

# LAND CRUISER **PRADO**



# **TABLE OF CONTENTS**

Off-road driving guide

Precautions and notices that you must read before driving off-road.

Off-road driving techniques

Techniques necessary for off-road driving.

Off-road driving assistance functions

Functions that can assist with off-road driving.

Index

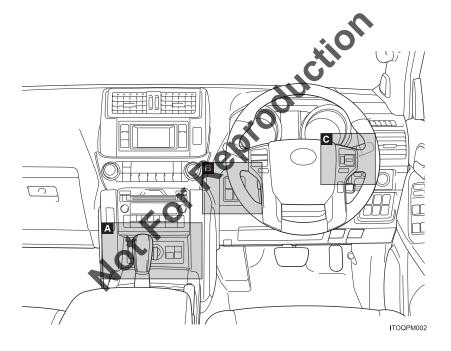
Alphabetical listing of information contained in this man-

This manual only contains information about off-road driving techniques and off-road assistance functions. Refer to the Owner's Manual" for other information regarding your vehicle.

	Off-road driving guide		Off-road driving assistance functions
-1	Points to note before driving off-road 14	3-1.	Using off-road driving systems  Multi-terrain Select
2	Off-road driving techniques		Multi-terrain Monitor
?-1	Things to do before setting off	3-2.	AVS (Adaptive Variable Suspension System)
	40		Index
			Abbreviation list 156
			Alphabetical index 157

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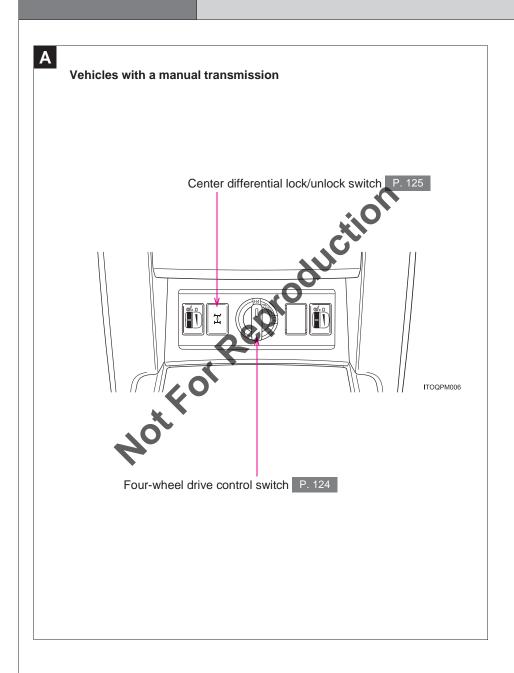
# Instrument panel



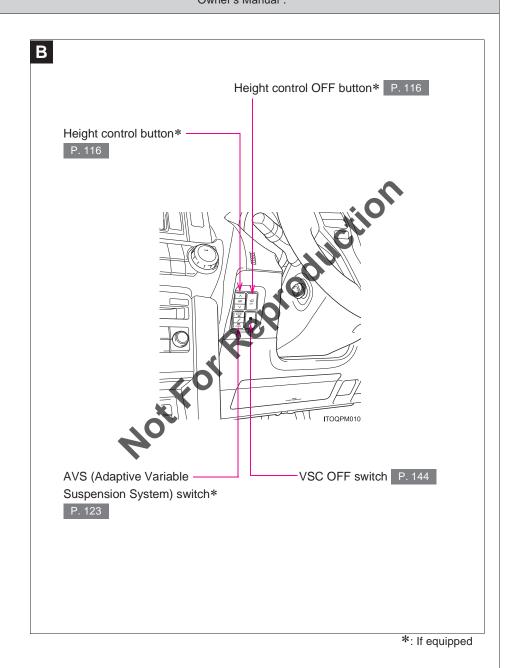
This manual only contains information about equipment that is used in off-road driving. For information regarding other equipment, refer to the "Owner's Manual".

# Vehicles with an automatic transmission Rear differential lock/unlock switch\* P. 130 Center differential Crawl Control lock/unlock switch P. 125 ITOQPM005 -wheel drive control switch P. 124 DAC (Downhill Assist Control) switch\* P. 138 \*: If equipped

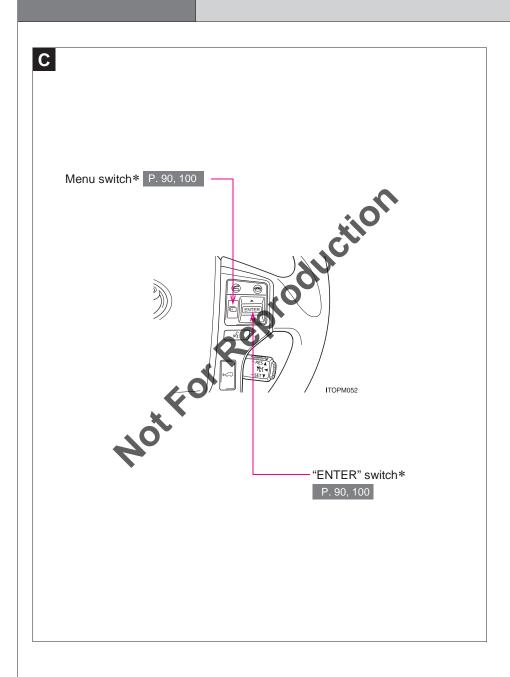
# Instrument panel



This manual only contains information about equipment that is used in off-road driving. For information regarding other equipment, refer to the "Owner's Manual".



# Instrument panel



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\*: If equipped

# For your information

# Main Off-road Driving 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 equipment.

# 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. Using these spare parts and accessories which are not genuine Toyota products may adversely affect the safety of your vehicle, even though these parts may be approved by certain authorities in your country. Toyota therefore cannot accept any liability or guarantee spare parts and accessories which are not genuine Toyota product, nor for replacement or installation involving such parts.

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

As the installation of a mobile two-way radio system in your vehicle may affect electronic systems such as the multi-port fuel injection system/sequential multi-port fuel injection system, cruise control system, anti-lock brake system, SRS airbag system and seat belt pretensioner system, be sure to check with your Toyota dealer for precautionary measures or special instructions regarding installation.

# 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.

# **A** CAUTION

# General precautions while driving

Driving under the influence: Never drive your vehicle with 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 you 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.

# Symbols used throughout this manual

# **Cautions & Notices**

# **A** CAUTION

This is a warning against something which, if ignored, may cause death or serious injury to people. You are informed about what you must or must not do in order to reduce the risk of death or serious injury to yourself and others.

# NOTICE

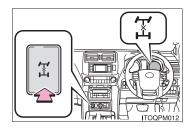
This is a warning against something which, if ignored, may cause damage to the vehicle or its equipment. You are informed about what you must or must not do in order to avoid or reduce the risk of damage to your Toyota and its equipment.

# Symbols used in illustrations



# Safety symbol

The symbol of a circle with a slash through it means "Do not", "Do not do this", or "Do not let this happen".



# **Arrows indicating operations**

indicates the action (pushing, turning, etc.) used to operate switches and other devices.

1-1. Things you shall read first
Points things
before in ving off-road ...... 14

# 1-1. Things you should read first

# Points to note before driving off-road

# Read the following before driving off-road.



# **A** CAUTION

# ■ Before driving off-road

When driving off-road, you do so at your own risk.

Be sure to read each part of this manual, and to pay close attention to safety while driving.

# Advice for off-road driving

Off-road driving is inherently dangerous.

In some cases, the vehicle may be seriously damaged, and the driver and occupants could be killed or seriously injured.



# **NOTICE**

# About off-road driving

Observe the following precautions when driving off-road.

- Drive your vehicle only in areas where off-road vehicles are permitted to
- 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.

Off-road driving techniques

2

# 2-1. Off-road driving techniques

	I nings to ac	
	before setting off	. 16
	Basic off-road driving	
	teshniques	. 2′
N.	Driving styles in various conditions	. 30
2ek	If your vehicle becomes stuck while driving	
. 1	off-road	. 78
Lot	After driving off-road	. 85
"OL)		
H		

# Things to do before setting off

This section gives details of preparations that should be undertaken and things to know before setting off on an off-road course.

# Understand the physical dimensions of your vehicle

When driving off-road, certain types of terrain and objects may be unpassable depending on the driving line you take.

Before driving off-road, understand the dimensions of your vehicle and the positions of the tires so that you can take the driving line you want. Doing so will allow for a smoother drive. roducti

# About tires

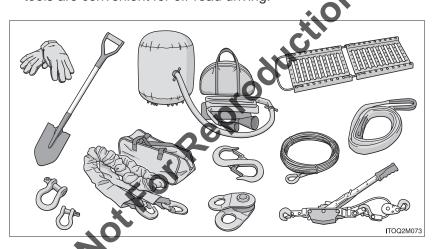
Check and prepare the following.

# ■ Wheel and tire check

Inspect the conditions of the wheels and tires before driving offroad. At the same time, check that the tire inflation pressure is within the recommended level. Refer to the "Owner's Manual" for inspection instructions and tire inflation pressure specifications.

# **About Luggage**

- Remove any unnecessary items from the interior pockets or the luggage compartment. Firmly secure any needed items to prevent them from moving around during driving.
- Following your driving plan, prepare all necessary rescue tools (such as a shovel, ropes for freeing the vehicle when stuck, maps, flashlights, etc.) and load them into the vehicle. Refer to P. 80 or to specialized handbooks for information regarding which rescue tools are convenient for off-road driving.



About Fuel

Check that there is an appropriate amount of fuel remaining for your driving plan. Add fuel beforehand if you think that refueling will be difficult at your driving location.

# **Vehicle inspection**

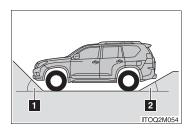
Conduct regular checks as you would for everyday driving, and check that all lights and indicators are working and that the brakes are effective. If you discover an abnormality, have the vehicle inspected by your Toyota dealer as soon as possible.

For scheduled maintenance information, refer to the "Warranty and Service Booklet".

# ■When driving in severe conditions

If regularly driving in severe off-road conditions such as crossing rivers, driving in mud or sand, etc., conduct the checks on the following page without fail. ( $\rightarrow$ P. 85)

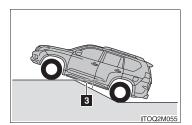
# **■** Clearance dimensions and incline angles



Approach angle Gives a rough indication of whether or not the front bumper will contact the ground when crossing obstructions or an incline.

# Departure angle Gives a rough indication of whether or not the rear bumper will contact the ground when crossing obstructions or an incline.

3 Ramp breakover angle Gives a rough indication of whether or not the bottom of the vehicle will contact the ground when crossing obstructions or the peak of an incline.



1 5 ITO02M075

- Maximum side tilt angle
- 5 Maximum climbing angle

# **CAUTION**

# Physical dimensions of the vehicle

Understand the dimensions of your vehicle before driving off-road. If you drive off-road without doing so, you may not be able to follow your intended driving line, and cause the vehicle to become stuck or could result in death or serious injury.

# Objects inside the vehicle

- Firmly secure all items. If not firmly secured, items may move or be propelled while driving and could cause an accident, possibly resulting in death or serious injury.
- Drive cautiously when carrying luggage on the roof. Driving with luggage on the roof will raise the vehicle's center of gravity, which could cause the vehicle to lose balance and roll over, resulting in damage to the vehicle, or in death or serious injury.



If the remaining fuel level is low

Avoid off-road driving Avoid off-road driving. Driving on undulating or severely sloping roads may cause problems with the fuel supply, and the fuel system may be damaged.

# **Basic off-road driving techniques**

This section outlines information you should know when driving offroad.

Refer to the "Owner's Manual" for information on basic vehicle operations such as starting the engine, operating the shift lever, etc.

# Things to check before driving off-road

Check the following points before driving off-road:

# ■ Avoid traveling alone

It is a good idea to travel with at least one other vehicle, so that emergency situations, such as the vehicle becoming stuck, can be dealt with easily. Also, carrying rescue equipment in the vehicle is recommended. ( $\rightarrow$ P. 80)

# ■ Confirm the minimum ground clearance

Confirm that the suspension components and the front and rear bumpers do not make contact with the ground while driving. Before driving, plan a route that will not cause the lower parts of the vehicle to make contact with the road surface and, whenever possible, avoid any obstacles that look as though they may make contact.

# ■ Correct posture for off-road driving

→Refer to the "Owner's Manual"

# Points to note while driving off-road

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When driving off-road, observe the following points and conduct shift changes and deceleration appropriately.

# ■ Selecting a shift position

 Different shift positions are appropriate for different road surface conditions.

Refer to the "Driving styles in various conditions". ( $\rightarrow$ P. 30) For shift position selection procedure, refer to the "Owner's Manual".

Avoid shift changes when driving on sand or other yielding surfaces.

Loss of speed by changing ship position on such high-resistance surfaces may cause the vehicle to become stuck.

# ■ When accelerating

Operate the accelerator pedal cautiously and with discretion. Rapid acceleration could cause you to lose control of the vehicle.

# When decelerating

Operate the brake pedal cautiously while using the engine brake. In the event that strong engine braking is necessary, you can shift to the slower shift position.

# ■ Steering wheel operation



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.

# ■ Turning the steering wheel

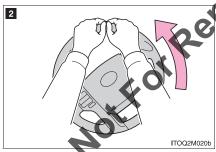
Push-pull steering is often used when driving off-road.

This method assists with proper steering wheel operation because the steering wheel is held for long periods of time, and is also suitable when driving at medium to low speeds.

When turning the steering wheel to the left.



Turn the steering wheel using your right hand.



Slide your left hand on the steering wheel until your hands touch on the upper part of the steering wheel.



3 Turn the steering wheel with your left hand, sliding your right hand on the steering wheel. Then, return to the position shown in 1.

# Using the off-road functions

Utilize the following off-road functions to help enhance safety while driving off-road and to improve drivability in each road condition.

