after 1995 may be equipped with rolling code protection. If this is the case, you will need a stepladder or other sturdy, safe device to reach the "learn" or "smart" button on the garage door opener motor.

*: If equipped

HIGHLANDER_HV_U (OM48F02U)

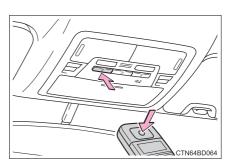
362 5-4. Using the other interior features

Programming HomeLink[®]

1 Point the remote control transmitter for the device 1 to 3 in. (25 to 75 mm) from the HomeLink[®] buttons. Keep the HomeLink[®] indicator

light in view while programming.

- ► For U.S.A. owner's
- 2 Press and hold the HomeLink[®] button you want to program and the handheld transmitter button simultaneously. When the HomeLink[®] indicator light changes from slowly flashing orange to rapidly flashing green (rolling code) or continuously lit green (fixed code), release both buttons.



- Programming an entry gate (for U.S.A. owners)/Programming a device in the Canadian market
- 2 With one hand, press and hold the HomeLink[®] button you want to program. With your other hand, press and release the remote control transmitter every 2 seconds and repeat this cycle until the HomeLink[®] indicator light starts to flash rapidly. Then, release the buttons.

HIGHLANDER_HV_U (OM48F02U)

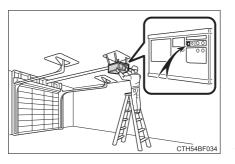
- **3** Test the HomeLink[®] operation by pressing the newly programmed button and observing the indicator light:
 - If the indicator light is solid/continuous, programming has been completed and your device should activate when the HomeLink[®] button is pressed and released.
 - If the indicator light blinks rapidly for 2 seconds and then turns into a solid/continuous light, proceed to the heading "Programming a rolling code system".
- 4 Repeat the steps above to program another device for any of the remaining HomeLink[®] buttons.

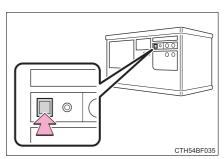
Programming a rolling code system

1 Locate the "learn" or "smart" button on the garage door opener motor in the garage.

> This button can usually be found where the hanging antenna wire is attached to the unit. The name and color of the button may vary by manufacturer. Please refer to the owner's manual supplied with the garage door opener motor for details.

 Press and release the "learn" or "smart" button.
 Perform 3 within 30 seconds after performing 2.



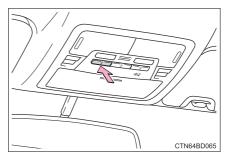


Interior features

364 5-4. Using the other interior features

3 Press and hold the programmed HomeLink[®] button (located inside the vehicle) for 2 seconds and release it. Repeat this sequence (press/ hold/release) up to 3 times to complete programming.

If the garage door opener motor activates when the HomeLink[®] button is pressed, the garage door opener motor recognizes the HomeLink[®] signal.



Enabling 2-way communication with a garage door (only available for compatible devices)

When enabled, 2-way communication allows you to check the status of the opening and closing of the garage door through indicators in your vehicle.

2-way communication is only available if the garage door opener motor used is a compatible device. (To check device compatibility, refer to the owner's manual supplied with the garage door opener motor.)

- 1 Press a programmed HomeLink[®] button to operate a garage door.
- 2 Within 1 minute of pressing the HomeLink[®] button, after the garage door operation has stopped, press the "learn" or "smart" button on the garage door opener motor. Within 5 seconds of the establishment of 2-way communication with the garage door opener, both garage door operation indicators in the vehicle will flash rapidly (green).

Reprogramming a single HomeLink[®] button

When the following procedure is performed, buttons which already have devices registered to them can be overwritten:

- $\boxed{1}$ With one hand, press and hold the desired HomeLink[®] button.
- 2 When the HomeLink[®] indicator starts flashing, continue to hold the HomeLink[®] button and perform "Programming HomeLink[®], from 1 (it takes 20 seconds for the HomeLink[®] indicator to start flashing).

Operating HomeLink[®]

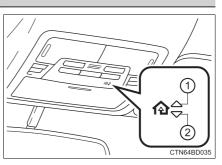
Press the appropriate ${\sf HomeLink}^{\mathbb{R}}$ button. The ${\sf HomeLink}^{\mathbb{R}}$ indicator light should turn on.

Garage door operation indicators

The status of the opening and closing of a garage door is shown by the indicators.

- (1) Opening
- (2) Closing

This function is only available if the garage door opener motor used is a compatible device. (To check device compatibility, refer to the owner's manual supplied with the garage door opener motor.)



Color	Status
Orange (flashing)	Currently opening/closing
Green	Opening/closing has completed
Red (flashing)	Feedback signals cannot be received

The indicators can operate within approximately 820 ft. (250 m) of the garage door. However, if there are obstacles between the garage door and the vehicle, such as houses and trees, feedback signals from the garage door may not be received.

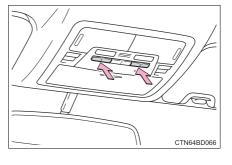
To recall the previous door operation status, press and release either HomeLink[®] buttons "1" and "2" or "2" and "3" simultaneously for 2 seconds. The last recorded status will be displayed for 5 seconds.

366 5-4. Using the other interior features

Erasing the entire HomeLink[®] memory (all three programs)

Press and hold the 2 outside buttons for 10 seconds until the HomeLink[®] indicator light changes from continuously lit (orange) to rapidly flashing (green).

If you sell your vehicle, be sure to erase the programs stored in the HomeLink $^{\textcircled{B}}$ memory.



■ Programs stored in the HomeLink[®] memory

- The registered codes are not erased even if the 12-volt battery cable is disconnected.
- If learning failed when registering a different code to a HomeLink[®] button that already has a code registered to it, the already registered code is not erased.

Before programming

Install a new battery in the transmitter.

• The battery side of the transmitter must be pointed away from the HomeLink[®].

Certification for the garage door opener

This device complies with FCC rules part 15 and Industry Canada RSS-210.

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

WARNING:

The transmitter has been tested and complies with FCC and IC rules. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the device.

The term "IC:" before the certification/registration number only signifies that Industry Canada technical specifications were met.

IC: 279B-440AHL5 MODEL/FCC ID: CB2440AHL5

Cet appareil est conforme aux normes FCC partie 15 et Industry Canada RSS-210.

Son fonctionnement est soumis aux deux conditions suivantes: (1) Cet appareil ne doit pas causer d'interférences nuisibles et (2) Cet appareil doit accepter toute interférence qui peuvent être reçues y compris les interférences pouvant provoquer un fonctionnement indésirable.

AVERTISSEMENT:

L'émetteur a été testé et est conforme aux régles de la FCC et IC. Les changements ou modifications non expressément approuvés par la partie responsable de la conformité pourrait annuler l'autorité de l'utilisateur de faire fonctionner le dispositif.

Le terme "IC:" devant le numéro de certification / enregistrement signifie seulement que les spécifications techniques d'Industry Canada ont été respectées.

IC: 279B-440AHL5 MODEL/FCC ID: CB2440AHL5

For additional programming assistance with your HomeLink[®] Universal Transceiver

Visit on the web at www.homelink.com or call 1-800-355-3515.

WARNING

When programming a garage door or other remote control device

The garage door may operate, so ensure people and objects are out of danger to prevent potential harm.

Conforming to federal safety standards

Do not use the HomeLink[®] Compatible Transceiver with any garage door opener or device that lacks safety stop and reverse features as required by federal safety standards.

This includes any garage door that cannot detect an obstruction object. A door or device without these features increases the risk of death or serious injury.

When operating or programming HomeLink[®]

Never allow a child to operate or play with the HomeLink[®] buttons.

Interior features

Safety Connect*

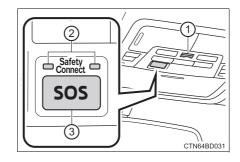
Safety Connect is a subscription-based telematics service that uses Global Positioning System (GPS) data and embedded cellular technology to provide safety and security features to subscribers. Safety Connect is supported by Toyota's designated response center, which operates 24 hours per day, 7 days per week.

Safety Connect service is available by subscription on select, telematics hardware-equipped vehicles.

By using the Safety Connect service, you are agreeing to be bound by the Telematics Subscription Service Agreement and its Terms and Conditions, as in effect and amended from time to time, a current copy of which is available at Toyota.com. All use of the Safety Connect service is subject to such then-applicable Terms and Conditions.

System components

- (1) Microphone
- (2) LED light indicators
- (3) "SOS" button



*: If equipped

Services

Subscribers have the following Safety Connect services available:

- Automatic Collision Notification*
 Helps drivers receive necessary
 - Helps drivers receive necessary response from emergency service providers. (${\rightarrow}\text{P. 371})$
- *: U.S. Patent No. 7,508,298 B2
- Stolen Vehicle Location Helps drivers in the event of vehicle theft. (→P. 372)
- Emergency Assistance Button (SOS)
 Connects drivers to response-center support. (→P. 372)
- Enhanced Roadside Assistance
 Provides drivers various on-road assistance. (→P. 372)

Subscription

After you have signed the Telematics Subscription Service Agreement and are enrolled, you can begin receiving services.

A variety of subscription terms are available for purchase. Contact your Toyota dealer, call 1-800-331-4331, or push the "SOS" button in your vehicle for further subscription details.

Safety Connect Services Information

- Phone calls using the vehicle's Bluetooth[®] technology will not be possible during Safety Connect.
- Safety Connect is available beginning Fall 2009 on select Toyota models. Contact with the Safety Connect response center is dependent upon the telematics device being in operative condition, cellular connection availability, and GPS satellite signal reception, which can limit the ability to reach the response center or receive emergency service support. Enrollment and Telematics Subscription Service Agreement are required. A variety of subscription terms are available; charges vary by subscription term selected.
- Automatic Collision Notification, Emergency Assistance, Stolen Vehicle Location, and Enhanced Roadside Assistance will function in the United States, including Hawaii and Alaska, and in Canada. No Safety Connect services will function outside of the United States in countries other than Canada.
- Safety Connect services are not subject to section 255 of the Telecommunications Act and the device is not TTY compatible.

Languages

The Safety Connect response center will offer support in multiple languages. The Safety Connect system will offer voice prompts in English and Spanish. Please indicate your language of choice when enrolling.

When contacting the response center

You may be unable to contact the response center if the network is busy.

Safety Connect LED light Indicators

When the power switch is turned to ON mode, the red indicator light comes on for 2 seconds then turns off. Afterward, the green indicator light comes on, indicating that the service is active.

The following indicator light patterns indicate specific system usage conditions:

- Green indicator light on = Active service
- Green indicator light flashing = Safety Connect call in process
- Red indicator light (except at vehicle start-up) = System malfunction (contact your Toyota dealer)
- No indicator light (off) = Safety Connect service not active

Safety Connect services

Automatic Collision Notification

In case of either airbag deployment or severe rear-end collision, the system is designed to automatically call the response center. The responding agent receives the vehicle's location and attempts to speak with the vehicle occupants to assess the level of emergency. If the occupants are unable to communicate, the agent automatically treats the call as an emergency, contacts the nearest emergency services provider to describe the situation, and requests that assistance be sent to the location.

Stolen Vehicle Location

If your vehicle is stolen, Safety Connect can work with local authorities to assist them in locating and recovering the vehicle. After filing a police report, call the Safety Connect response center at 1-800-331-4331 and follow the prompts for Safety Connect to initiate this service.

In addition to assisting law enforcement with recovery of a stolen vehicle, Safety-Connect-equipped vehicle location data may, under certain circumstances, be shared with third parties to locate your vehicle. Further information is available at Toyota.com.

Emergency Assistance Button ("SOS")

In the event of an emergency on the road, push the "SOS" button to reach the Safety Connect response center. The answering agent will determine your vehicle's location, assess the emergency, and dispatch the necessary assistance required.

If you accidentally press the "SOS" button, tell the response-center agent that you are not experiencing an emergency.

Enhanced Roadside Assistance

Enhanced Roadside Assistance adds GPS data to the already included warranty-based Toyota roadside service.

Subscribers can press the "SOS" button to reach a Safety Connect response-center agent, who can help with a wide range of needs, such as: towing, flat tire, fuel delivery, etc. For a description of the Enhanced Roadside Assistance services and their limitations, please see the Safety Connect Terms and Conditions, which are available at Toyota.com.

Safety information for Safety Connect

Important! Read this information before using Safety Connect.

Exposure to radio frequency signals

The Safety Connect system installed in your vehicle is a low-power radio transmitter and receiver. It receives and also sends out radio frequency (RF) signals.

In August 1996, the Federal Communications Commission (FCC) adopted RF exposure guidelines with safety levels for mobile wireless phones. Those guidelines are consistent with the safety standards previously set by the following U.S. and international standards bodies.

- ANSI (American National Standards Institute) C95.1 [1992]
- NCRP (National Council on Radiation Protection and Measurement) Report 86 [1986]
- ICNIRP (International Commission on Non-Ionizing Radiation Protection) [1996]

Those standards were based on comprehensive and periodic evaluations of the relevant scientific literature. Over 120 scientists, engineers, and physicians from universities, and government health agencies and industries reviewed the available body of research to develop the ANSI Standard (C95.1).

The design of Safety Connect complies with the FCC guidelines in addition to those standards.

Certification for Safety Connect

FCC ID: O6Y-CDMRF101

FCC ID: XOECDMRF101B FCC ID: N7NGTM2

NOTE:

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

FCC WARNING:

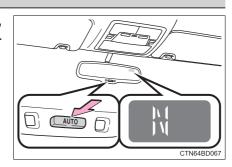
Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Compass*

The compass on the inside rear view mirror indicates the direction in which the vehicle is heading.

Operation

To turn the compass on or off, press and hold "AUTO" for 3 seconds.

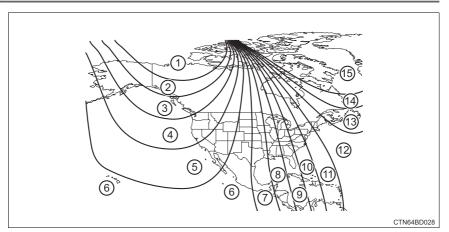


Displays and directions

Display	Direction
N	North
NE	Northeast
E	East
SE	Southeast
S	South
SW	Southwest
W	West
NW	Northwest

*: If equipped

Calibrating the compass



The direction display deviates from the true direction determined by the earth's magnetic field. The amount of deviation varies according to the geographic position of the vehicle.

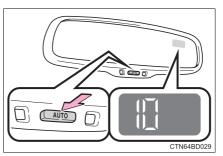
If you cross over a map boundary shown in illustration, the compass will deviate.

To obtain higher precision or perfect calibration, refer to the following.

Deviation calibration

- 1 Stop the vehicle.
- 2 Press and hold "AUTO" for 6 seconds.

A number (1 to 15) appears on the compass display.



3 Press the switch and referring to the map above, select the number of the zone where you are.

If the direction is displayed several seconds after adjustment, the calibration is complete.

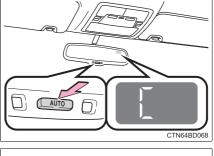
HIGHLANDER_HV_U (OM48F02U)

Interior features

Circling calibration

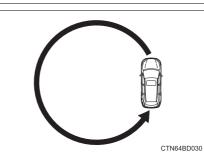
- 1 Stop the vehicle in a place where it is safe to drive in a circle.
- 2 Press and hold "AUTO" for 9 seconds.

"C" appears on the compass display.



3 Drive the vehicle at 5 mph (8 km/h) or less in a circle until a direction is displayed.

If there is not enough space to drive in a circle, drive around the block until the direction is displayed.



HIGHLANDER_HV_U (OM48F02U)

Conditions unfavorable to correct operation

The compass may not show the correct direction in the following conditions:

- The vehicle is stopped immediately after turning.
- The vehicle is on an inclined surface.
- The vehicle is in a place where the earth's magnetic field is subject to interference by artificial magnetic fields (underground car park/parking lot, under a steel tower, between buildings, roof car park/parking lot, near an intersection, near a large vehicle, etc.).
- The vehicle has become magnetized. (There is a magnet or metal object near the inside rear view mirror.)
- The 12-volt battery has been disconnected.
- A door is open.

WARNING

While driving the vehicle

Do not adjust the display. Adjust the display only when the vehicle is stopped.

When doing the circling calibration

Secure a wide space, and watch out for people and vehicles in the neighborhood. Do not violate any local traffic rules while performing circling calibration.

To avoid compass malfunctions

Do not place magnets or any metal objects near the inside rear view mirror. Doing this may cause the compass sensor to malfunction.

To ensure normal operation of the compass

- Do not perform circling calibration of the compass in a place where the earth's magnetic field is subject to interference by artificial magnetic fields.
- During calibration, do not operate electric systems (moon roof, power windows, etc.) as they may interfere with the calibration.

HIGHLANDER_HV_U (OM48F02U)

Maintenance and care

6-1.	Maintenance and care	
	Cleaning and protecting	
	the vehicle exterior	. 380
	Cleaning and protecting	
	the vehicle interior	. 383
6-2.	Maintenance	
	Maintenance	
	requirements	
	General maintenance	. 389
	Emission inspection and	
	maintenance (I/M)	
	programs	. 393
6-3.	Do-it-yourself	
	maintenance	
	Do-it-yourself service	
	precautions	. 394
	Hood	
	Positioning a floor jack	. 398
	Engine compartment	. 399
	12-volt battery	. 407
	Tires	. 412
	Tire inflation pressure	. 421
	Wheels	
	Air conditioning filter	. 426
	Electronic key battery	
	Checking and replacing	0
	fuses	. 430
	Light bulbs	

Cleaning and protecting the vehicle exterior

Perform the following to protect the vehicle and maintain it in prime condition:

- Working from top to bottom, liberally apply water to the vehicle body, wheel wells and underside of the vehicle to remove any dirt and dust.
- Wash the vehicle body using a sponge or soft cloth, such as a chamois.
- For hard-to-remove marks, use car wash soap and rinse thoroughly with water.
- Wipe away any water.
- Wax the vehicle when the waterproof coating deteriorates.

If water does not bead on a clean surface, apply wax when the vehicle body is cool.

Automatic car washes

Before washing the vehicle:

- Fold the mirrors.
- Turn off the power back door.
- Start washing from the front of the vehicle. Make sure to extend the mirrors before driving.
- Brushes used in automatic car washes may scratch the vehicle surface and harm your vehicle's paint.

High pressure car washes

- Do not allow the nozzles of the car wash to come within close proximity of the windows.
- Before using the car wash, check that the fuel filler door on your vehicle is closed properly.

When using a car wash

If the door handle becomes wet while the electronic key is within the effective range, the door may lock and unlock repeatedly. In that case, follow the following correction procedures to wash the vehicle:

- Place the key in a position 6 ft. (2 m) or more separate from the vehicle while the vehicle is being washed. (Take care to ensure that the key is not stolen.)
- Set the electronic key to battery-saving mode to disable the smart key system. (→P. 150)

Aluminum wheels

 Remove any dirt immediately by using a neutral detergent. Do not use hard brushes or abrasive cleaners. Do not use strong or harsh chemical cleaners.

Use the same mild detergent and wax as used on the paint.

- Do not use detergent on the wheels when they are hot, for example after driving for long distance in the hot weather.
- Wash detergent from the wheels immediately after use.

Bumpers

Do not scrub with abrasive cleaners.

WARNING

When washing the vehicle

Do not apply water to the inside of the engine compartment. Doing so may cause the electrical components etc. to catch fire.

Precautions regarding the exhaust pipe

Exhaust gasses cause the exhaust pipe to become quite hot.

- When washing the vehicle, be careful not to touch the pipe until it has cooled sufficiently, as touching a hot exhaust pipe can cause burns.
- Precaution regarding the rear bumper with Blind Spot Monitor (if equipped)

If the paint of the rear bumper is chipped or scratched, the system may malfunction. If this occurs, consult your Toyota dealer. Maintenance and care

Cleaning and protecting the vehicle interior

The following procedures will help protect your vehicle's interior and keep it in top condition:

Protecting the vehicle interior

Remove dirt and dust using a vacuum cleaner. Wipe dirty surfaces with a cloth dampened with lukewarm water.

Cleaning the leather areas

- Remove dirt and dust using a vacuum cleaner.
- Wipe off any excess dirt and dust with a soft cloth dampened with diluted detergent.

Use a diluted water solution of approximately 5% neutral wool detergent.

- Wring out any excess water from the cloth and thoroughly wipe off all remaining traces of detergent.
- Wipe the surface with a dry, soft cloth to remove any remaining moisture. Allow the leather to dry in a shaded and ventilated area.

Cleaning the synthetic leather areas

- Remove loose dirt using a vacuum cleaner.
- Apply a mild soap solution to the synthetic leather using a sponge or soft cloth.
- Allow the solution to soak in for a few minutes. Remove the dirt and wipe off the solution with a clean, damp cloth.

Maintenance and care

Caring for leather areas

Toyota recommends cleaning the interior of the vehicle at least twice a year to maintain the quality of the vehicle's interior.

Shampooing the carpets

There are several commercial foaming-type cleaners available. Use a sponge or brush to apply the foam. Rub in overlapping circles. Do not use water. Wipe dirty surfaces and let them dry. Excellent results are obtained by keeping the carpet as dry as possible.

Seat belts

Clean with mild soap and lukewarm water using a cloth or sponge. Also check the belts periodically for excessive wear, fraying or cuts.

WARNING

Water in the vehicle

- Do not splash or spill liquid in the vehicle, such as on the floor, in the hybrid battery (traction battery) air vents, and in the luggage compartment. Doing so may cause the hybrid battery, electrical components, etc. to malfunction or catch fire.
- Do not get any of the SRS components or wiring in the vehicle interior wet.
 (→P. 43)

An electrical malfunction may cause the airbags to deploy or not function properly, resulting in death or serious injury.

Cleaning the interior (especially instrument panel)

Do not use polish wax or polish cleaner. The instrument panel may reflect off the windshield, obstructing the driver's view and leading to an accident, resulting in death or serious injury.

Cleaning detergents

- Do not use the following types of detergent, as they may discolor the vehicle interior or cause streaks or damage to painted surfaces:
 - Non-seat portions: Organic substances such as benzene or gasoline, alkaline or acidic solutions, dye, and bleach
 - Seats: Alkaline or acidic solutions, such as thinner, benzene, and alcohol
- Do not use polish wax or polish cleaner. The instrument panel's or other interior part's painted surface may be damaged.

Preventing damage to leather surfaces

Observe the following precautions to avoid damage to and deterioration of leather surfaces:

- Remove any dust or dirt from leather surfaces immediately.
- Do not expose the vehicle to direct sunlight for extended periods of time. Park the vehicle in the shade, especially during summer.
- Do not place items made of vinyl, plastic, or containing wax on the upholstery, as they may stick to the leather surface if the vehicle interior heats up significantly.

Water on the floor

Do not wash the vehicle floor with water.

Vehicle systems such as the audio system may be damaged if water comes into contact with electrical components such as the audio system above or under the floor of the vehicle. Water may also cause the body to rust.

When cleaning the inside of the windshield (vehicles with LDA [Lane Departure Alert] and Automatic High Beam)

Be careful not to touch the camera sensor (\rightarrow P. 253, 283).

If the camera is accidentally scratched or hit, LDA and Automatic High Beam may not operate properly or may cause a malfunction.

Cleaning the inside of the rear window and the rear quarter windows

Do not use glass cleaner to clean the rear window and the rear quarter windows, as this may cause damage to the rear window defogger heater wires or antenna. Use a cloth dampened with lukewarm water to gently wipe the window clean. Wipe the window in strokes running parallel to the heater wires or antenna.

Be careful not to scratch or damage the heater wires or antenna.

care

Maintenance requirements

To ensure safe and economical driving, day-to-day care and regular maintenance are essential. It is the owner's responsibility to perform regular checks. Toyota recommends the following maintenance:

General maintenance

General maintenance should be performed on a daily basis. This can be done by yourself or by a Toyota dealer.

Scheduled maintenance

Scheduled maintenance should be performed at specified intervals according to the maintenance schedule.

For details about maintenance items and schedules, refer to the "Scheduled Maintenance Guide" or "Owner's Manual Supplement".

Do-it-yourself maintenance

You can perform some maintenance procedures by yourself. Please be aware that do-it-yourself maintenance may affect warranty coverage.

The use of Toyota Repair Manuals is recommended.

For details about warranty coverage, see the separate "Owner's Warranty Information Booklet" or "Owner's Manual Supplement".

387

Repair and replacement

It is recommended that genuine Toyota parts be used for repairs to ensure performance of each system. If non-Toyota parts are used in replacement or if a repair shop other than a Toyota dealer performs repairs, confirm the warranty coverage.

Reset the maintenance data (U.S.A. only)

After the required maintenance is performed according to the maintenance schedule, please reset the maintenance data.

To reset the data, follow the procedure described below:

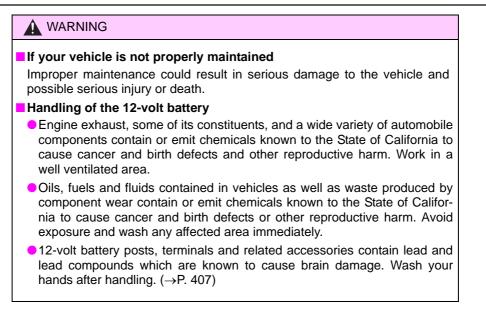
- Using the trip meter
- 1 Turn the power switch off with the trip meter A reading shown.
- While pressing the trip meter reset button (→P. 104), turn the power switch to the ON mode (do not start the engine because otherwise the reset mode will be canceled).
- 3 Continue to press and hold the button until the trip meter displays "000000".
- ► Using the multi-information display (vehicles with color display)
- 1 While the hybrid system operating, switch the multi-information display to the "Settings" screen. (\rightarrow P. 103)
- 2 Select "Maintenance System" on the "Settings" screen.
- 3 Select "Yes" on the "Maintenance System" screen.

"Initialization Completed" will be displayed on the multi-information display when the reset procedure has been completed.

Allow inspection and repairs to be performed by a Toyota dealer

- Toyota technicians are well-trained specialists and are kept up to date with the latest service information. They are well informed about the operations of all systems on your vehicle.
- Keep a copy of the repair order. It proves that the maintenance that has been performed is under warranty coverage. If any problem should arise while your vehicle is under warranty, your Toyota dealer will promptly take care of it.

Maintenance and care



General maintenance

Listed below are the general maintenance items that should be performed at the intervals specified in the "Owner's Warranty Information Booklet" or "Owner's Manual Supplement/Scheduled Maintenance Guide". It is recommended that any problem you notice should be brought to the attention of your Toyota dealer or qualified service shop for advice.

• •	
Items	Check points
Brake fluid	Is the brake fluid at the correct level? (\rightarrow P. 405)
Coolant	Is the coolant at the correct level? $(\rightarrow P. 403)$
Engine oil	Is the engine oil at the correct level? (\rightarrow P. 400)
Exhaust system	There should not be any fumes or strange sounds.
Radiator/condenser	The radiator and condenser should be free from foreign objects. $(\rightarrow P. 404)$
Washer fluid	Is there sufficient washer fluid? $(\rightarrow P. 406)$

Engine compartment

Vehicle interior

Items	Check points
12-volt battery	Check the battery connections. $(\rightarrow P. 407)$
Accelerator pedal	 The accelerator pedal should move smoothly (without uneven pedal effort or catching).
Hybrid transmission "Park" mechanism	 When parked on a slope and the shift lever is in P, is the vehicle securely stopped?
Brake pedal	 Does the brake pedal move smoothly? Does the brake pedal have appropriate clear- ance from the floor? (→P. 535) Does the brake pedal have the correct amount of free play? (→P. 535)
Brakes	 The vehicle should not pull to one side when the brakes are applied. The brakes should work effectively. The brake pedal should not feel spongy. The brake pedal should not get too close to the floor when the brakes are applied.

