

Utility vehicle precautions

This vehicle belongs to the utility vehicle class, which has higher ground clearance and narrower tread in relation to the height of its center of gravity.

Utility vehicle feature

- 1 Specific design characteristics give it a higher center of gravity than ordinary passenger cars. This vehicle design feature causes this type of vehicle to be more likely to rollover. And, utility vehicles have a significantly higher rollover rate than other types of vehicles.
- 1 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 rollover.

 CAUTION

n Utility vehicle precautions

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

- I** 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.
- I** 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.
- I** 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.
- I** Always slow down in gusty crosswinds. Because of its profile and higher center of gravity, your vehicle is more sensitive to side winds than an ordinary passenger car. Slowing down will allow you to have better control.
- I** Do not drive horizontally across steep slopes. Driving straight up or straight down is preferred. Your vehicle (or any similar off-road vehicle) can tip over sideways much more easily than forward or backward.

Off-road driving

Your vehicle is not designed to be driven off-road. However, in the event that off-road driving cannot be avoided, please observe the following precautions to help avoid the areas prohibited to vehicles.


- 1 Drive your vehicle only in areas where off-road vehicles are permitted to travel.
- 1 Respect private property. Get owner's permission before entering private property.
- 1 Do not enter areas that are closed. Honor gates, barriers and signs that restrict travel.
- 1 Stay on established roads. When conditions are wet, driving techniques should be changed or travel delayed to prevent damage to roads.

n **Additional information for off-road driving**

- For owners in U.S. mainland, Hawaii and Puerto Rico:

To obtain additional information pertaining to driving your vehicle off-road, consult the following organizations.

- 1 State and Local Parks and Recreation Departments
- 1 State Motor Vehicle Bureau
- 1 Recreational Vehicle Clubs
- 1 U.S. Forest Service and Bureau of Land Management

 CAUTION

n Off-road driving precautions

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

- I** Drive carefully when off the road. Do not take unnecessary risks by driving in dangerous places.
- I** 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.
- I** Always check your brakes for effectiveness immediately after driving in sand, mud, water or snow.
- I** After driving through tall grass, mud, rock, sand, rivers, 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.
- I** 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**n To prevent the water damage**

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

- I Water entering the engine air intake will cause severe engine damage.
- I Water entering the automatic transmission will cause deterioration in shift quality, locking up of your transmission accompanied by vibration, and ultimately damage.
- I 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.

n 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 river bed for firmness. Drive slowly and avoid deep water.

n Inspection after off-road driving

- I Sand and mud that has accumulated in brake drums and around brake discs may affect braking efficiency and may damage brake system components.
- I Always perform a maintenance inspection after each day of off-road driving that has taken you through rough terrain, sand, mud, or water. For scheduled maintenance information, refer to the "Scheduled Maintenance Guide" or "Owner's Manual Supplement".

Cargo and luggage

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

- 1 Stow cargo and luggage in the luggage compartment whenever possible. Be sure all items are secured in place.
- 1 Be careful to keep the vehicle level. Placing the weight as far forward as possible helps maintain vehicle balance.
- 1 For better fuel economy, do not carry unnecessary weight.

Capacity and distribution

Cargo capacity depends on the total weight of the occupants.

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

Steps for Determining Correct Load Limit—

- (1) Locate the statement “The combined weight of occupants and cargo should never exceed XXX kg or XXX lbs.” on your vehicle’s placard.
- (2) Determine the combined weight of the driver and passengers that will be riding in your vehicle.
- (3) Subtract the combined weight of the driver and passengers from XXX kg or XXX lbs.
- (4) The resulting figure equals the available amount of cargo and luggage load capacity.

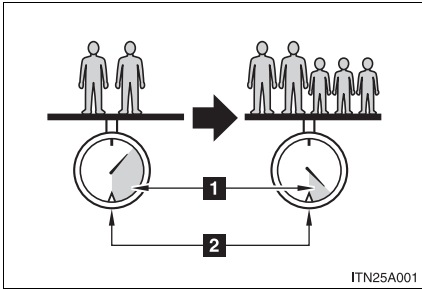
For example, if the “XXX” amount equals 1400 lbs. and there will be five 150 lb passengers in your vehicle, the amount of available cargo and luggage load capacity is 650 lbs. (1400 - 750 (5 × 150) = 650 lbs.)

- (5) Determine the combined weight of luggage and cargo being loaded on the vehicle.

That weight may not safely exceed the available cargo and luggage load capacity calculated in Step 4.

- (6) If your vehicle will be towing a trailer, load from your trailer will be transferred to your vehicle. Consult this manual to determine how this reduces the available cargo and luggage load capacity of your vehicle. (→P. 243)

Example on your vehicle



- 1** Cargo capacity
- 2** Total load capacity

When 2 people with the combined weight of 366 lb. (166 kg) are riding in your vehicle, which has a total load capacity of 825 lb. (370 kg), the available amount of cargo and luggage load capacity will be as follows:

$$825 \text{ lb.} - 366 \text{ lb.} = 459 \text{ lb.} \quad (370 \text{ kg} - 166 \text{ kg} = 204 \text{ kg})$$

In this condition, if 3 more passengers with the combined weight of 388 lb. (176 kg) get on, the available cargo and luggage load will be reduced as follows:

$$459 \text{ lb.} - 388 \text{ lb.} = 71 \text{ lb.} \quad (204 \text{ kg} - 176 \text{ kg} = 28 \text{ kg})$$

As shown in the above example, if the number of occupants increases, the cargo and luggage load equaling the combined weight of the occupants who got on later, by an amount. In other words, if an increase in the number of occupants causes an excess of the total load capacity (combined weight of occupants plus cargo and luggage load), you must reduce the cargo and luggage on your vehicle.