- Multi-terrain Select (if equipped) (→P. 90)
  Select different modes suited to various types of terrain when driving off-road.
- Multi-terrain Monitor (if equipped) (→P. 100)
  Use to observe road conditions and obstacles around the vehicle when driving off-road.
- Four-wheel drive control switch (→P. 124)

  Switch the transfer position with this switch in accordance with road conditions.
- Center differential lock (→P. 124)

  Use when the vehicle is stuck of when traction is otherwise necessary.

The center differential lock can be used by pressing the center differential lock/unleck switch regardless of the transfer position.

Make sure that the center differential is unlocked when not needed.

# $\blacksquare$ Rear differential lock (if equipped) ( $\rightarrow$ P. 130)

Use when a large amount of traction is needed, such as when the vehicle is stuck and cannot be freed even by using the center differential lock.

The rear differential lock can be operated only when the fourwheel drive control switch is in L4 and the center differential is locked.

Make sure that the rear differential is unlocked when not needed.

# ■ Crawl Control (if equipped) (→P. 133)

Crawl Control may assist with driving comfort when switched ON in the following situations. When driving

- When driving uphill or downhill
- When crossing rivers
- When driving in deep snow
- When freeing the vehicle from a stuck position
- Rear height control air suspension (if equipped) (→P. 116) Switch to match the road surface conditions or driving conditions.
- AVS (Adaptive Variable Suspension System) (if equipped) (→P. 123)

Switch to match the road surface conditions or driving conditions.

- Downhill assist control (if equipped) (→P. 138) Use on severely downward sloping roads.
- Hill start assist control (if equipped) (→P. 141) This function gives assistance when starting off on a hill. It will operate automatically when needed.
- KDSS (Kinetic Dynamic Suspension System) (if equipped) (→P. 141)

This function helps keep contact between the tires and the road surface by controlling the suspension stabilizers. It will operate automatically when needed.

# ■ Using the audio system

Avoid playing a CD while driving on rugged or precipitous courses. Vibrations and charles are Mot For Belo tions and shocks may cause the CD to skip.

# **CAUTION**

# Precautions when driving off-road

Always observe the following precautions to minimize the risk of death, serious injury or damage to your vehicle:

- Make sure that all occupants are sitting in the correct posture and are wearing their seatbelts.
  - See P. 22 for the correct driving posture. For seatbelt use, refer to the "Owner's Manual".
- Avoid sudden acceleration, braking or turning of the steering wheel. You may lose control of the vehicle and cause the vehicle to roll over.
- Do not jump the vehicle. Doing so may damage the underside of the vehicle to roll over.
- Do not intentionally drive into objects.
- Reduce speed in strong crosswinds. Crosswinds may cause the vehicle to roll over due to the vehicle's high center of gravity.
- Make sure that all windows the glass hatch and the moon roof\* are closed.

# ■ When exiting the vehicle while stopped sideways on an incline

Avoid exiting the vehicle while stopped on an incline. If you need to exit, use the uphill-facing door. If you try to exit using the downhill-facing door, the chances of the vehicle rolling over will increase. As a result, the vehicle may roll onto you and could result in death or serious injury.

# ♠ NOTICE

# ■When driving off-road



Take care not to put your thumbs on the inside of the steering wheel. Driving in ruts or over rocky terrain may cause the steering wheel to move, and may injure your thumbs. Be especially careful on severely undulating roads.

# ■Precautions before driving off-road

Drive after making sure that the underside of the vehicle will not make contact with the road surface. Whenever possible, avoid areas that will cause contact.

Failure to do so may cause the vehicle to become immovable, or the underside of the vehicle may be damaged causing the vehicle to become unable to be driven.

# If ground effects parts are equipped

The minimum ground clearance will be lower than on standard vehicles, and the ground effects parts may be damaged by off-road driving.

Check the ground clearance before driving off-road.



# 2-1. Off-road driving techniques **Driving styles in various conditions**

This section outlines the points of concern, driving styles and precautions corresponding to each type of typical off-road driving condition.

Make sure to read each description carefully before driving, and observe the precautions.

Title	Page
Driving on muddy roads	P. 31
Driving on sand	P. 34
Driving on rubble	P.36
Driving on moguls	P. 38
Driving on rocky terrain	P. 41
Driving through undergrowth	P. 44
Driving on dirt roads	P. 46
Driving in deep snow	P. 47
Crossing rivers	P. 49
Driving on uneven surfaces	P. 52
Crossing grooved areas	P. 55
Driving across inclines	P. 58
Driving through V-shaped ditch	P. 60
Driving uphill	P. 62
Driving downhill	P. 66
Driving on roads with ruts	P. 70

# **Driving on muddy roads**

# ■ Driving style



- To prevent the tires from spinning, depress the accelerator pedal as lightly as possible when starting off.
- Drive at a low speed and avoid use of the foot brake as much as possible.
- Find a steering position which allows the vehicle to move straight.
  - move in the direction in which the steering wheel is turned. Driving with the steering wheel turned may cause increased driving resistance and may also increase the possibility of the vehicle becoming stuck.

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- If the vehicle does not move in the direction in which the steering wheel is turned, avoid unreasonable steering handle the steering wheel after the tires grip the ground.
- If the tires begin to spin, move the steering left and right or apply varying amounts of force to the accelerator pedal to find the point where the tires grip the ground.

# ■ When stopping the vehicle

- Stop on as flat a surface as possible with shallow mud.
- When stopping on an incline, point the front of the vehicle downhill to reduce the risk of rolling over.

# ■ When driving uphill or downhill Not For

→P. 62, 66

# ■ Selecting shift position and other settings

When driving on muddy roads, apply settings as shown in the following table.

Item		Selection suitable for road type	
Shift position	Automatic transmission	Driving in D is possible, but select a gear that allows a constant speed to be maintained (in most situations, 2 or 3 range of S mode)	
	Manual transmission	2 or 3	
Four-wheel drive control switch		Select H4 if the mid is less than 20 cm (7.9 in.) deep, otherwise select L4	
Center differential lock/ unlock switch		In most situations, select unlock When the vehicle is stuck, select lock	
Rear differe	ntial lock*	In most situations, select unlock  If unable to free the vehicle even when the center differential is locked, select lock	
Multi-terrain Select*		MUD & SAND	
Crawl Contr	ol*	Not ordinarily used When the vehicle is stuck, switching ON may make freeing the vehicle easier	

# ■ When the vehicle is stuck

→P. 78

# ■ If the treads are muddy

Tire grip will worsen. In this event, it is possible to spin the tires intentionally to expel the mud that is collected in the treads, and then drive while maintaining tire grip.

# **Driving on sand**

# ■ Driving style



- Depress the accelerator pedal as lightly as possible.
- Select a shift position appropriate to the traction, and operate the accelerator pedal in a way that allows you to maintain a constant speed.
- On vehicles with a manual transmission, conduct shift changes quickly and select a gear that will allow you to maintain a constant speed.

# ■ When stopping the vehicle?

- Stop on as flat a surface as possible.
- When stopping on an incline, point the front of the vehicle downhill to reduce the risk of rolling over.
- Stop slowly while being careful not to form a wall of sand around the front and rear of the tires.

# ■ When driving uphill or downhill

→P. 62, 66

# ■ Selecting shift position and other settings

When driving on sand, apply settings as shown in the following table.

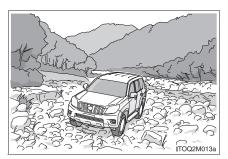
Item		Selection suitable for road type
Shift position	Automatic transmission	Driving in D is possible, but select a gear that allows a constant speed to be maintained (in most situations, 2, 3 or 4 range of S mode)
	Manual transmission	2, 3 or 4
Four-wheel drive control switch  Center differential lock/ unlock switch		In most situations, select H4 and try to maintain a constant speed while driving Select L4 if unable to maintain a constant speed
		In most situations, select unlock Wher traction is required, such as when driving uphill, select lock
Rear differential lock*		Unlock
Multi-terrain Select*  Crawl Control*		MUD & SAND
		Not ordinarily used When the vehicle is stuck, switching ON may make freeing the vehicle easier

# ■ When the vehicle is stuck

→P. 78

#### **Driving on rubble**

#### ■ Driving style



To prevent the tires from spinning, depress the accelerator pedal as lightly as possible when starting off.

**Jetion** 

## ■ When stopping the vehicle

- Stop on as flat a surface as possible.
- When stopping on an incline, point the front of the vehicle downhill to reduce the risk of rolling over.

## ■ When driving uphill or downhill

- The tires can easily become buried when driving uphill. Select a high shift position and ascend without stopping and while maintaining a slightly high speed.
- On vehicles with a manual transmission, conduct shift changes quickly. Once the vehicle reaches enough speed to climb, remain in a constant gear, and climb the hill without stopping.
- Also see P. 62, 66.

When driving on rubble, apply settings as shown in the following table.

Item		Selection suitable for road type
Shift position	Automatic transmission	Driving in D is possible, but select a gear that allows a constant speed to be maintained (in most situations, 2, 3 or 4 range of S mode)
	Manual transmission	2, 3 or 4
Four-wheel switch	drive control	L4
Center differential lock/ unlock switch		In most situations, select unlock When traction is required, such as when driving uphil, select lock
Rear differential lock*		In most situations, select unlock When traction is required, such as when driving uphill, select lock (the center differ- ential must be locked)
Multi-terrain Select*		LOOSE ROCK
Crawl Control*		Not ordinarily used When switched ON, may make downhill driving more comfortable

#### **Driving on moguls**

#### ■ Driving style



- To prevent the tires from spinning, depress the accelerator pedal as lightly as possible when starting off.
- Drive slowly and carefully, ensuring that the underside of the vehicle does not make contact with the road surface.
- Take care not to drive over the top of a hump.

End a driving line that will allow you to keep at least 3 wheels (or 4 wheels) in contact with the ground as much as possible.

Drive along an estimated line that allows the inner rear wheel to trace around the depressions of the moguls.

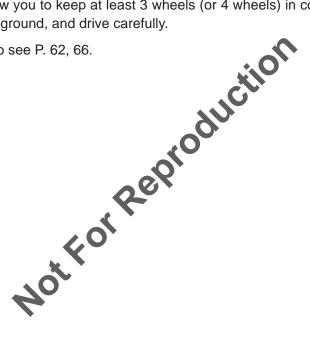
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#### ■ When stopping the vehicle

- Stop on as flat a surface as possible.
- When stopping on an incline, point the front of the vehicle downhill to reduce the risk of rolling over.

#### ■ When driving uphill or downhill

- When driving uphill or downhill also, find a driving line that will allow you to keep at least 3 wheels (or 4 wheels) in contact with the ground, and drive carefully.
- Also see P. 62, 66.



When driving on moguls, apply settings as shown in the following table.

Item		Selection suitable for road type
Shift position	Automatic transmission	Driving in D is possible, but select a gear that allows a constant speed to be maintained (in most situations, 1 or 2 range of S mode)
	Manual transmission	1 or 2
Four-wheel switch	drive control	L4
Center differential lock/ unlock switch		In most situations, select unlock Select lock in situations where it is easy for the vehicle to become stuck
Rear differential lock*		In most situations, select unlock Select lock in situations where it is easy for the vehicle to become stuck (the center dif- ferential must be locked)
Multi-terrain Select*		MOGUL
Crawl Control*		Not ordinarily used When switched ON, may make uphill or downhill driving more comfortable

#### ■When the vehicle is stuck

→P. 78

# ■If traction is lost when the tires of opposing corners do not make contact with the ground

Change your driving line, move the steering wheel left and right to find the point where the tires grip the ground.

#### Driving on rocky terrain

#### ■ Before driving



As driving on rocky terrain can be very difficult, it is strongly recommended that you travel with at least one other vehicle.

Also, follow the lead of someone with experience driving over such terrain.

## ■ Driving style

- Choose a driving line with the tires on the rocks so that the underside of the vehicle does not make contact with the ground.
- Use the brake and accelerator pedals to drive at a slow and careful speed.

#### When driving uphill or downhill

- When driving uphill, set the four-wheel drive control switch to L4. shift the shift lever to 1 or 2 range of S mode (automatic transmission) or 1 or 2 (manual transmission) and use the brake and accelerator pedals to drive at a slow and careful speed. The Crawl Control\* may also assist with driving.
- When driving downhill, set the four-wheel drive control switch to L4, shift the shift lever to 1 or 2 range of S mode (automatic transmission) or 1 or 2 (manual transmission), use the foot brake and drive slowly and carefully taking care not to allow the wheels to lock.

The downhill assist control\* or Crawl Control\* may also assist with driving.

- Choose a driving line where the tires are on the rocks and that Not For Rep travels straight up or down inclines
- Also see P. 62, 66.

When driving on rocky terrain, apply settings as shown in the following table.

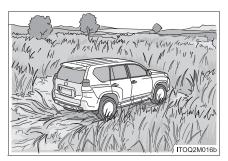
Item		Selection suitable for road type
Shift position	Automatic transmission	Driving in D is possible, but select a gear that allows a constant speed to be maintained (in most situations, 1 or 2 range of S mode)
	Manual transmission	1 or 2
Four-wheel switch	drive control	L4
Center differential lock/ unlock switch		In most situations, select unlock Select lock in situations where it is easy for the vehicle to become stuck
Rear differential lock*		In most situations, select unlock Select lock in situations where it is easy for the vehicle to become stuck (the center dif- ferential must be locked)
Multi-terrain Select*		ROCK
Crawl Control		Not ordinarily used When switched ON, may make driving on terrain where the underside of the vehicle is likely to make contact with the ground, and uphill or downhill driving more comfort- able

#### ■ When the vehicle is stuck

→P. 78

## **Driving through undergrowth**

#### ■ Driving style



- Choose a driving area which is relatively clear of undergrowth.
  - If unavoidable, drive slowly as you use your tires to flatten the undergrowth.
- If the bumpiness of the road surface cannot be determined due to its covering of undergrowth, drive slowly and carefully while paying attention to the inclination of the vehicle.
- If you need to back up after the undergrowth has been flattened, drive while steering to avoid becoming entangled in undergrowth.