6-2. Maintenance

Items	Check points
Head restraints	 Do the head restraints move smoothly and lock securely?
Indicators/buzzers	 Do the indicators and buzzers function prop- erly?
Lights	 Do all the lights come on?
Parking brake	 Does the parking brake move smoothly? When parked on a slope and the parking brake is on, is the vehicle securely stopped?
Seat belts	Do the seat belts operate smoothly?The seat belts should not be damaged.
Seats	Do the seat controls operate properly?
Steering wheel	 Does the steering wheel rotate smoothly? Does the steering wheel have the correct amount of free play? There should not be any strange sounds coming from the steering wheel.

391

Vehicle exterior Check points Items • Do the doors/trunk operate smoothly? Doors/trunk · Does the engine hood lock system work prop-Engine hood erly? • There should not be any signs of fluid leakage Fluid leaks after the vehicle has been parked. • Is the tire inflation pressure correct? · The tires should not be damaged or excessively worn. Tires · Have the tires been rotated according to the maintenance schedule? • The wheel nuts should not be loose. • The wiper blades should not show any signs of cracking, splitting, wear, contamination or Windshield wipers/rear deformation. window wiper The wiper blades should clear the windshield/ • rear window without streaking or skipping.

WARNING

If the hybrid system is operating

Turn the hybrid system off and ensure that there is adequate ventilation before performing maintenance checks.

393

Emission inspection and maintenance (I/M) programs

Some states have vehicle emission inspection programs which include OBD (On Board Diagnostics) checks. The OBD system monitors the operation of the emission control system.

If the malfunction indicator lamp comes on

The OBD system determines that a problem exists somewhere in the emission control system. Your vehicle may not pass the I/M test and may need to be repaired. Contact your Toyota dealer to service the vehicle.

Your vehicle may not pass the I/M test in the following situations:

When the 12-volt battery is disconnected or discharged

Readiness codes that are set during ordinary driving are erased. Also, depending on your driving habits, the readiness codes may not be completely set.

When the fuel tank cap is loose

The malfunction indicator lamp comes on indicating a temporary malfunction and your vehicle may not pass the I/M test.

When the malfunction indicator lamp still remains on after several driving trips

The error code in the OBD system will not be cleared unless the vehicle is driven 40 or more times.

If your vehicle does not pass the I/M test

Contact your Toyota dealer to prepare the vehicle for re-testing.

Do-it-yourself service precautions

If you perform maintenance by yourself, be sure to follow the correct procedure as given in these sections.

Items	Parts and tools
$\begin{array}{ll} 12 \text{-volt} & \text{battery} \\ \text{condition} \\ (\rightarrow P. \ 407) \end{array}$	GreaseConventional wrench (for terminal clamp bolts)
Brake fluid level (→P. 405)	 FMVSS No.116 DOT 3 or SAE J1703 brake fluid Rag or paper towel Funnel (used only for adding brake fluid)
Engine/power control unit cool- ant level (→P. 403)	 "Toyota Super Long Life Coolant" or a similar high quality ethylene glycol based non-silicate, non-amine, non-nitrite and non-borate coolant with long-life hybrid organic acid technology For the U.S.A.: "Toyota Super Long Life Coolant" is pre-mixed with 50% coolant and 50% deionized water. For Canada: "Toyota Super Long Life Coolant" is pre-mixed with 55% coolant and 45% deionized water. Funnel (used only for adding coolant)
Engine oil level (→P. 400)	 "Toyota Genuine Motor Oil" or equivalent Rag or paper towel Funnel (used only for adding engine oil)
Fuses (→P. 430)	 Fuse with same amperage rating as original
Light bulbs (→P. 434)	 Bulb with same number and wattage rating as original Phillips-head screwdriver Flathead screwdriver Wrench
Radiator and con- denser (\rightarrow P. 404)	—
Tire inflation pressure $(\rightarrow P. 421)$	Tire pressure gaugeCompressed air source
Washer fluid (→P. 406)	 Water or washer fluid containing antifreeze (for winter use) Funnel (used only for adding water or washer fluid)

🛕 WARNING The engine compartment contains many mechanisms and fluids that may move suddenly, become hot, or become electrically energized. To avoid death or serious injury, observe the following precautions. When working on the engine compartment Make sure that the "ACCESSORY" or "IGNITION ON" on the multi-information display and the "READY" indicator are both off. • Keep hands, clothing and tools away from the moving fans and engine drive belt. Be careful not to touch the engine, power control unit, radiator, exhaust manifold, etc. right after driving as they may be hot. Oil and other fluids may also be hot. Do not leave anything that may burn easily, such as paper and rags, in the engine compartment. Do not smoke, cause sparks or expose an open flame to fuel. Fuel fumes are flammable. When working near the electric cooling fans or radiator grille Be sure the power switch is off. With the power switch in ON mode, the electric cooling fans may automatically start to run if the air conditioning is on and/or the coolant temperature is high. (\rightarrow P. 404) Safety glasses Wear safety glasses to prevent flying or falling material, fluid spray, etc. from getting in your eyes. NOTICE

If you remove the air cleaner filter

Driving with the air cleaner filter removed may cause excessive engine wear due to dirt in the air.

Maintenance and care

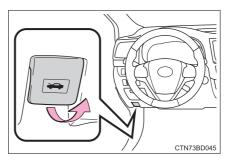
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396 6-3. Do-it-yourself maintenance

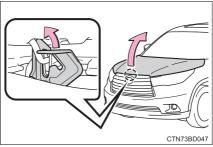
Hood

Release the lock from the inside of the vehicle to open the hood.

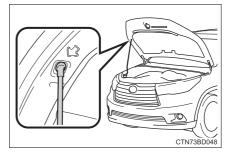
1 Pull the hood lock release lever. The hood will pop up slightly.



2 Pull up the auxiliary catch lever and lift the hood.



3 Hold the hood open by inserting the support rod into the slot.



WARNING Pre-driving check Check that the hood is fully closed and locked. If the hood is not locked properly, it may open while the vehicle is in motion and cause an accident, which may result in death or serious injury. After installing the support rod into the slot Make sure the rod supports the hood securely preventing it from falling down onto your head or body. Motice When closing the hood

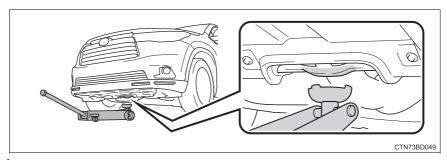
Be sure to return the support rod to its clip before closing the hood. Closing the hood with the support rod not clipped could cause the hood to bend.

Positioning a floor jack

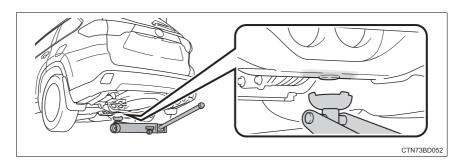
When using a floor jack, follow the instructions in the manual provided with the jack and perform the operation safely.

When raising your vehicle with a floor jack, position the jack correctly. Improper placement may damage your vehicle or cause injury.

Front



Rear



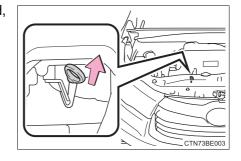
Engine compartment 234 5 6 (7) (11) (8) CTN73BE002 (1) Washer fluid tank (\rightarrow P. 406) (6) Power control unit coolant (→P. 403) reservoir (2) Brake fluid reservoir 6 (→P. 405) \bigcirc Fuse boxes (→P. 430) ③ Engine oil filler cap (8) Electric cooling fans Maintenance and care (→P. 401) (9) Condenser (→P. 404) (4) Engine oil level dipstick (10) Power control unit coolant (→P. 400) radiator (→P. 404) (5) Engine coolant reservoir (11) Radiator (→P. 404) (→P. 403)

Engine oil

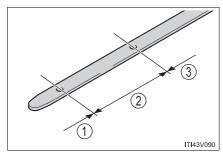
With the engine at operating temperature and turned off, check the oil level on the dipstick.

Checking the engine oil

- 1 Park the vehicle on level ground. After warming up the engine and turning off the hybrid system, wait more than 5 minutes for the oil to drain back into the bottom of the engine.
- 2 Holding a rag under the end, pull the dipstick out.



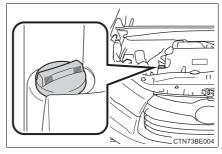
- 3 Wipe the dipstick clean.
- 4 Reinsert the dipstick fully.
- 5 Holding a rag under the end, pull the dipstick out and check the oil level.
 - \bigcirc Low
 - 2 Normal
 - ③ Excessive



6 Wipe the dipstick and reinsert it fully.

Adding engine oil

If the oil level is below or near the low level mark, add engine oil of the same type as that already in the engine.



401

Make sure to check the oil type and prepare the items needed before adding oil.

Engine oil selection	→P. 532
Oil quantity (Low \rightarrow Full)	1.6 qt. (1.5 L, 1.3 Imp. qt.)
Items	Clean funnel

1 Remove the oil filler cap by turning it counterclockwise.

2 Add engine oil slowly, checking the dipstick.

3 Install the oil filler cap by turning it clockwise.

Engine oil consumption

A certain amount of engine oil will be consumed while driving. In the following situations, oil consumption may increase, and engine oil may need to be refilled in between oil maintenance intervals.

- When the engine is new, for example directly after purchasing the vehicle or after replacing the engine
- If low quality oil or oil of an inappropriate viscosity is used
- When driving at high engine speeds or with a heavy load, when towing, or when driving while accelerating or decelerating frequently
- When leaving the engine idling for a long time, or when driving frequently through heavy traffic

402 6-3. Do-it-yourself maintenance

WARNING

Used engine oil

- Used engine oil contains potentially harmful contaminants which may cause skin disorders such as inflammation and skin cancer, so care should be taken to avoid prolonged and repeated contact. To remove used engine oil from your skin, wash thoroughly with soap and water.
- Dispose of used oil and filters only in a safe and acceptable manner. Do not dispose of used oil and filters in household trash, in sewers or onto the ground.
- Call your Toyota dealer, service station or auto parts store for information concerning recycling or disposal.
- Do not leave used engine oil within the reach of children.

NOTICE

To prevent serious engine damage

Check the oil level on a regular basis.

When replacing the engine oil

- Be careful not to spill engine oil on the vehicle components.
- Avoid overfilling, or the engine could be damaged.
- Check the oil level on the dipstick every time you refill the vehicle.
- Be sure the engine oil filler cap is properly tightened.

Coolant

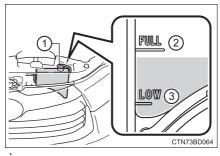
The coolant level is satisfactory if it is between the "FULL" and "LOW" lines on the reservoir when the hybrid system is cold.

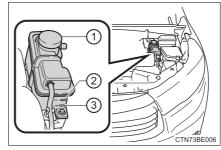
- Engine coolant reservoir
- (1) Reservoir cap
- 2 "FULL" line
- (3) "LOW" line

If the level is on or below the "LOW" line, add coolant up to the "FULL" line.

- Power control unit coolant reservoir
- 1 Reservoir cap
- 2) "FULL" line
- ③ "LOW" line

If the level is on or below the "LOW" line, add coolant up to the "FULL" line.





Coolant selection

Only use "Toyota Super Long Life Coolant" or a similar high quality ethylene glycol based non-silicate, non-amine, non-nitrite, and non-borate coolant with long-life hybrid organic acid technology.

U.S.A.:

"Toyota Super Long Life Coolant" is a mixture of 50% coolant and 50% deionized water. (Minimum temperature: -31°F [-35°C])

Canada:

"Toyota Super Long Life Coolant" is a mixture of 55% coolant and 45% deionized water. (Minimum temperature: -44°F [-42°C])

For more details about coolant, contact your Toyota dealer.

If the coolant level drops within a short time of replenishing

Visually check the radiator, hoses, engine/power control unit coolant reservoir caps, drain cock and water pump.

If you cannot find a leak, have your Toyota dealer test the cap and check for leaks in the cooling system.

404 6-3. Do-it-yourself maintenance

🛕 WARNING

When the hybrid system is hot

Do not remove the engine/power control unit coolant reservoir caps. The cooling system may be under pressure and may spray hot coolant if the cap is removed, causing serious injuries, such as burns.

When adding coolant

Coolant is neither plain water nor straight antifreeze. The correct mixture of water and antifreeze must be used to provide proper lubrication, corrosion protection and cooling. Be sure to read the antifreeze or coolant label.

If you spill coolant

Be sure to wash it off with water to prevent it from damaging parts or paint.

Radiator and condenser

Check the radiator and condenser and clear away any foreign objects. If any of the above parts is extremely dirty or you are not sure of their condition, have your vehicle inspected by your Toyota dealer.

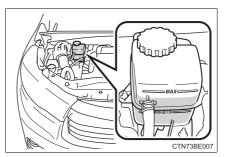
When the hybrid system is hot

Do not touch the radiator or condenser as they may be hot and cause serious injuries, such as burns.

Brake fluid

Checking fluid level

The brake fluid level should be between the "MAX" and "MIN" lines on the tank.



Adding fluid

Make sure to check the fluid type and prepare the necessary item.

Fluid type	FMVSS No.116 DOT 3 or SAE J1703 brake fluid
Item	Clean funnel

Brake fluid can absorb moisture from the air

Excess moisture in the brake fluid can cause a dangerous loss of braking efficiency. Use only newly opened brake fluid.

WARNING

When filling the reservoir

Take care as brake fluid can harm your hands and eyes and damage painted surfaces.

If fluid gets on your hands or in your eyes, flush the affected area with clean water immediately.

If you still experience discomfort, see a doctor.

NOTICE

If the fluid level is low or high

It is normal for the brake fluid level to go down slightly as the brake pads wear out or when the fluid level in the accumulator is high.

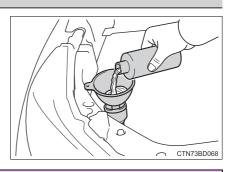
If the reservoir needs frequent refilling, there may be a serious problem.

Maintenance and care

406 6-3. Do-it-yourself maintenance

Washer fluid

If any washer does not work or the warning message appears on the multi-information display, the washer tank may be empty. Add washer fluid.



WARNING

When adding washer fluid

Do not add washer fluid when the hybrid system is hot or operating as washer fluid contains alcohol and may catch fire if spilled on the engine etc.

Do not use any fluid other than washer fluid

Do not use soapy water or engine antifreeze instead of washer fluid. Doing so may cause streaking on the vehicle's painted surfaces.

Diluting washer fluid

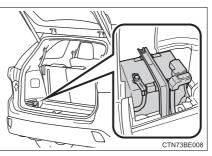
Dilute washer fluid with water as necessary.

Refer to the freezing temperatures listed on the label of the washer fluid bottle.

12-volt battery

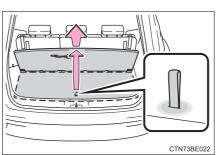
Location

The 12-volt battery is located in the left-hand side of luggage compartment.



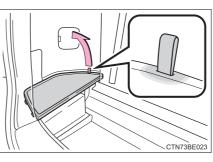
Before removing the 12-volt battery cover

Remove the center deck board.



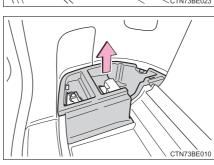
Removing the 12-volt battery cover

1 Remove the side deck board.



Maintenance and care

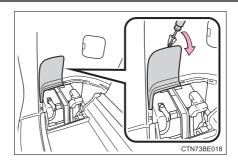
2 Remove the 12-volt battery cover.



HIGHLANDER_HV_U (OM48F02U)

408 6-3. Do-it-yourself maintenance

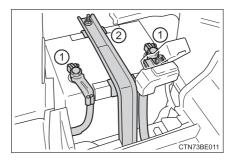
3 Remove the clamp cover.

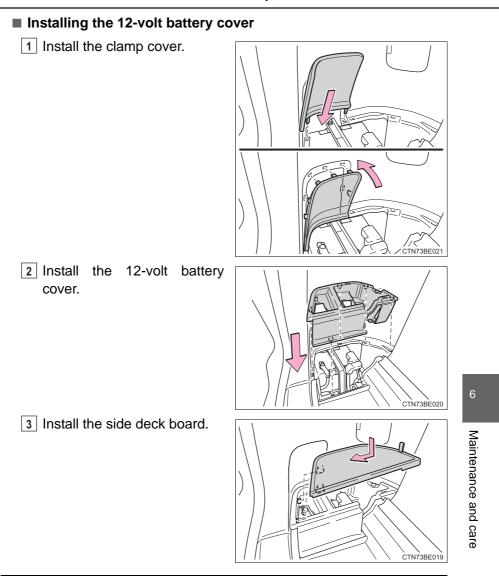


Exterior

Make sure that the 12-volt battery terminals are not corroded and that there are no loose connections, cracks, or loose clamps.

- 1) Terminals
- (2) Hold-down clamp





Before recharging

When recharging, the 12-volt battery produces hydrogen gas which is flammable and explosive. Therefore, before recharging:

- If recharging with the 12-volt battery installed on the vehicle, be sure to disconnect the ground cable.
- Make sure the power switch on the charger is off when connecting and disconnecting the charger cables to the 12-volt battery.

After recharging/reconnecting the 12-volt battery

- The hybrid system may not start. Follow the procedure below to initialize the system.
- 1 Shift the shift lever to P.
- 2 Open and close any of the doors.
- 3 Restart the hybrid system.
- Unlocking the doors using the smart key system may not be possible immediately after reconnecting the 12-volt battery. If this happens, use the wireless remote control or the mechanical key to lock/unlock the doors.
- Start the hybrid system with the power switch in ACCESSORY mode. The hybrid system may not start with the power switch turned off. However, the hybrid system will operate normally from the second attempt.
- The power switch mode is recorded by the vehicle. If the 12-volt battery is disconnected and reconnected, the vehicle will return the power switch mode to the status it was in before the 12-volt battery was disconnected. Make sure to turn off the power switch before disconnecting the 12-volt battery. Take extra care when connecting the 12-volt battery if the power switch mode prior to the battery being disconnected is unknown.

If the system will not start even after multiple attempts, contact your Toyota dealer.

WARNING

Chemicals in the 12-volt battery

The 12-volt battery contains poisonous and corrosive sulfuric acid and may produce hydrogen gas which is flammable and explosive. To reduce the risk of death or serious injury, take the following precautions while working on or near the 12-volt battery:

- Do not cause sparks by touching the 12-volt battery terminals with tools.
- Do not smoke or light a match near the 12-volt battery.
- Avoid contact with eyes, skin and clothes.
- Never inhale or swallow electrolyte.
- Wear protective safety glasses when working near the 12-volt battery.

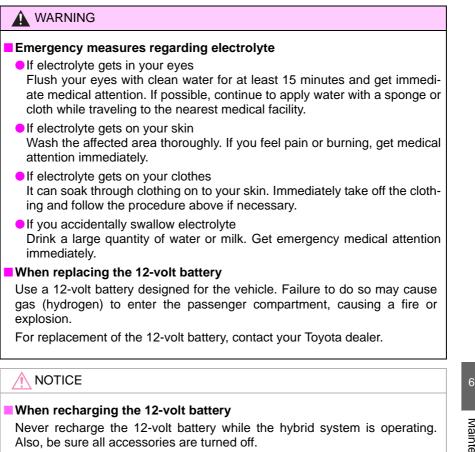
Keep children away from the 12-volt battery.

Where to safely charge the 12-volt battery

Always charge the 12-volt battery in an open area. Do not charge the 12-volt battery in a garage or closed room where there is not sufficient ventilation.

How to recharge the 12-volt battery

Only perform a slow charge (5 A or less). The 12-volt battery may explode if charged at a quicker rate.



Maintenance and care

Tires

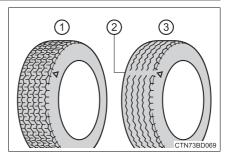
Replace or rotate tires in accordance with maintenance schedules and treadwear.

Checking tires

- (1) New tread
- (2) Treadwear indicator
- (3) Worn tread

The location of treadwear indicators is shown by the "TWI" or " Δ " marks, etc., molded on the sidewall of each tire.

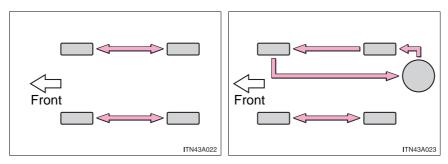
Check spare tire condition and pressure if not rotated.



Tire rotation

Rotate the tires in the order shown.

Vehicles with compact spare
 Vehicles with full-size spare tire



Do not fail to initialize the tire pressure warning system after tire rotation.

To equalize tire wear and extend tire life, Toyota recommends that tire rotation is carried out at the same interval as tire inspection.

Tire pressure warning system

Your vehicle is equipped with a tire pressure warning system that uses tire pressure warning valves and transmitters to detect low tire inflation pressure before serious problems arise.

If the tire pressure drops below a predetermined level, the driver is warned by a warning light. (\rightarrow P. 459)

Installing tire pressure warning valves and transmitters

When replacing tires or wheels, tire pressure warning valves and transmitters must also be installed.

When new tire pressure warning valves and transmitters are installed, new ID codes must be registered in the tire pressure warning computer and the tire pressure warning system must be initialized. Have tire pressure warning valve and transmitter ID codes registered by your Toyota dealer. (\rightarrow P. 415)

Initializing the tire pressure warning system

- The tire pressure warning system must be initialized in the following circumstances:
 - When the tire inflation pressure is changed such as when changing traveling speed or load weight.

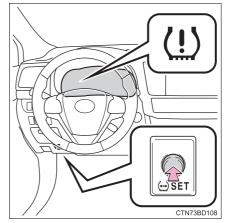
When the tire pressure warning system is initialized, the current tire inflation pressure is set as the benchmark pressure.

How to initialize the tire pressure warning system

- 1 Park the vehicle in a safe place and turn the power switch to off. Initialization cannot be performed while the vehicle is moving.
- 2 Adjust the tire inflation pressure to the specified cold tire inflation pressure level. (\rightarrow P. 536)

Make sure to adjust the tire pressure to the specified cold tire inflation pressure level. The tire pressure warning system will operate based on this pressure level.

- 3 Turn the power switch to the ON mode.
- 4 Press and hold the tire pressure warning reset switch until the tire pressure warning light blinks slowly 3 times.



5 Wait for a few minutes with the power switch in ON mode and then turn the power switch off.

Registering ID codes

The tire pressure warning valve and transmitter is equipped with a unique ID code. When replacing a tire pressure warning valve and transmitter, it is necessary to register the ID code. Have the ID code registered by your Toyota dealer.

When to replace your vehicle's tires

Tires should be replaced if:

- You have tire damage such as cuts, splits, cracks deep enough to expose the fabric, and bulges indicating internal damage
- A tire goes flat repeatedly or cannot be properly repaired due to the size or location of a cut or other damage

If you are not sure, consult with your Toyota dealer.

Replacing tires and wheels

If the ID code of the tire pressure warning valve and transmitter is not registered, the tire pressure warning system will not work properly. After driving for about 20 minutes, the tire pressure warning light blinks for 1 minute and stays on to indicate a system malfunction.

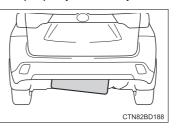
Tire life

Any tire over 6 years old must be checked by a qualified technician even if it has seldom or never been used or damage is not obvious.

Proper storage of the spare tire

As an improperly stored spare tire may cause damage to the wire cable that holds it, check that the spare tire is stored properly on a daily basis.

 If the stored spare tire is slanted or causes a rattle while driving, properly store the spare tire by following the tire change procedure correctly (→P. 486).



- If the spare tire is slanted, the hoist assembly may be stuck in the wheel opening. If the spare tire rattles while driving, it may not be fully raised. Lower the spare tire to the ground and make sure that the hoist assembly is perpendicular to the wheel opening.
- Raise the tire slowly and steadily until a click is heard and the jack handle skips.
- If the spare tire cannot be lowered, the wire cable may be severed. Have the vehicle inspected at your Toyota dealer.

Routine tire inflation pressure checks

The tire pressure warning system does not replace routine tire inflation pressure checks. Make sure to check tire inflation pressure as part of your routine of daily vehicle checks.

Maximum load of tire

Check that the number given by dividing the maximum load by 1.10 of the replacement tire is greater than 1/2 of the Gross Axle Weight Ratings (GAWR) of either the front axle or the rear axle, whichever is greater.

For the GAWR, see the Certification Label. For the maximum load of the tire, see the load limit at maximum cold tire inflation pressure mentioned on the sidewall of the tire. (\rightarrow P. 543)



Tire types

Summer tires

Summer tires are high-speed performance tires best suited to highway driving under dry conditions. Since summer tires do not have the same traction performance as snow tires, summer tires are inadequate for driving on snow-covered or icy roads. For driving on snow-covered roads or icy roads, the use of snow tires is recommended. When installing snow tires, be sure to replace all four tires.

All season tires

All season tires are designed to provide better traction in snow and to be adequate for driving in most winter conditions as well as for use year-round. All season tires, however, do not have adequate traction performance compared with snow tires in heavy or loose snow. Also, all season tires fall short in acceleration and handling performance compared with summer tires in highway driving.

Snow tires

For driving on snow-covered roads or icy roads, we recommend using snow tires. If you need snow tires, select tires of the same size, construction and load capacity as the originally installed tires. Since your vehicle has radial tires as original equipment, make sure your snow tires also have radial construction. Do not install studded tires without first checking local regulations for possible restrictions. Snow tires should be installed on all wheels. (\rightarrow P. 316)

If the tread on snow tires wears down below 0.16 in. (4 mm)

The effectiveness of the tires as snow tires is lost.

Situations in which the tire pressure warning system may not operate properly

- In the following cases, the tire pressure warning system may not operate properly.
 - If non-genuine Toyota wheels are used.
 - A tire has been replaced with a tire that is not an OE (Original Equipment) tire.
 - A tire has been replaced with a tire that is not of the specified size.
 - Tire chains etc. are equipped.
 - Lock nuts are equipped.
 - An auxiliary-supported run-flat tire is equipped.
 - If a window tint that affects the radio wave signals is installed.
 - If there is a lot of snow or ice on the vehicle, particularly around the wheels or wheel housings.
 - If the tire inflation pressure is extremely higher than the specified level.
 - If the spare tire is in a location subject to poor radio wave signal reception.*
 - If a large metallic object which can interfere with signal reception is put in the luggage compartment.*

*: Vehicles with a full-size spare tire only

• Performance may be affected in the following situations.

- Near a TV tower, electric power plant, gas station, radio station, large display, airport or other facility that generates strong radio waves or electrical noise
- When carrying a portable radio, cellular phone, cordless phone or other wireless communication device
- When the vehicle is parked, the time taken for the warning to start or go off could be extended.
- When tire inflation pressure declines rapidly for example when a tire has burst, the warning may not function.

The initialization operation

 Make sure to carry out initialization after adjusting the tire inflation pressure.

Also, make sure the tires are cold before carrying out initialization or tire inflation pressure adjustment.

- If you have accidentally turned the power switch to off during initialization, it is not necessary to press the reset switch again as initialization will restart automatically when the power switch has been turned to the ON mode for the next time.
- If you accidentally press the reset switch when initialization is not necessary, adjust the tire inflation pressure to the specified level when the tires are cold, and conduct initialization again.

When initialization of the tire pressure warning system has failed Initialization can be completed in a few minutes. However, in the following cases, the settings have not been recorded and the system will not operate properly. If repeated attempts to record tire inflation pressure settings are unsuccessful, have the vehicle inspected by your Toyota dealer.

- When operating the tire pressure warning reset switch, the tire pressure warning light does not blink 3 times.
- After carrying out the initialization procedure, the tire pressure warning light blinks for 1 minute then stays on after driving for 20 minutes.

Tire pressure warning system certification

FCC ID: PAXPMVC010

NOTE:

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

FCC WARNING:

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

NOTE:

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. NOTE:

L'utilisation de ce dispositif est autorisée seulement aux deux conditions suivantes : (1) il ne doit pas produire de brouillage, et (2) l'utilisateur du dispositif doit être prêt à accepter tout brouillage radioélectrique reçu, même si ce brouillage est susceptible de compromettre le fonctionnement du dispositif.

WARNING

When inspecting or replacing tires

Observe the following precautions to prevent accidents.

Failure to do so may cause damage to parts of the drive train as well as dangerous handling characteristics, which may lead to an accident resulting in death or serious injury.

- Do not mix tires of different makes, models or tread patterns. Also, do not mix tires of remarkably different treadwear.
- Do not use tire sizes other than those recommended by Toyota.
- Do not mix differently constructed tires (radial, bias-belted or bias-ply tires).
- Do not mix summer, all season and snow tires.
- Vehicles with a compact spare tire: Do not tow if your vehicle has a compact spare tire installed.

When initializing the tire pressure warning system

Do not operate the tire pressure warning reset switch without first adjusting the tire inflation pressure to the specified level. Otherwise, the tire pressure warning light may not come on even if the tire inflation pressure is low, or it may come on when the tire inflation pressure is actually normal.

NOTICE

Repairing or replacing tires, wheels, tire pressure warning valves, transmitters and tire valve caps

 When removing or fitting the wheels, tires or the tire pressure warning valves and transmitters, contact your Toyota dealer as the tire pressure warning valves and transmitters may be damaged if not handled correctly.

- Make sure to install the tire valve caps. If the tire valve caps are not installed, water could enter the tire pressure warning valves and the tire pressure warning valves could be bound.
- When replacing tire valve caps, do not use tire valve caps other than those specified. The cap may become stuck.

To avoid damage to the tire pressure warning valves and transmitters

When a tire is repaired with liquid sealants, the tire pressure warning valve and transmitter may not operate properly. If a liquid sealant is used, contact your Toyota dealer or other qualified service shop as soon as possible. Make sure to replace the tire pressure warning valve and transmitter when replacing the tire. (\rightarrow P. 413)

Driving on rough roads

Take particular care when driving on roads with loose surfaces or potholes.

These conditions may cause losses in tire inflation pressure, reducing the cushioning ability of the tires. In addition, driving on rough roads may cause damage to the tires themselves, as well as the vehicle's wheels and body.

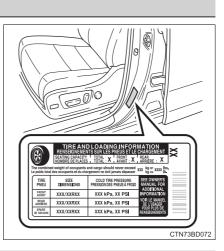
If tire inflation pressure of each tire becomes low while driving

Do not continue driving, or your tires and/or wheels may be ruined.

Tire inflation pressure

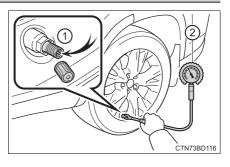
Tire inflation pressure

The recommended cold tire inflation pressure and tire size are displayed on the tire and loading information label. (\rightarrow P. 536)



Inspection and adjustment procedure

- 1 Tire valve
- (2) Tire pressure gauge



- 1 Remove the tire valve cap.
- 2 Press the tip of the tire pressure gauge onto the tire valve.
- 3 Read the pressure using the gauge gradations.
- 4 If the tire inflation pressure is not at the recommended level, adjust the pressure.
 - If you add too much air, press the center of the valve to deflate.
- 5 After completing the tire inflation pressure measurement and adjustment, apply soapy water to the valve and check for leakage.
- 6 Put the tire valve cap back on.

Tire inflation pressure check interval

You should check tire inflation pressure every two weeks, or at least once a month.

Do not forget to check the spare.

Effects of incorrect tire inflation pressure

Driving with incorrect tire inflation pressure may result in the following:

- Reduced fuel efficiency
- Reduced driving comfort and tire life
- Reduced safety
- Damage to the drive train

If a tire needs frequent inflating, have it checked by your Toyota dealer.

Instructions for checking tire inflation pressure

When checking tire inflation pressure, observe the following:

• Check only when the tires are cold.

If your vehicle has been parked for at least 3 hours or has not been driven for more than 1 mile or 1.5 km, you will get an accurate cold tire inflation pressure reading.

Always use a tire pressure gauge.

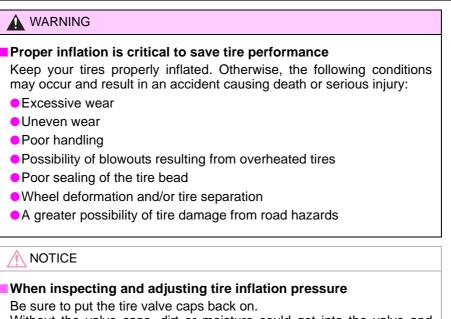
The appearance of the tire can be misleading. In addition, tire inflation pressure that is even just a few pounds off can affect ride quality and handling.

 Do not reduce tire inflation pressure after driving. It is normal for tire inflation pressure to be higher after driving.

• Never exceed the vehicle capacity weight.

Passengers and luggage weight should be placed so that the vehicle is balanced.

6-3. Do-it-yourself maintenance



Without the valve caps, dirt or moisture could get into the valve and cause air leakage, which could result in an accident. If the caps are lost, replace them as soon as possible.

Maintenance and care

6

Wheels

If a wheel is bent, cracked or heavily corroded, it should be replaced. Otherwise, the tire may separate from the wheel or cause a loss of handling control.

Wheel selection

When replacing wheels, care should be taken to ensure that they are equivalent to those removed in load capacity, diameter, rim width and inset^{*}.

Replacement wheels are available at your Toyota dealer.

*: Conventionally referred to as "offset".

Toyota does not recommend using the following:

- Wheels of different sizes or types
- Used wheels
- Bent wheels that have been straightened

Aluminum wheel precautions

- Use only Toyota wheel nuts and wrenches designed for use with your aluminum wheels.
- When rotating, repairing or changing your tires, check that the wheel nuts are still tight after driving 1000 miles (1600 km).
- Be careful not to damage the aluminum wheels when using tire chains.
- Use only Toyota genuine balance weights or equivalent and a plastic or rubber hammer when balancing your wheels.

When replacing wheels

The wheels of your vehicle are equipped with tire pressure warning valves and transmitters that allow the tire pressure warning system to provide advance warning in the event of a loss in tire inflation pressure. Whenever wheels are replaced, tire pressure warning valves and transmitters must be installed. (\rightarrow P. 413)

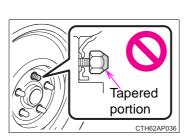
WARNING

When replacing wheels

- Do not use wheels that are a different size from those recommended in the Owner's Manual, as this may result in a loss of handling control.
- Never use an inner tube in a leaking wheel which is designed for a tubeless tire. Doing so may result in an accident, causing death or serious injury.

When installing the wheel nuts

Be sure to install the wheel nuts with the tapered ends facing inward. Installing the nuts with the tapered ends facing outward can cause the wheel to break and eventually cause the wheel to come off while driving, which could lead to an accident resulting in death or serious injury.



- Never use oil or grease on the wheel bolts or wheel nuts.
- Oil and grease may cause the wheel nuts to be excessively tightened, leading to bolt or disc wheel damage. In addition, the oil or grease can cause the wheel nuts to loosen and the wheel may fall off, causing an accident and resulting in death or serious injury. Remove any oil or grease from the wheel bolts or wheel nuts.

Replacing tire pressure warning valves and transmitters

- Because tire repair or replacement may affect the tire pressure warning valves and transmitters, make sure to have tires serviced by your Toyota dealer or other qualified service shop. In addition, make sure to purchase your tire pressure warning valves and transmitters at your Toyota dealer.
- Ensure that only genuine Toyota wheels are used on your vehicle. Tire pressure warning valves and transmitters may not work properly with non-genuine wheels.

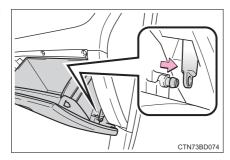
6

Air conditioning filter

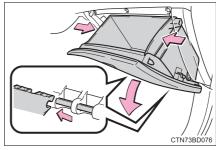
The air conditioning filter must be changed regularly to maintain air conditioning efficiency.

Removal method

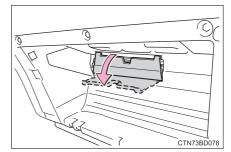
- 1 Turn the power switch off.
- 2 Open the glove box. Slide off the damper.



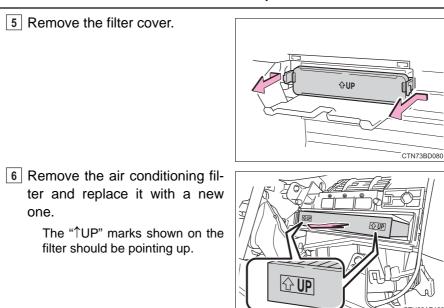
3 Push in each side of the glove box to disconnect the upper claws. Then pull out the glove box and disconnect the lower claws.



4 Pull down the cover.



6-3. Do-it-yourself maintenance



Checking interval

Inspect and replace the air conditioning filter according to the maintenance schedule. In dusty areas or areas with heavy traffic flow, early replacement may be required. (For scheduled maintenance information, please refer to the "Schedule maintenance guide" or "Owner's Manual Supplement".)

If air flow from the vents decreases dramatically

The filter may be clogged. Check the filter and replace if necessary.

NOTICE

When using the air conditioning system

Make sure that a filter is always installed.

Using the air conditioning system without a filter may cause damage to the system.

Maintenance and care

Electronic key battery

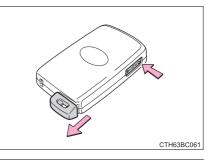
Replace the battery with a new one if it is depleted.

You will need the following items:

- Flathead screwdriver
- Small flathead screwdriver
- Lithium battery CR2032

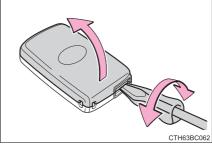
Replacing the battery

1 Take out the mechanical key.

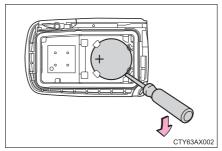


2 Remove the cover.

To prevent damage to the key, cover the tip of the flathead screwdriver with a rag.



3 Remove the depleted battery. Insert a new battery with the "+" terminal facing up.



Use a CR2032 lithium battery

- Batteries can be purchased at your Toyota dealer, local electrical appliance shops or camera stores.
- Replace only with the same or equivalent type recommended by the manufacturer.
- Dispose of used batteries according to local laws.

If the key battery is depleted

The following symptoms may occur:

- The smart key system and wireless remote control will not function properly.
- The operational range will be reduced.

WARNING

Removed battery and other parts

These parts are small and if swallowed by a child, they can cause choking. Keep away from children. Failure to do so could result in death or serious injury.

For normal operation after replacing the battery

Observe the following precautions to prevent accidents:

- Always work with dry hands. Moisture may cause the battery to rust.
- Do not touch or move any other component inside the remote control.
- Do not bend either of the battery terminals.

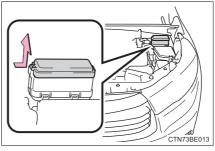
Maintenance and care

Checking and replacing fuses

If any of the electrical components do not operate, a fuse may have blown. If this happens, check and replace the fuses as necessary.

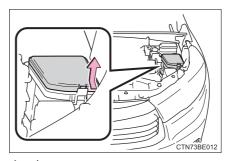
- 1 Turn the power switch off.
- 2 Open the fuse box cover.
- Engine compartment (type A fuse box)

Push the tab in and lift the lid off.



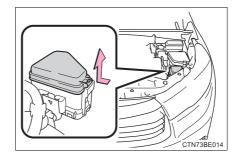
Engine compartment (type B fuse box)

Push the tab in and lift the lid off.

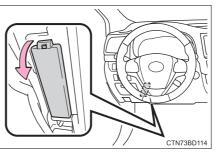


Engine compartment (type C fuse box)

Push the tab in and lift the lid off.

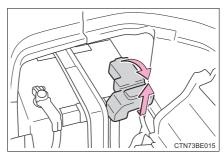


Under the driver's side instrument panel
 Remove the lid.



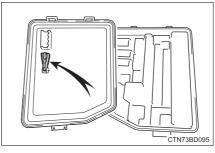
Luggage compartment

Remove the 12-volt battery cover (\rightarrow P. 407) and then remove the terminal cover.



3 Remove the fuse with the pullout tool.

Only type A fuses can be removed using the pullout tool.



Maintenance and care

4 Check if the fuse is blown.

1 Normal fuse

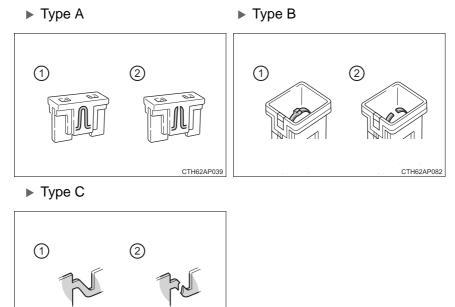
(2) Blown fuse

Type A and B:

Replace the blown fuse with a new fuse of an appropriate amperage rating. The amperage rating can be found on the fuse box lid.

Type C:

Contact your Toyota dealer.



CTH62AP084

HIGHLANDER_HV_U (OM48F02U)

After a fuse is replaced

- If the lights do not turn on even after the fuse has been replaced, a bulb may need replacement. (\rightarrow P. 434)
- If the replaced fuse blows again, have the vehicle inspected by your Toyota dealer.

If there is an overload in a circuit

The fuses are designed to blow, protecting the wiring harness from damage.

When replacing light bulbs

Toyota recommends that you use genuine Toyota products designed for this vehicle. Because certain bulbs are connected to circuits designed to prevent overload, non-genuine parts or parts not designed for this vehicle may be unusable.

WARNING

To prevent system breakdowns and vehicle fire

Observe the following precautions.

Failure to do so may cause damage to the vehicle, and possibly a fire or injury.

- Never use a fuse of a higher amperage rating than that indicated, or use any other object in place of a fuse.
- Always use a genuine Toyota fuse or equivalent.
 - Never replace a fuse with a wire, even as a temporary fix.
- Do not modify the fuses or fuse boxes.

Fuse box near the power control unit

Never check or replace the fuses as there are high voltage parts and wiring near the fuse box.

Doing so may cause electric shock, resulting in death or serious injury.

NOTICE

Before replacing fuses

Have the cause of electrical overload determined and repaired by your Toyota dealer as soon as possible.

Light bulbs

You may replace the following bulbs by yourself. The difficulty level of replacement varies depending on the bulb. If necessary bulb replacement seems difficult to perform, contact your Toyota dealer.

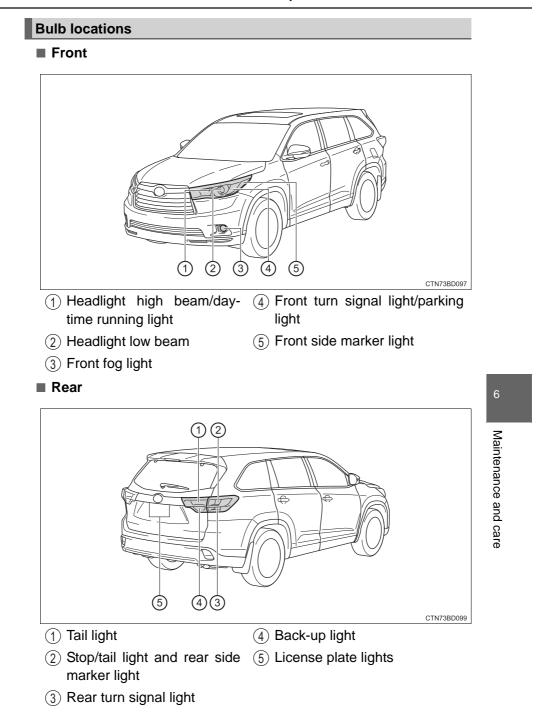
For more information about replacing other light bulbs, contact your Toyota dealer.

Preparing for light bulb replacement

Check the wattage of the light bulb to be replaced. (\rightarrow P. 539)

Turning off the power back door main switch

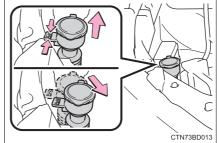
→P. 136



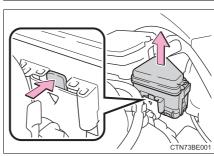
Replacing light bulbs

Headlight low beams

1 For the right side only: Remove the washer fluid tank opening.

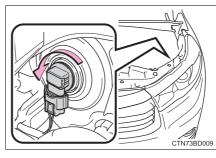


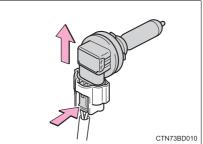
For the left side only: Remove the fuse box.



2 Turn the bulb base counterclockwise.

3 Unplug the connector while pressing the lock release.





6-3. Do-it-yourself maintenance

4 Replace the light bulb, and install the bulb base. Align the 3 tabs on the light bulb with the mounting and insert.
5 Turn and secure the bulb base. Shake the bulb base gently to check that it is not loose, turn the headlight low beams on once and visually confirm that no light is leaking through the mounting.
6 For the right side only: Install the washer fluid tank.

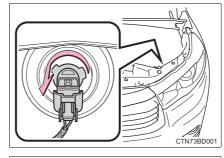
For the left side only: Install the fuse box.

Maintenance and care

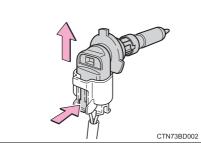
438 6-3. Do-it-yourself maintenance

Headlight high beams/daytime running lights

1 Turn the bulb base counterclockwise.

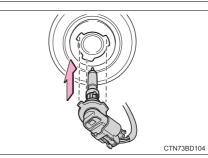


2 Unplug the connector while pressing the lock release.



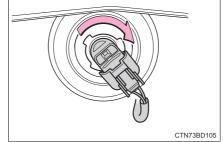
3 Replace the light bulb, and install the bulb base.

Align the 3 tabs on the light bulb with the mounting, and insert.



4 Turn and secure the bulb base.

Shake the bulb base gently to check that it is not loose, turn the headlights on once and visually confirm that no light is leaking through the mounting.



439 Front turn signal lights/parking lights 1 Remove the 2 clips and remove the side cover. CTN73BD016 2 Turn the bulb base counterclockwise. CTN73BD017 3 Remove the light bulb. 1-7-6 Maintenance and care CTN73BD018 4 Install by conducting 3 and 2 with the directions reversed. 5 Install the side cover and then install the 2 clips. (1) 2 3

CTN73BD101

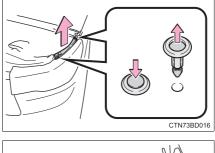
HIGHLANDER_HV_U (OM48F02U)

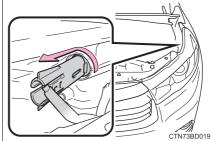
440 6-3. Do-it-yourself maintenance

Front side marker lights

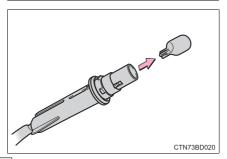
1 Remove the 2 clips and remove the side cover.

2 Turn the bulb base counterclockwise.



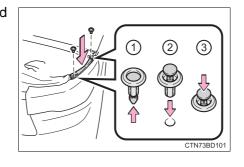


3 Remove the light bulb.



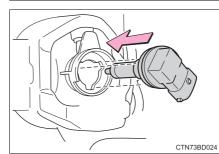
4 Install by conducting 2 and 3 with the directions reversed.

5 Install the side cover and then install the 2 clips.



Front fog lights

- 1 Remove the 3 screws and partly remove the fender liner.
- 2 Unplug the connector while pressing the lock release.
- 3 Turn the bulb base counter-
 - CTN73BD023
- Install a new light bulb.Align the 3 tabs on the light bulb with the mounting and insert.

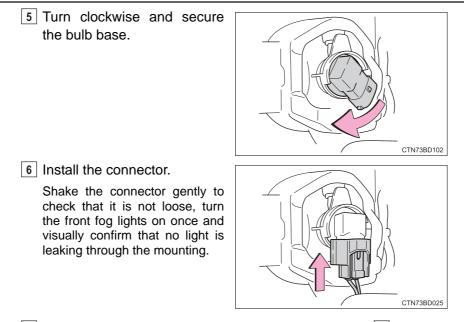


Maintenance and care

CTN73BD021

CTN73BD022

442 6-3. Do-it-yourself maintenance

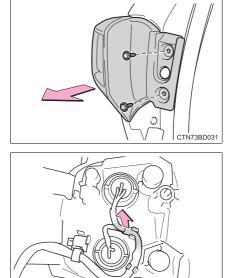


7 When installing the fender liner, install by conducting 1 with the directions reversed.

Make sure that the fender liner is attached to the inside of the bumper.

Stop/tail lights and rear side marker lights, and rear turn signal lights

1 Open the back door and remove the 2 screws, and remove the lamp assembly by pulling it directly backward from the rear of the vehicle.



2 Remove the wire harness.

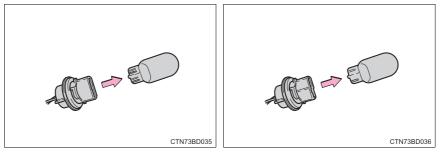
3 Turn the bulb base counterclockwise.

▶ Stop/tail lights and rear side ▶ Rear turn signal lights marker lights

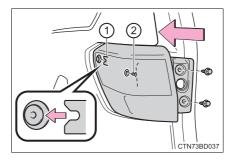


CTN73BD110

- 4 Remove the light bulb.
- Stop/tail lights and rear side
 Rear turn signal lights



- 5 When installing the light bulb, install by conducting 4, 3 and
 2 with the directions reversed.
- Install the lamp assembly and then install the 2 screws.
 Align the guide (1) and pin (2) on the lamp assembly with the mounting when installing it.



Tail lights and back-up lights

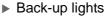
1 Open the back door and remove the cover.

Insert a flathead screwdriver or similar into the hole at the top of the cover and remove it as shown in the illustration.

To prevent damaging the vehicle, wrap the flathead screwdriver with a tape.

- CTN73BD026
- 2 Turn the bulb base counterclockwise.
- Tail lights



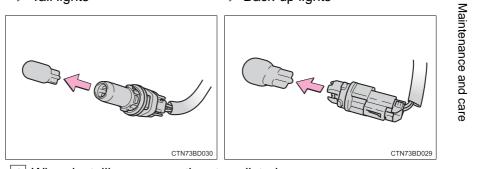




3 Remove the light bulb.

► Tail lights

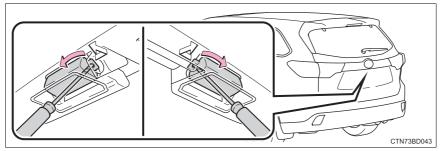
Back-up lights



4 When installing, reverse the steps listed.

License plate lights

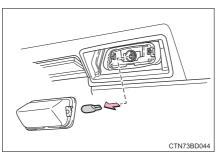
1 Remove the lens.



Insert a properly sized screwdriver into the hole of the lens on the inner side and disengage the claw and pry the lens toward the outer side as shown in the illustration.

To prevent damaging the vehicle, wrap the tip of the screwdriver with tape.

2 Remove the light bulb.



3 When installing, reverse the steps listed.

Replacing the following bulbs

If any of the lights listed below has burnt out, have it replaced by your Toyota dealer.

- Side turn signal lights
- Daytime running lights (LED type)
- High mounted stoplight
- Outer foot lights (if equipped)

■LED light bulbs

The side turn signal, daytime running lights (LED type), high mounted stoplight and outer foot lights (if equipped) consist of a number of LEDs. If any of the LEDs burns out, take your vehicle to your Toyota dealer to have the light replaced.

Condensation build-up on the inside of the lens

Temporary condensation build-up on the inside of the headlight lens does not indicate a malfunction.

Contact your Toyota dealer for more information in the following situations:

• Large drops of water have built up on the inside of the lens.

• Water has built up inside the headlight.

When replacing light bulbs

→P. 433

MARNING

Replacing light bulbs

 Turn off the lights. Do not attempt to replace the bulb immediately after turning off the lights.

The bulbs become very hot and may cause burns.

- Do not touch the glass portion of the light bulb with bare hands. When it is unavoidable to hold the glass portion, use and hold with a clean dry cloth to avoid getting moisture and oils on the bulb.
 - Also, if the bulb is scratched or dropped, it may blow out or crack.
- Fully install light bulbs and any parts used to secure them. Failure to do so
 may result in heat damage, fire, or water entering the headlight unit. This
 may damage the headlights or cause condensation to build up on the lens.

To prevent damage or fire

Make sure bulbs are fully seated and locked.

Maintenance and care

HIGHLANDER_HV_U (OM48F02U)

When trouble arises

7

7-1.	Essential information Emergency flashers
	be stopped in an emergency 451
7-2.	Steps to take in an emergency
	If your vehicle needs to be towed 452
	If you think something is wrong 456
	If a warning light turns on or a warning buzzer
	sounds 457
	If a warning message is displayed 466
	If you have a flat tire 486
	If the hybrid system will not start510
	If the shift lever cannot be shifted from P 512
	If the electronic key does not operate properly 513
	If the 12-volt battery is discharged 516
	If your vehicle overheats 521
	If the vehicle becomes stuck

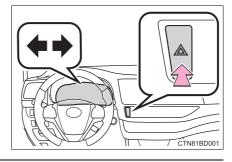
450 7-1. Essential information

Emergency flashers

The emergency flashers are used to warn other drivers when the vehicle has to be stopped in the road due to a breakdown, etc.

Press the switch.

All the turn signal lights will flash. To turn them off, press the switch once again.



Emergency flashers

If the emergency flashers are used for a long time while the hybrid system is not operating (while the "READY" indicator is not illuminated), the 12-volt battery may discharge.

451

If your vehicle has to be stopped in an emergency

Only in an emergency, such as if it becomes impossible to stop the vehicle in the normal way, stop the vehicle using the following procedure:

- 1 Steadily step on the brake pedal with both feet and firmly depress it. Do not pump the brake pedal repeatedly as this will increase the effort required to slow the vehicle.
- 2 Shift the shift lever to N.
- If the shift lever is shifted to N
- 3 After slowing down, stop the vehicle in a safe place by the road.
- 4 Stop the hybrid system.
- If the shift lever cannot be shifted to N
- 3 Keep depressing the brake pedal with both feet to reduce vehicle speed as much as possible.
- 4 To stop the hybrid system, press and hold the power switch for 2 consecutive seconds or more, or press it briefly 3 times or more in succession.



Press and hold for 2 seconds or more, or press briefly 3 times or more

5 Stop the vehicle in a safe place by the road.

🚺 WARNING

If the hybrid system has to be turned off while driving

Power assist for the steering wheel will be lost, making the steering wheel heavier to turn. Decelerate as much as possible before turning off the hybrid system.

If your vehicle needs to be towed

If towing is necessary, we recommend having your vehicle towed by your Toyota dealer or commercial towing service, using a lift-type truck or flatbed truck.

Use a safety chain system for all towing, and abide by all state/ provincial and local laws.

If towing your vehicle with a wheel-lift type truck, use a towing dolly. (\rightarrow P. 452, 453)

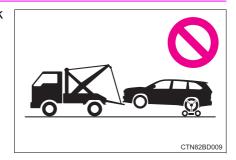
Situations needs to contact dealers before towing

The following may indicate a problem with your transmission. Contact your Toyota dealer or commercial towing service before towing.

- A warning message for the hybrid system is shown on the multiinformation display and the vehicle does not move.
- The vehicle makes an abnormal sound.

Towing with a sling-type truck

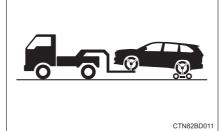
Do not tow with a sling-type truck to prevent body damage.