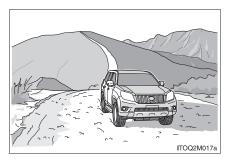
■ When driving uphill or downhill →P. 62, 66

When driving through undergrowth, apply settings as shown in the following table.

Item		Selection suitable for road type
Shift position	Automatic transmission	Driving in D is possible, but select a gear that allows a constant speed to be maintained (in most situations, 1 or 2 range of S mode)
	Manual transmission	1 or 2
Four-wheel drive control switch		L4
Center differential lock/ unlock switch		In most situations, select unlock Select lock in situations where it is easy for the vehicle to become stuck
Rear differential lock*		In most situations, select unlock select lock in situations where it is easy for the vehicle to become stuck (the center dif- ferential must be locked)
Multi-terrain Select*		LOOSE ROCK
Crawl Control*		Not ordinarily used

# Driving on dirt roads

#### ■ Driving style



Since dirt road surfaces can be slippery, avoid sudden acceleration, braking or turning of the steering wheel, and drive cautiously.

# ■ When driving uphill or downhill

 $\rightarrow$ P. 62, 66

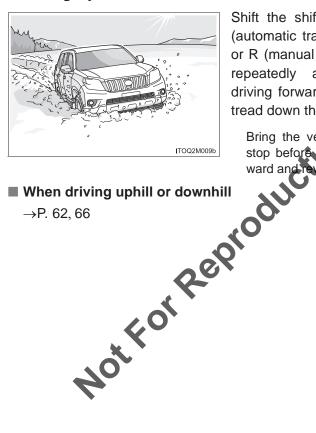
# oduction ■ Selecting shift position and other settings

When driving on dirt roads, apply settings as shown in the following table.

Item		Selection suitable for road type
Shift position	Automatic transmission	D
	Manual transmission	Select a gear that is suitable for the vehicle speed
Four-wheel drive control switch		H4
Center differential lock/ unlock switch		Unlock
Rear differential lock*		Unlock
Multi-terrain Select*		MUD & SAND
Crawl Control*		Not used

#### Driving in deep snow

#### Driving style



Shift the shift lever to D or R (automatic transmission) or 2, 3 or R (manual transmission), and repeatedly alternate between driving forward and reversing to tread down the snow.

Bring the vehicle to a complete stop before shifting between forward and reverse gears.

#### ■ When driving uphill or downhill

 $\rightarrow$ P. 62, 66

# 47

When driving in deep snow, apply settings as shown in the following table.

Item		Selection suitable for road type
Shift	Automatic transmission	D or R
position	Manual transmission	2, 3 or R
Four-wheel drive control switch		In most situations, select H4 If the snow is making progress difficult, select L4
Center differential lock/ unlock switch		In most situations, select unlock When traction is required, select lock
Rear differential lock*		In most situations, select unlock When traction is required, select lock (the center differential must be locked)
Multi-terrain Select*		MUD & SAND
Crawl Control*		Not ordinarily used When switched ON, may assist when alter- nating between forward and reverse

# When the vehicle is stuck

→P. 78

# ■ Drivable snow depth

Snow with a depth of 60 cm (23.6 in.) or less can be driven through.

## **Crossing rivers**

#### ■ Before crossing a river



- Check the water depth and river bed conditions beforehand.
- Make sure that all doors, windows, the glass hatch and the moon roof\* are closed.
  - Drive with another vehicle.

#### **■** Driving style

- Enter the river at walking speed and drive while maintaining this speed.
- Cross perpendicular to the river or downstream.
- Avoid changing speed while crossing and cross without stopping.
- Do not cross river with powerful currents.

# ■ Things to check after crossing a river

→P. 86

When crossing a river, apply settings as shown in the following table.

Item		Selection suitable for road type
Shift position	Automatic transmission	Driving in D is possible, but select a gear that allows a constant speed to be maintained (in most situations, 1 or 2 range of S mode)
	Manual transmission	1 or 2
Four-wheel drive control switch		L4
Center differential lock/ unlock switch		In most situations, select unlock Select lock in situations where it is easy for the vehicle to become stuck
Rear differential lock*		In most situations, select unlock Select lock in situations where it is easy for the vehicle to become stuck (the center dif- ferential must be locked)
Multi-terrain Select*		LOOSE ROCK
Crawl Control*		Not ordinarily used When switched ON, may make driving more comfortable when a constant speed cannot be maintained

#### ■ Drivable water depth

Water with a depth of 70 cm (27.6 in.) or less can be driven through. However, be aware that the drivable depth may differ in accordance with factors such as the bumpiness of the river bed, vibrations and shocks that will affect the vehicle and waves on the surface of the water.

#### ■ Driving speed

Keep the vehicle speed at walking speed or below.

#### ■ If many river crossings are likely

Not For Reproduction. It may become necessary to check items that are not ordinarily checked. Consult your Toyota dealer.

## Driving on uneven surfaces

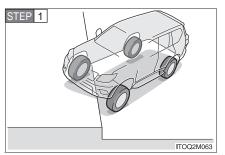
# ■ Driving style



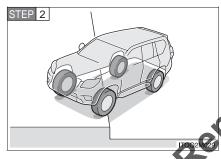
- Find a driving line that will allow you to keep at least 3 wheels (or 4 wheels) in contact with the ground at all times.
- Approach the step diagonally, allowing the wheels to mount the step one at a time.
- Drive slowly and carefully, making sure that the underside of the vehicle does not make contact with the ground.

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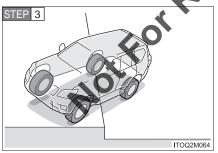
#### Overcoming steps



Approach the steps diagonally, allowing one of the front wheels to mount the step.



Before one of the rear wheels loses contect with the ground, depress the accelerator, transferring the load onto the remaining for wheel and allowing it to mount the step.



Drive straight forward without turning the steering wheel until the remaining rear wheel has been brought up onto the step.

When driving on uneven surfaces, apply settings as shown in the following table.

Item		Selection suitable for road type
Shift position	Automatic transmission	Driving in D is possible, but select a gear that allows a constant speed to be maintained (in most situations, 1 or 2 range of S mode)
	Manual transmission	1 or 2
Four-wheel switch	drive control	L4
Center differential lock/ unlock switch		In most situations, select unlock Select lack in situations where it is easy for the vehicle to become stuck
Rear differential lock*		In most situations, select unlock select lock in situations where it is easy for the vehicle to become stuck (the center dif- ferential must be locked)
Multi-terrain Select		Select a mode in accordance with the terrain If there are no suitable modes, select MOGUL
Crawl Control*		Not ordinarily used When switched ON, may make driving more comfortable

#### ■When the vehicle is stuck

→P. 78

# **Crossing grooved areas**

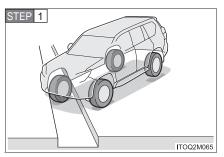
#### ■ Driving style



- Find a driving line that will allow you to keep at least 3 wheels (or 4 wheels) in contact with the ground at all times.
- Approach the groove diagonally, allowing the wheels to mount the step one at a time.
- Drive slowly and carefully, making sure that the underside of the vehicle does not make contact with the ground.

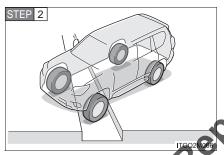
Not For Reid

#### ■ When crossing a groove



Approach the groove diagonally, and allow one of the front wheels to drop in.

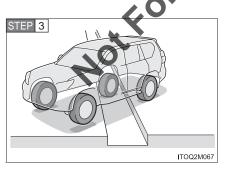
Time your acceleration so that the inertia of the vehicle will be able to carry the tire over the groove.



Once the first wheel has cleared the groove, allow the other front wheel to drop in.

Time your acceleration so that the inertia of the vehicle will be able to carry the tire over the groove.

Also, take care not to allow both the tire which is dropped into the groove and the tire at the opposing corner to fall into the groove at the same time.



Bring the rear wheels over the groove in the same way as the front wheels.

Time your acceleration so that the inertia of the vehicle will be able to carry the tire over the ditch.

When crossing grooved areas, apply settings as shown in the following table.

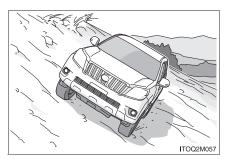
Item		Selection suitable for road type
Shift position	Automatic transmission	Driving in D is possible, but select a gear that allows a constant speed to be maintained (in most situations, 1 or 2 range of S mode)
	Manual transmission	1 or 2
Four-wheel switch	drive control	L4
Center differential lock/ unlock switch		In most situations, select unlock Select lock in situations where it is easy for the venicle to become stuck
Rear differential lock*		In most situations, select unlock select lock in situations where it is easy for the vehicle to become stuck (the center dif- ferential must be locked)
Multi-terrain Select		Select a mode in accordance with the terrain If there are no suitable modes, select MOGUL
Crawl Control*		Not ordinarily used When switched ON, may make driving more comfortable

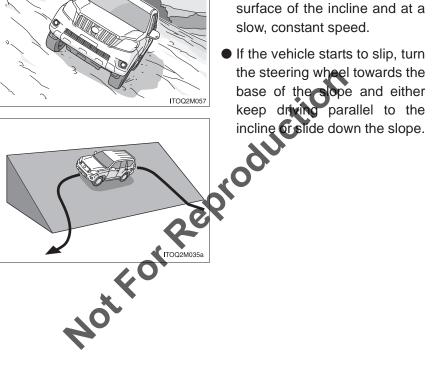
#### ■ When the vehicle is stuck

→P. 78

# **Driving across inclines**

#### ■ Driving style





- When driving across an incline, drive parallel to the surface of the incline and at a

When driving across an incline, apply settings as shown in the following table.

Item		Selection suitable for road type
Shift position	Automatic transmission	Driving in D is possible, but select a gear that allows a constant speed to be maintained (in most situations, 1 or 2 range of S mode)
	Manual transmission	1 or 2
Four-wheel switch	drive control	L4 AUCT
Center differential lock/ unlock switch		In most situations, select unlock Select lock in situations where it is easy for the vehicle to become stuck
Rear differential lock*		In most situations, select unlock Select lock in situations where it is easy for the vehicle to become stuck (the center dif- ferential must be locked)
Multi-terrain Select		Select a mode in accordance with the terrain If there are no suitable modes, select MOGUL
Crawl Control*		Not ordinarily used When switched ON, may make driving more comfortable

#### ■When the vehicle is stuck

→P. 78

## **Driving through V-shaped ditch**

#### ■ Driving style



- Straddle both sides of the ditch while keeping the vehicle level, and drive in as low a shift position as possible.
- If you are unable to straddle the ditch, drive across the incline of one side. (→P. 58)
- If you encounter a curve in the ditch, drive across the incline of the outer side of the ditch.
- When crossing from slope to slope, tires of diagonally opposite corners may leave the ground and the vehicle may become stuck. Therefore, drive while steering gently and try to time acceleration appropriately.
- If the vehicle begins to slide, turn the steering wheel towards the base of the slope.

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When driving through a V-shaped ditch, apply settings as shown in the following table.

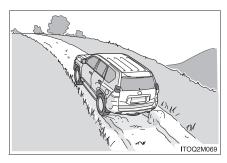
Item		Selection suitable for road type
Shift position	Automatic transmission	Driving in D is possible, but select a gear that allows a constant speed to be maintained (in most situations, 1 or 2 range of S mode)
	Manual transmission	1 or 2
Four-wheel switch	drive control	L4
Center differential lock/ unlock switch		In most situations, select unlock Select lock in situations where it is easy for the vehicle to become stuck
Rear differential lock*		In most situations, select unlock select lock in situations where it is easy for the vehicle to become stuck (the center dif- ferential must be locked)
Multi-terrain Select		Select a mode in accordance with the terrain If there are no suitable modes, select MOGUL
Crawl Control*		Not ordinarily used When switched ON, may make driving more comfortable

#### ■ When the vehicle is stuck

→P. 78

#### **Driving uphill**

#### ■ Before driving



- Check the condition of the path and decide on a driving line beforehand.
- Also check the condition of the summit.

#### ■ Driving style

- Make sure that you drive directly up the incline in order to prevent lateral sliding and rolling over.
- Accelerate sufficiently beforehand, and drive forcefully up the hill without stopping.
- Avoid changing the shift position while driving uphill.
- If climbing a very steep incline, select a gear that will not cause the vehicle to stall.
- If the vehicle starts to slide, try to keep it aligned straight with the incline by turning the steering wheel slowly and carefully.
- If the wheels start to spin, momentarily release the accelerator pedal to allow traction to return, and continue driving.
  - If the vehicle does stop moving forward, slide down the incline as described on P. 64.
- Use hill start assist control if equipped. (→P. 141)
- On vehicles with a manual transmission, do not use half engagement frequently.
- On vehicles with a manual transmission, do not stop the vehicle while using half engagement.

When driving uphill, apply settings as shown in the following table.

Item		Selection suitable for road type
Shift position	Automatic transmission	Driving in D is possible, but select a gear that allows a constant speed to be maintained (in most situations, 1 or 2 range of S mode Select 3 or 4 in accordance with road condition)
	Manual transmission	1 or 2 Select 3 or 4 in accordance with road condition
Four-wheel drive control switch		L4 COOL
Center differential lock/ unlock switch		In most situations, select unlock Select lock in situations where it is easy for the vehicle to become stuck
Rear differential lock		In most situations, select unlock Select lock in situations where it is easy for the vehicle to become stuck (the center dif- ferential must be locked)
Multi-terrain Select*		Select a mode in accordance with the terrain If there are no suitable modes, select MOGUL
Crawl Control*		Not ordinarily used When switched ON, may make driving more comfortable

<sup>\*:</sup> If equipped

#### ■When driving uphill through moguls

- Find a driving line that will allow you to keep at least 3 wheels (or 4 wheels) in contact with the ground.
- Crawl Control\* may help make driving more comfortable.

#### ■ When driving uphill over rubble

As it is easy for the tires to become embedded, choose a higher gear and a slightly faster speed than usual, and drive up the incline without stopping while maintaining a constant speed.

#### ■When driving uphill over rocky terrain

Set the four-wheel drive control switch to L4, shift the shift lever to 1 or 2 range of S mode (automatic transmission) or 1 or 2 (manual transmission) and use the brake and accelerator pedals to proceed slowly and carefully (Crawl Control\* can carry out these operations automatically, thus it may enhance driving comfort).

#### ■ If an incline cannot be climbed completel

#### On vehicles with downhill assist control

- STEP 1 Stop the vehicle using the foot brake.
- STEP 2 Shift the shift lever to R
- STEP 3 Allow downhill assist control to operate ( $\rightarrow$ P. 138).
- Use downhill assist control to control the vehicle speed. Keep the vehicle straight and descend the incline while making sure to avoid whee lock.
- STEP 5 When flat ground is reached, cancel downhill assist control.

#### On vehicles with Crawl Control

- STEP 1 Stop the vehicle using the foot brake.
- STEP 2 Shift the shift lever to R.
- STEP 3 Allow Crawl Control (low mode) to operate (→P. 133).
- Reverse at a slow speed.

  If the wheels lock while Crawl Control is in low mode, select a slightly higher mode.
- STEP 5 When flat ground is reached, cancel Crawl Control.

#### On vehicles without downhill assist control and Crawl Control

- STEP 1 Stop the vehicle using the foot brake.
- STEP 2 Shift the shift lever to R.
- Use the engine brake and brake pedal to control the vehicle speed.
  Keep the vehicle straight and descend the incline while making sure to avoid wheel lock.

#### **Driving downhill**

#### ■ Before driving



Check the condition of the path and decide on a driving line beforehand.

#### ■ Driving style

- Make sure that you drive directly down the incline in order to prevent lateral sliding and rolling over.
- Using both the engine brake and brake pedal, descend while trying to avoid wheel lock.

If it appears that the wheels will lock while the shift position is set to 1 range of S mode (automatic transmission) or 1 (manual transmission) and the engine brake is applied, depress the accelerator pedal slightly and avoid allowing the wheels to lock.

- On vehicles with a manual transmission, do not operate the clutch while driving downhill.
- If the vehicle slides, turn the wheel towards the base of the incline.
- Use downhill assist control if equipped. (→P. 138)

#### ■ When descending an incline

- STEP 1 Stop the vehicle before the incline.
  - Allow for an area that is at least as long as the overall length of the vehicle.
- or 2 range of S mode (automatic transmission) or 1 or 2 (manual transmission).
- STEP 3 Allow downhill assist control\* or Crawl Control\* to operate.
- Use downhill assist control or Crawl Control to centrol the vehicle speed.
- speed.

  STEP 5 When flat ground is reached, cancel downfill assist control or Crawl Control.

When driving downhill, apply settings as shown in the following table.

Item		Selection suitable for road type
Shift position	Automatic transmission	Driving in D is possible, but select a gear that allows a constant speed to be maintained (in most situations, 1 or 2 range of S mode Select 3 or 4 in accordance with road condition)
	Manual transmission	1 or 2 Select 3 or 4 in accordance with road condition
Four-wheel drive control switch		L4 COOL
Center differential lock/ unlock switch		In most situations, select unlock Select lock in situations where it is easy for the vehicle to become stuck
Rear differential lock		In most situations, select unlock Select lock in situations where it is easy for the vehicle to become stuck (the center dif- ferential must be locked)
Multi-terrain Select*		Select a mode in accordance with the terrain If there are no suitable modes, select MOGUL
Crawl Control*		Not ordinarily used When switched ON, may make driving more comfortable

#### ■ When driving downhill through rocky terrain

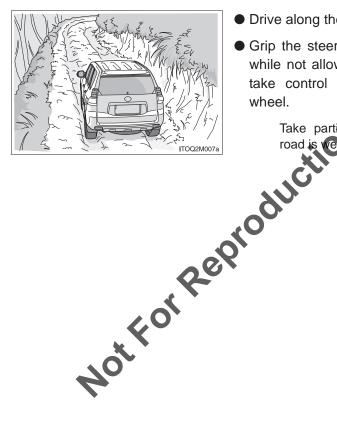
- Set the four-wheel drive control switch to L4, shift the shift lever to 1 range of S mode (automatic transmission) or 1 (manual transmission), and use the brake pedal to drive slowly and carefully (Crawl Control\* can carry out these operations automatically, thus it may enhance driving comfort).
- Choose a driving line where the tires are on the rocks and that travels straight down the incline.

#### ■ If it appears that the wheels will lock

Not For Reproduction Depress the accelerator pedal slightly and drive while ensuring that the wheels do not lock.

# Driving on roads with ruts

#### ■ Driving style



- Drive along the ruts.
- Grip the steering wheel softly while not allowing the road to take control of the steering wheel.

Take particular care if the road is wet.

When driving on roads with ruts, apply settings as shown in the following table.

Item		Selection suitable for road type
Shift position	Automatic transmission	Driving in D is possible, but select a gear that allows a constant speed to be maintained (in most situations, 1 or 2 range of S mode)
	Manual transmission	1 or 2
Four-wheel drive control switch		L4 AUCT
Center differential lock/ unlock switch		In most situations, select unlock Select lock in situations where it is easy for the vehicle to become stuck
Rear differential lock*		In most situations, select unlock select lock in situations where it is easy for the vehicle to become stuck (the center dif- ferential must be locked)
Multi-terrain Seert		Select a mode in accordance with the terrain If there are no suitable modes, select MOGUL
Crawl Control*		Not ordinarily used When switched ON, may make driving more comfortable

# ■When the vehicle is stuck

→P. 78

# **CAUTION**

#### Assessing conditions accurately

When driving off-road, it is necessary to operate the accelerator pedal, brake pedal and steering wheel in response to the type and conditions of the terrain. The driver should assess conditions precisely and drive cautiously in response to each type of condition encountered.

Losing control can be dangerous especially in off-road conditions, where it could cause the vehicle to roll over, resulting in death or serious injury.

#### If the vehicle slides when driving on an incline

Do not turn the steering wheel suddenly. Also, if the vehicle appears to be going into a lateral slide, turn the steering wheel towards the base of the incline.

Losing control can be dangerous especially in off-road conditions where it could cause the vehicle to roll over, resulting in death or serious injury.

### When driving on an incline

- Do not drive continually on inclines with a forward or backward tilt that is greater than 35°, or a side to side that that is greater than 25°. The vehicle could roll over, resulting in death of serious injury.
  - However, inclines with a forward or backward tilt of 42° can be driven on momentarily.
- When descending an incline, select an appropriate shift position. If an incline is descended without an appropriate amount of traction, you may lose control of the vehicle, which could cause the vehicle to roll over, resulting in death or serious injury.

# When climbing an incline

Drive directly up the incline. If the incline is approached diagonally, the vehicle is likely to slide laterally, and you may lose control of the vehicle. This could cause the vehicle to roll over, resulting in death or serious injury.

#### ■If an incline cannot be climbed completely

If you change direction while climbing an incline, the vehicle may roll over, resulting in death or serious injury. Following the steps outlined on P. 64, reverse directly down the incline until reaching flat ground.

#### When descending an incline

Observe the following precautions.

Failure to do so may cause the vehicle to roll over, resulting in death or serious injury.

- Drive directly down the incline.
- Make sure to avoid extremely slippery areas where, ou cannot stop the vehicle.

### ■When driving across an incline

- Check the following points before driving:
   Failure to do so may cause the vehicle to roll over, resulting in death or serious injury.
  - The driving path is stable and not slippery.
  - The total weight of the passengers is distributed equally throughout the vehicle.
  - Any passengers in the rear seats are seated on the uphill side of the vehicle.
  - There is no luggage on the roof luggage carrier.
  - Any luggage is stored at a low level and is firmly secured.

#### When driving across an incline

- Observe the following precautions while driving. Failure to do so may cause the vehicle to roll over, resulting in death or serious injury.
  - If it looks as though the vehicle will slide laterally, turn the steering wheel towards the base of the incline.
  - Make sure that the wheels on the downhill side of the vehicle do not fall into any depressions.
  - Make sure that the wheels on the uphill side of the vehicle do not ride over any rocks or tree roots. It is dangerous if the tilt of the vehicle changes suddenly.
  - If the incline is extreme or the terrain conditions are very unforgiving. let any passengers out from the vehicle anti-safe ground has been reached.

## ■When driving on roads with ruts

If the road is wet, drive particularly carefully and make sure that the control of the steering wheel is not taken from you. Leaving the ruts suddenly may cause the vehicle to spin, resulting in damage to the vehicle, or in death or serious injury.

# When crossing a ridge

If a ridge is approached diagonally, the first front wheel to cross the ridge line and the rear wheel that is diagonally opposite to it may lose contact with the ground, or the vehicle may slide. This may cause the vehicle to roll over, resulting in damage to the vehicle, or in death or serious injury.

#### ■When driving rocky terrain

- As driving on rocky terrain can be very difficult, it is strongly recommended that you travel with at least one other vehicle. Also, follow the lead of someone with experience driving over such terrain.
- If a mistake is made while driving through rocky terrain, a component on the underside of the vehicle could be struck, possibly rendering the vehicle unable to be driven. Also, the vehicle could lose balance and roll over, resulting in damage to the vehicle, or in death or serious injury.

### ■When driving through V-shaped ditch

When encountering a downward incline in the ditch pay close attention to brake pedal operation. If the tires lose grip, the vehicle may slide and lose balance. This could cause the vehicle to roll over, resulting in damage to the vehicle, or in death or serious injury.

### ■When driving through undergrowth

If the bumpiness of the road surface cannot be determined due to its covering of undergrowth, drive slowly and carefully while paying attention to the inclination of the vehicle.

Failure to do so may cause the vehicle to lose balance without you noticing, which could cause the vehicle to roll over, resulting in damage to the vehicle, or in death or serious injury.

# **↑** NOTICE

### ■When driving across a groove



If a groove is approached head on, both front wheels could fall into the groove at the same time, possibly damaging the vehicle and rendering it immovable.

### ■ Drivable snow depth

Snow with a depth of around 60 cm (23.6 in.) or less can be driven through.

#### ■ When crossing a river

Observe the following precautions.

Failure to do so may cause water to enter the engine or the vehicle and cause malfunctions.

- Check the water depth and river ped conditions beforehand.
- Enter the river at walking speed.
- Cross perpendicular to the liver or downstream.
- Avoid changing speed while crossing and cross without stopping.
- If the engine statis during a crossing a river, have the vehicle towed out of the water by escue vehicle and have the vehicle checked by your Toyota dealer as soon as possible.
- Even for only a short time, do not stop the vehicle where the water level is over the door opening.

# **№** NOTICE

### When driving through V-shaped ditch

Exercise caution when straddling both sides of the ditch, as the sides of the vehicle could strike the walls of the ditch, possibly rendering the vehicle immovable. Drive particularly cautiously in these situations, or take an alternative route if possible.

#### ■When driving through undergrowth

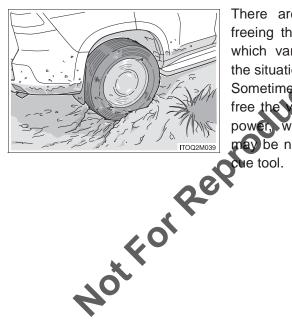
- Choose a driving area which is relatively clear of undergrowth. Undergrowth may become entangled in the underside components of the vehicle when driving through areas of heavy undergrowth for long periods of time, possibly rendering it immovable.
- If you need to back up after the undergrowth has been flattened, drive while steering to avoid becoming entangled in undergrowth. Undergrowth may become entangled in the underside components of the vehicle when the undergrowth is not avoided, possibly rendering it immovable.

# 2-1. Off-road driving techniques

# If your vehicle becomes stuck while driving off-road

This section explains ways of coping when the wheels have no grip, the tires become stuck, or the vehicle becomes otherwise unable to move while driving off-road.

# When the vehicle is stuck



There are numerous ways of freeing the vehicle when stuck, which vary in accordance with the situation.

Sometimes it will be possible to free the venicle under your own power, whereas other times it may be necessary to use a rescue tool.

# ■ Freeing the vehicle under your own power

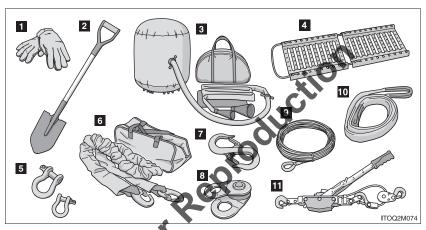
Functions and basic techniques for freeing the vehicle are described below. Use as necessary and in accordance with the situation.

- Repeatedly moving the vehicle forwards and backwards.
- Clearing away any obstacles, if possible.
- Removing rocks, etc. from the treads.
- Using the center differential lock. ( $\rightarrow$ P. 124)
- Using the rear differential lock\*. (→P. 130)
- Switching the four-wheel drive control switch: (→P. 124
- Using Crawl Control\*. (→P. 133)
- Using Multi-terrain Select\*. (→P. 90
- Canceling VSC and TRC/Active TRC may make freeing the vehicle easier. (→P. 141, refer to the "Owner's Manual")

If you are unable to free the vehicle under your own power, have the vehicle freed by a rescue vehicle.