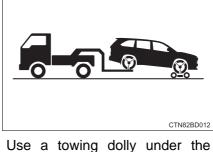


Towing with a wheel-lift type truck

From the front

From the rear

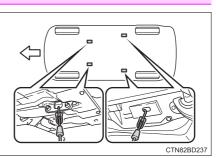




Use a towing dolly under the rear wheels.

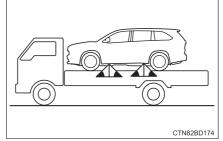
Using a flatbed truck

If your Toyota is transported by a flatbed truck, it should be tied down at the locations shown in the illustration. front wheels.



If you use chains or cables to tie down your vehicle, the angles shaded in black must be 45° .

Do not overly tighten the tie downs or the vehicle may be damaged.



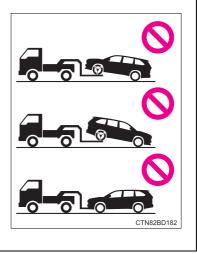
When trouble arises

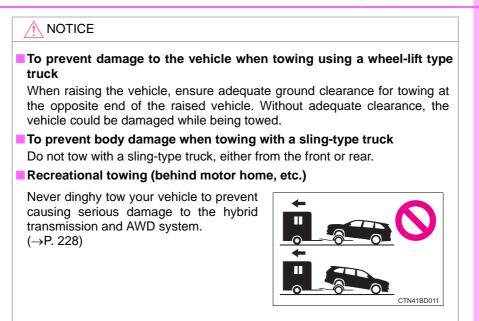
Observe the following precautions.

Failure to do so may result in death or serious injury.

When towing the vehicle

Be sure to transport the vehicle with all four wheels raised off the ground. If the vehicle is towed with the tires contacting the ground, the drivetrain or related parts may be damaged, the vehicle may fly off the truck, or electricity generated by the operation of the motor may cause a fire to occur depending on the nature of the damage or malfunction.





455

HIGHLANDER_HV_U (OM48F02U)

If you think something is wrong

If you notice any of the following symptoms, your vehicle probably needs adjustment or repair. Contact your Toyota dealer as soon as possible.

Visible symptoms

- Fluid leaks under the vehicle. (Water dripping from the air conditioning after use is normal.)
- Flat-looking tires or uneven tire wear
- Engine coolant temperature gauge needle continually points higher than normal.

Audible symptoms

- Changes in exhaust sound
- Excessive tire squeal when cornering
- Strange noises related to the suspension system
- Pinging or other noises related to the hybrid system

Operational symptoms

- Engine missing, stumbling or running roughly
- Appreciable loss of power
- Vehicle pulls heavily to one side when braking
- Vehicle pulls heavily to one side when driving on a level road
- Loss of brake effectiveness, spongy feeling, pedal almost touches the floor

If a warning light turns on or a warning buzzer sounds

Calmly perform the following actions if any of the warning lights comes on or flashes. If a light comes on or flashes, but then goes off, this does not necessarily indicate a malfunction in the system. However, if this continues to occur, have the vehicle inspected by your Toyota dealer.

Warning light and warning buzzer list

Warning light	Warning light/Details/Actions		
(U.S.A.) (Canada)	 Brake system warning light in red (warning buzzer)*1 Indicates that: The brake fluid level is low; or The brake system is malfunctioning → Immediately stop the vehicle in a safe place and contact your Toyota dealer. Continuing to drive the vehicle may be dangerous. 		
	 Brake system warning light in yellow Indicates a malfunction in: The regenerative braking system; or The electronically controlled brake system → Have the vehicle inspected by your Toyota dealer immediately. 		
-	Charging system warning light ^{*2} Indicates a malfunction in the vehicle's charging system → Immediately stop the vehicle in a safe place and con- tact your Toyota dealer.		
4121	Low engine oil pressure warning light (warning buzzer) ^{*2} Indicates that the engine oil pressure is too low. → Immediately stop the vehicle in a safe place and con- tact your Toyota dealer.		
(U.S.A.) (Canada)	 Malfunction indicator lamp Indicates a malfunction in: The hybrid system; The electronic engine control system; or The electronic throttle control system → Have the vehicle inspected by your Toyota dealer immediately. 		

When trouble arises

Warning light	Warning light/Details/Actions	
*	 SRS warning light Indicates a malfunction in: The SRS airbag system; The front passenger occupant classification system; or The seat belt pretensioner system → Have the vehicle inspected by your Toyota dealer immediately. 	
(Canada)	 ABS warning light Indicates a malfunction in: The ABS; or The brake assist system → Have the vehicle inspected by your Toyota dealer immediately. 	
@!	Electric power steering system warning light (warning buzzer) Indicates a malfunction in the EPS (Electric Power Steer- ing) system → Have the vehicle inspected by your Toyota dealer immediately.	
PCS (Flashes)	 Pre-collision system warning light*^{3, 4} Indicates a malfunction in the PCS (Pre-Collision System) The warning light will operate as follows, even when the system is not malfunctioning: The light will flash quickly when the system is operating. (→P. 297) The light will turn on when the pre-collision system is disabled. (→P. 298) The light will turn on when the VSC (Vehicle Stability Control) system is disabled. (→P. 294) The light will flash when the system cannot temporarily be used. (→P. 477) → Have the vehicle inspected by your Toyota dealer immediately. 	
	 Slip indicator Indicates a malfunction in: The VSC (Vehicle Stability Control) system; The TRAC (Traction Control) system; or The hill-start assist control system The light will flash when the VSC or the TRAC system is operating. → Have the vehicle inspected by your Toyota dealer immediately. 	

Warning light	Warning light/Details/Actions
	Open door warning light (warning buzzer)* ^{2, 5} Indicates that one or more of the doors, the back door or the glass hatch is not fully closed. → Check that all the doors, the back door and the glass hatch are closed.
	Low fuel level warning light Indicates that remaining fuel is approximately 2.6 gal. (9.7 L, 2.1 lmp. gal.) or less \rightarrow Refuel the vehicle.
Å	 Seat belt reminder light (warning buzzer)*6 Warns the driver and/or front passenger to fasten their seat belts → Fasten the seat belt. If the front passenger's seat is occupied, the front passenger's seat belt also needs to be fastened to make the warning light (warning buzzer) turn off.
	Master warning light A buzzer sounds and the warning light comes on and flashes to indicate that the master warning system has detected a malfunction. → P. 466
<u>(!)</u>	 Tire pressure warning light When the light comes on: Low tire inflation pressure such as Natural causes (→P. 461) Flat tire (→P. 486) → Adjust the tire inflation pressure (including the full-size spare tire) to the specified level. The light will turn off after a few minutes. In case the light does not turn off even if the tire inflation pressure is adjusted, have the system checked by your Toyota dealer. When the light comes on after blinking for 1 minute: Malfunction in the tire pressure warning system (→P. 462) → Have the system checked by your Toyota dealer.
	 Vehicle proximity notification system warning light This warning light flashes then stays on to indicate that there is a malfunction in the vehicle proximity notification system. → Have the vehicle inspected by your Toyota dealer

459

When trouble arises

immediately.

- *1: Parking brake engaged warning buzzer: →P. 472
- *2: Vehicles with monochrome display
- *³: Vehicles with color display
- *4: If equipped
- *5: Open door warning buzzer: \rightarrow P. 468
- *6: Driver's seat belt buzzer:

The driver's seat belt buzzer sounds to alert the driver that his or her seat belt is not fastened. Once the power switch is turned to ON mode, the buzzer sounds for 6 seconds. If the vehicle reaches a speed of 12 mph (20 km/h), the buzzer sounds once. If the seat belt is still unfastened after 25 seconds, the buzzer will sound intermittently for 10 seconds. Then, if the seat belt is still unfastened, the buzzer will sound in a different tone for 20 more seconds.

Front passenger's seat belt buzzer:

The front passenger's seat belt buzzer sounds to alert the front passenger that his or her seat belt is not fastened. The buzzer sounds once if the vehicle reaches a speed of 12 mph (20 km/h). If the seat belt is still unfastened after 25 seconds, the buzzer will sound intermittently for 10 seconds. Then, if the seat belt is still unfastened, the buzzer will sound in a different tone for 20 more seconds.

SRS warning light

This warning light system monitors the airbag sensor assembly, front impact sensors, side impact sensors (front door), side impact sensors (rear), driver's seat position sensor, driver's seat belt buckle switch, front passenger occupant classification system (ECU and sensors), "AIR BAG ON" indicator light, "AIR BAG OFF" indicator light, front passenger's seat belt buckle switch, driver's seat belt pretensioner, front passenger's seat belt pretensioner and force limiter, airbags, interconnecting wiring and power sources. (\rightarrow P. 43)

Front passenger detection sensor, seat belt reminder and warning buzzer

If luggage is placed on the front passenger seat, the front passenger detection sensor may cause the warning light to flash and the warning buzzer to sound even if a passenger is not sitting in the seat.

If the malfunction indicator lamp comes on while driving

First check the following:

- Is the fuel tank empty?
 - If it is, fill the fuel tank immediately.
- Is the fuel tank cap loose?

If it is, tighten it securely.

The light will go off after several driving trips.

If the light does not go off even after several trips, contact your Toyota dealer as soon as possible.

Electric power steering system warning light (warning buzzer)

When the 12-volt battery charge becomes insufficient or the voltage temporarily drops, the electric power steering system warning light may come on and the warning buzzer may sound.

When the tire pressure warning light comes on

Check the tire inflation pressure and adjust to the appropriate level. Pushing the tire pressure warning reset switch will not turn off the tire pressure warning light.

The tire pressure warning light may come on due to natural causes

The tire pressure warning light may come on due to natural causes such as natural air leaks and tire inflation pressure changes caused by temperature. In this case, adjusting the tire inflation pressure will turn off the warning light (after a few minutes).

When a tire is replaced with a spare tire

▶ Vehicles with a compact spare tire

The compact spare tire is not equipped with a tire pressure warning valve and transmitter. If a tire goes flat, the tire pressure warning light will not turn off even though the flat tire has been replaced with the spare tire. Replace the spare tire with the repaired tire and adjust the tire inflation pressure. The tire pressure warning light will go off after a few minutes.

► Vehicles with a full-size spare tire

The spare tire is also equipped with the tire pressure warning valve and transmitter. The tire pressure warning light will turn on if the tire inflation pressure of the spare tire is low. If a tire goes flat, even though the flat tire is replaced with the spare tire, the tire pressure warning light does not turn off. Replace the spare tire with the repaired tire and adjust to the proper tire inflation pressure. The tire pressure warning light will turn off after a few minutes.

Conditions that the tire pressure warning system may not function properly

→P. 417

If the tire pressure warning light frequently comes on after blinking for 1 minute

If the tire pressure warning light frequently comes on after blinking for 1 minute when the power switch is turned to ON mode, have it checked by your Toyota dealer.

Customization that can be configured at Toyota dealer

The vehicle speed linked seat belt reminder buzzer can be disabled. (Customizable features \rightarrow P. 565) However, Toyota recommends that the seat belt reminder buzzer be operational to alert the driver and front passenger when seat belts are not fastened.

Warning buzzer

In some cases, the buzzer may not be heard because of noisy place or an audio sound.

WARNING If both the ABS and the brake system warning lights remain on Stop your vehicle in a safe place immediately and contact your Toyota dealer. The vehicle will become extremely unstable during braking, and the ABS system may fail, which could cause an accident resulting in death or serious injury. When the electric power steering system warning light comes on The steering wheel may become extremely heavy. If the steering wheel becomes heavier than usual when operating, hold firmly and operate using more force than usual. If the tire pressure warning light comes on Be sure to observe the following precautions. Failure to do so could cause a loss of vehicle control and result in death or serious injury. Stop your vehicle in a safe place as soon as possible. Adjust the tire inflation pressure immediately. If the tire pressure warning light comes on even after tire inflation pressure adjustment, it is probable that you have a flat tire. Check the tires. If a tire is flat, change it with the spare tire and have the flat tire repaired by the nearest Toyota dealer. Avoid abrupt maneuvering and braking. If the vehicle tires deteriorate, you could lose control of the steering wheel or the brakes. If a blowout or sudden air leakage should occur The tire pressure warning system may not activate immediately.

WARNING

Maintenance of the tires

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 (tire and load information label). (If your vehicle has tires of a different size than the size indicated on the vehicle placard or tire inflation pressure label [tire and load information 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-tire pressure warning system) that illuminates a low tire pressure telltale (tire pressure warning light) when one or more of your tires is significantly under-inflated. Accordingly, when the low tire pressure telltale (tire pressure warning light) illuminates, you should stop and check your tires as soon as possible, and inflate them to the proper pressure. Driving on a significantly underinflated 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 (tire pressure warning system) 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 (tire pressure warning light).

Your vehicle has also been equipped with a TPMS (tire pressure warning system) malfunction indicator to indicate when the system is not operating properly. The TPMS (tire pressure warning system) malfunction indicator is combined with the low tire pressure telltale (tire pressure warning light). 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 malfunction exists. When the malfunction indicator is illuminated, the system may not be able to detect or signal low tire pressure as intended.

TPMS (tire pressure warning system) 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 (tire pressure warning system) from functioning properly. Always check the TPMS (tire pressure warning system) 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 (tire pressure warning system) to continue to function properly.

To ensure the tire pressure warning system operates properly

Do not install tires with different specifications or makers, as the tire pressure warning system may not operate properly.

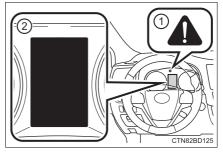
465

HIGHLANDER_HV_U (OM48F02U)

If a warning message is displayed

If a warning message is shown on the multi-information display, stay calm and perform the following actions:

- (1) Master warning light
 - The master warning light also comes on or flashes in order to indicate that a message is currently being displayed on the multiinformation display.
- (2) Multi-information display



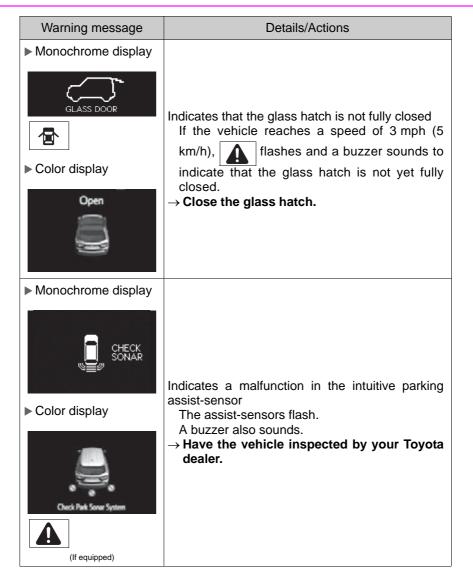
If any of the warning message or indicator comes on again after the following actions have been performed, contact your Toyota dealer.

Warning message	Details/Actions
Color display only	
BRAKE! PCS (Flashes) (If equipped)	 Indicates that: There is a high possibility of a frontal collision; or The pre-collision braking function is operating A buzzer also sounds. → Slow the vehicle by applying the brakes.
Hybrid System Has Stopped. Please Put Shift Lever into "P".	Indicates that the hybrid system was stopped with the shift lever not in P A buzzer also sounds. \rightarrow Shift the shift lever to P.
Hybrid System Has Stopped. Please Stop Your Car in a Safe Place.	 Indicates that the hybrid system was stopped while driving A buzzer also sounds. → Stop the vehicle in a safe place such as the shoulder of a road.
Color display only	Indicates that your vehicle is nearing the vehicle ahead (in vehicle-to-vehicle distance mode) A buzzer also sounds. → Slow the vehicle by applying the brakes.

Warning message	Details/Actions
 Monochrome display Color display Color display (If equipped) 	Alerts the driver that the vehicle has deviated from the lane (while the LDA [Lane Departure Alert] system is operating) The lane line on the side the vehicle has devi- ated from flashes. The warning buzzer sounds continuously. → Check around the vehicle and move back inside the lane lines.
Hybrid System Failure. Please Refrain From being towed	Indicates a malfunction in the hybrid system A buzzer also sounds. → Immediately stop the vehicle in a safe place and contact your Toyota dealer.
 Monochrome display Image: A state of the sta	Indicates that one or more of the doors is not fully closed The system also indicates which doors are not fully closed. If the vehicle reaches a speed of 3 mph (5 km/h),

HIGHLANDER_HV_U (OM48F02U)

		_	
Warning message	Details/Actions		
 Monochrome display HOOD OPEN Color display 	Indicates that the hood is not fully closed If the vehicle reaches a speed of 3 mph (5 km/h),		
 Monochrome display BACK OPEN Color display Open Open 	Indicates that the back door is not fully closed If the vehicle reaches a speed of 3 mph (5 km/h),		7 When trouble arises



Warning message	Details/Actions	
 Monochrome display CLEAN SONAR Color display Color display 	Indicates that an intuitive parking assist-sensor is dirty or covered with ice A buzzer also sounds. → Clean the sensor.	
(If equipped) Please Wait Now Opening	Preparing the vehicle for refueling. \rightarrow Wait a moment.	
Refuel Ready	You may commence refueling. \rightarrow Finish refueling within 30 minutes.	
Close Fuel Lid	Close the fuel filler door.	
N position	Indicates that the accelerator pedal is depressed while the shift lever is in N A buzzer also sounds. → Release the accelerator pedal and shift the shift lever to D, S or R.	
Traction battery preservation mode Restart after shifting to P position	Indicates that the hybrid battery (traction battery) power has dropped because a long period of time has elapsed after shifting the shift lever to N A buzzer also sounds. → Restart the hybrid system when starting the vehicle.	

Warning message	Details/Actions
Check Hybrid System Stop the vehicle in a safe place immediately	Indicates a malfunction in the hybrid system A buzzer also sounds. → Immediately stop the vehicle in a safe place and contact your Toyota dealer.
Traction battery Low Charges when not in N position (Flashes)	Indicates that the hybrid battery (traction battery) is low A buzzer also sounds. → When stopping the vehicle for a long period of time, shift the shift lever to P. The battery cannot be charged with the shift lever in N.
EPS Failure. Steering Wheel Harder to Turn. Voltage Abnormality. Steering Wheel Harder to Turn. Check Power Steering System	Indicates a malfunction in the EPS (Electric Power Steering) system A buzzer also sounds. → Have the vehicle inspected by your Toyota dealer.
Release Parking Brake BRAKE (U.S.A.) (Canada) (Flashes)	Indicates that the vehicle is being driven at 3 mph (5 km/h) or more with the parking brake still engaged A buzzer also sounds. → Release the parking brake.

Warning message	Details/Actions	
Color display only	Indicates that the engine coolant temperature is too high A buzzer also sounds. \rightarrow P. 521	
Color display only	Indicates a malfunction in the vehicle's charging system → Immediately stop the vehicle in a safe place and contact your Toyota dealer. Continuing to drive the vehicle may be dangerous.	
 Color display only Clean Radar Sensor (If equipped) 	Indicates that the radar sensor is dirty or covered with ice A buzzer also sounds. → Clean the sensor.	
Color display only Cruise Control not available (If equipped)	Indicates that the dynamic radar cruise control system is unable to judge vehicle-to-vehicle dis- tance A buzzer also sounds. → Turn off snow mode. If the windshield wipers are on, turn them off or set them to a mode other than high speed wiper operation.	
LDA not available (If equipped)	Indicates that the LDA (Lane Departure Alert) system is suspended (The camera sensor temperature is higher than the operation temperature range) A buzzer also sounds. \rightarrow Restart the LDA after driving for a while.	
BSM not available	 Indicates that a Blind Spot Monitor sensor or the surrounding area on the bumper is dirty or covered with ice A buzzer also sounds. → Clean the sensor and its surrounding area on the bumper. 	

Warning message	Details/Actions
Check Cruise Control System	 Indicates a malfunction in: The cruise control system; or The dynamic radar cruise control system Press the "ON-OFF" button once to deactivate the system, and then press the button again to reactivate the system. A buzzer also sounds. → Have the vehicle inspected by your Toyota dealer.
Check LDA System (If equipped)	 Indicates a malfunction in the LDA (Lane Departure Alert) system A buzzer also sounds. → Have the vehicle inspected by your Toyota dealer.
► Color display only Check PCS System PCS (Flashes) (If equipped)	Indicates a malfunction in the PCS (Pre-Collision system) A buzzer also sounds. → Have the vehicle inspected by your Toyota dealer.
Check BSM System (If equipped)	Indicates a malfunction in the BSM (Blind Spot Monitor) system A buzzer also sounds. → Have the vehicle inspected by your Toyota dealer.
Color display only	Indicates abnormal engine oil pressure A buzzer also sounds. → Immediately stop the vehicle in a safe place and contact your Toyota dealer.
Check AWD System	Indicates a malfunction in the AWD system A buzzer also sounds. → Have the vehicle inspected by your Toyota dealer.

Warning message	Details/Actions	
LDA System is Unavailable Below Approx. 32 MPH. (If equipped)	Indicates that the LDA (Lane Departure Alert) system cannot be used because the vehicle speed is lower than approximately 32 mph (50 km/h) → Drive the vehicle at 32 mph (50 km/h) or higher.	
Hybrid System Stopped, Steering Wheel Harder to Turn.	Indicates that the hybrid system was stopped while driving A buzzer also sounds. → Operate the steering wheel with more force than usual.	
Turn Light Off	Indicates that the power switch is turned off or turned to ACCESSORY mode and the driver's door is opened while the lights are turned on A buzzer also sounds. \rightarrow Turn the lights off.	
Moon Roof opened	Indicates that the moon roof or panoramic moon roof is not fully closed (with the power switch off, and the driver's door open) A buzzer also sounds. → Close the moon roof or panoramic moon roof.	
Monochrome display		7
BRAKE OVERRIDE SYSTEM FAILURE. ► Color display Brake Override System Failure.	Indicates a malfunction in the brake override sys- tem A buzzer also sounds. → Have the vehicle inspected by your Toyota dealer.	When trouble arises

Warning message	Details/Actions	
Hybrid System Overheat Output Power is limited	Indicates that the hybrid system has overheated This message may be displayed when driving under severe operating conditions. (For exam- ple, when driving up a long steep hill.) A buzzer also sounds. → Stop and check. (→P. 521)	
Check Headlight System (If equipped)	 Indicates a malfunction in the Automatic High Beam system A buzzer also sounds. → Have the vehicle inspected by your Toyota dealer. 	
 Monochrome display BOTH ACCELERATOR AND BRAKE PEDALS ARE DEPRESSED. Color display Color display Both Accelerator and Brake Pedals Are Depressed. Image: Constant of the second s	Indicates that the accelerator and brake pedal are being depressed simultaneously \rightarrow Release the accelerator or brake pedal.	
Washer Fluid Low	Indicates that the washer fluid level is low \rightarrow Add washer fluid.	
Fuel Low	Indicates that remaining fuel is approximately 2.6 gal. (9.7 L, 2.1 Imp. gal.) or less \rightarrow Refuel the vehicle.	

477

When trouble arises

Warning message	Details/Actions
TRAC OFF	Indicates that the TRAC (Traction Control) system has been deactivated \rightarrow Turn the TRAC on. (\rightarrow P. 294)
Maintenance required soon (U.S.A. only)	Indicates that all maintenance according to the driven distance on the maintenance schedule ^{*1} should be performed soon. Comes on approximately 4500 miles (7200 km) after the maintenance data has been reset. \rightarrow If necessary, perform maintenance.
Maintenance required (U.S.A. only)	Indicates that all maintenance is required to cor- respond to the driven distance on the mainte- nance schedule ^{*1} . Comes on approximately 5000 miles (8000 km) after the maintenance data has been reset. (The indicator will not work properly unless the maintenance data has been reset.) → Perform the necessary maintenance. Please reset the maintenance data after the maintenance is performed. (→P. 387)
Turn on the high beam to activate AHB System (If equipped)	Indicates that the Automatic High Beam switch is pressed while the headlights are in low beam. → Turn the high beam on and press the Automatic High Beam switch again.
 Color display only VSC System Switched Off. Pre-Collision Brake System Disengaged. PCS (If equipped) 	Indicates that, since the VSC (Vehicle Stability Control) system was turned off, the pre-collision brake system operation is stopped \rightarrow Turn the VSC on. (\rightarrow P. 294)
 Color display only PCS temporarily not available PCS (Flashes) (If equipped) 	Indicates that the PCS (Pre-collision system) is not currently functional because the grille cover or the sensor is dirty → Check the grille cover and the sensor and clean them if they are dirty.

Warning message	Details/Actions
EV mode currently not available EV mode not available Warming up EV mode currently not available Low battery EV mode currently not available Excessive speed EV mode currently not available Excessive acceleration	Indicates that the EV drive mode is not avail- able ^{*2} The reason the EV drive mode is not available (the vehicle is idling, hybrid battery [traction battery] charge is low, speed is higher than the EV drive mode operating speed range, acceler- ator pedal is depressed too much) may be dis- played. A buzzer also sounds. → Use the EV drive mode when it becomes available.
EV mode deactivated EV mode deactivated Low battery EV mode deactivated Excessive speed EV mode deactivated Excessive acceleration	Indicates that the EV drive mode has been auto- matically canceled ^{*2} The reason the EV drive mode is not available (the hybrid battery [traction battery] charge is low, speed is higher than the EV drive mode operating speed range, accelerator pedal is depressed too much) may be displayed. A buzzer also sounds. → Drive the vehicle for a while.

*1: Refer to the separate "Scheduled Maintenance Guide" or "Owner's Manual Supplement" for the maintenance interval applicable to your vehicle.

*2: For the EV drive mode operating conditions: \rightarrow P. 235

HIGHLANDER_HV_U (OM48F02U)

Messages displays

The message illustrations used are intended as examples, and may differ from the image that is actually displayed on the multi-information display.

Warning message in dynamic radar cruise control mode (if equipped)

In the following situations, the warning message may not be displayed even if vehicle-to-vehicle distance decreases:

When your vehicle and the vehicle ahead are traveling at the same speed or the vehicle ahead is traveling more quickly than your vehicle

- When the vehicle ahead is traveling at a very low speed
- Immediately after cruise control speed is set
- At the instant the accelerator pedal is depressed
- The LDA (Lane Departure Alert) lane departure warning function (if equipped)

In the following situations, a warning message will not be displayed even if a lane line is crossed.

- When the vehicle speed deviates from the operating range of the LDA system functions
- When the lane lines cannot be recognized

Conditions that the tire pressure warning system may not function properly

→P. 387

Warning buzzer

→P. 462

Interior buzzer	Exterior buzzer	Warning message	Details/Actions
Once		Shift to P position to start (Flashes)	An attempt was made to start the hybrid system with the shift lever in an incorrect position. → Shift the shift lever to P and start the hybrid sys- tem.
Con- tinu- ous		Shift to P position when parked (Flashes)	The driver's door was opened when the shift lever was not in P and the power switch was not turned off. \rightarrow Shift the shift lever to P.
Con- tinu- ous	Contin- uous	Shift to P position when parked Key not detected (Displayed alternately) (Flashes)	The driver's door was opened and closed while the electronic key was not in the vehicle, the shift lever was not in P and the power switch was not turned off. → Shift the shift lever to P. → Bring the electronic key back into the vehicle.
Once	Contin- uous	Turn Power OFF Key not detected (Displayed alternately) (Flashes)	An attempt was made to exit the vehicle with the electronic key and lock the doors without first turning the power switch off when the shift lever was in P. → Turn the power switch off and lock the doors again.

Interior buzzer	Exterior buzzer	Warning message	Details/Actions
Once	3 times	Key not detected	The driver's door was opened and closed while the electronic key was not in the vehicle, the shift lever was in P and the power switch was not turned off. → Turn the power switch off. → Bring the electronic key back into the vehicle.
		(Flashes)	The electronic key was carried outside the vehicle and a door other than the driver's door was opened and closed while the power switch was in a mode other than off. → Bring the electronic key back into the vehicle.
Once		Key not detected (Flashes)	The electronic key is not detected when an attempt is made to start the hybrid sys- tem. → Start the hybrid system with the electronic key present.
9 times		Key not detected	An attempt was made to drive when the electronic key was not inside the vehicle. → Confirm that the elec- tronic key is inside the vehicle.
	Contin- uous	Key detected in vehicle (Flashes)	An attempt was made to lock the doors using the smart key system while the electronic key was still inside the vehicle. → Retrieve the electronic key from the vehicle and lock the doors again.