### ■ Freeing the vehicle using a rescue tool

- If you are unable to free the vehicle by yourself, it may be possible to free the vehicle using a rescue tool.
- Examples of rescue tools are listed below. Use as necessary and in accordance with the situation. For a detailed explanation, refer to the tool's accompanying manual.



■ Gloves Useful for various tasks outside the vehicle.

- 2 Shovel
  Can be used to remove earth, sand, etc. from around the tire.
- 3 Air jack
  Uses exhaust gas to raise the vehicle.
- Sand ladder Use by placing underneath a wheel with no grip.
- **5** U-shaped shackle
  Used to attach straps, etc. when passed through the towing hook.

- 6 Elastic towing rope Used when the vehicle needs to be towed by another vehicle.
- 7 S-shaped hook Used to connect the wire or the strap.
- 8 Pulley Used to change the direction from which the vehicle is being towed.
- 9 Wire
- Strap
  Useful when used in place of the wire.

  Hand winch
  Used when freeing the vehicle. 10 Strap
- 11 Hand winch

#### ■ To restore tire grip

Placing a tree branch, a sack or something similar underneath the tire may help to restore grip.

#### ■When stuck in mud and unable to move

- Shift the shift lever to D or R (automatic transmission) or 2, 3 or R (manual transmission), and free the vehicle by rocking it back and forth. (You may be able to free the vehicle by first monitoring the vehicle's progression while using the accelerator pedal as little as possible, and then increasing acceleration gradually.)
- Freeing the vehicle may become easier if Crawl Control switched ON.

#### ■When stuck in sand and unable to move

- You may be able to free the vehicle by using the accelerator pedal as little as possible at first and then maintaining acceleration when the vehicle begins to move forward.
  - If you are still unable to free the vehicle bemove the sand from around the tires, check that the body of the vehicle is not in contact with the ground, and attempt to free the vehicle once again.
- Freeing the vehicle may become easier if Crawl Control\* is switched ON.
- If you have an air jack, use it to raise the vehicle, then place sand under the tire and return the vehicle to the height of the ground level. If you are still unable to free the vehicle, place a sandbag or sand ladder underneath the tire and attempt to free it again.

# ■ When unable to move while driving uphill on rubble

- Shift the shift lever to R, and operate the steering wheel, engine brake and brake pedal to reverse directly down the incline while making sure that the tires do not lock.
- Crawl Control\* may assist driving comfort on extreme inclines.

#### ■ When unable to move while driving through moguls

Shift the shift lever to D or R (automatic transmission) or 2, 3 or R (manual transmission), and try to free the vehicle by rocking it back and forth while moving the steering wheel left and right.

## ■ When unable to move while driving through rocky terrain

Shift the shift lever to D or R (automatic transmission) or 2, 3 or R (manual transmission), and try to free the vehicle either by rocking it back and forth or by moving the steering wheel left and right to search for grip.

When possible, reverse over your driving line. If you become stuck even when doing so, use the center and rear differential locks\*.

# ■When being towed

→Refer to the "Owner's Manual"

#### ■When stuck

→Also refer to the "Owner's Manual"



# **CAUTION**

#### ■ When exiting the vehicle while stopped sideways on an incline

Avoid exiting the vehicle while stopped on an incline. If you need to exit, use the uphill-facing door. If you try to exit using the downhill-facing door, the chances of the vehicle rolling over will increase. As a result, the vehicle may roll onto you and could result in death or serious injury.

#### After using the rear differential lock

The rear differential lock is for use in freeing the vehicle in emergency situations. After freeing the vehicle, make sure that you unlock the rear differential.

#### NOTICE

#### Precaution when freeing the vehicle

- If the steering wheel is overused or if the wheels are allowed to spin more than necessary when freeing the vehicle, the tires could become further embedded and the situation could worsen.
- If you are unable to free the vehicle under your own power, have the vehicle freed by a rescue vehicle.

# ■ To prevent damage to the clutch

On vehicles with a manual transmission, do not use half engagement frequently.

# 2-1. Off-road driving techniques After driving off-road

After driving off-road, confirm the points explained in this section and conduct any necessary checks.

# Points to confirm after driving off-road

Check the following points before returning to regular roads after driving off-road.

- Remove any mud adhering to the tires, and check that the tires are not damaged.
- Confirm that there are no strange noises or vibrations while driving.
- Check the brake discs and calipers when having driven on sandy roads, muddy roads, through deep snow, when crossing rivers, etc.
- Check that the suspension, drive shaft boots and components on the underside of the vehicle are not damaged or leaking oil.
- Check that both the center and the rear differentials are unlocked.
- Check that the four-wheel drive control switch is in H4.

### After crossing a river

- Drive a little and check that the brakes are operating properly.
- After driving through muddy water, remove any foreign objects or substances such as leaves or mud from the radiator.
- Check that no water has mixed with the oil in the engine, transmission, transfer, differential, etc.
   If water has mixed with the oil, the oil will be cloudy. In this event, change the oil. Consult your Toyota dealer if necessary.
- Check for changes in the amount and quality of the oil in the engine, transmission, transfer, differential, etc. and conduct maintenance.
- Replace the grease on the propeller shaft within 24 hours after driving.
- Check that no water has entered the air filter. Replace the air filter if it is wet.
  - Consult your Toyota dealer if necessary.
- Wash the exterior and underside of the vehicle with fresh water after driving through seawater.

#### After driving in seawater

Wash the vehicle as soon as possible to prevent damage to the vehicle exterior, the underside components and the parking brake.

Refer to the "Owner's Manual".

# **CAUTION**

#### ■ If you discover an abnormality

Without driving any further, contact your Toyota dealer. Driving with the abnormality could cause an unexpected accident and could result in death or serious injury. Also, if you feel that there is something wrong with the vehicle while driving, immediately stop in a safe place and inspect the vehicle.

#### After driving off-road

Remove any foreign objects or substances such as grass, undergrowth, paper, rubble, rocks, sand, etc. after driving through undergrowth, mud, rocks, rubble, sand, water, etc. If you drive without removing them, the vehicle may break down or catch fire and could result in death or serious injury.

#### ■To prevent damage to the center differential

Not For Representation For normal driving on dry roads and highways thlock the center differential. Not For Reproduction

# Off-road driving assistance functions

3

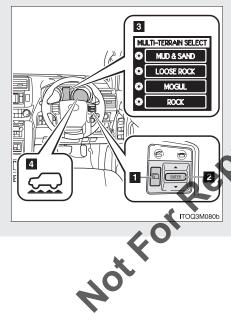
	3-1.	Using off-resp driving systems	
		Multi-terrain Select	90
		Multi-jerrain Monitor	100
		Pear height control	
	3	air suspension	1116
4	1)	AVS (Adaptive Variable	
	7	Suspension System)	123
20		Four-wheel drive	
		system	124
		Rear differential lock	
		system	
		Crawl Control	133
		DAC (Downhill Assist	
		Control system)	138
		Off-road driving assist	
		systems	141
	3-2.	Off-road driving informat	ion
		Off-road precautions	149

# 3-1. Using off-road driving systems Multi-terrain Select\*

# Multi-terrain Select is a system that improves drivability in off-road situations.

Select a mode that most closely matches the type of terrain on which you are driving from among 4 modes.

Engine control and brake control can be optimized in accordance with the selected mode.



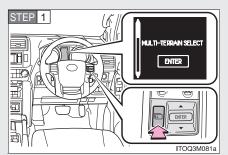
- 1 Menu switch
- 2 "ENTER" switch
- Multi-information display
  Displays status information including operating status and road type selection.
- 4 Multi-terrain Select indicator

#### ■ Selectable modes

A mode which matches the road conditions can be selected from among the following 4 modes.

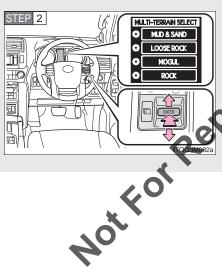
Mode	Road Conditions			
MUD & SAND	Suitable for muddy roads, sandy roads, snow-covered roads, dirt trails and other slippery or dirty conditions			
LOOSE ROCK	Suitable for slippery conditions consisting of mixtures of earth and loose rock			
MOGUL	Suitable for a wide range of off-road conditions, particularly very bumpy conditions			
ROCK	Suitable for rocky terrain			
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# ■ Switching modes



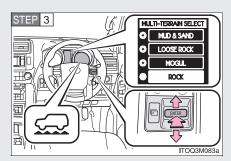
Push the menu switch.

The multi-information display will change to electronic features control mode.



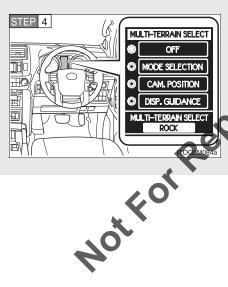
Press the "ENTER" switch upwards or cownwards until "MULTI-TERRAIN SELECT" appears and then press the "ENTER" switch.

The mode selection screen is displayed.



Press the "ENTER" switch upwards or downwards to select a desired mode and then press the "ENTER" switch.

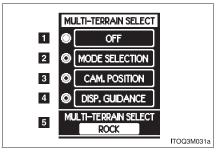
The system switches to the selected mode, and the multi-terrain select indicator will turn on.



Once the mode has been set, the mode hame will be displayed and operation will commence.

# Statement on the multi-information display

#### ■ After mode selection



1 OFF
Turn the system off

- 2 MODE SELECTION Change the mode (→P. 92)
- Switch the displayed image when using the Multi-terrain Monitor (>P. 100)
- DISP GUIDANCE
   Explain other necessary operations when selecting a mode
   (→P. 95)
- Status
  Display the status of the system

The displayed content may differ in accordance with the system status.

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# ■ Operation guidance

Operation guidance is shown on the multi-information display when you cannot set a mode.

When the operation guidance is shown on the multi-information display, follow the instructions in the table.



SHI	TING TO SAND MODE ITOQ3M032a	Hon
Guidance Display	Vehicle Status	Procedure
SHIFT TO L4	LOOSE ROCK, MOGUL or ROCK mode is selected when the four-wheel drive control switch is in H4	Set the four-wheel drive control switch to L4
STOP THE VEHICLE AND SHIFT THE AUTOMATIC TRANSMIS- SION TO N	The four-wheel drive control switch has been shifted to H4 or L4 and LOOSE ROCK, MOGUL or ROCK mode is selected, but the automatic transmission is not in N position or the vehicle is not stopped	Stop the vehicle completely and shift the shift lever into N
ACCELERATE OR DECELER- ATE	The center differential lock/unlock switch is pressed when Multi-ter- rain Select is operating, but the center differential cannot be switched between lock and unlock	Drive straight ahead while accel- erating or deceler- ating, or drive in reverse

Guidance Display	Vehicle Status	Procedure
RETURN THE FOUR-WHEEL DRIVE CON- TROL SWITCH	The four-wheel drive control switch is shifted when Multi-terrain Select is operating, but the transfer cannot be shifted to H4 or L4 position	Return the four- wheel drive con- trol switch to L4 or H4
DRIVE THE VEHICLE A SHORT DIS- TANCE	The rear differential lock/unlock switch is pressed when Multi-terrain Select is operating, but the rear differential cannot be switched between lock and unlock.	Drive forward or backward a short distance
PUSH CENTER DIFFERENTIAL LOCK/UNLOCK SWITCH	The rear differential lock/unlock switch is pressed when the four wheel drive control switch is in L4 and the center differential is unlocked, and Multi-terrain Select is operating	Engage the center differential lock fol- lowed by the rear differential lock
MULTI-TER- RAIN SELECT NOT AVAIL- ABLE	The vehicle speed exceeds approximately 12 km/h (7 mph) or the VSC EFI, 4WD and/or Multiterrain Select system may be mallunctioning	Reduce vehicle speed If the system is still not available, con- tact your Toyota dealer

#### ■ The Multi-terrain Select can be operated when

- Vehicle speed is less than 12 km/h (7 mph)
- Crawl Control is off

### ■ When using Multi-terrain Select

The following functions cannot be switched on or off.

- VSC
- Active TRC
- Second start mode

A message will be shown on the multi-information display stating that these functions cannot be switched using the VSC OFF switch or the menu and "ENTER" switches.

#### ■When selecting a terrain mode

If you are unsure which mode is appropriate, select MOGUL when the fourwheel drive control switch is in L4 or select MUD & SAND when it is in H4.

### ■ When it is difficult to generate traction

MUD & SAND mode provides the largest amount of tire slippage, followed by LOOSE ROCK, MOGUL and ROCK mode.

Drivability can be improved by selecting a mode which provides a smaller amount of tire slippage than the current mode when the amount of tire slippage is large, or conversely selecting a mode which provides a larger amount of tire slippage than the current mode when the amount of tire slippage is small.

#### ■ When the vehicle is stuck

Use the center differential lock

If unable to free the vehicle even when using the center differential lock, use the rear differential lock.

The rear differential cannot be locked if the center differential is not locked with the four-wheel drive control switch in L4.

- Switching the transfer and differentials
   For the operation of the following functions, refer to the following pages.
  - Four-wheel drive system (→P. 124)
  - Center differential lock (→P. 124)
  - Rear differential lock (→P. 130)

#### ■ When the Active TRC (Traction Control) operates continuously

→P. 146

# ■ When the four-wheel drive control switch is in L4 position

If the Multi-terrain Select system is not operating and the four-wheel drive control switch is in L4, TRC OFF will be shown on the multi-information display.

# ■ When there is a malfunction in the system

The Multi-terrain Select indicator light will blink. Have the vehicle inspected by your Toyota dealer immediately.

### ■ When using the Multi-terrain Select

Observe the following precautions to avoid an accident that could result in death or serious injuries:

- There is a chance that the selected mode may not be the most appropriate in terms of road conditions such as pitch, slipperiness, undulation, etc. (→P. 91)
- Multi-terrain Select is not intended to expand the limits of the vehicle. Check the road conditions thoroughly beforehand, and drive safely and carefully.



#### NOTICE

#### Precaution for use

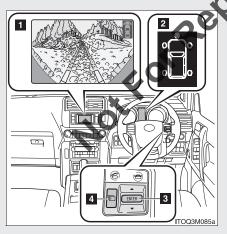
The Multi-terrain Select is intended for use during off-road driving. Do not Not For Reigh use the system at any other time.

# 3-1. Using off-road driving systems Multi-terrain Monitor\*

The Multi-terrain Monitor displays the vehicle surroundings when driving at low speeds, thus assisting off-road driving and helping the driver to check the vehicle surroundings.

The Multi-terrain Monitor displays the vehicle surroundings automatically when a mode is being selected on the Multi-terrain Select.

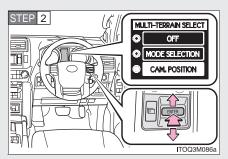
- You can switch between 4 different images (front, side-front, side-rear and rear) by operating the switch.
- By referring to the guidelines shown on the front monitor, you can decide a driving line while assessing the distance to obstacles ahead of the vehicle and confirm the projected path, and by using the front and side monitors to identify objects in the vicinity or path of the tires, you can prevent the vehicle from becoming stuck unexpectedly while driving.



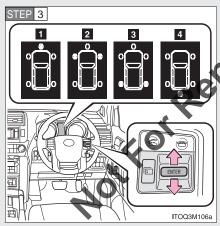
- 1 Accessory meter (vehicles without navigation system) or touch screen (vehicles with navigation system)
- 2 Multi-information display
- 3 "ENTER" switch
- 4 Menu switch

## ■ Switching the image

STEP 1 Select any mode using the Multi-terrain Select system. (→P. 90)



Move the "ENTER" switch upwards or downwards to select "CAM. POSITION", and press the "ENTER" switch.

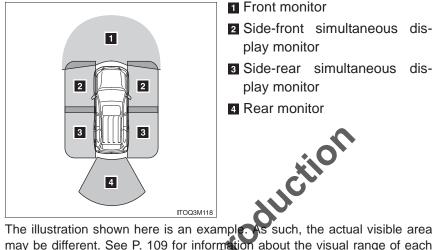


The camera view can be switched by moving the "ENTER" switch upwards or downwards.

Each time the switch is operated, the mark on the multiinformation display will move and the image displayed on the monitor will switch.

- Front monitor\*1
- Side-front simultaneous display monitor\*2
- Side-rear simultaneous display monitor\*2
- 4 Rear monitor\*3
- \*1: Cannot be selected if the shift lever is in R.
- \*2: The displayed icon differs in accordance with shift position.
- \*3: Cannot be selected if the shift lever is not in R.

# Range covered by each camera

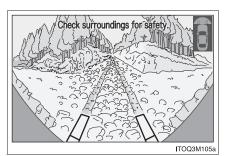


- 1 Front monitor
- 2 Side-front simultaneous display monitor
- 3 Side-rear simultaneous display monitor
- 4 Rear monitor

The illustration shown here is an example. As such, the actual visible area may be different. See P. 109 for information about the visual range of each camera.

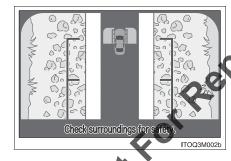
# **Display**

#### ■ Front monitor



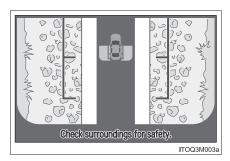
The image from the front camera is displayed. Use this monitor to help check the area in front of the vehicle for safety. Guidelines are shown to help determine the course.

# ■ Side-front simultaneous display monitor



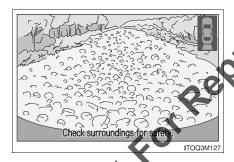
The iniage from both side cameras is displayed. Use this monitor to help check the area on both sides of the vehicle at the same time, and to check for objects near the tires or the sides of the vehicle. Guidelines showing an image of the vehicle width and the position of the front tires are displayed.

# ■ Side-rear simultaneous display monitor



The image from both side cameras is displayed. Use this monitor to help check the area on both sides of the vehicle at the same time, and to check for objects near the tires or the sides of the vehicle. Guidelines showing an image of the vehicle width and the position of the rear tires are displayed.

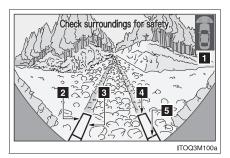
#### ■ Rear monitor



The image from the rear camera is displayed. Use this monitor to help check the area in rear of the vehicle for safety. Guidelines are not shown.

# Using the monitor

### ■ Front monitor



1 Vehicle icon

Displays the image being shown by the front monitor.

2 Trajectory line (outside)

Indicates the outer path of the tire.

- 3 Trajectory line (inside)
  Indicates the inner path of the tire.
- 4 Distance guideline (yellow)

Shows the position about 1 m (3.3 ft.) away from the front edge of the vehicle.

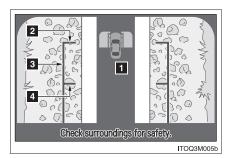
5 Distance guideline (red)

Shows the position about 0.5 m (1.6 ft.) away from the front edge of the vehicle.

The trajectory lines move according to the steering wheel position.

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# ■ Side-front simultaneous display monitor



1 Vehicle icon

Displays the image being shown by the side-front simultaneous display monitor.

2 Vehicle front edge line

Shows the position of the vehicle's front edge.

3 Vehicle width line

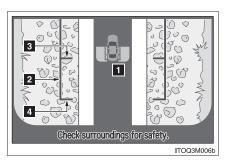
Indicates the width of the vehicle including the outside rear view mirror.

4 Front wheel contact point

Shows the position of the vehicle's front tire.

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# ■ Side-rear simultaneous display monitor



1 Vehicle icon

Displays the image being shown by the side-rear simultaneous display monitor.

2 Vehicle width line

Indicates the width of the vehicle including the outside rear view mirror.

Rear wheel contact point

Shows the position of the vehicle's rear tire.

- 4 Vehicle rear edge line
  - Sows the position of the vehicle's rear edge.

## ■ Rear monitor



1 Vehicle icon

Displays the image being shown by the rear monitor.

### ■ The Multi-terrain Monitor can be operated when

- Any Multi-terrain Select mode is selected.
- The door mirrors are not folded.
- The vehicle speed is less than approximately 12 km/h (7 mph).

### ■ Automatic system cancellation

In the following situations, the image is canceled automatically.

■ When the vehicle speed exceeds approximately 12 km/h (7 mph).

After the vehicle speed exceeds approximately 12km/h (7 mph), the image will continue to be displayed for a short time. If the vehicle speed returns to below 12 km/h (7 mph) before the image If the vehicle speed returns to below 12 km/h (7 monextinguishes, the image will continue to be displayed. The Multi-terrain Select is off.

The door mirrors are folded.

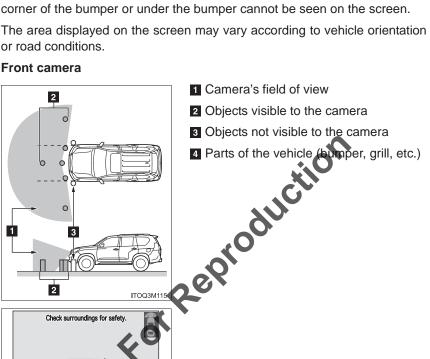
- The Multi-terrain Select is off.
- The door mirrors are folded.

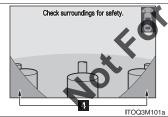
### ■ Displayed area

The area covered by the camera is limited. Objects which are close to either corner of the bumper or under the bumper cannot be seen on the screen.

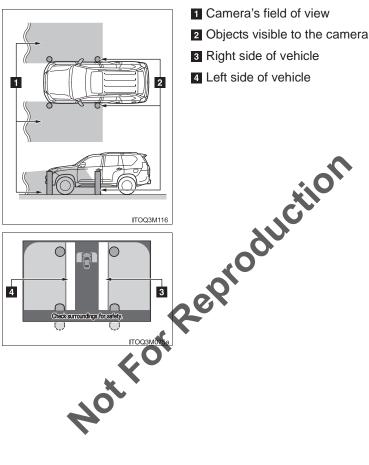
The area displayed on the screen may vary according to vehicle orientation or road conditions.

### Front camera





### Side camera (side-front simultaneous display monitor)



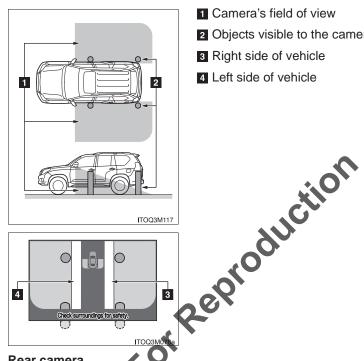
1 Camera's field of view

2 Objects visible to the camera

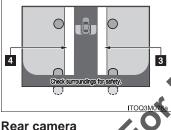
3 Right side of vehicle

4 Left side of vehicle

### Side camera (side-rear simultaneous display monitor)



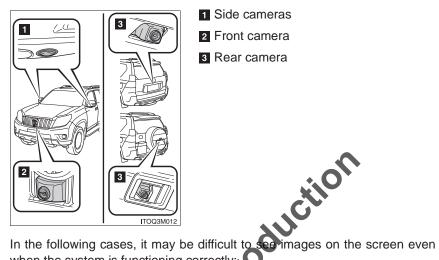
- 1 Camera's field of view
- 2 Objects visible to the camera
- 3 Right side of vehicle
- 4 Left side of vehicle



Rear camera

Refer to the "Owner's Manual" (vehicles without a navigation system) or "Navigation System Owner's Manual" (vehicles with a navigation system)

### ■ Multi-terrain Monitor cameras

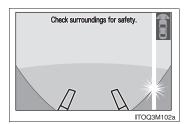


- 1 Side cameras
- 2 Front camera
- 3 Rear camera

when the system is functioning correctly.

- The vehicle is in a dark area, such as at night.
- The temperature near the lens is extremely high or low.
- Water droplets are on the camera lens or humidity is high, such as when it rains.
- Foreign matter, such as snow and mud, adheres to the camera lens.
- The sun or headights are shining directly into the camera lens.
- The cameral ensis damaged by flying stones.

### ■ Smear effect



If a bright light, such as sunlight reflected off the vehicle body, is picked up by the camera, a smear effect\* characteristic to the camera may occur.

\*: Smear effect — A phenomenon that occurs when a bright light is picked up by the camera; when transmitted by the camera, the light source appears to have a vertical streak above and below it. The vertical streak also appears in the vehicle icon area.

### ■ Display settings

Refer to the "Owner's Manual" (vehicles without a navigation system) or the "Navigation System Owner's Manual" (vehicles with a navigation system)

### ■ If the battery is disconnected



If he battery is disconnected and connected again, the guidelines will not be displayed and the message will be shown on the screen.

Drive for a short period of time while keeping the steering wheel straight.

### **CAUTION**

### ■ When using the Multi-terrain Monitor system

Observe the following precautions to avoid an accident that could result in death or serious injuries:

- Never depend solely on the monitor system.
- Always check visually and with the mirrors to confirm your intended path is clear.
- Depicted distances between objects and flat surfaces differ from actual distances.
- Do not use the system if the hood or doors are open.

### ■ Conditions which may affect the Multi-terrain Monitor system

- If the front or the rear of the vehicle or the outside rear view mirror has been hit, the camera's position and mounting angle may have changed. Have the vehicle inspected by your Toyota dealer.
- Rapid temperature changes, such as when hot water is poured on the vehicle in cold weather, may cause the system to function abnormally.
- If the camera lens is extremely dirty, it cannot transmit a clear image. Rinse with water and wipe with a soft cloth. If the camera lens is extremely dirty, wash with a mild cleanser and rinse.
- The displayed image may be darker and moving images may be slightly distorted when the system is cold.
- Situations unsuitable for Multi-terrain Monitor
  - On icy or slick road surfaces, or in snow
  - When using tire chains

### **CAUTION**

### Conditions which may affect the Multi-terrain Monitor system

- If the tires are changed, the position of the guide lines displayed on the screen may be incorrect. When changing the tires, consult your Toyota dealer.
- Depending on the circumstances of the vehicle (number of passengers, amount of luggage, etc.), the position of the guide lines displayed on the screen may change. Be sure to check visually behind and all around the vehicle before proceeding.
- Depending on the overall length of the vehicle (if a frontal protection system is installed or the bumper has been replaced, etc. the position of the distance guidelines displayed on the front monitor may change. Be sure to check visually behind and all around the vehicle before proceeding.

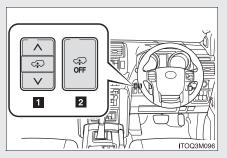
### NOTICE

### When using the Multi-terrain Monito

- Even if an obstacle is no longer visible on the side monitor, do not turn the steering wheel further in the direction the vehicle is turning until the vehicle has moved completely past the obstacle. If the steering wheel is turned to full lock, the vehicle will turn in the smallest possible turning circle, and may collide with the obstacle.
- It may be difficul to judge distance with the image from the front camera due to the characteristics of the lens. Drive carefully while checking the actual distance to the obstacles displayed on the screen. Also, give your full attention to sudden bumps in the road.

# Rear height control air suspension\*

The rear height control air suspension allows the driver to control vehicle rear height in order to adjust driving conditions. Select the desired height with the height control button.



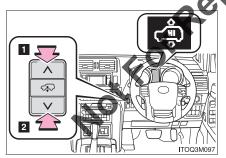
Height control button

duction

2 Height control OFF button

# Selecting vehicle height

Operating the button changes vehicle rear height as follows:



- 1 Higher
- 2 Lower

Vehicle height can be adjusted only when the engine is running.

The selected height mode will be shown on the multi-information display.