Interior buzzer	Exterior buzzer	Warning message	Details/Actions
Once	Contin- uous	Key detected in vehicle (Flashes)	An attempt was made to lock either front door by opening a door and putting the inside lock button into the lock position, then closing the door with the electronic key still inside the vehicle. → Retrieve the electronic key from the vehicle and lock the doors again.
Once	_	Key Battery Low	The electronic key has a low battery. → Replace the electronic key battery. (→P. 428)
Once		Steering Lock active	The steering lock could not be released within 3 seconds of the power switch being pressed. → Press the power switch while depressing the brake pedal and moving the steering wheel left and right.
Once	_	Check Smart Key system	Indicates a malfunction in the smart key system → Have the vehicle inspected by your Toyota dealer.

Interior buzzer	Exterior buzzer	Warning message	Details/Actions	
Once		Depress brake pedal, touch POWER switch with key (Flashes)	 When the doors were unlocked with the mechanical key and then the power switch was pressed, the electronic key could not be detected in the vehicle. The electronic key could not be detected in the vehicle even after the power switch was pressed two consecutive times. → Touch the electronic key to the power switch while depressing the brake pedal. 	
Once		 Monochrome display Color display Color display Depress brake pedal and push POWER switch to start 	During a hybrid system starting procedure in the event that the electronic key was not function- ing properly (→P. 513), the power switch was touched with the electronic key. → Press the power switch within 10 seconds of the buzzer sounding.	7
		 Monochrome display Color display Depress brake pedal and push POWER switch to start 	 Indicates that: With the power switch off, the doors were unlocked and then the driver's door was opened and closed; The power switch was turned to ACCESSORY mode without starting the hybrid system; or The shift lever was shifted to P from another position with the power switch in ON mode. → Press the power switch while depressing the brake pedal. 	When trouble arises

Interior buzzer	Exterior buzzer	Warning message	Details/Actions
Once	_	Shift to P position when parked (Flashes)	The power switch has been turned off with the shift lever in a position other than P. \rightarrow Shift the shift lever to P.
Once		Turn Power OFF (Flashes)	After the power switch has been turned off with the shift lever in a position other than P, the shift lever has been shifted to P. \rightarrow Turn the power switch off.
_		Auto Power OFF to Conserve Battery	Power was turned off due to the automatic power off function. → Next time when starting the hybrid system, increase the engine speed slightly and maintain that level for approximately 5 minutes to recharge the 12-volt battery.
Con- tinu- ous		To Restart Car, Shift Lever to "N" and Press POWER Switch.	Indicates that the hybrid system was stopped in an emergency while driving → To restart the hybrid sys- tem, shift the shift lever to N and turn the power switch to ON mode.*
Once		Holding in POWER Switch Will Cause an Emergency Hybrid System Stop.	Indicates that the power switch has been pressed while driving → Except when emergency stopping of the vehicle is needed, immediately release the power switch.

*: The hybrid system may not be restarted depending on the vehicle condition.

Messages displays

The message illustrations used are intended as examples, and may differ from the image that is actually displayed on the multi-information display.

■ Warning buzzer

→P. 462

When trouble arises

If you have a flat tire

Your vehicle is equipped with a spare tire. The flat tire can be replaced with the spare tire.

For details about tires: \rightarrow P. 412

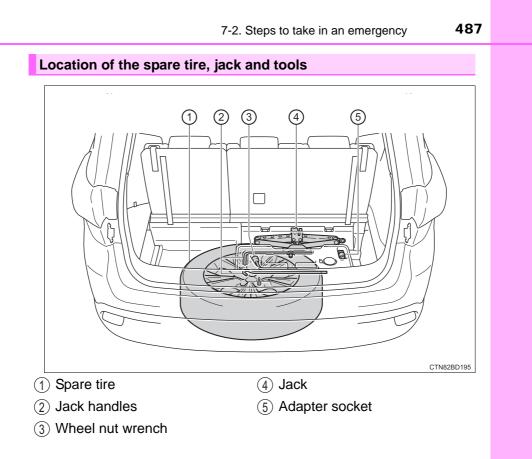
WARNING

If you have a flat tire

Do not continue driving with a flat tire. Driving even a short distance with a flat tire can damage the tire and the wheel beyond repair, which could result in an accident.

Before jacking up the vehicle

- Stop the vehicle on a hard, flat surface.
- Set the parking brake.
- Shift the shift lever to P.
- Stop the hybrid system.
- Turn on the emergency flashers. (\rightarrow P. 450)



WARNING

Using the tire jack

Observe the following precautions.

Improper use of the tire jack may cause the vehicle to suddenly fall off the jack, leading to death or serious injury.

- Do not use the tire jack for any purpose other than replacing tires or installing and removing tire chains.
- Only use the tire jack that comes with this vehicle for replacing a flat tire.

Do not use it on other vehicles, and do not use other tire jacks for replacing tires on this vehicle.

- Put the jack properly in its jack point.
- Do not put any part of your body under the vehicle while it is supported by the jack.
- Do not start the engine or drive the vehicle while the vehicle is supported by the jack.
- Do not raise the vehicle while someone is inside.
- When raising the vehicle, do not put an object on or under the jack.
- Do not raise the vehicle to a height greater than that required to replace the tire.
- Use a jack stand if it is necessary to get under the vehicle.
- When lowering the vehicle, make sure that there is no-one near the vehicle. If there are people nearby, warn them vocally before lowering.

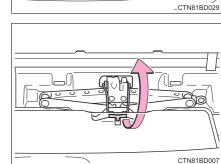
Taking out the jack

1 Pull the strap upwards to open the center deck board.

2 To secure the center deck board, remove the hook on the backside of the center deck board and attach the hook to the head restraint on the third seats as shown.

3 Remove the jack cover.

4 Remove the jack after removing the hook.



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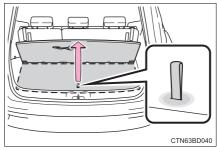
When trouble arises

489

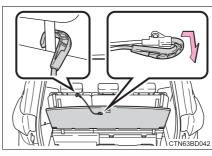
CTN63BD040

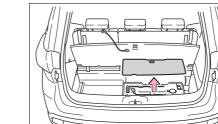
Taking out the spare tire

1 Pull the strap upwards to open the center deck board.



2 To secure the center deck board, remove the hook on the backside of the center deck board and attach the hook to the head restraint on the third seats as shown.

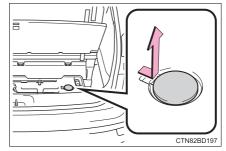




4 Remove the cover.

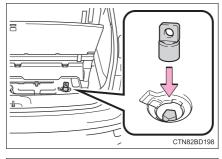
3 Remove the mat.

If it is difficult to remove the cover, you can use your key.



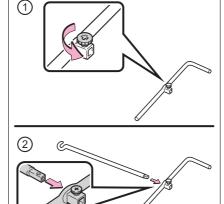
CTN82BD201

5 Attach the adapter socket to the spare tire clamp bolt.



- 6 Assembling the jack handle.
 Remove the jack handle and assemble it by following these steps.
 - (1) Loosen the screw.
 - (2) Assemble the jack handle and tighten the screw.

Check that the screw is firmly tightened.

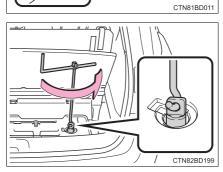


7 Connect the jack handle to the adapter socket. Turn the jack handle counterclockwise.

The tire will be lowered completely to the ground.

Turn the jack handle slowly to lower the spare tire. If the handle is turned quickly, as doing so may cause the shaft to disengage and the tire may not be lowered.

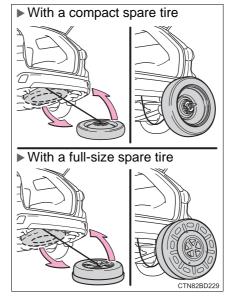
If the spare tire cannot be lowered: \rightarrow P. 498



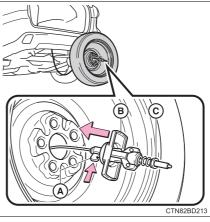
When trouble arises

HIGHLANDER_HV_U (OM48F02U)

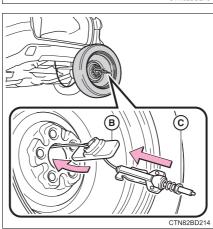
8 Pull out the spare tire and stand it against the bumper.



- ► Vehicles with a compact spare tire
- Fully depress the secondary latch (A) and remove the holding bracket (B) from the hoist assembly (C).



10 Tilt the bracket (B) and pass it through the wheel opening. Then remove the hoist assembly (C).

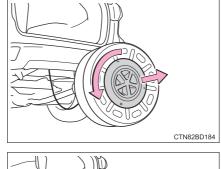


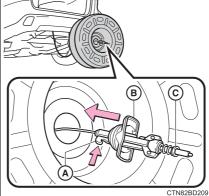
When trouble arises

HIGHLANDER_HV_U (OM48F02U)

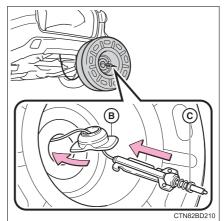
- Vehicles with a full-size spare tire
- 9 Remove the inside spare tire cover.

10 Fully depress the secondary latch (A) and remove the holding bracket (B) from the hoist assembly (C).

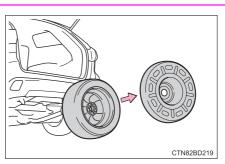




11 Tilt the holding bracket (B) so that it can easily be passed through the wheel opening. After passing the holding bracket through the wheel opening, remove the hoist assembly (C).



12 Remove the outside spare tire cover.

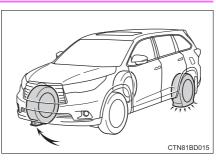


495

When trouble arises

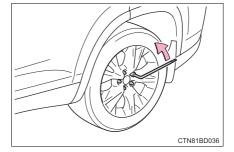
Replacing a flat tire

1 Chock the tires.



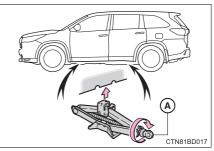
	Flat tire	Wheel chock positions	
Front	Left-hand side	Behind the rear right-hand side tire	
FION	Right-hand side	Behind the rear left-hand side tire	
Rear	Left-hand side	In front of the front right-hand side tire	
Neal	Right-hand side	In front of the front left-hand side tire	

2 Slightly loosen the wheel nuts (one turn).

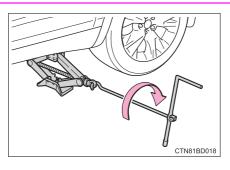


3 Turn the tire jack portion "A" by hand until the notch of the jack is in contact with the jack point.

The jack point guides are located under the rocker panel. They indicate the jack point positions.

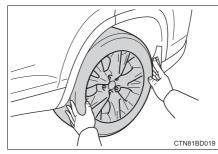


4 Raise the vehicle until the tire is slightly raised off the ground.



5 Remove all the wheel nuts and the tire.

When resting the tire on the ground, place the tire so that the wheel design faces up to avoid scratching the wheel surface.



■ If the spare tire cannot be lowered

If the spare tire cannot be lowered, it may not have been stowed properly. Perform the following procedure:

1 Fully tighten the spare tire clamp bolt by turning the jack handle clockwise until two clicks are heard and the jack handle skips.



2 Turn the jack handle counterclockwise to lower the spare tire.

If the spare tire still cannot be lowered, attempt to fully tighten the spare tire clamp bolt again by turning the jack handle clockwise. Then turn it counterclockwise at least 2 turns to lower the spare tire.



If the spare tire still cannot be lowered, the wire cable may be severed. Have the vehicle inspected by your Toyota dealer.

WARNING

Replacing a flat tire

 Do not touch the disc wheels or the area around the brakes immediately after the vehicle has been driven.

After the vehicle has been driven the disc wheels and the area around the brakes will be extremely hot. Touching these areas with hands, feet or other body parts while changing a tire, etc. may result in burns.

- Failure to follow these precautions could cause the wheel nuts to loosen and the tire to fall off, resulting in death or serious injury.
 - Have the wheel nuts tightened with a torque wrench to 76 ft•lbf (103 N•m, 10.5 kgf•m) as soon as possible after changing wheels.
 - Do not attach a heavily damaged wheel ornament, as it may fly off the wheel while the vehicle is moving.
 - When installing a tire, only use wheel nuts that have been specifically designed for that wheel.
 - If there are any cracks or deformations in the bolt screws, nut threads or bolt holes of the wheel, have the vehicle inspected by your Toyota dealer.
 - When installing the wheel nuts, be sure to install them with the tapered ends facing inward. (→P. 425)

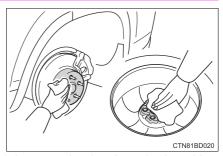
Observe the following precautions.

- Failure to do so may result in serious injury:
- Do not try to remove the wheel ornament by hand. Take due care in handling the ornament to avoid unexpected personal injury.
- Lower the spare tire completely to the ground before removing it from under the vehicle.

Installing the spare tire

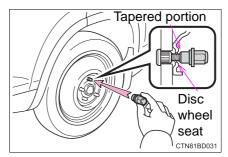
1 Remove any dirt or foreign matter from the wheel contact surface.

If foreign matter is on the wheel contact surface, the wheel nuts may loosen while the vehicle is in motion, causing the tire to come off.



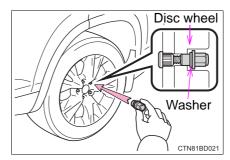
- 2 Install the spare tire and loosely tighten each wheel nut by hand by approximately the same amount.
 - Vehicles with a compact spare tire

Tighten the nuts until the tapered portion comes into loose contact with the disc wheel seat.



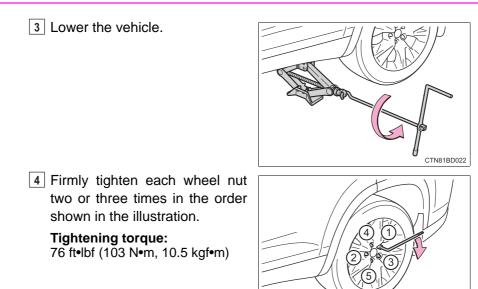
Vehicles with a full-size spare tire

Turn the nuts until the washers come into contact with the wheel.



501

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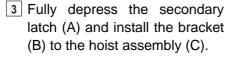
HIGHLANDER_HV_U (OM48F02U)

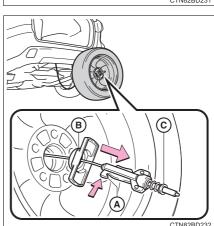
Stowing the flat tire, jack and all tools (with a compact spare tire)

1 Remove the center wheel ornament by pushing from the reverse side.

B

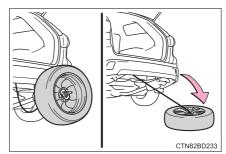
- Be careful not to lose the wheel ornament.
- 2 Stand the spare tire against the bumper with the inner surface facing toward you. Pass the hoist assembly (C) and holding bracket (B) through the wheel opening.





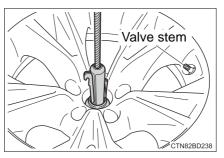
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4 Lay the tire on the ground with the outer surface (valve stem) facing up.



HIGHLANDER_HV_U (OM48F02U)

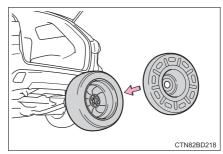
5 Before raising the tire, make sure that the hoist assembly is perpendicular to the wheel opening. (Try to place the tire directly beneath the vehicle, near where the wire cable is hanging from.)



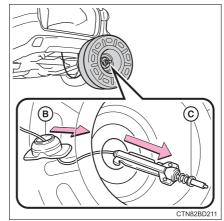
- 6 Using the jack handle and adapter socket, tighten the tire clamp bolt by turning it clockwise until the tire is in the correct position and two clicks are heard as the jack handle skips.
- 7 Stow the jack and all tools.

Stowing the flat tire, jack and all tools (with a full-size spare tire)

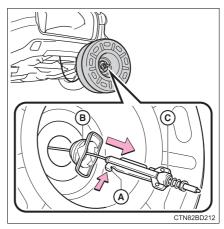
- 1 Remove the center wheel ornament by pushing from the reverse side.
 - Be careful not to lose the wheel ornament.
- 2 Stand the spare tire against the bumper with the inner surface facing toward you and install the outside spare tire cover.



3 Pass the hoist assembly (C) and holding bracket (B) through the wheel opening.

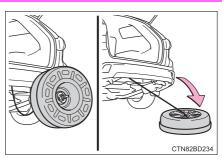


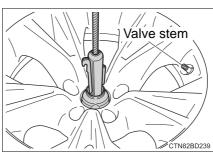
4 Fully depress the secondary latch (A) and install the bracket (B) to the hoist assembly (C).



HIGHLANDER_HV_U (OM48F02U)

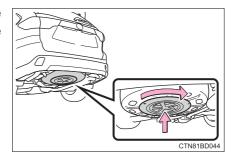
- 5 Lay the tire on the ground with the outer surface (valve stem) facing up.
- 6 When stowing the tire, make sure that the hoist assembly is placed perpendicular to the wheel opening.





- 7 Using the jack handle and adapter socket, tighten the spare tire clamp bolt by turning it clockwise until the tire is in the correct position and two clicks are heard as the jack handle skips.
- 8 Install the inside spare tire cover to the outside spare tire cover.

9 Stow the jack and all tools.



When trouble arises

505

- The compact spare tire (vehicles with a compact spare tire)
 - The compact spare tire is identified by the label "TEMPORARY USE ONLY" on the tire sidewall.
 - Use the compact spare tire temporarily, and only in an emergency.
 - Make sure to check the tire inflation pressure of the compact spare tire. $(\rightarrow P. 536)$
- When the compact spare tire is installed (vehicles with a compact spare tire)

The vehicle is lower when the compact spare tire is installed compared to when standard tires are installed.

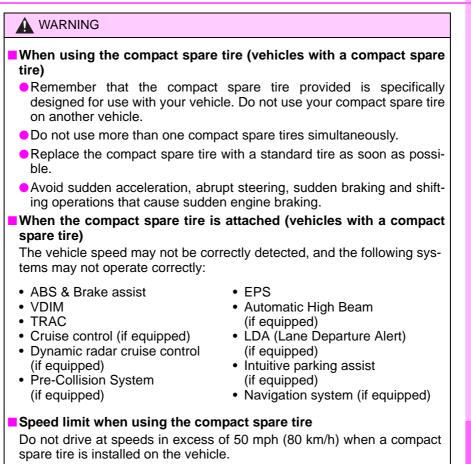
When using the compact spare tire (vehicles with a tire pressure warning system)

As the compact spare tire is not equipped with a tire pressure warning valve and transmitter, low inflation pressure of the spare tire will not be indicated by the tire pressure warning system. Also, if you replace the compact spare tire after the tire pressure warning light comes on, the light remains on.

If you have a flat front tire on a road covered with snow or ice (vehicles with a compact spare tire)

Install the compact spare tire on one of the rear wheels of the vehicle. Perform the following steps and fit tire chains to the front tires:

- 1 Replace a rear tire with the compact spare tire.
- 2 Replace the flat front tire with the tire removed from the rear of the vehicle.
- 3 Fit tire chains to the front tires.



The compact spare tire is not designed for driving at high speeds. Failure to observe this precaution may lead to an accident causing death or serious injury.

When trouble arises

507

MARNING

Replacing a flat tire

In cases such as when replacing tires, make sure to turn off the power back door main switch (\rightarrow P. 136). Failure to do so may cause the back door to operate unintentionally if the power back door switch is accidentally touched, resulting in hands and fingers being caught and injured.

After using the tools and jack

Before driving, make sure all the tools and jack are securely in place in their storage location to reduce the possibility of personal injury during a collision or sudden braking.

Be careful when driving over bumps with the compact spare tire installed on the vehicle.

The vehicle becomes lower when driving with the compact spare tire compared to when driving with standard tires. Be careful when driving over uneven road surfaces.

Driving with tire chains and the compact spare tire

Do not fit tire chains to the compact spare tire. Tire chains may damage the vehicle body and adversely affect driving performance.

When replacing the tires (vehicles with a tire pressure warning system)

When removing or fitting the wheels, tires or the tire pressure warning valve and transmitter, contact your Toyota dealer as the tire pressure warning valve and transmitter may be damaged if not handled correctly.

To avoid damage to the tire pressure warning valves and transmitters (vehicles with a tire pressure warning system)

When a tire is repaired with liquid sealants, the tire pressure warning valve and transmitter may not operate properly. If a liquid sealant is used, contact your Toyota dealer or other qualified service shop as soon as possible. Make sure to replace the tire pressure warning valve and transmitter when replacing the tire. (\rightarrow P. 413)

When stowing the flat tire

- Ensure that there is no object caught between the tire and the vehicle underbody.
- Securely tighten the spare tire clamp bolt to hold the spare wheel carrier by the hook.
- Stow the flat tire in the spare tire location. Failure to do so may cause damage to the spare tire carrier. Proper storage reduces the possibility of injury in a collision or during sudden braking.
- Have the flat tire repaired and the spare tire replaced with it as soon as possible.

Proper storage of the spare tire

If the hoist assembly is slanted when stowing a tire, the hoist assembly may become stuck in the wheel opening and the tire may not be raised properly, causing damage to the wheel or the wire cable.



Do not attempt to turn the spare tire clamp bolt without a tire on the hoist assembly, as doing so may cause the wire cable to slip off of the shaft inside the unit and the wire cable may not be able to be raised or lowered. If the spare tire clamp bolt has been turned without a tire on the hoist assembly and the wire cable cannot be raised or lowered, contact your Toyota dealer.

509

If the hybrid system will not start

Reasons for the hybrid system not starting vary depending on the situation. Check the following and perform the appropriate procedure:

The hybrid system will not start even though the correct starting procedure is being followed. (\rightarrow P. 229)

One of the following may be the cause of the problem:

- The electronic key may not be functioning properly. (\rightarrow P. 514)
- There may not be sufficient fuel in the vehicle's tank. Refuel the vehicle.
- There may be a malfunction in the immobilizer system. (\rightarrow P. 91)
- There may be a malfunction in the steering lock system.
- The hybrid system may be malfunctioning due to an electrical problem such as electronic key battery depletion or a blown fuse. However, depending on the type of malfunction, an interim measure is available to start the hybrid system. (→P. 511)

The interior lights and headlights are dim, or the horn does not sound or sounds at a low volume.

One of the following may be the cause of the problem:

- The 12-volt battery may be discharged. (\rightarrow P. 516)
- The 12-volt battery terminal connections may be loose or corroded.

The interior lights and headlights do not turn on, or the horn does not sound.

One of the following may be the cause of the problem:

- One or both of the 12-volt battery terminals may be disconnected.
- The 12-volt battery may be discharged. (\rightarrow P. 516)

Contact your Toyota dealer if the problem cannot be repaired, or if repair procedures are unknown.

Emergency start function

When the hybrid system does not start, the following steps can be used as an interim measure to start the hybrid system if the power switch is functioning normally:

- 1 Set the parking brake.
- 2 Shift the shift lever to P.
- 3 Turn the power switch to ACCESSORY mode.
- 4 Press and hold the power switch for about 15 seconds while depressing the brake pedal firmly.

Even if the hybrid system can be started using the above steps, the system may be malfunctioning. Have the vehicle inspected by your Toyota dealer.

If the shift lever cannot be shifted from P

If the shift lever cannot be shifted with your foot on the brake pedal, there may be a problem with the shift lock system (a system to prevent accidental operation of the shift lever). Have the vehicle inspected by your Toyota dealer immediately.

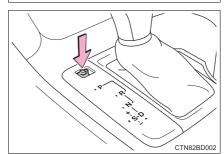
The following steps may be used as an emergency measure to ensure that the shift lever can be shifted:

- 1 Set the parking brake.
- 2 Turn the power switch to ACCESSORY mode.
- 3 Depress the brake pedal.
- 4 Pry the cover up with a flathead screwdriver or equivalent tool.

To prevent damage to the cover, cover the tip of the screwdriver with a rag.

- 5 Press the shift lock override button.

The shift lever can be shifted while the button is pressed.



If the electronic key does not operate properly

If communication between the electronic key and vehicle is interrupted (\rightarrow P. 151) or the electronic key cannot be used because the battery is depleted, the smart key system, push button start and wireless remote control cannot be used. In such cases, the doors can be opened and the hybrid system can be started by following the procedure below.

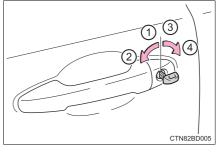
Locking and unlocking the doors and key linked functions

Use the mechanical key (\rightarrow P. 125) in order to perform the following operations:

- 1 Locks all the doors
- (2) Closes the windows and moon roof^{*1} (turn and hold)^{*2}
 (→P. 181, 184)
- (3) Unlocks the door

Turning the key rearward unlocks the driver's door. Turning the key once again within 5 seconds unlocks the other doors.

- ④ Opens the windows and moon roof^{*1} (turn and hold)^{*2}
 (→P. 181, 184)
- *1: If equipped
- *2: This setting must be customized at your Toyota dealer.



513

Starting the hybrid system

- 1 Ensure that the shift lever is in P and depress the brake pedal.
- 2 Touch the Toyota emblem side of the electronic key to the power switch.

When the electronic key is detected, a buzzer sounds and the power switch will turn to ON mode.

When the smart key system is deactivated in customization setting, the power switch will turn to ACCESSORY mode.

3 Firmly depress the brake pedal.

Vehicles with monochrome display:

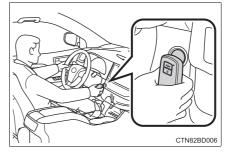
Check that a is shown on the multi-information display.

Vehicles with color display:

Check that and a message are shown on the multi-information display.

4 Press the power switch.

In the event that the engine still cannot be started, contact your Toyota dealer.



Stopping the hybrid system

Shift the shift lever to P and press the power switch as you normally do when stopping the hybrid system.

Replacing the key battery

As the above procedure is a temporary measure, it is recommended that the electronic key battery be replaced immediately when the battery is depleted. $(\rightarrow P. 428)$

Changing power switch modes

Release the brake pedal and press the power switch in step 3 above. The hybrid system does not start and modes will be changed each time the switch is pressed. (\rightarrow P. 230)

When the electronic key does not work properly

 Make sure that the smart key system has not been deactivated in the customization setting. If it is off, turn the function on. (Customizable features →P. 556)

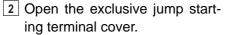
• Check if battery-saving mode is set. If it is set, cancel the function. $(\rightarrow P. 150)$

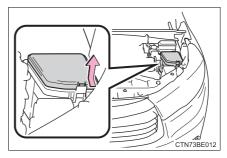
If the 12-volt battery is discharged

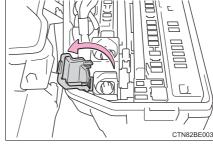
The following procedures may be used to start the hybrid system if the 12-volt battery is discharged. You can also call your Toyota dealer or a qualified repair shop.

If you have a set of jumper (or booster) cables and a second vehicle with a 12-volt battery, you can jump start your vehicle by following the steps below.

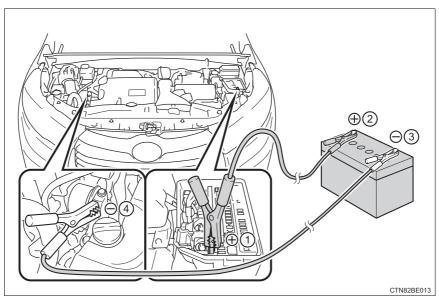
1 Open the hood and fuse box cover.