The selected mode will flash while the height mode is being changed.

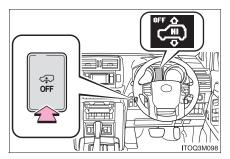
### ■ Height modes

- N mode (normal mode): For ordinary driving Normal height
- HI mode (high mode): For driving on bumpy roads
   40 mm (1.6 in.) higher than the normal rear height
   HI mode cannot be selected when vehicle speed exceeds 50 km/h (31 mph).
- LO mode (low mode): For the ease of egress/ingress and loading luggage

20 mm (0.8 in.) lower than the normal rear height

LO mode cannot be selected when vehicle speed exceeds 12 km/h (7 mph).

### Disabling the height control



When the height control OFF button is pressed with the vehicle stopped, the vehicle height is fixed at the current height.

This status is memorized in the system even after the engine is stopped.

The height can be adjusted by pressing the height control OFF button agair.

When vehicle speed exceeds 30 km/h (18 mph), the rear height control air suspension turns on automatically.

### ■ When HI mode is selected

The vehicle height will change to N mode when driving at the speeds of 50 km/h (31 mph).

Even if vehicle speed is then reduced to under 50 km/h (31 mph), height will not return to HI mode.

### ■ When LO mode is selected

The vehicle height will change to N mode when vehicle speed exceeds 12 km/h (7 mph).

Even if vehicle speed is then reduced to under 12 km/h (7 mph), height will not return to LO mode.

### ■ Automatic leveling function

Regardless of the number of occupants and the luggage load, vehicle height in any mode is always adjusted to a fixed height by the automatic leveling function.

# ■The rear height control air suspension will not operate in the following cases:

- The underbody of the vehicle is touching the surface of the road.
- The area around the suspension is covered with ice

### ■ Even if you hear an operating noise

This does not indicate a problem in the rear height control air suspension.

### ■ Parking and stopping tips

- If you immediately stop the engine after off-road driving, or park the vehicle for a long time, the vehicle height may gradually lower. When parking, make sure there is nothing under the vehicle that may come in contact with the underbody. The vehicle will return to the set height when the engine is started.
- The vehicle height may change as the temperature changes when the engine is stopped. The vehicle will return to the set height when the engine is started.

### ■When lowering the vehicle

In order to prevent the vehicle height from rising as occupants leave the vehicle, lowering control will occur for a short while after the engine has been stopped.

### ■ The rear height control air suspension failure warning

- If a malfunction occurs in the rear height control air suspension, N mode is automatically selected. However, the system may not switch to N mode depending on the location of the malfunction.
- The warning message is displayed on the multi-information display, and the rear height control air suspension cannot be activated until the malfunction is corrected.

Stop the engine and start it again. If the warning message turns off, the system is operating correctly. If the warning message continues to be displayed, have your vehicle inspected by your Toyota dealer as soon as possible. (→Refer to the "Owner's Manual")

### **A** CAUTION

### ■The rear height control air suspension must be turned off

Be sure to observe the following precautions. Otherwise, the automatic leveling function may cause vehicle height to change, and you may catch part of your body in the vehicle, resulting in an accident:

- When jacking up the vehicle, installing tire chains or tying the vehicle with chains/wires for transportation via flat bed truck, turn off the rear height control air suspension and stop the engine.
- When the vehicle must be towed, put the vehicle height N mode and turn off the rear height control air suspension.
- When the vehicle is stuck, turn off the rear height control air suspension.
- When disconnecting a trailer, put the vehicle height in LO mode and turn off the rear height control air suspension.

### ■ Selecting the correct height mode

- HI mode should only be used when driving on rough roads, for example when driving off-road.
  - Because the vehicle's center of gravity will become higher when in the mode, the vehicle may become unstable when turning abruptly, resulting in an accident.
- Do not select HI mode when loading cargo on the roof luggage carrier. Because the vehicles center of gravity will become higher when in the mode, the vehicle may become unstable when turning abruptly, resulting in an accident.
- Before lowering vehicle height, check that there is no one under the vehicle.

## NOTICE

### ■ Be careful in any place where overhead space is limited

The vehicle height will rise when a higher mode is selected or cargo is unloaded. This may cause damage to the vehicle.

### ■ Do not select LO mode when driving on bumpy roads

If the underbody of the vehicle touches a rugged road surface, the vehicle may be damaged.

### Changing vehicle height

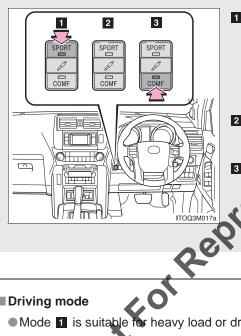
Do not change vehicle height frequently. The compressor may overheat and stop operation.

# ■When on the extremely uneven roads with rocks

Sometimes the vehicle height is not adjusted because it is judged as uneven road driving.

# AVS (Adaptive Variable Suspension System)\*

AVS controls the suspension according to the road and driving conditions. Selecting an optimum driving mode allows good riding comfort and stability.



### Sport mode

For winding mountain road driving or high speed driving

> The indicator light comes on.

- 2 Normal mod
  - For normal driving
- 3 Comfort mode
  - For bumpy road driving
    - The indicator light comes

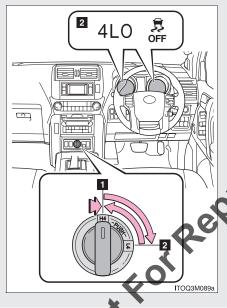
### ■ Driving mode

- Mode 11 is suitable for heavy load or driving on a unpaved road.
- With the four-wheel drive control switch at L4, the damping effect suitable for off-road driving will be provided, regardless of the position of the AVS switch.

## Four-wheel drive system

Use the four-wheel drive control switch and center differential lock/ unlock switch to select the following transfer and center differential modes.

### ■ Four-wheel drive control switch

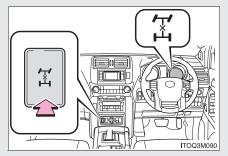


- H4 (high speed position)
  Normal driving on all types of roads.
- 2 L4 (low speed position)

Driving requiring maximum power and traction such as climbing or descending steep hills, of road driving, and hard pulling in sand or mud, etc.

The low speed fourwheel drive and VSC OFF indicators will come on.

### ■ Center differential lock/unlock switch



Lock the center differential when your vehicle's wheels get stuck in a ditch or when driving on a slippery or bumpy surface.

The center differential lock indicator will come on.

Unlock the center differential after the wheels have been freed, or after moving to a flat,

To unlock the center differen-

To unlock the center diffectial, push the switch again.

### Shifting between H4 and L4

### ■ Shifting from H4 to L4

- STEP 1 Stop the vehicle completely with brake pedal held down.
- Automatic transmission: Shift the shift lever to N.

  Manual transmission: Depress and hold the clutch pedal.
- Push and turn the four-wheel drive control switch clockwise.

  Maintain this condition until the low speed four-wheel drive indicator light turns on.

### ■ Shifting from L4 to H4

- STEP 1 Stop the vehicle completely with brake pedal held down.
- STEP 2 Automatic transmission: Shift the shift lever to N.

  Manual transmission: Depress and hold the clutch pedal.
- Maintain this condition until the low speed four-wheel drive indicator light turns off.

### ■ The four-wheel drive control switch can be operated when

- The "ENGINE START STOP" switch is in IGNITION ON mode.
- The shift lever is in the N position (automatic transmission).
- ■The clutch pedal is depressed (manual transmission).
- The vehicle is stopped completely.

### ■The low speed four-wheel drive indicator light

- The indicator light blinks while shifting between H4 and L4.
- If the low speed four-wheel drive indicator light continues to blink when you operate the four-wheel drive control switch to the H4 or L4 position, stop the vehicle completely, shift the shift lever sequely into N (automatic transmission) or depress and hold the clutch pedal (manual transmission) and then operate the switch again.
- If the shift lever is moved before the low speed four-wheel drive indicator turns on/off, the transfer mode may not be shifted completely. The transfer mode disengages both the front and rear driveshafts from the power-train and allows the vehicle to move legardless of the shift position. (At this time, the indicator blinks and the buzzer sounds.)
  - Therefore, the vehicle is free to roll even if the shift lever is in P (vehicles with an automatic transmission). You or someone else could be seriously injured. You must complete the shifting of the transfer mode and confirm that the indicator light has turned off (H4) or turned on (L4).
- If the engine coclant temperature is too low, the four-wheel drive control system may not be able to shift. When the engine is warmer operate the switch again

If the indicator continue to blink even if doing so, have the vehicle inspected by your Toyota dealer as soon as possible. There may be a trouble in the four-wheel drive system.

# ■ The center differential lock/unlock switch can be operated when The "ENGINE START STOP" switch is in IGNITION ON mode.

### ■The center differential lock indicator light

- The indicator light blinks while locking/unlocking the center differential.
- If the center differential lock indicator light blinks and the buzzer sounds when the center differential is locked, stop the slipping or spinning and push the switch again.

If the indicator continue to blink even if doing so, have the vehicle inspected by your Toyota dealer as soon as possible. There may be a trouble in the four-wheel drive system.

### ■ Locking/unlocking the center differential

- When the four-wheel drive control switch is in L4 with the center differential locked, VSC is automatically turned off. (The center differential lock and VSC OFF indicator light will come on.)
- If the operation is not completed, the center differential lock indicator blinks. If the indicator light does not turn off when unlocking the center differential, drive straight ahead while accelerating or decelerating, or drive in reverse.
- Avoid turning suddenly while the center differential is locked. If you do turn suddenly, the difference in turning speeds between the front and rear wheels may have a similar effect to braking, thus making driving difficult.

## **CAUTION**

### ■While driving

Observe the following precautions. Failure to do so may cause an accident resulting in death or serious injury.

- Never move the four-wheel drive control switch if the wheels have lost traction.
- Do not operate the center differential lock/unlock when the vehicle is turning or when its wheels are spinning freely off the ground.

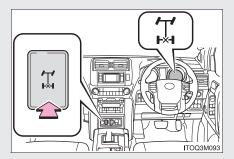


### NOTICE

- ■To prevent damage to the center differential.
  - For normal driving on dry and hard surface roads, unlock the center differential.
  - Not For Per Unlock the center differential after the wheels are out of the ditch or off the slippery or bumpy surface.

# Rear differential lock system\*

Use the rear differential lock system only when wheel spinning occurs in a ditch or on a slippery or ragged surface. This system is effective in case one of the rear wheels is spinning.



Press the rear differential lock/ unlock switch to lock the rear differential.

At this time, the indicator will blink. Wait a few seconds for the system to complete operation. After the rear differential is ar differ will stop blin an on.

To unlock the rear different push the switch again. locked, the rear differential lock indicate will stop blinking and

o unlock the rear differential,

### ■ Operating tips

First turn the four-wheel drive control switch to L4 with the center differential locked to see if you can move forward. If this does not work, use the rear differential lock system also.

Be sure to stop the wheels before locking the differential.

Unlock the differential as soon as the vehicle moves out.

### ■ For easy unlocking

Slightly turn the steering wheel in either direction while the vehicle is in motion.

### ■ Automatic unlocking feature

The rear differential will also unlock if you turn the four-wheel drive control switch to H4 or unlock the center differential. Never forget to turn off the switch after using this feature.

### ■ After unlocking the rear differential

Check that the indicator goes off.

### ■When the rear differential is locked

- The ABS/Multi Terrain ABS/brake assist do not operate. It is normal operation for the ABS warning light to be on at this time.
- VSC is automatically turned off. (The VSC OFF indicator light will come on and the "TRC OFF" indicator will come on [non-optitron type meters] or the TRC OFF will be shown on the multi-information display\* [optitron type meters].
- \*: On vehicles with Multi-terrain Select, TRC OFF will be shown only when the Multi-terrain Select is off

# **A** CAUTION

### ■When using the rear differential lock system

Failure to observe the following precautions may result in an accident.

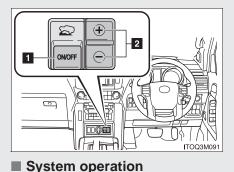
- Do not lock the rear differential in the conditions other than above.
- Do not lock the rear differential until the wheels have stopped spinning.
- Do not drive over 8 km/h (5 mph) when the differential is locked.
- Do not keep driving with the differential lock switch on.

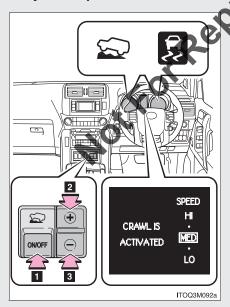
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# Crawl Control\*

Allows travel on extremely rough off-road surfaces at a fixed low speed without pressing the accelerator or brake pedal. Minimizes loss of traction or vehicle slip when driving on slippery road surfaces, allowing for stable driving.

### ■ Crawl Control switch





- ON/OFF switch
- 2 Speed selection switch

On/off
The C
lit e The Crawl Control indicator is lit and the slip indicator flashes when operating.

> Also, the operating status and speed select status of the Crawl Control are shown on the multi-information display.

- 2 Higher
- 3 Lower

\*: If equipped

### ■ Speed modes

- LO (low mode)
   Effective when traveling on rocks, or descending a slope of mogul and rubble.\*
- MED (medium mode)
   Effective when ascending a slope of mogul.\*
- HI (high mode)
   Effective when ascending a slope of mogul and rubble, or traveling on snow, dirt, mud, sand, gravel, grass etc.\*

The position between low and medium modes and the position between medium and high modes can also be selected.

\*: Depending on the road surface, may not be the most effective.

### ■ The Crawl Control can be operated when

- The shift lever is in any gear other than P or N.
- The four-wheel drive control switch is in L4.
- The driver's door is closed.

### ■ Automatic system cancelation

In the following situations, the system is canceled automatically:

At that time, the buzzer will sound, the slip indicator turns off, and the Crawl Control indicator flashes.