HIGHLANDER_HV_U (OM48F02U)



3 Connect the jumper cables according to the following procedure:

- (1) Connect a positive jumper cable clamp to the exclusive jump starting terminal on your vehicle.
- (2) Connect the clamp on the other end of the positive cable to the positive (+) battery terminal on the second vehicle.
- (3) Connect a negative cable clamp to the negative (-) battery terminal on the second vehicle.
- (4) Connect the clamp at the other end of the negative cable to a solid, stationary, unpainted metallic point away from the exclusive jump starting terminal and any moving parts, as shown in the illustration.
- 4 Start the engine of the second vehicle. Increase the engine speed slightly and maintain at that level for approximately 5 minutes to recharge the 12-volt battery of your vehicle.
- 5 Open and close any of the doors of your vehicle with the power switch off.
- 6 Maintain the engine speed of the second vehicle and start the hybrid system of your vehicle by turning the power switch to ON mode.
- 7 Make sure the "READY" indicator comes on. If the indicator does not come on, contact your Toyota dealer.

517

- Once the hybrid system has started, remove the jumper cables in the exact reverse order from which they were connected.
- 9 Close the exclusive jump starting terminal cover, and reinstall the fuse box cover to its original position.

When installing, first hook the fuse box cover onto the two rear tabs.

Once the hybrid system starts, have the vehicle inspected at your Toyota dealer as soon as possible.

Starting the hybrid system when the 12-volt battery is discharged The hybrid system cannot be started by push-starting.

To prevent 12-volt battery discharge

- Turn off the headlights and the audio system while the hybrid system is off.
- Turn off any unnecessary electrical components when the vehicle is running at a low speed for an extended period, such as in heavy traffic.

When recharging or replacing the 12-volt battery

- In some cases, it may not be possible to unlock the doors using the smart key system when the 12-volt battery is discharged. Use the wireless remote control or the mechanical key to lock or unlock the doors.
- The hybrid system may not start on the first attempt after the 12-volt battery has recharged but will start normally after the second attempt. This is not a malfunction.
- The power switch mode is memorized by the vehicle. When the 12-volt battery is reconnected, the system will return to the mode it was in before the 12-volt battery was discharged. Before disconnecting the 12-volt battery, turn the power switch off.

If you are unsure what mode the power switch was in before the 12-volt battery discharged, be especially careful when reconnecting the 12-volt battery.

• The power back door must be initialized. (\rightarrow P. 567)

Charging the 12-volt battery

The electricity stored in the 12-volt battery will discharge gradually even when the vehicle is not in use, due to natural discharge and the draining effects of certain electrical appliances. If the vehicle is left for a long time, the 12-volt battery may discharge, and the hybrid system may be unable to start. (The 12-volt battery recharges automatically while the hybrid system is operating.)

MARNING Avoiding 12-volt battery fires or explosions Observe the following precautions to prevent accidentally igniting the flammable gas that may be emitted from the 12-volt battery: Make sure each jumper cable is connected to the correct terminal and that it is not unintentionally in contact with any other than the intended terminal. Do not allow the other end of the jumper cable connected to the "+" terminal to come into contact with any other parts or metal surfaces in the area, such as brackets or unpainted metal. Do not allow the + and - clamps of the jumper cables to come into contact with each other. Do not smoke, use matches, cigarette lighters or allow open flame near the 12-volt battery. 12-volt battery precautions The 12-volt battery contains poisonous and corrosive acidic electrolyte, while related parts contain lead and lead compounds. Observe the following precautions when handling the 12-volt battery: •When working with the 12-volt battery, always wear safety glasses and take care not to allow any 12-volt battery fluids (acid) to come into contact with skin, clothing or the vehicle body. Do not lean over the 12-volt battery. In the event that 12-volt battery fluid comes into contact with the skin or eyes, immediately wash the affected area with water and seek medical attention. Place a wet sponge or cloth over the affected area until medical attention can be received. Always wash your hands after handling the 12-volt battery support, terminals, and other battery-related parts. When trouble arises Do not allow children near the 12-volt battery. After recharging the 12-volt battery Have the 12-volt battery inspected at your Toyota dealer as soon as possible. If the 12-volt battery is deteriorating, continued use may cause the 12-volt battery to emit a malodorous gas, which may be detrimental to the health of passengers. When replacing the 12-volt battery →P. 411

519

HIGHLANDER_HV_U (OM48F02U)

When handling jumper cables

When connecting the jumper cables, ensure that they do not become entangled in the cooling fans or belt.

Exclusive jump starting terminal

The exclusive jump starting terminal is intended to charge the 12-volt battery on your vehicle from another vehicle in an emergency. Do not use the exclusive jump starting terminal to jump start another vehicle.

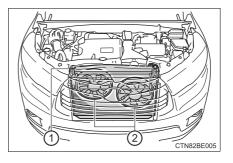
If your vehicle overheats

The following may indicate that your vehicle is overheating.

- The needle of the engine coolant temperature gauge (→P. 103) enters the red zone or a loss of hybrid system power is experienced. (For example, the vehicle speed does not increase.)
- "Hybrid System Overheat" is shown on the multi-information display.
- Steam comes out from under the hood.

Correction procedures

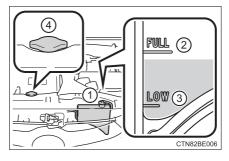
- If the needle of the engine coolant temperature gauge enters the red zone
- 1 Stop the vehicle in a safe place and turn off the air conditioning system, and then stop the hybrid system.
- If you see steam: Carefully lift the hood after the steam subsides.If you do not see steam: Carefully lift the hood.
- 3 After the hybrid system has cooled down sufficiently, inspect the hoses and radiator core (radiator) for any leaks.
 - 1 Radiator
 - 2 Cooling fans
 - If a large amount of coolant leaks, immediately contact your Toyota dealer.

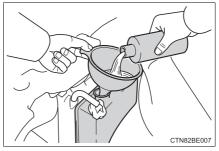


When trouble arises

- 4 The coolant level is satisfactory if it is between the "FULL" and "LOW" lines on the reservoir.
 - 1 Reservoir
 - 2 "FULL"
 - (3) "LOW"
 - (4) Radiator cap
- 5 Add coolant if necessary.

Water can be used in an emergency if coolant is unavailable.





6 Start the hybrid system and turn the air conditioning system on to check that the radiator cooling fans operate and to check for coolant leaks from the radiator or hoses.

The fans operate when the air conditioning system is turned on immediately after a cold start. Confirm that the fans are operating by checking the fan sound and air flow. If it is difficult to check these, turn the air conditioning system on and off repeatedly.

(The fan may not operate in freezing temperatures.)

7 If the fans are not operating:

Stop the hybrid system immediately and contact your Toyota dealer.

If the fans are operating:

Have the vehicle inspected at the nearest Toyota dealer.

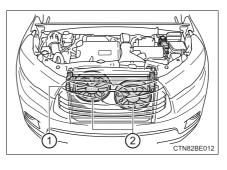
■ If "Hybrid System Overheat" is shown on the multi-information display

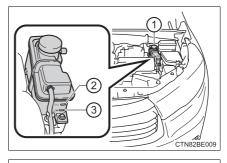
- 1 Stop the vehicle in a safe place.
- 2 Stop the hybrid system and carefully lift the hood.
- 3 After the hybrid system has cooled down, inspect the hoses and radiator core (radiator) for any leaks.
 - 1 Radiator
 - (2) Cooling fans

If a large amount of coolant leaks, immediately contact your Toyota dealer.

- 4 The coolant level is satisfactory if it is between the "FULL" and "LOW" lines on the reservoir.
 - (1) Reservoir
 - (2) "FULL"
 - (3) "LOW"
- 5 Add coolant if necessary. Water can be used in an emer-

gency if coolant is unavailable.







When trouble arises

6 Start the hybrid system and check the multi-information display.

If the message does not disappear: Stop the hybrid system and contact your Toyota dealer.

If the message is not displayed:

Have the vehicle inspected at the nearest Toyota dealer.

Messages displays

The message illustrations used are intended as examples, and may differ from the image that is actually displayed on the multi-information display.

WARNING

When inspecting under the hood of your vehicle

Observe the following precautions.

Failure to do so may result in serious injury such as burns.

- If steam is seen coming from under the hood, do not open the hood until the steam has subsided. The engine compartment may be very hot.
- After the hybrid system has been turned off, check that the "READY" indicator are off.

When the hybrid system is operating, the gasoline engine may automatically start, or the cooling fan may suddenly operate even if the gasoline engine stops. Do not touch or approach rotating parts such as the fan, which may lead to fingers or clothing (especially a tie, a scarf or a muffler) getting caught, resulting in serious injury.

 Do not loosen the radiator cap and the coolant reservoir caps while the hybrid system and radiator are hot.

High temperature steam or coolant could spray out.

NOTICE

When adding engine/power control unit coolant

Add coolant slowly after the hybrid system has cooled down sufficiently. Adding cool coolant to a hot hybrid system too quickly can cause damage to the hybrid system.

To prevent damage to the cooling system

Observe the following precautions:

- Avoid contaminating the coolant with foreign matter (such as sand or dust etc.).
- Do not use any coolant additive.

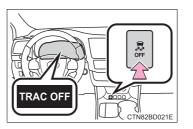
If the vehicle becomes stuck

Carry out the following procedures if the tires spin or the vehicle becomes stuck in mud, dirt or snow:

- 1 Stop the hybrid system. Set the parking brake and shift the shift lever to P.
- 2 Remove the mud, snow or sand from around the front wheels.
- 3 Place wood, stones or some other material under the front wheels to help provide traction.
- 4 Restart the hybrid system.
- 5 Shift the shift lever to D or R and release the parking brake. Then, while exercising caution, depress the accelerator pedal.

When it is difficult to free the vehicle

Press & to turn off TRAC.



🛕 WARNING

When attempting to free a stuck vehicle

If you choose to push the vehicle back and forth to free it, make sure the surrounding area is clear to avoid striking other vehicles, objects or people. The vehicle may also lunge forward or lunge back suddenly as it becomes free. Use extreme caution.

When shifting the shift lever

Be careful not to shift the shift lever with the accelerator pedal depressed. This may lead to unexpected rapid acceleration of the vehicle that may cause an accident resulting in death or serious injury.

525

To avoid damaging the transmission and other components

- Avoid spinning the front wheels and depressing the accelerator pedal more than necessary.
- If the vehicle remains stuck even after these procedures are performed, the vehicle may require towing to be freed.

Vehicle specifications	8	
	8-1.	Specifications Maintenance data (fuel, oil level, etc

	(fuel, oil level, etc.) 528
	Fuel information 540
	Tire information 543
8-2.	Customization
	Customizable features 556
8-3.	Initialization
	Items to initialize 567

527

Maintenance data (fuel, oil level, etc.)

Dimensions and weights

Overall length	191.1 in. (4855 mm)
Overall width	75.8 in. (1925 mm)
Overall height ^{*1}	 Without roof antenna 68.1 in. (1730 mm) With roof antenna 70.1 in. (1780 mm)
Wheelbase	109.8 in. (2790 mm)
Front tread	64.4 in. (1635 mm)
Rear tread	64.2 in. (1630 mm)
Vehicle capacity weight (Occupant + luggage)	1305 lb. (595 kg) ^{*2} 1385 lb. (625 kg) ^{*3}
Trailer Weight Rating (Trailer weight + cargo weight)	3500 lb. (1590 kg)

*1: Unladen vehicle

 $*^2$: With a seating capacity of 7 occupants

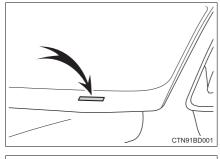
*3: With a seating capacity of 8 occupants

Vehicle identification

Vehicle identification number

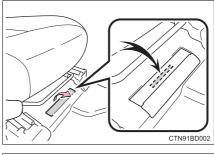
The vehicle identification number (VIN) is the legal identifier for your vehicle. This is the primary identification number for your Toyota. It is used in registering the ownership of your vehicle.

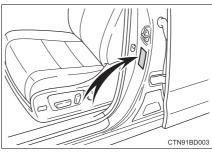
This number is stamped on the top left of the instrument panel.



On some models, this number is stamped under the right-hand front seat.

This number is also on the Certification Label.



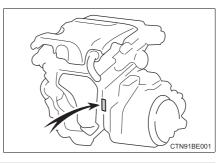


Vehicle specifications

530 8-1. Specifications

Engine number

The engine number is stamped on the engine block as shown.



Engine

Model	2GR-FXE
Туре	6-cylinder V type, 4-cycle, gasoline
Bore and stroke	3.70×3.27 in. (94.0 \times 83.0 mm)
Displacement	210.9 cu. in. (3456 cm ³)
Valve clearance	
Drive belt tension	Automatic adjustment

Fuel

Fuel type	Unleaded gasoline only
Octane rating	87 (Research Octane Number 91) or higher
Fuel tank capacity (Reference)	17.1 gal. (65.0 L, 14.2 lmp. gal.)

Front electric motor (traction motor)

Туре	Permanent magnet synchronous motor
Maximum output	123 kW
Maximum torque	247 ft•lbf (335 N•m, 34.2 kgf•m)

Rear electric motor (traction motor)

Туре	Permanent magnet synchronous motor
Maximum output	50 kW
Maximum torque	103 ft•lbf (139 N•m, 14.2 kgf•m)

Hybrid battery (traction battery)

Туре	Nickel-Metal hydride battery
Voltage	9.6 V/module
Capacity	6.5 Ah (3HR)
Quantity	30 modules
Overall voltage	288 V

Lubrication system

Oil capacity (Drain and refill — reference [*])	
	6.4 qt. (6.1 L, 5.4 Imp. qt.)
Without filter	6.0 qt. (5.7 L, 5.0 Imp. qt.)

*: The engine oil capacity is a reference quantity to be used when changing the engine oil. Warm up the engine and turn off the hybrid system, wait more than 5 minutes, and check the oil level on the dipstick.

Engine oil selection

"Toyota Genuine Motor Oil" is used in your Toyota vehicle. Use Toyota approved "Toyota Genuine Motor Oil" or equivalent to satisfy the following grade and viscosity.

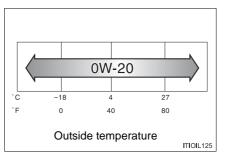
Oil grade: ILSAC GF-5 multigrade engine oil

533

Recommended viscosity: SAE 0W-20

SAE 0W-20 is the best choice for good fuel economy and good starting in cold weather. If SAE 0W-20 is not available,

SAE 5W-20 oil may be used. However, it must be replaced with SAE 0W-20 at the next oil change.



Oil viscosity (0W-20 is explained here as an example):

- The 0W in 0W-20 indicates the characteristic of the oil which allows cold startability. Oils with a lower value before the W allow for easier starting of the engine in cold weather.
- The 20 in 0W-20 indicates the viscosity characteristic of the oil when the oil is at high temperature. An oil with a higher viscosity (one with a higher value) may be better suited if the vehicle is operated at high speeds, or under extreme load conditions.

How to read oil container label:

The International Lubricant Specification Advisory Committee (ILSAC) Certification Mark is added to some oil containers to help you select the oil you should use.



8

HIGHLANDER_HV_U (OM48F02U)

Cooling system

Capacity (reference)	
Gasoline engine Power control unit	13.5 qt. (12.8 L, 11.2 lmp. qt.) 2.0 qt. (1.9 L, 1.7 lmp. qt.)
Coolant type	 Use either of the following. "Toyota Super Long Life Coolant" Similar high-quality ethylene glycol-based non-silicate, non-amine, non-nitrite, and non-borate coolant with long-life hybrid organic acid technology Do not use plain water alone.

Ignition system

Spark plug	
Make	DENSO FK20HR11
Gap	0.043 in. (1.1 mm)

Iridium-tipped spark plugs

Use only iridium-tipped spark plugs. Do not adjust the spark plug gap.

Electrical system

12-volt battery	
Open voltage at 68°F (20°C):	12.6 — 12.8 V Fully charged 12.2 — 12.4 V Half charged 11.8 — 12.0 V Discharged (Voltage is checked 20 minutes after the hybrid system and all lights are turned off.)
Charging rates	5 A max.

Hybrid transmission

Fluid capacity*	 Front 4.9 qt. (4.6 L, 4.0 Imp. qt.) Rear 1.9 qt. (1.8 L, 1.6 Imp. qt.)
Fluid type	Toyota Genuine ATF WS

*: The fluid capacity is a reference quantity.

If replacement is necessary, contact your Toyota dealer.

Hybrid transmission fluid type

Using transmission fluid other than "Toyota Genuine ATF WS" may ultimately damage the transmission of your vehicle.

Brakes

Pedal clearance*1	3.7 in. (93 mm) Min.			
Pedal free play	0.04 — 0.08 in. (1 — 2 mm)			
Brake pad wear limit	0.04 in. (1.0 mm)			
Parking brake lining wear limit	0.04 in. (1.0 mm)			
Parking brake pedal travel ^{*2}	8 — 11 clicks			
Fluid type SAE J1703 or FMVSS No.116 DOT 3				

*1: Minimum pedal clearance when depressed with a force of 110 lbf (490 N, 50 kgf) while the hybrid system is on.

*2: Parking brake pedal travel when depressed with a force of 67 lbf (300 N, 31 kgf)

Steering

Free play	Less than 1.2 in. (30 mm)
-----------	---------------------------

Tires and wheels

► Type A

Tire size	245/60R18 105T, T165/90D18 107M (spare)	
Tire inflation pressure (Recommended cold tire inflation pressure)	Front 35 psi (240 kPa, 2.4 kgf/cm ² or bar) Rear 35 psi (240 kPa, 2.4 kgf/cm ² or bar) Spare 60 psi (420 kPa, 4.2 kgf/cm ² or bar)	
Wheel size	18 \times 7 1/2 J, 18 \times 4T (spare)	
Wheel nut torque	76 ft•lbf (103 N•m, 10.5 kgf•m)	

► Type B

Tire size	P245/60R18 104T, T165/90D18 107M (spare)	
Tire inflation pressure (Recommended cold tire inflation pressure)	Front 35 psi (240 kPa, 2.4 kgf/cm ² or bar) Rear 35 psi (240 kPa, 2.4 kgf/cm ² or bar) Spare 60 psi (420 kPa, 4.2 kgf/cm ² or bar)	
Wheel size	18 × 7 1/2 J, 18 × 4T (spare)	
Wheel nut torque	76 ft•lbf (103 N•m, 10.5 kgf•m)	

► Type C

Tire size	245/55R19 103T, T165/90D18 107M (spare)	
Tire inflation pressure (Recommended cold tire inflation pressure)	Front 35 psi (240 kPa, 2.4 kgf/cm ² or bar) Rear 35 psi (240 kPa, 2.4 kgf/cm ² or bar) Spare 60 psi (420 kPa, 4.2 kgf/cm ² or bar)	
Wheel size	19 × 7 1/2 J, 18 × 4T (spare)	
Wheel nut torque	76 ft•lbf (103 N•m, 10.5 kgf•m)	

► Type D

Tire size	245/60R18 105T	
Tire inflation pressure (Recommended cold tire inflation pressure)	Front 35 psi (240 kPa, 2.4 kgf/cm ² or bar) Rear 35 psi (240 kPa, 2.4 kgf/cm ² or bar) Spare 35 psi (240 kPa, 2.4 kgf/cm ² or bar)	
Wheel size	18 × 7 1/2 J	
Wheel nut torque	76 ft•lbf (103 N•m, 10.5 kgf•m)	

► Type E

Tire size	P245/60R18 104T	
Tire inflation pressure (Recommended cold tire inflation pressure)	Front 35 psi (240 kPa, 2.4 kgf/cm ² or bar) Rear 35 psi (240 kPa, 2.4 kgf/cm ² or bar) Spare 35 psi (240 kPa, 2.4 kgf/cm ² or bar)	
Wheel size	18 × 7 1/2 J	
Wheel nut torque	76 ft•lbf (103 N•m, 10.5 kgf•m)	

► Type F

Tire size	245/55R19 103T	
Tire inflation pressure (Recommended cold tire inflation pressure)	Front 35 psi (240 kPa, 2.4 kgf/cm ² or bar) Rear 35 psi (240 kPa, 2.4 kgf/cm ² or bar) Spare 35 psi (240 kPa, 2.4 kgf/cm ² or bar)	∞ Vehicle sp
Wheel size	19 × 7 1/2 J	ecifi
Wheel nut torque	76 ft•lbf (103 N•m, 10.5 kgf•m)	specifications
		าร

■ When towing a trailer (245/55R19 103T tires)

On rear tires, add 1 psi (10.0kPa, 0.1 kgf/cm² or bar) to the recommended tire inflation pressure and drive at speeds below 65 mph (104 km/h).

8-1. Specifications

539

Light bulbs				
	Light bulbs	Bulb No.	W	Туре
	Headlights High beam Low beam	9005 —	60 55	A B
	Parking and front turn signal lights	7444NA	28/8	С
	Front side maker lights		5	D
Exterior	Front fog lights		19	Е
Exterior	Rear turn signal lights		21	С
	Back-up lights		16	D
	Stop/tail and rear side marker lights		21/5	D
	Tail lights		5	D
	License plate lights		5	D
	Vanity lights		1.26	D
ligh Interior Rea	Front interior/front personal lights		5	D
	Rear interior/rear personal lights		8	D
	Front door courtesy lights	168	5	D
	Luggage compartment light		5	F

A: HB3 halogen bulbs

B: H11 halogen bulbs

C: Wedge base bulbs (amber) D: Wed

E: H16 halogen bulbs

D: Wedge base bulbs (clear)

F: Double end bulbs

HIGHLANDER_HV_U (OM48F02U)

Fuel information

You must only use unleaded gasoline in your vehicle.

Select octane rating 87 (Research Octane Number 91) or higher. Use of unleaded gasoline with an octane rating lower than 87 may result in engine knocking. Persistent knocking can lead to engine damage.

At minimum, the gasoline you use should meet the specifications of ASTM D4814 in the U.S.A. and CGSB3.5-M93 in Canada.

Fuel tank opening for unleaded gasoline

To help prevent incorrect fueling, your vehicle has a fuel tank opening that only accommodates the special nozzle on unleaded fuel pumps.

Gasoline quality

In very few cases, driveability problems may be caused by the brand of gasoline you are using. If driveability problems persist, try changing the brand of gasoline. If this does not correct the problem, consult your Toyota dealer.

Gasoline quality standards

- Automotive manufacturers in the U.S.A., Europe and Japan have developed a specification for fuel quality called the World-Wide Fuel Charter (WWFC), which is expected to be applied worldwide.
- The WWFC consists of four categories that are based on required emission levels. In the U.S., category 4 has been adopted.
- The WWFC improves air quality by lowering emissions in vehicle fleets, and improves customer satisfaction through better performance.

Recommendation of the use of gasoline containing detergent additives

- Toyota recommends the use of gasoline that contains detergent additives to avoid the build-up of engine deposits.
- All gasoline sold in the U.S.A. contains minimum detergent additives to clean and/or keep clean intake systems, per EPA's lowest additives concentration program.
- Toyota strongly recommends the use of Top Tier Detergent Gasoline. For more information on Top Tier Detergent Gasoline and a list of marketers, please go to the official website www.toptiergas.com.

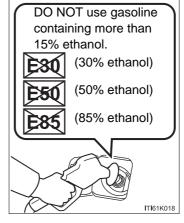
Cleaner burning gasoline, including reformulated gasoline that contains oxygenates such as ethanol or MTBE (Methyl Tertiary Butyl Ether) is available in many areas.

Toyota recommends the use of cleaner burning gasoline and appropriately blended reformulated gasoline. These types of gasoline provide excellent vehicle performance, reduce vehicle emissions and improve air quality.

Non-recommendation of the use of blended gasoline

• Use only gasoline containing up to 15% ethanol.

DO NOT use any flex-fuel or gasoline that could contain more than 15% ethanol, including from any pump labeled E30, E50, E85 (which are only some examples of fuel containing more than 15% ethanol).



- If you use gasohol in your vehicle, be sure that it has an octane rating no lower than 87.
- Toyota does not recommend the use of gasoline containing methanol.

Non-recommendation of the use of gasoline containing MMT

Some gasoline contains an octane enhancing additive called MMT (Methylcyclopentadienyl Manganese Tricarbonyl).

Toyota does not recommend the use of gasoline that contains MMT. If fuel containing MMT is used, your emission control system may be adversely affected.

The malfunction indicator lamp on the instrument cluster may come on. If this happens, contact your Toyota dealer for service.

If your engine knocks

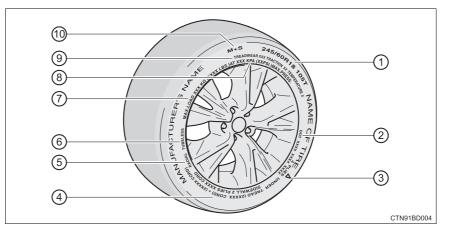
- Consult your Toyota dealer.
- You may occasionally notice light knocking for a short time while accelerating or driving uphill. This is normal and there is no need for concern.

NOTICE ۸ì Notice on fuel quality • Do not use improper fuels. If improper fuels are used, the engine will be damaged. Do not use leaded gasoline. Leaded gasoline can cause damage to your vehicle's three-way catalytic converters causing the emission control system to malfunction. Do not use gasohol other than the type previously stated. Other gasohol may cause fuel system damage or vehicle performance problems. • Using unleaded gasoline with an octane number or rating lower than the level previously stated will cause persistent heavy knocking. At worst, this will lead to engine damage. Fuel-related poor driveability If poor driveability is encountered after using a different type of fuel (poor hot starting, vaporization, engine knocking, etc.), discontinue the use of that type of fuel. When refueling with gasohol Take care not to spill gasohol. It can damage your vehicle's paint.

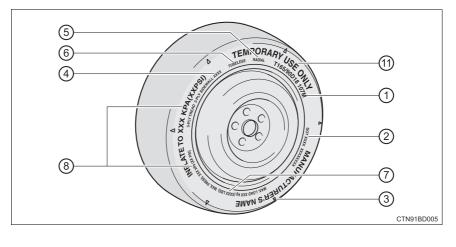
Tire information

Typical tire symbols

► Full-size tire



Compact spare tire





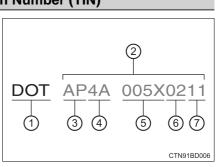
(1) Tire size	(→P. 546)
② DOT and Tire Identification Number (TIN)	(→P. 545)
③ Location of treadwear indicators	(→P. 412)
(4) Tire ply composition and materials	
Plies are layers of rubber-coated parallel cords. Cords which form the plies in a tire.	are the strands
5 Radial tires or bias-ply tires	
A radial tire has "RADIAL" on the sidewall. A tire not m is a bias-ply tire.	arked "RADIAL"
6 TUBELESS or TUBE TYPE	
A tubeless tire does not have a tube and air is directly A tube type tire has a tube inside the tire and the tube r pressure.	
(7) Load limit at maximum cold tire inflation pressure	(→P. 550)
8 Maximum cold tire inflation pressure	(→P. 550)
This means the pressure to which a tire may be inflated	d.
(9) Uniform tire quality grading	
For details, see "Uniform Tire Quality Grading" that follo	ows.
10 Summer tires or all season tires	(→P. 416)
An all season tire has "M+S" on the sidewall. A tire no is a summer tire.	t marked "M+S"
(1) "TEMPORARY USE ONLY"	
A compact spare tire is identified by the phrase "TEN	/PORARY USE

A compact spare tire is identified by the phrase "TEMPORARY USE ONLY" molded on its sidewall. This tire is designed for temporary emergency use only.

545

Typical DOT and Tire Identification Number (TIN)

- 1 DOT symbol*
- (2) Tire Identification Number (TIN)
- (3) Tire manufacturer's identification mark
- (4) Tire size code
- (5) Manufacturer's optional tire type code (3 or 4 letters)
- 6 Manufacturing week
- 7 Manufacturing year
 - *: The DOT symbol certifies that the tire conforms to applicable Federal Motor Vehicle Safety Standards.



Tire size

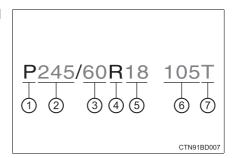
Typical tire size information

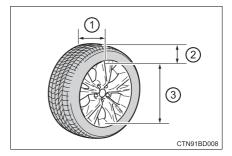
The illustration indicates typical tire size.

- ① Tire use (P = Passenger car, T = Temporary use)
- (2) Section width (millimeters)
- (3) Aspect ratio(tire height to section width)
- ④ Tire construction code(R = Radial, D = Diagonal)
- (5) Wheel diameter (inches)
- 6 Load index(2 digits or 3 digits)
- ⑦ Speed symbol (alphabet with one letter)

Tire dimensions

- 1 Section width
- (2) Tire height
- (3) Wheel diameter

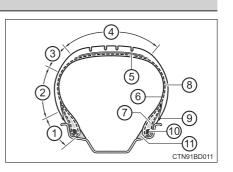




8-1. Specifications 547

Tire section names

- 1 Bead
- 2 Sidewall
- ③ Shoulder
- (4) Tread
- (5) Belt
- 6 Inner liner
- \bigcirc Reinforcing rubber
- (8) Carcass
- (9) Rim lines
- (10) Bead wires
- (1) Chafer



Vehicle specifications

Uniform Tire Quality Grading

This information has been prepared in accordance with regulations issued by the National Highway Traffic Safety Administration of the U.S. Department of Transportation.

It provides the purchasers and/or prospective purchasers of Toyota vehicles with information on uniform tire quality grading.

Your Toyota dealer will help answer any questions you may have as you read this information.

DOT quality grades

All passenger vehicle 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 a 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. Performance may differ significantly from the norm due to variations in driving habits, service practices and differences in road characteristics and climate.

Traction AA, A, B, C

The traction grades, from highest to lowest, are AA, A, B and C, and they 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 braking (straight ahead) traction tests and does not include cornering (turning) traction.

Temperature A, B, 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.

Grade C corresponds to a level of performance which all passenger car tires must meet under the Federal Motor Vehicle 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 grades of a tire assume that it is properly inflated and not overloaded.

Excessive speed, underinflation, or excessive loading, either separately or in combination, can cause heat buildup and possible tire failure.

Glossary of tire terminology

Tire related term	Meaning
Cold tire inflation pres- sure	Tire pressure when the vehicle has been parked for three hours or more, or has not been driven more than 1 mile or 1.5 km under that condition
Maximum inflation pressure	The maximum cold inflated pressure to which a tire may be inflated, shown on the sidewall of the tire
Recommended infla- tion pressure	Cold tire inflation pressure recommended by a manufacturer
Accessory weight	The combined weight (in excess of those stan- dard items which may be replaced) of hybrid transmission, power steering, power brakes, power windows, power seats, radio and heater, to the extent that these items are avail- able as factory-installed equipment (whether installed or not)
Curb weight	The weight of a motor vehicle with standard equipment, including the maximum capacity of fuel, oil and coolant, and if so equipped, air conditioning and additional weight optional engine
Maximum loaded vehi- cle weight	The sum of: (a) Curb weight (b) Accessory weight (c) Vehicle capacity weight (d) Production options weight
Normal occupant weight	150 lb. (68 kg) times the number of occupants specified in the second column of Table 1* that follows
Occupant distribution	Distribution of occupants in a vehicle as speci- fied in the third column of Table 1* below

551

Tire related term	Meaning
Production options weight	The combined weight of installed regular pro- duction options weighing over 5 lb. (2.3 kg) in excess of the standard items which they replace, not previously considered in curb weight or accessory weight, including heavy duty brakes, ride levelers, roof rack, heavy duty 12-volt battery, and special trim
Rim	A metal support for a tire or a tire and tube assembly upon which the tire beads are seated
Rim diameter (Wheel diameter)	Nominal diameter of the bead seat
Rim size designation	Rim diameter and width
Rim type designation	The industry manufacturer's designation for a rim by style or code
Rim width	Nominal distance between rim flanges
Vehicle capacity weight (Total load capacity)	The rated cargo and luggage load plus 150 lb. (68 kg) times the vehicle's designated seating capacity
Vehicle maximum load on the tire	The load on an individual tire that is deter- mined by distributing to each axle its share of the maximum loaded vehicle weight, and dividing by two
Vehicle normal load on the tire	The load on an individual tire that is deter- mined by distributing to each axle its share of curb weight, accessory weight, and normal occupant weight (distributed in accordance with Table 1* below), and dividing by two
Weather side	The surface area of the rim not covered by the inflated tire
Bead	The part of the tire that is made of steel wires, wrapped or reinforced by ply cords and that is shaped to fit the rim
Bead separation	A breakdown of the bond between components in the bead

Vehicle specifications

552 8-1. Specifications

Tire related term	Meaning
Bias ply tire	A pneumatic tire in which the ply cords that extend to the beads are laid at alternate angles substantially less than 90 degrees to the centerline of the tread
Carcass	The tire structure, except tread and sidewall rubber which, when inflated, bears the load
Chunking	The breaking away of pieces of the tread or sidewall
Cord	The strands forming the plies in the tire
Cord separation	The parting of cords from adjacent rubber compounds
Cracking	Any parting within the tread, sidewall, or inner- liner of the tire extending to cord material
СТ	A pneumatic tire with an inverted flange tire and rim system in which the rim is designed with rim flanges pointed radially inward and the tire is designed to fit on the underside of the rim in a manner that encloses the rim flanges inside the air cavity of the tire
Extra load tire	A tire designed to operate at higher loads and at higher inflation pressures than the corre- sponding standard tire
Groove	The space between two adjacent tread ribs
Innerliner	The layer(s) forming the inside surface of a tubeless tire that contains the inflating medium within the tire
Innerliner separation	The parting of the innerliner from cord material in the carcass
Intended outboard sidewall	(a)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 (b)The outward facing sidewall of an asym- metrical tire that has a particular side that must always face outward when mounted on a vehicle

Tire related term	Meaning
Light truck (LT) tire	A tire designated by its manufacturer as pri- marily intended for use on lightweight trucks or multipurpose passenger vehicles
Load rating	The maximum load that a tire is rated to carry for a given inflation pressure
Maximum load rating	The load rating for a tire at the maximum per- missible inflation pressure for that tire
Maximum permissible inflation pressure	The maximum cold inflation pressure to which a tire may be inflated
Measuring rim	The rim on which a tire is fitted for physical dimension requirements
Open splice	Any parting at any junction of tread, sidewall, or innerliner that extends to cord material
Outer diameter	The overall diameter of an inflated new tire
Overall width	The linear distance between the exteriors of the sidewalls of an inflated tire, including ele- vations due to labeling, decorations, or protec- tive bands or ribs
Passenger car tire	A tire intended for use on passenger cars, multipurpose passenger vehicles, and trucks, that have a gross vehicle weight rating (GVWR) of 10,000 lb. or less.
Ply	A layer of rubber-coated parallel cords
Ply separation	A parting of rubber compound between adja- cent plies
Pneumatic tire	A mechanical device made of rubber, chemi- cals, fabric and steel or other materials, that, when mounted on an automotive wheel, pro- vides the traction and contains the gas or fluid that sustains the load
Radial ply tire	A pneumatic tire in which the ply cords that extend to the beads are laid at substantially 90 degrees to the centerline of the tread
Reinforced tire	A tire designed to operate at higher loads and at higher inflation pressures than the corre- sponding standard tire

HIGHLANDER_HV_U (OM48F02U)

553

554 8-1. Specifications

Tire related term	Meaning
Section width	The linear distance between the exteriors of the sidewalls of an inflated tire, excluding ele- vations due to labeling, decoration, or protec- tive bands
Sidewall	That portion of a tire between the tread and bead
Sidewall separation	The parting of the rubber compound from the cord material in the sidewall
Snow tire	A tire that attains a traction index equal to or greater than 110, compared to the ASTM E- 1136 Standard Reference Test Tire, when using the snow traction test as described in ASTM F-1805-00, Standard Test Method for Single Wheel Driving Traction in a Straight Line on Snow-and Ice-Covered Surfaces, and
	which is marked with an Alpine Symbol (
Test rim	The rim on which a tire is fitted for testing, and may be any rim listed as appropriate for use with that tire
Tread	That portion of a tire that comes into contact with the road
Tread rib	A tread section running circumferentially around a tire
Tread separation	Pulling away of the tread from the tire carcass
Treadwear indicators (TWI)	The projections within the principal grooves designed to give a visual indication of the degrees of wear of the tread
Wheel-holding fixture	The fixture used to hold the wheel and tire assembly securely during testing

*: Table 1 — Occupant loading and distribution for vehicle normal load for various designated seating capacities

8-1. Specifications

555

Designated seating capacity, Number of occupants	Vehicle normal load, Number of occupants	Occupant distribution in a normally loaded vehicle
2 through 4	2	2 in front
5 through 10	3	2 in front, 1 in second seat
11 through 15	5	2 in front, 1 in second seat, 1 in third seat, 1 in fourth seat
16 through 20	7	2 in front, 2 in second seat, 2 in third seat, 1 in fourth seat

Customizable features

Your vehicle includes a variety of electronic features that can be personalized to your preferences. The settings of these features can be changed by the meter control switches, on the audio system screen or at your Toyota dealer.

Customizing vehicle features

Changing on the audio system screen

- 1 Press the "APPS" button.
- 2 Touch "Setup" on the "Apps" screen and select "Vehicle". Select the desired item.

Various setting can be changed. Refer to the list of settings that can be changed for details.

Changing by the meter control switches

→P. 109, 112

Customizable features

Some function settings are changed simultaneously with other functions being customized. Contact your Toyota dealer for further details.

- ① Settings that can be changed on the audio system screen
- 2 Settings that can be changed by the meter control switches
- ③ Settings that can be changed by your Toyota dealer

Definition of symbols: O = Available, — = Not available

■ Gauges, meters and multi-information display (→P. 103, 107, 111)

Function ^{*1}	Default setting	Customized set- ting	1	2	3
Language ^{*2}	English	French	0		
	LIGISI	Spanish		0	
		km (km/L)	_ o o		
Units ^{*2}	miles (MPG US)	km (L/100 km)		0	
Units		miles (MPG Imperial)			
EV indicator	On (Self-lighting)	Off	—	0	_

Vehicles with monochrome display

Vehicles with color display

Function ^{*1}	Default setting	Customized set- ting	1	2	3	
Language ^{*2}	English	French	0	0		
	Ligisii	Spanish		0		
Units ^{*2}		km (km/L)	00-			
	miles (MPG US)	km (L/100 km)		0		
		miles (MPG Imperial)				
Maintenance system ini- tialization ^{*3}	Off	On	_	0	_	
EV indicator	On (Self-lighting)	Off	—	0	_	

558 8-2. Customization

Function ^{*1}	Default setting	Customized set- ting	1	2	3
switch settings	Drive information 1	Desired status screen ^{*4}	_	0	_
	Current fuel con- sumption				
Drive information 1	Average fuel economy (after reset)	*5		0	
	Distance (driving range)	_			
Drive information 2	Average fuel economy (after refueling)	*5		0	
	Driving distance (after reset)			0	
Drive information 3	Average vehicle speed (after reset)	*5			
Pop-up display	On	Off	—	0	—
		Blue			
Accent color	Light blue	Orange	0	0	
		Yellow			
Eco mode linked color display	On	Off	_	0	_
Speed limit display ^{*6}	On with the speed limit cau- tion indicator (yellow) enabled	On with the speed limit cau- tion indicator (yellow) not enabled		0	0
		Off			

559

- *1: For details about each function: \rightarrow P. 109, 114
- *2: The default setting varies according to country.
- *3: U.S.A. only
- *4: Some status screens cannot be registered (indicated on multi-information display).
- *5: 6 of the following items: current fuel consumption, average fuel economy (after reset), average fuel economy (after refuel), average fuel economy (after start), average vehicle speed (after reset), average vehicle speed (after start), distance (driving range), elapsed time (after reset), elapsed time (after start), distance (after start), driving distance (after reset), blank.
- *6: Speed limit display may not be available for some regions.

560 8-2. Customization

■ Door lock (→P. 128, 134, 513)

Function	Default setting	Customized set- ting	1	2	3
Unlocking using a mechanical key	Driver's door unlocked in one step, all doors unlocked in two steps	All doors unlocked in one step			0
		Off			
Automatic door lock	Shifting the shift lever to position other than P	Vehicle speed is approximately 12 mph (20 km/h) or higher	0		0
Automatic door unlock	Chitting the chitt	Off			
	Shifting the shift lever to P	Driver's door is opened	0 —		0

■ Smart key system and wireless remote control (→P. 128, 134)

Function	Default setting	Customized set- ting	1	2	3
Operation buzzer vol-	Level 5	Off	0		0
ume	Level 5	Level 1 to 7	0		0
Operation signal (Emergency flashers)	On	Off	0	_	0
Time elapsed before		Off			
automatic door lock function is activated if	60 seconds	30 seconds	0	_	0
door is not opened after being unlocked		120 seconds			
Open door warning buzzer	On	Off	_	_	0

■ Smart key system (→P. 128, 134, 148)

Function	Default setting	Customized set- ting	1	2	3
Smart key system	On	Off	—	—	0
Number of consecutive door lock operations	2 times	As many as desired		_	0

■ Wireless remote control (→P. 124, 128, 134)

Function	Default setting	Customized set- ting	1	2	3
Wireless remote control	On	Off			0
Unlocking operation	Driver's door unlocked in one step, all doors unlocked in two steps	All doors unlocked in one step	0		0
Alarm (panic mode)	On	Off	—	—	0

■ Power back door (→P. 134)

Function	Default setting	Customized set- ting	1	2	3
Power back door open- ing angle	Opening angle 5	Opening angle 1 to 4	0	_	0

■ Driving position memory* (→P. 165)

Function	Default setting	Customized set- ting	1	2	3
Selecting the door link- ing driving position mem- ory with door unlock operation	Driver's door	All doors			0

*: If equipped

■ Power windows and moon roof* (→P. 179, 183)

Function	Default setting	Customized set- ting	1	2	3
Mechanical key linked operation	Off	On	_	_	0
Wireless remote control linked operation (open only)	Off	On			0
Wireless remote control linked operation signal (buzzer)	On	Off			0

*: If equipped

■ Power windows (→P. 179)

Function	Default setting	Customized set- ting	1	2	3
One-touch close opera- tion using the power win- dow switches on the front passenger door and each rear door	On	Off			0
One-touch front passen- ger window or rear side window close operation using the power window switch on the driver's door	On	Off			0

■ Moon roof* (→P. 183)

Function	Default setting	Customized set- ting	1	2	3
Linked operation of com- ponents when mechani- cal key is used (open only)	Slide only	Tilt only	_		0
Linked operation of com- ponents when wireless remote control is used	Slide only	Tilt only	_	_	0

*: If equipped

■ Turn signal lever (→P. 242)

Function	Default setting	Customized set- ting	1	2	3
The number of times the turn signal lights flash automatically when the	lights flash	Off ^{*2}			
turn signal lever is moved to the first posi- tion during a lane change ^{*1}	3	4 to 7]		0

*1: After flashing the turn signal lights when turning left or right while this function is off and the turn signal lever is moved to the first position in the direction of the flashing light, the turn signal lights can be selected to be flashing or off.

*²: The turn signal lights will be off if the turn signal lever is moved to the first position in the direction of flashing light.

■ Automatic light control system (→P. 244)

Function	Default setting	Customized set- ting	1	2	3
Light sensor sensitivity	Standard	-2 to 2	0	—	0
Time elapsed before		Off			
headlights automatically turn off after doors are	30 seconds	60 seconds	0	—	0
closed		90 seconds			

564 8-2. Customization

■ Lights (→P. 244)

Function	Default setting	Customized set- ting	1	2	3
Daytime running light system*	On	Off	0		0

*: U.S.A. only

Intuitive parking assist^{*1} (Refer to "Navigation and Multimedia System Owner's Manual")

Function	Default setting	Customized set- ting	1	2	3
Detection distance of the rear center sensor	Far	Near	0	_	0
Buzzer volume	Level 3	Level 1 to 5	0	—	0
Display setting ^{*2}	All sensors dis- played	Display off	0	_	0

*¹: If equipped

*2: When intuitive parking assist is operating.

■ Vehicle Proximity Notification System (→P. 82)

Function	Default setting	Customized set- ting	1	2	3
The volume of Vehicle		Level 2			
Proximity Notification System sound	Level 1	Level 3			0

■ Automatic air conditioning system (→P. 326)

Function	Default setting	Customized set- ting	1	2	3
A/C auto switch opera- tion	On	Off	0	_	0

■ Illumination (→P. 339)

Function	Default setting	Customized set- ting	1	2	3
		Off			
Time elapsed before the interior lights turn off	15 seconds	7.5 seconds	0	_	0
		30 seconds	-		
Operation after the power switch is turned off	On	Off	_		0
Operation when the doors are unlocked	On	Off	_	_	0
Operation when you approach the vehicle with the electronic key on your person	On	Off	_		0
Ambient lights*	On	Off	—		0
	15 seconds	Off	0		0
Time elapsed before the outer foot lights turn off*		7.5 seconds			
	30 seconds				
Operation of the outer foot lights when you approach the vehicle with the electronic key on your person*	On	Off			0
Operation of the outer foot lights when the doors are unlocked*	On	Off		_	0

*: If equipped

■ Seat belt reminder (→P. 459)

Function	Default setting	Customized set- ting	1	2	3
Vehicle speed linked seat belt reminder buzzer	On	Off	_	_	0

Vehicle customization

When the smart key system is off, the entry unlock function cannot be customized.

When the doors remain closed after unlocking the doors and the timer activated automatic door lock function activates, signals will be generated in accordance with the operation buzzer volume and operational signal (Emergency flashers) function settings.

Changing of the power back door opening angle

The opening angle setting can be changed through operation of either the power back door switch or the audio system screen.

However, if the power switch is on and the power back door switch is used to change the opening angle setting, the changed opening angle will not be reflected on the audio system screen until the power switch is turned off and then on again.

When customizing on the audio system screen

Stop the vehicle in a safe place, apply the parking brake, and shift the shift lever to P. Also, to prevent 12-volt battery discharge, leave the hybrid system operating while customizing the features.

WARNING

During customization

As the hybrid system needs to be operating during customization, ensure that the vehicle is parked in a place with adequate ventilation. In a closed area such as a garage, exhaust gases including harmful carbon monoxide (CO) may collect and enter the vehicle. This may lead to death or a serious health hazard.

🔨 NOTICE

During customization

To prevent 12-volt battery discharge, ensure that the hybrid system is operating while customizing features.

Items to initialize

The following items must be initialized for normal system operation after such cases as the 12-volt battery being reconnected, or maintenance being performed on the vehicle:

Item	When to initialize	Reference	
Power back door	After reconnecting or chang- ing the batteryAfter changing a fuse	P. 134	
Maintenance data (U.S.A. only)	After the maintenance is per- formed	P. 387	
Tire pressure warning sys- tem	When changing the tire infla- tion pressure by changing trav- eling speed or load weight, etc.	P. 414	

For owners	569
	Reporting safety defects for U.S. owners

Reporting safety defects for U.S. owners

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 Toyota Motor Sales, U.S.A., Inc. (Toll-free: 1-800-331-4331).

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 Toyota Motor Sales, U.S.A., Inc.

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, 1200 New Jersey Ave, S.E., Washington, DC 20590. You can also obtain other information about motor vehicle safety from *http://www.safercar.gov*.

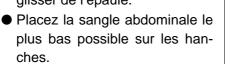
Seat belt instructions for Canadian owners (in French)

The following is a French explanation of seat belt instructions extracted from the seat belt section in this manual.

See the seat belt section for more detailed seat belt instructions in English.

Utilisation correcte des ceintures de sécurité

 Déroulez la sangle diagonale de telle sorte qu'elle passe bien sur l'épaule, sans pour autant être en contact avec le cou ou glisser de l'épaule.



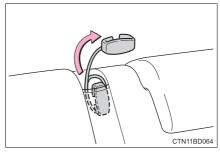


- Réglez la position du dossier de siège. Asseyez-vous le dos droit et calez-vous bien dans le siège.
- Ne vrillez pas la ceinture de sécurité.

Guide de confort de ceinture de sécurité (siège central de la troisième rangée)

Si la sangle diagonale est proche du cou d'une personne, utilisez le guide de confort de la ceinture de sécurité.

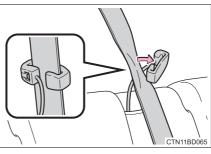
1 Sortez le guide de confort de sa poche.



2 Glissez la ceinture dans la fente du guide.

Le cordon élastique doit être derrière la ceinture de sécurité.

3 Attachez la ceinture de sécurité et placez-la confortablement.





Entretien et soin

Ceintures de sécurité

Nettoyez avec un chiffon ou une éponge humectée d'eau savonneuse tiède. Vérifiez régulièrement que les ceintures ne sont pas effilochées, entaillées ou exagérément usées.

AVERTISSEMENT

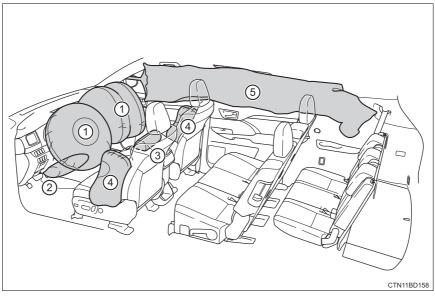
Détérioration et usure des ceintures de sécurité

Inspectez le système de ceintures de sécurité périodiquement. Contrôlez l'absence de coupures, d'effilochages et de pièces desserrées. N'utilisez pas une ceinture de sécurité défectueuse avant qu'elle ne soit remplacée. Une ceinture de sécurité défectueuse ne protège pas l'occupant de blessures graves ou mortelles.

SRS airbag instructions for Canadian owners (in French)

The following is a French explanation of SRS airbag instructions extracted from the SRS airbag section in this manual.

See the SRS airbag section for more detailed SRS airbag instructions in English.



Coussins gonflables frontaux SRS

(1) Le coussin gonflable conducteur/le coussin gonflable passager avant SRS

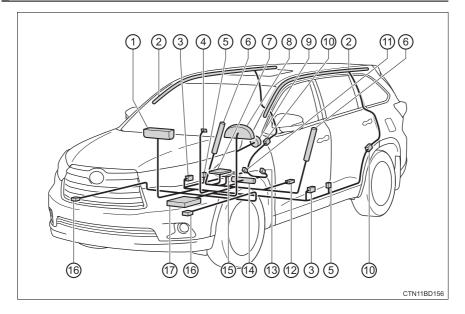
Participent à la protection de la tête et du thorax du conducteur et du passager avant contre les chocs contre les éléments de l'habitacle

- ② Coussin gonflable SRS de genoux du conducteur Participe à la protection du conducteur
- ③ Coussin gonflable d'assise SRS
 Participe à la protection du passager avant

Coussins gonflables latéraux et rideau SRS

- ④ Coussins gonflables avant latéraux SRS
 Peuvent aider à protéger le torse des passagers avant
- (5) Coussins gonflables rideau SRS
 - Participent principalement à la protection de la tête des occupants assis aux places extérieures
 - Contribuent à empêcher les occupants d'être éjectés du véhicule en cas de tonneau

Compositions du système de coussin gonflable SRS



- Coussin gonflable passager (1) Capteurs d'impact latéral avant (arrière)
- (2) Coussins gonflables rideau
- ③ Capteurs d'impact latéral (portes avant)
- (4) Témoins indicateurs "AIR BAG ON" et "AIR BAG OFF"
- (5) Prétensionneurs de ceintures de sécurité et limiteurs de force
- (6) Coussins gonflables latéraux
- (7) Coussin gonflable d'assise
- (8) Témoin d'avertissement SRS
- (9) Coussin gonflable conducteur

- (arrière)
 (1) Contacteur de boucle de cein-
- ture de sécurité du siège passager avant
- Capteur de position du siège conducteur
- (13) Contacteur de boucle de ceinture de sécurité conducteur
- (4) Coussin gonflable de genoux du conducteur
- (15) Système de classification de l'occupant du siège passager avant (ECU et capteurs)
- (16) Capteurs d'impact avant
- Boîtier électronique de coussins gonflables

Votre véhicule est équipé de COUSSINS GONFLABLES INTELLI-GENTS conçus selon les normes de sécurité américaines applicables aux véhicules à moteur (FMVSS208). Le boîtier électronique (ECU) des coussins gonflables régule le déploiement des coussins gonflables sur la base des informations qu'il reçoit des capteurs, etc., indiqués ci-dessus dans le schéma illustrant les composants du système. Parmi ces informations figurent la gravité du choc et l'occupation du véhicule par les passagers. Le déploiement rapide des coussins gonflables est obtenu au moyen d'une réaction chimique dans les dispositifs pyrotechniques, qui produit un gaz inoffensif permettant d'amortir le mouvement des occupants.

AVERTISSEMENT

Précautions concernant les coussins gonflables SRS

Respectez les précautions suivantes concernant les coussins gonflables SRS.

Autrement, des blessures graves, voire mortelles, pourraient s'ensuivre.

- Le conducteur et tous les passagers du véhicule doivent porter correctement leur ceinture de sécurité.
 - Les coussins gonflables SRS sont des dispositifs supplémentaires à utiliser avec les ceintures de sécurité.
- Le coussin gonflable SRS conducteur se déploie avec une violence considérable, qui peut causer des blessures graves, voire mortelles, si le conducteur se trouve très près du coussin gonflable. La National Highway Traffic Safety Administration (NHTSA) conseille:

Sachant que la zone de danger pour le coussin gonflable conducteur se trouve dans les premiers 2 à 3 in. (50 - 75 mm) de déploiement, vous placer à 10 in. (250 mm) de votre coussin gonflable conducteur vous garantit une marge de sécurité suffisante. Cette distance est à mesurer entre le centre du volant et le sternum. Si vous êtes assis à moins de 10 in. (250 mm), vous pouvez changer votre position de conduite de plusieurs façons:

- Reculez votre siège le plus possible, de manière à pouvoir encore atteindre confortablement les pédales.
- Inclinez légèrement le dossier du siège.

Bien que les véhicules puissent être différents les uns des autres, la plupart des conducteurs peuvent s'asseoir à une distance de 10 in. (250 mm), même avec le siège conducteur complètement avancé, simplement en inclinant un peu le dossier de siège. Si vous avez des difficultés à voir la route après avoir incliné votre siège, utilisez un coussin ferme et antidérapant pour vous rehausser ou remontez le siège si votre véhicule est équipé de cette fonction.

 Si votre volant est réglable, inclinez-le vers le bas. Cela a pour effet d'orienter le coussin gonflable en direction de votre poitrine plutôt que de votre tête et de votre cou.

Réglez votre siège selon les recommandations de la NHTSA ci-dessus, tout en conservant le contrôle des pédales, du volant et la vue des commandes du tableau de bord.

🛕 AVERTISSEMENT

Précautions concernant les coussins gonflables SRS

Si vous attachez une rallonge de ceinture de sécurité aux boucles de ceinture de sécurité avant, mais pas au pêne de la ceinture de sécurité, les coussins gonflables avant SRS détectent que le conducteur et le passager avant ont attaché leur ceinture de sécurité, alors même que ce n'est pas le cas. Dans ce cas, il se peut que les coussins gonflables avant SRS ne se déploient pas correctement en cas de collision et vous risquez d'être tué ou grièvement blessé. Veillez à porter la ceinture de sécurité avec la rallonge de ceinture de sécurité.