A notification will be displayed on the multi-information display for several seconds. (\( \rightarrow \text{Refer} \) to the "Owner's Manual")

- When the shift lever is moved to P or N.
- When the four-wheel drive control switch is in ★
- When the driver's door is opened.

When turning off Crawl Control while traveling, stop the vehicle before the Crawl Control indicator turns off, or drive extremely carefully.

### **■** Function limit

- In the following situations, you will be able to use brake control to drive downhill at a fixed low speed, but you will be unable to use engine control to drive uphill at a fixed low speed.
  - When the driving mode is set to second start mode.
  - When the vehicle speed is greater than 10 km/h (6 mph).
- In the following situation, engine control and brake control will stop temporarily:

At that time, the Crawl Control indicator flashes.

When the vehicle speed is higher than 25 km/h (15 mph).

### ■ When the Crawl Control system is operated continuously

This may cause the brake actuator to overheat. In this case, the Crawl Control system will stop operating, a buzzer will sound, the Crawl Control indicator will turn off after flashing and the TRC OFF will be shown on the multi-information display. In this case, quickly stop the vehicle in a safe place and give the actuator adequate time to cool off. Refrain from using the system until the message goes off. (The vehicle can be driven normally during this time.)

### ■ If the automatic transmission system overheats

The system will cease operation, a buzzer will sound and a warning message will be displayed to alert the driver. Stop the vehicle in a safe place until the warning message turns off. (→Refer to the "Owner's Manual")

### ■ Sounds and vibrations caused by the Crawl Control system

- A sound may be heard from the engine compartment when the engine is started or just after the vehicle begins to move. This sound does not indicate that a malfunction has occurred in Crawl Control system.
- Either of the following conditions may occur when the Crawl Control system is operating. None of these are indicators 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.

### ■ If the slip indicator comes on...

It may indicate a malfunction in the system. Consult your Toyota dealer.

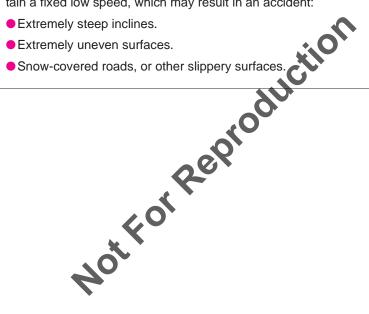
## **A** CAUTION

### ■When using Crawl Control

Do not rely solely on the Crawl Control. This function does not extend the vehicle's performance limitations. Always thoroughly check the road conditions, and drive safely.

### ■ These conditions may cause the system not to operate properly

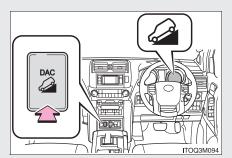
When driving on the following surfaces, the system may not be able to maintain a fixed low speed, which may result in an accident:



# DAC (Downhill Assist Control system)\*

The DAC helps to prevent excessive speed on steep downhill slopes. The system will operate when the vehicle is traveling under 25 km/h (15 mph) and the four-wheel drive control switch is in the L4 position.

### ■ System operation



Press the "DAC" switch. The downhill assist control indicator light comes on and the system will operate.

When the system is in operation, the slip indicator light will flash, and the stop lights/high mounted stop lights will be lit.

## ■ Turning off the system

Press the "DAC" switch while the system is in operation. The downhill assist control indicator will flash as the system gradually ceases operation, and will turn off when the system is fully off.

Press the "DAC" switch while the downhill assist control indicator is flashing to start the system again.

### Operating tips

The system will operate when the shift lever is in a position other than P, however to make effective use of the system it is recommended that the shift lever be shifted to 2 or 1 range of S mode.

### ■ If the four-wheel drive control switch is in H4

The system does not operate.

### ■When the downhill assist control system is operated continuously

This may cause the brake actuator to overheat. In this case, the downhill assist control system will stop operating, a buzzer will sound and the DAC indicator will start flashing, and the "TRC OFF" indicator light will come on (non-optitron type meters) or the TRC OFF will be shown on the multi-information display (optitron type meters). Refrain from using the system until the DAC indicator stays on and "TRC OFF" indicator light turns off (non-optitron type meters) or the message goes off (optitron type meters). (The vehicle can be driven normally during this time.)

### Sounds and vibrations caused by the DAC

- A sound may be heard from the engine compartment when the engine is started or just after the vehicle begins to move. This sound does not indicate that a malfunction has occurred in DAC.
- Either of the following conditions may occur when the DAC is operating. None of these are indicators 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.

### ■ System malfunction

- The DAC indicator does not come on when the "ENGINE START STOP" switch is turned to IGNITION ON mode.
- ■The "DAC" indicator does not come on when the "DAC" switch is pressed.
- The slip indicator comes on.

In the above cases, have your vehicle checked by your Toyota dealer.

## **A** CAUTION

## ■When using downhill assist control

Do not rely overmuch on the downhill assist control. This function does not extend the vehicle's performance limitations. Always thoroughly check the road conditions, and drive safely.

- ■The system may not operate on the following surfaces, which may lead to an accident causing death or serious injury
  - Slippery surfaces such as wet or muddy roads
  - Icy surface
  - NotFor Unpaved roads

# Off-road driving assist systems

To help enhance off-road 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)
  - →Refer to the "Owner's Manual"
- Multi Terrain ABS (Anti-lock Brake System) (vehicles with a Multi-terrain Select 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, or in offroad conditions (such as rough roads, sand and mud)

The Multi Terrain ABS operates in synchronization with the Multi-terrain Select

- VSC (Vehicle Stability Control
  - →Refer to the "Owner's Manual"
- TRC (Traction Control) for H4 mode
  - →Refer to the "Owner's Manual"
- Active TRC (Traction Control) for L4 mode\*

Helps to maintain drive power and prevent the 4 wheels from spinning when starting the vehicle or accelerating on slippery roads

■ Hill-start assist control (if equipped)

Helps to prevent the vehicle from rolling backward when starting on an incline or slippery slope

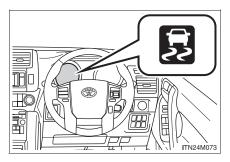
## ■ KDSS (Kinetic Dynamic Suspension System) (if equipped)

KDSS enhances ride comfort and handling response by using a hydraulic control system to control the suspension stabilizer bars in response to road surface and driving conditions during cornering or offroad driving

\*: The function only works in vehicles with Multi-terrain Select when Multi-terrain Select is switched on

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# When the VSC/Active TRC/hill-start assist control systems are operating



If the vehicle is in danger of slipping or rolling backward when starting on an incline, or if any of the drive wheels spins, the slip indicator flashes to indicate that the VSC/Active TRC/hill-start assist control systems are operating.

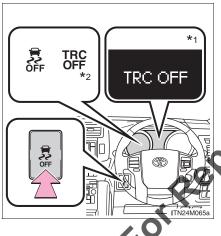
A buzzer (intermittent) sounds to indicate that VSC is operating.

The stop lights and high mounted stoplight turn on when the hill-start assist control system is operating.

# Disabling the Active TRC/VSC systems

If the vehicle gets stuck in fresh snow or mud, the Active TRC/VSC systems may reduce power from the engine to the wheels. You may need to turn the system off to enable you to rock the vehicle in order to free it.

# ■ Turning off both Active TRC and VSC systems



To turn the Active TRC and VSC systems off, press and hold the button for 3 seconds and more while the vehicle is stopped.

The VSC OFF indicator light will come on and the "TRC OFF" indicator light will come on or TRC OFF will be shown on the multi-information display.

Press the button again to turn the system back on.

- \*1: Vehicles with an optitron type meters
- \*2: Vehicles with a non-optitron type meters

### ■ Hill-start assist control operation conditions

- The shift lever is in D or S.
- The brake pedal is not depressed.
- The rear differential is not locked.

# ■ Sounds and vibrations caused by the Multi Terrain ABS, VSC, Active-TRC and hill-start assist control systems

- A sound may be heard from the engine compartment when the engine 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.
  - The brake pedal may pulsate slightly after the Multi Terrain ABS is activated.
  - The brake pedal may move down slightly after the Multi Terrain ABS is activated.

# ■Reactivation of the Active TRC/VSC systems after turning off the engine

Turning off the engine after turning off the Active TRC/VSC systems will automatically reactivate them.

# ■ Reactivation of the Active TRC system linked to vehicle speed

When both Active TRC and VSC systems are turned off, the systems will not turn on even when vehicle speed increases.

## ■ When the brake system operates continuously

The brake actuator may overheat. In this case, the Active TRC and hill-start assist control systems will stop operating, a buzzer will sound and the "TRC OFF" indicator will come on (non-optitron type meters) on the TRC OFF will be shown on the multi-information display (optitron type meters). Refrain from using the system until the "TRC OFF" indicator turns off (non-optitron type meters) or the message goes off (optitron type meters). (There is no problem with continuing normal driving.)

# ■ If the slip indicator comes on...

It may indicate a malfunction in the VSC, Active TRC or hill-start assist control system. Consult your Toyota dealer.

# **CAUTION**

# ■ The Multi Terrain ABS does not operate effectively when

- Tires with inadequate gripping ability are used (such as excessively worn tires on a snow covered road).
- The vehicle hydroplanes while driving at high speed on the wet or slick road.

# **A** CAUTION

# Stopping distance when the Multi Terrain ABS is operating may exceed that of normal conditions

The Multi Terrain ABS is not designed to shorten the vehicle's stopping distance. Always maintain a safe distance from the vehicle in front of you 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 roads with uneven surfaces
- Active TRC may not operate effectively when

Directional control and power may not be achievable while driving on slippery road surfaces, even if the Active TRC system is operating.

Do not drive the vehicle in conditions where stability and power may be lost.

■ Hill-start assist control does not operate effectively when

Do not overly rely on the hill-start assist control. The hill-start assist control may not operate effectively on steep inclines and roads covered with ice.

■When the Active TRC/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 enhance vehicle stability and driving force, do not turn the Active TRC/VSC systems off unless necessary.

# **A** CAUTION

# ■ Replacing tires

Make sure that all tires are of the same 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 Multi Terrain ABS and VSC 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 e syst the driving assist systems, and may cause the system to malfunction.

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 to make it capable of performing in a wide variety of off-road applications.

# Off-road vehicle features

- 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. Ind., 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 are designed to perform satisfactorily under off-road conditions. Therefore, sharp turns at excessive speeds may cause the vehicle to rollover.

# **CAUTION**

### Off-road 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 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 with 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

When driving your vehicle off-road, please observe the following precautions to ensure your driving enjoyment and to help prevent the closure of areas to off-road 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.

# **CAUTION**

# 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 immediate after driving in sand, mud, water or snow.
- After driving through tall grass, mud, rock, sand livers, 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.

# **№** NOTICE

### ■To prevent the water damage

Take all necessary safety measures to ensure that water damage to the engine or other components does not occur.

- Water entering the engine air intake will cause severe engine damage.
- Water entering the automatic transmission will cause deterioration in shift quality, locking up of your transmission accompanied by vibration, and ultimately damage.
- Water can wash the grease from wheel bearings, causing rusting and premature failure, and may also enter the differentials, transmission and transfer 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 "Warranty and Service Booklet".

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# Index

	Abbreviation list	156
	Appleviation iis	130
	Alphabetic a index	157
	An	
	400	
c c	6,	
Red	•	
Kor,		
. 60		
40		

ABBREVIATIONS	MEANING	
4WD	Four Wheel Drive	
ABS	Anti-lock Brake System	
AVS	Adaptive Variable Suspension System	
DAC	Downhill Assist Control system	
EFI	Electronic Fuel Injection	
HI	High	
KDSS	Kinetic Dynamic Suspension System	
LO	Low	
N	Normal	
TRC	Traction Control	
VSC	Vehicle Stability Control	
Notk	or Repl	

# Alphabetical index

# Alphabetical index

Α	ABS	Driving on uneven		
	Multi Terrain ABS141	surfaces52		
	Acceleration	Driving posture22		
	When accelerating23	Driving styles in various		
	Active TRC141	conditions30		
	Adaptive variable	Driving through		
	suspension system123	undergrowth44		
	After crossing a river86	Driving through		
	After driving in seawater86	V-shaped ditch60		
	After driving off-road85	Driving uphill62		
	Anti-lock Brake System			
	Multi Terrain ABS141	Four-wheel drive system		
	AVS123	Four-wheel drive		
		control switch124		
В	Basic off-road	Fuel17		
	driving techniques21			
С		Height control		
	Center differential	Rear height control		
	lock/unlock124	air suspension116		
	Clearance dimensions	Hill-start assist control141		
	and incline angles19			
	Crawl Control	KDSS141		
	Crossing grooved areas55	Kinetic Dynamic Suspension		
	Crossing rivers49	System141		
D	DAC138	Luggage17		
	Deceleration			
	When decelerating23	Multi Terrain ABS141		
	Downhill assist control	Multi-terrain Monitor100		
	system138	Multi-terrain Select90		
	Driving across inclines58			
	Driving downhill	Off-road precautions149		
	Driving in deep snow47	On-road precautions149		
	Driving on dirt roads46	Bullio Hatarday Lad		
	Driving on moguls38	Push-pull steering wheel 24		
	Driving on muddy roads31			
	Driving on roads with ruts70			
	Driving on rocky terrain41			
	Driving on rubble36			
	Driving on sand34			

R	Rear differential lock system	
S	Shift position	
	Selecting a shift position22	
	Steering wheel	
	Steering wheel operation23	
	Turning the steering wheel24	
	Stuck	
	If your vehicle becomes	
	stuck78	10
T	Things you should read	duction
<u>'</u>	Things you should read	10.
	first14	
	Tires	
	Inspection16	
	Active TRC141	
	Active TRO41	
٧	Vehicle inspection18	
W	Wheel Inspection	

TOTA HOLLON