- Le coussin gonflable SRS passager avant se déploie également avec une violence considérable, qui peut causer des blessures graves, voire mortelles, si le passager avant se trouve très près du coussin gonflable. Éloignez le siège du passager avant au maximum du coussin gonflable et réglez le dossier de siège de façon à être assis bien droit dans le siège.
- Les nourrissons et les enfants qui ne sont pas correctement assis et/ou protégés peuvent être grièvement blessés ou tués par le déploiement d'un coussin gonflable. Installez dans un siège de sécurité enfant les nourrissons et les enfants trop petits pour pouvoir utiliser la ceinture de sécurité. Toyota recommande vivement que les nourrissons et les jeunes enfants soient installés sur les sièges arrière du véhicule et convenablement attachés. Les sièges arrière sont plus sûrs pour les nourrissons et les enfants que le siège du passager avant.
- N'installez jamais de siège de sécurité enfant type dos à la route sur le siège du passager avant, même si le témoin indicateur "AIR BAG OFF" est allumé.

En cas d'accident, par la violence et la vitesse de son déploiement, le coussin gonflable passager avant peut blesser grièvement, voire tuer l'enfant si le siège de sécurité enfant type dos à la route est installé sur le siège du passager avant.

AVERTISSEMENT

Précautions concernant les coussins gonflables SRS

- Ne vous asseyez pas sur le bord du siège et ne vous appuyez pas contre le tableau de bord.
- Ne laissez pas un enfant rester debout devant le coussin gonflable SRS passager avant ou bien s'asseoir sur les genoux du passager avant.
- Ne laissez pas les occupants des sièges avant voyager avec un objet sur les genoux.
- Ne vous appuyez pas contre la porte, contre le rail latéral de toit ou contre les montants avant, latéraux et arrière.
- Ne laissez personne s'agenouiller sur les sièges passagers en appui contre la porte ou sortir la tête ou les mains à l'extérieur du véhicule.







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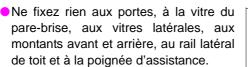
For owners

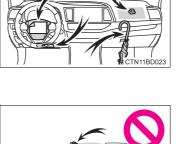
AVERTISSEMENT

Précautions concernant les coussins gonflables SRS

 Ne fixez ni ne posez aucun objet sur le tableau de bord, la garniture du volant de direction et la partie inférieure du tableau de bord.

Au déploiement des coussins gonflables SRS conducteur, passager avant et de genoux du conducteur, ces objets risquent de se transformer en projectiles.







Précautions concernant les coussins gonflables SRS

- Ne suspendez aucun cintre ou objets durs aux crochets à vêtements. En cas de déploiement des coussins gonflables rideau SRS, tous ces objets pourraient se transformer en projectiles et causer des blessures graves, voire mortelles.
- Si un cache en vinyle recouvre la partie où le coussin gonflable de genoux pour conducteur SRS se déploie, veillez à l'enlever.
- N'utilisez aucun accessoire de siège qui couvrirait les zones de déploiement des coussins gonflables latéraux SRS et du coussin gonflable d'assise SRS, car il risquerait de gêner le déploiement des coussins gonflables. De tels accessoires peuvent empêcher les coussins gonflables latéraux et le coussin gonflable d'assise de fonctionner correctement, désactiver le dispositif ou entraîner le déploiement accidentel des coussins gonflables latéraux et du coussin gonflable d'assise, entraînant la mort ou des blessures graves.
- Ne faites pas subir de chocs ou de pressions excessives à la zone renfermant les composants de coussin gonflable SRS.
 En effet, cela pourrait entraîner un fonctionnement anormal des coussins gonflables SRS.
- Ne touchez aucun composant du système immédiatement après le déploiement (gonflage) des coussins gonflables SRS, car ils peuvent être chauds.
- Si vous avez des difficultés à respirer après le déploiement des coussins gonflables SRS, ouvrez une porte ou une vitre pour faire entrer de l'air frais, ou bien descendez du véhicule si cela ne présente pas de danger. Essuyez tout résidu dès que possible afin d'éviter d'éventuelles irritations de la peau.
- Si les parties renfermant les coussins gonflables SRS, telles que la garniture du volant et les garnitures de montants avant et arrière, sont abîmées ou craquelées, faites-les remplacer par votre concessionnaire Toyota.
- Ne placez rien sur le siège du passager avant, comme un coussin par exemple. Cela a pour conséquence de répartir le poids du passager sur toute la surface du siège, ce qui empêche le capteur de détecter correctement le poids du passager. Il en résulte que les coussins gonflables avant SRS du passager avant risquent de ne pas se déployer en cas de collision.

AVERTISSEMENT

Modification et mise au rebut des éléments du système de coussins gonflables SRS

Consultez votre concessionnaire Toyota avant de mettre votre véhicule au rebut ou de procéder à l'une des modifications suivantes. Les coussins gonflables SRS peuvent être défaillants ou se déployer (se gonfler) accidentellement, provoquant la mort ou de graves blessures.

- Installation, dépose, démontage et réparation des coussins gonflables SRS
- Réparations, modifications, démontage ou remplacement du volant, du tableau de bord, de la planche de bord, des sièges ou de leur garniture, des montants avant, latéraux et arrière ou des rails latéraux de toit
- Réparations ou modifications des ailes avant, du pare-chocs avant ou des flancs de l'habitacle
- Installation d'un protège-calandre (pare-buffle, pare-kangourou, etc.), de chasse-neiges, de treuils ou d'une galerie de pavillon
- Modifications du système de suspension du véhicule
- Installation d'appareils électroniques, tels qu'un émetteur/récepteur radio mobile ou un lecteur CD
- Aménagements de votre véhicule pour une personne atteinte d'un handicap physique

	583
Index	
	What to do if (Troubleshooting)584 Alphabetical index589

584 What to do if... (Troubleshooting)

What to do if... (Troubleshooting)

If you have a problem, check the following before contacting your Toyota dealer.

The doors cannot be locked, unlocked, opened or closed



You lose your keys

- If you lose your keys or mechanical keys, new genuine keys can be made by your Toyota dealer. (→P. 125)
- If you lose your electronic keys, the risk of vehicle theft increases significantly. Contact your Toyota dealer immediately. (→P. 127)

The doors cannot be locked or unlocked

- Is the electronic key battery weak or depleted? (\rightarrow P. 428)
- Is the power switch in ON mode? When locking the doors, turn the power switch off. (→P. 230)
- Is the electronic key left inside the vehicle?
 When locking the doors, make sure that you have the electronic key on your person.
- The function may not operate properly due to the condition of the radio wave. (→P. 151)

The rear door cannot be opened

Is the child-protector lock set? The rear door cannot be opened from inside the vehicle when the lock is set. Open the rear door from outside and then unlock the child-protector lock. (→P. 131)

585

If you think something is wrong



The hybrid system does not start

- Did you press the power switch while firmly depressing the brake pedal? (→P. 229)
- Is the shift lever in P? (\rightarrow P. 232)
- Is the electronic key anywhere detectable inside the vehicle? (→P. 149)
- Is the steering wheel unlocked? (\rightarrow P. 232)
- Is the electronic key battery weak or depleted? In this case, the hybrid system can be started in a temporary way. (→P. 514)
- Is the 12-volt battery discharged? (\rightarrow P. 516)

The shift lever cannot be shifted from P even if you depress the brake pedal

Is the power switch in ON mode?

If you cannot release the shift lever by depressing the brake pedal with the power switch in ON mode (\rightarrow P. 512)

The steering wheel cannot be turned after the hybrid system is stopped

• It is locked automatically to prevent theft of the vehicle. (\rightarrow P. 232)

586 What to do if... (Troubleshooting)



The windows do not open or close by operating the power window switches

 Is the window lock switch pressed? The power window except for the one at the driver's seat cannot be operated if the window lock switch is pressed. (→P. 180)



The power switch is turned off automatically

 The auto power off function will be operated if the vehicle is left in ACCES-SORY or ON mode (the hybrid system is not operating) for a period of time. (→P. 231)

$\binom{7}{2}$ A warning buzzer sounds during driving

- The seat belt reminder light is flashing Are the driver and the front passenger wearing the seat belts? (→P. 459)
- The parking brake indicator is on
 Is the parking brake released? (→P. 243)

Depending on the situation, other types of warning buzzer may also sound. (\rightarrow P. 457, 466)

587



An alarm is activated and the horn sounds (vehicles with an alarm)

 ● Did anyone inside the vehicle open a door during setting the alarm? The sensor detects them and the alarm sounds. (→P. 93)
 To stop the alarm, turn the power switch to ON mode or start the hybrid system.



A warning buzzer sounds when leaving the vehicle

Is the electronic key left inside the vehicle or the moon roof or panoramic moon roof open?

Check the message on the multi-information display. (\rightarrow P. 466)



A warning light turns on or a warning message or indicator is displayed

 When a warning light turns on or a warning message or indicator is displayed, refer to P. 457, 466.

588 What to do if... (Troubleshooting)

When a problem has occurred



If you have a flat tire

• Stop the vehicle in a safe place and replace the flat tire with the spare tire. $(\rightarrow P. 486)$



The vehicle becomes stuck

● Try the procedure for when the vehicle becomes stuck in mud, dirt, or snow. (→P. 525)

Alphabetical index

Α

.

A/C
Air conditioning filter 426
Front automatic air
conditioning system
Rear automatic air
conditioning system
ABS
(Anti-lock Brake System) 291
Function291
Warning light458
Air conditioning filter 426
Air conditioning system
Air conditioning filter 426
Front automatic air
conditioning system
Rear automatic air
conditioning system

Airbags 41
Airbag operating conditions 49
Airbag precautions for
your child44
Airbag warning light 458
Correct driving posture
Curtain shield airbag
operating conditions
Curtain shield airbag
precautions46
Front passenger occupant
classification system54
General airbag precautions 44
Locations of airbags 41
Modification and
disposal of airbags
Side airbag operating
conditions 49
Side airbag precautions 44
Side and curtain shield
airbags operating
conditions 49
Side and curtain shield
airbags precautions
SRS airbags 41
Alarm
Alarm 93
Warning buzzer 457, 466
Anchor brackets 66
Antennas (smart key
system) 148

589

Anti-lock Brake System

D	
Back door13	4
Back-up lights	
Replacing light bulb 43	4
Wattage 53	
Battery (12-volt battery) 40	7
Battery checking 40	7
If the 12-volt battery is	
discharged51	6
Preparing and checking	
before winter 31	6
Warning light 45	7
Battery (traction battery)8	5
Bluetooth [®]	
Audio system [*]	
Hands-free system*	
(for cellular phone)	
Bottle holders 34	4
Brake	
Fluid53	-
Parking brake 24	3
Warning light 45	7
Brake assist 29	
Break-in tips19	5
Brightness control	
Instrument panel light	
control 10	
BSM (Blind Spot Monitor) 30	4
Blind Spot Monitor	
function30	8
Rear Cross Traffic Alert	
function31	1

C
Care
Aluminum wheels
Exterior
Interior
Seat belts
Cargo hooks 349
CD player [*]
Chains318
Child restraint system62
Booster seats, definition 63
Booster seats, installation 74
Convertible seats,
definition 63
Convertible seats,
installation70
Front passenger occupant
classification system54
Infant seats, definition63
Infant seats, installation70
Installing CRS with
LATCH anchors68
Installing CRS with seat
belts70
Installing CRS with top
tether strap76
Child safety 61
12-volt battery
precautions
Airbag precautions
Back door precautions
Child restraint system
Glass hatch precautions 145
How your child should wear
the seat belt
Installing child restraints 66
Moon roof precautions 186

precautions	191
Power window lock switch	180
Power window precautions	182
Rear door child-protectors	131
Removed electronic key	
battery precautions	429
Seat belt extender	
precautions	. 40
Seat belt precautions	. 39
Seat heater precautions	336
Child-protectors	131
Cleaning 380, 3	
Aluminum wheels	381
Exterior	380
Interior	383
Seat belts	384
Clock	353
Coat hooks	359
Compass	374
Condenser	404
Console box	343
Conversation mirror	352
Cooling system	403
Hybrid system overheating	521
Cruise control	
Cruise control	264
Dynamic radar cruise	
control	
Cup holders	
Curtain shield airbags	
Customizable features	556

*: Refer to "Navigation and Multimedia System Owner's Manual"

D

Daytime running light
system245
Deck board 350
Defogger
Outside rear view mirrors 328
Rear window 328
Windshield 328
Dimensions 528
Dinghy towing228
Display
Drive information 107, 113
Dynamic radar cruise
control269
LDA (Lane Departure
Alert)284
Multi-information
display 107, 111
Warning message 466
Do-it-yourself maintenance 394
Do-it-yoursell maintenance 394
Door lock
-
Door lock
Door lock Doors
Doors
Door lock Doors
Door lock Doors
Door lock Doors
Door lock Doors
Door lock Doors

Driving	194
Break-in tips	195
Correct driving posture	30
Hybrid vehicle driving tips	314
Procedures	194
Winter drive tips	316
Dynamic radar cruise	
control	269

E

Eco drive mode	238
EDR (Event data recorder)	. 11
Electric motor	
(traction motor)	. 81
Electric Power Steering	
(EPS)	292
Function	292
Warning light	458
Electronic key	124
Battery-saving	
function	150
If the electronic key does not	
operate properly	513
Replacing the battery	428
Emergency flashers	450
Emergency, in case of	
If a warning buzzer	
sounds	457
If a warning light turns on	457
If a warning message is	
displayed	466
If the 12-volt battery is	
discharged	516
If the electronic key does	
not operate properly	513
If the hybrid system	
will not start	510

If the shift lever cannot be shifted from P 512 If you have a flat tire 486 If you think something is wrong......456 If your vehicle becomes stuck 525 If your vehicle has to be stopped in an emergency ... 451 If your vehicle needs to be towed......452 If your vehicle overheats...... 521 Energy monitor 117 Engine.....530 ACCESSORY mode230 How to start the hybrid system 229 Identification number 530 If the hybrid system will not start510 Ignition switch (power switch) 229 Power switch......229 Engine coolant......403 Capacity......534 Checking...... 403 Preparing and checking Engine coolant temperature gauge......103

Capacity5	
	32
Checking 4	00
Oil pressure warning light 4	57
Oil pressure warning	
message 4	74
Preparing and checking	
	10
before winter 3	010
Engine switch 3	-
	29
Engine switch 2	29
Engine switch2 Enhanced VSC2	29 91
Engine switch2 Enhanced VSC2 EPS	29 91 92
Engine switch	29 291 292 292
Engine switch	29 291 292 292 58

F

486
28
535
535
406
254
434
254
539
326
339
539
254
434
434 254
254

593

Front personal lights340	
Wattage 539	
Front seats 156	
Adjustment156	
Cleaning	
Correct driving posture	
Head restraints 169	
Seat heaters337	
Seat position memory 165	
Seat ventilators 337	
Front side marker lights244	
Light switch 244	
Replacing light bulbs 434	
Wattage 539	
Front turn signal lights 242	
Replacing light bulbs434	
Turn signal lever242	
Wattage 539	
Fuel 259	
Capacity531	
Fuel gauge103	
Information540	
Refueling259	
Туре259, 531	
Warning light459	
Fuel consumption	
Average fuel	
economy107, 113	
Current fuel	
consumption 107, 113	
Fuel filler door259	
If the fuel filler door	
cannot be opened262	
Refueling259	
Fuses 430	

G

Garage door opener	361
Gauges	103
Glass hatch	144
Glove box	343
Grocery bag hooks	349

		а.
	ы	۰.

Hands-free system	
(for cellular phone)*	
Head restraints 1	169
Headlights	244
Automatic High Beam	
system2	248
Light switch2	244
Replacing light bulbs	134
Wattage	539
Heaters	
Front automatic air	
conditioning system	326
Heated steering wheel	337
Outside rear view mirrors	328
Rear automatic air	
conditioning system	333
Seat heaters	337
High voltage components	
Hill-start assist control	
Hood	
Open	396
Hooks	
Cargo hooks	349
Coat hooks	
Grocery bag hooks	
Retaining hooks (floor mat)	
Horn 1	173
Hybrid battery	
(traction battery)	85
Hybrid battery	
(traction battery) air vent	86

Hybrid system81
Emergency shut off system 86
Energy monitor/
consumption screen 117
EV drive mode235
High voltage components 85
Hybrid System Indicator 105
Hybrid system precautions 85
Hybrid vehicle driving tips 314
If the hybrid system
will not start 510
Overheating 521
Power (ignition) switch
Starting the hybrid system 229
Vehicle proximity notification
system 84
Hybrid System Indicator 105
Hybrid transmission
If the shift lever cannot be
shifted from P 512
S mode239

П

I/M test	23
Identification	
	-
Engine53	
Vehicle	29
Ignition switch	
(power switch)22	29
Illuminated entry system 34	11
Immobilizer system	91
Indicators10)1
Initialization	
Maintenance 38	37
Moon roof18	35
Panoramic moon roof18	39
Power back door13	39
Power windows18	31
Tire pressure	
warning system41	14

Inside rear view mirror	175
Interior lights	339
Switch	340
Wattage	539
Intuitive parking assist*	

595

J

Jack	
Positioning the jack	398
Vehicle-equipped jack	487
Jack handle	487
Jam protection function	
Moon roof	. 184
Panoramic moon roof	189
Power back door	. 138
Power window	. 180

K

Keyless entry
Smart key system 128
Wireless remote
control 129, 135
Keys124
Battery-saving function 150
Electronic key 124
Engine switch 229
If the electronic key does not
operate properly 513
If you lose your keys 125
Key number plate 124
Keyless entry 128
Mechanical key 125
Power switch 229
Replacing the battery 428
Warning buzzer 149
Wireless remote control
key 124
Knee airbags 41

*: Refer to "Navigation and Multimedia System Owner's Manual"

L
Lane Departure Alert (LDA) 283
Language
(multi-information
display)109, 114
LATCH anchors68
LDA (Lane Departure Alert) 283
Lever
Auxiliary catch lever
Hood lock release lever 396
Shift lever237
Tilt and telescopic steering
lock release lever 173
Turn signal lever242
Wiper lever 255, 257
License plate lights 244
Light switch 244
Replacing light bulbs
Wattage 539
Light bulbs
Replacing434
Wattage 539
Lights
Automatic High Beam
system 248
Fog light switch 254
Headlight switch244
Illuminated entry system 341
Interior lights 340
Interior lights list
Luggage compartment
light137
Personal lights 340
Replacing light bulbs434
Turn signal lever
Vanity lights 351
Wattage 539
Lock steering column173
Luggage compartment
light
Wattage 539

Μ

Maintenance	
Do-it-yourself maintenance	394
General maintenance	389
Maintenance data	528
Maintenance	
requirements	386
Malfunction indicator lamp	457
Master warning light	459
Meter	103
Indicators	101
Instrument panel light	
control	104
Meters	103
Multi-information display	
(with color display)	111
Multi-information display	
(with monochrome	
display)	107
Warning lights	. 99
Mirrors	
Inside rear view mirror	175
Outside rear view mirror	
defoggers	328
Outside rear view mirrors	
Vanity mirrors	351
Moon roof	183
Door lock linked	
moon roof operation	184
Jam protection function	
Operation	183
MP3 disc [*]	

Multi-information display

(with color display)111
Audio system-linked111
Driving information113
Dynamic radar cruise
control269
Energy monitor 117
LDA
(Lane Departure Alert) 284
Navigation system-linked 111
Settings display114
Switching the display112
Warning message 466
Multi-information display
(with monochrome display)
Driving information107
Settings display109
Warning message 466

Ν

0

Outside temperature

display...... 353 Overheating, Hybrid system... 521

Ρ

Panoramic moon roof 187
Jam protection function 189
Operation187
Parking assist sensors
(intuitive parking assist) *
Parking brake243
Operation243
Parking brake engaged
warning buzzer 472
Parking brake engaged
warning message 472
Parking lights 244
Light switch 244
Replacing light bulbs 434
Wattage 539
PCS
(Pre-Collision System) 297
Function297
PCS OFF switch 298
Warning light 458
Personal lights 340
Wattage 539
Power back door 134
Power control unit85
Power control unit coolant 403
Capacity 534
Checking 403
Preparing and checking
before winter 316
Power outlets 354
Power steering
(Electric power steering) 292
Warning light 458
Power switch 229

*: Refer to "Navigation and Multimedia System Owner's Manual"

597

Power windows179
Door lock linked
window operation 181
Jam protection function 180
Operation 179
Window lock switch 180
Pre-Collision System
(PCS) 297
Function 297
PCS OFF switch 298
Warning light 458

R

Radar cruise control (dynamic
radar cruise control)
Radiator 404
Radio [*]
Rear automatic air
conditioning system
Rear personal lights 340
Wattage 539
Rear seat 158
Adjustment158
Folding down 160, 162
Rear seat entertainment
system [*]
Rear side marker lights 244
Light switch 244
Replacing light bulbs434
Wattage 539
Rear sunshade357
Rear turn signal lights242
Replacing light bulbs434
Turn signal lever
Wattage 539
Rear view mirror
Inside rear view mirror 175
Outside rear view mirrors 177
Rear view monitor system [*]
Rear window defogger 328
Rear window wiper 257
•

Refueling	259
Capacity	531
Fuel types 259,	531
If the fuel filler door	
cannot be opened	262
Opening the fuel tank cap	261
Replacing	
Electronic key battery	428
Fuses	430
Light bulbs	434
Tires	486
Reporting safety defects	
for U.S. owners	570
Reset the maintenance	
data	387
Road accident cautions	. 89
Roof rails	208

HIGHLANDER_HV_U (OM48F02U)

50

S
Safety Connect 368
Seat belt reminder light 459
Seat belts32
Adjusting the seat belt
Automatic Locking
Retractor36
Child restraint system
installation70
Cleaning and maintaining
the seat belt384
Emergency Locking
Retractor36
How to wear your seat belt 30
How your child should wear
the seat belt37
Pregnant women, proper
seat belt use 38
Reminder light and buzzer 459
Seat belt extender37
Seat belt pretensioners
SRS warning light 458
Seat heaters 337
Seat position memory 165
Seat ventilators337
Seating capacity 210
Seats 156, 158
Adjustment156, 158
Adjustment
precautions157, 164
Child seats/child restraint
system installation
Cleaning384
Driving position memory 165
Head restraints 169
Properly sitting in the seat 30
Seat heaters
Seat position memory 165
Seat ventilators

Sensor

Automatic headlight
system246
Automatic High Beam
system 253
Inside rear view mirror 176
LDA (Lane Departure
Alert) 283
Radar sensor 278, 298, 307
Service plug85
Shift lever 237
Hybrid transmission
If the shift lever cannot
be shifted from P 512
S mode 239
Shift lock system512
Shopping bag hooks 349
Side airbags 42
Side marker lights 244
Light switch 244
Replacing light bulbs 434
Wattage 539
Side mirrors 177
Adjusting and folding 177
BSM (Blind Spot Monitor) 304
Mirror position memory 165
Side table 360
Side turn signal lights 242
Replacing light bulbs 447
Turn signal lever 242
Smart key system 148
Antenna location148
Entry functions128
Starting the hybrid system 229
Warning message 482
Snow tires 319
Spare tire 486
Inflation pressure 536
Storage location 487
Spark plug534
Specifications 528

*: Refer to "Navigation and Multimedia System Owner's Manual"

Speedometer 103
Steering wheel 173
Adjustment173 Audio switches [*]
Audio switches [*]
Stop/tail lights
Replacing light bulbs434
Wattage 539
Storage feature 342
Stuck
If the vehicle becomes
stuck525
Sun visors351
Sunshade
Panoramic roof187
Rear357
Roof 184
Switches
Audio remote control switches \star
Automatic High Beam
switch248
Back door opener switch 135
BSM (Blind spot monitor)
switch304
Cruise control switch264
Door lock switches130
Driving position memory
switches165
Dynamic radar cruise
control switch269
"ECO MODE" switch
Emergency flashers
switch 450
EV drive mode switch
Fog light switch 254
Garage door opener
switches361
Heated steering wheel
switch337
Ignition switch
LDA (Lane Departure Alert)
switch
Light switches244
Meter control switches 112

Moon roof switches 183
Outside rear view mirror
switches 177
Panoramic moon roof
switches 187
PCS OFF switch 298
Power back door main
switch 136
Power back door opener
and closer switch 134
Power door lock switch 130
Power switch 229
Power window switches 179
Rear window and outside
rear view mirror
defoggers switch 328
Rear window wiper and
washer switch257
Seat heater switches 337
Seat ventilator switches 337
"SOS" button 368
Steering wheel switch 112
Talk switch*
Telephone switches*
Tire pressure warning reset
switch 414
Vehicle-to-vehicle distance
button 269
VSC OFF switch 293
Window lock switch 180
Windshield wipers
and washer switch 255

HIGHLANDER_HV_U (OM48F02U)

601

т
Tachometer 103
Tail lights244
Light switch 244
Replacing light bulbs 434
Wattage 539
Talk switch [*]
Telephone switches [*]
Theft deterrent system
Alarm93
Immobilizer system
Theft prevention labels96
Tire inflation pressure
Maintenance data 536
Warning light459
Tire information543
Glossary550
Size546
Tire identification number 545
Uniform Tire Quality
Grading548
Tire pressure warning
system413
Function413
Initializing413
Installing tire pressure
warning valves
and transmitters413
Registering ID codes
Tire pressure warning reset
switch414
Warning light459

Tires	. 412
Chains	. 318
Checking	. 412
If you have a flat tire	. 486
Inflation pressure	. 536
Information	. 543
Replacing	. 486
Rotating tires	. 412
Size	. 536
Snow tires	. 319
Spare tire	. 486
Tire pressure warning	
system	. 413
Warning light	. 459
Tools	. 487
Top tether strap	76
Towing	
Dinghy towing	. 228
Emergency towing	. 452
Trailer towing	. 211
TRAC (Traction Control)	. 291
Traction battery	
(hybrid battery)	
Traction Control (TRAC)	. 291
Traction motor	
(electric motor)	
Trailer towing	
Transmission	-
Hybrid transmission	. 237
If the shift lever cannot be	
shifted from P	
S mode	
Turn signal lights	
Replacing light bulbs	
Turn signal lever	
Wattage	. 539

*: Refer to "Navigation and Multimedia System Owner's Manual"

U USB port^{*}

Vanity mirrors
VDIM (Vehicle Dynamics
Integrated Management) 292
Vehicle data recordings 10
Vehicle Dynamics Integrated
Management (VDIM) 292
Vehicle identification
number529
Vehicle Stability Control
(VSC)
Ventilators
(seat ventilators)
Voice command system [*]
VSC (Vehicle Stability
Control)291

W

Warning buzzers	
Brake system 457	,
Downshifting 240)
Electric power steering	
system458	3
Key reminder 482)
Open back door 459)
Open door459)
Open glass hatch459)
Open moon roof459)
Seat belt reminder459)

Warning lights	99
ABS	458
Brake system	457
Charging system	457
Electric power steering	
system	
Low engine oil pressure	
Low fuel level	
Malfunction indicator lan	np 457
Master warning light	
Open back door	
Open door	
Open glass hatch	
Open moon roof	
Pre-collision system	
Seat belt reminder light.	
Slip indicator	
SRS	
Tire pressure	
Warning messages	
Washer	
Checking	406
Preparing and checking	
before winter	
Switch	-
Washing and waxing	380
Weights	
Cargo capacity	
Load limits	
Weights	
Wheels	
Replacing	
Size	
Window glasses	
Window lock switch	180

HIGHLANDER_HV_U (OM48F02U)

Windows179Power windows179Rear window defogger328Windshield wiper de-icer329Windshield wipers255Intermittent wiper255Winter driving tips316Wireless remote controlkeykey124Battery-saving150Locking/Unlocking129Replacing the battery428WMA disc*

*: Refer to "Navigation and Multimedia System Owner's Manual"