 **CAUTION****n Things that must not be carried in the luggage compartment**

The following things may cause a fire if loaded in the luggage compartment.

- I Receptacles containing gasoline
- I Aerosol cans

n Storage precautions

Observe the following precautions.

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

- I Do not place cargo or luggage in or on the following locations as the item may get under the brake or accelerator pedal and prevent the pedals from being depressed properly, block the driver's vision, or hit the driver or passengers, causing an accident.
 - Driver's feet
 - Front passenger or rear seats (when stacking items)
 - Luggage cover (if equipped)
 - Instrument panel
 - Dashboard
 - Auxiliary box or tray that has no lid
- I Secure all items in the occupant compartment, as they may shift and injure someone during an accident or sudden braking.
- I Never allow anyone to ride in the luggage compartment. It is not designed for passengers. They should ride in their seats with their seat belts properly fastened. Otherwise, they are much more likely to suffer death or serious injury, in the event of sudden braking or an accident.

 CAUTION

n Weight of the load

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

2-5. Driving information

Vehicle load limits

Vehicle load limits include total load capacity, seating capacity, towing capacity and cargo capacity.

n **Total load capacity: 825 lb. (370 kg)**

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

n **Seating capacity: 5 occupants (Front 2, Rear 3)**

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

Even if the number of occupants is within the seating capacity, do not exceed the total load capacity.

n **Towing capacity**

With towing package:

- ▶ **2GR-FE engine**
3500 lb. (1585 kg)
- ▶ **1AR-FE engine**
2500 lb. (1130 kg)

Without towing package: 1000 lb. (450 kg)


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

n **Cargo capacity**

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

n Total load capacity and seating capacity

These details are also described on the tire and loading information label. (→P. 468)

 **CAUTION**

n Overloading the vehicle

Do not overload the vehicle.

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

Carry out the necessary preparations and inspections before driving the vehicle in winter. Always drive the vehicle in a manner appropriate to the prevailing weather conditions.

n Pre-winter preparations

- 1 Use fluids that are appropriate to the prevailing outside temperatures.
 - Engine oil
 - Engine coolant
 - Washer fluid
- 1 Have a service technician inspect the level and specific gravity of battery electrolyte.
- 1 Have the vehicle fitted with four snow tires or purchase a set of tire chains for the front tires.

Ensure that all tires are the same size and brand, and that chains match the size of the tires.

n **Before driving the vehicle**

Perform the following according to the driving conditions.

- l Do not try to forcibly open a window or move a wiper that is frozen. Pour warm water over the frozen area to melt the ice. Wipe away the water immediately to prevent it from freezing.
- l To ensure proper operation of the climate control system fan, remove any snow that has accumulated on the air inlet vents in front of the windshield.
- l Remove any ice that has accumulated on the vehicle chassis.
- l Periodically check for and remove any excess ice or snow that may have accumulated in the wheel well or on the brakes.

n **When driving the vehicle**

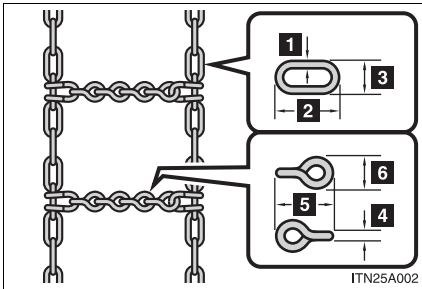
Accelerate the vehicle slowly and drive at a reduced speed suitable to road conditions.

n **When parking the vehicle**

Park the vehicle and move the shift lever to “P” without setting the parking brake. The parking brake may freeze up, preventing it from being released.

Selection tire chains

Use the correct tire chain size when mounting the tire chains. Chain size is regulated for each tire size.



Side chain:

- 1 0.12 in. (3.0 mm)
- 2 1.18 in. (30.0 mm)
- 3 0.39 in. (10.0 mm)

Cross chain:

- 4 0.16 in. (4.0 mm)
- 5 0.98 in. (25.0 mm)
- 6 0.55 in. (14.0 mm)


Regulations on the use of tire chains

- 1 Regulations regarding the use of tire chains vary according to location and type of road. Always check local regulations before installing chains.
- 1 Retighten the chains after driving 1/4 - 1/2 mile (0.5 - 1.0 km).

n Tire chains

Observe the following precautions when installing and removing chains.

- 1 Install and remove tire chains in a safe location.
- 1 Install tire chains on the front tires.
- 1 Install tire chains following the instructions provided in the accompanying manual.

 **CAUTION**

n Driving with snow tires

Observe the following precautions to reduce the risk of accidents.

Failing to do so may result in a loss of vehicle control and cause death or serious injury.

- I** Use tires of the size specified for your vehicle.
- I** Maintain the recommended level of tire inflation pressure.
- I** Do not drive in excess of 75 mph (120 km/h), regardless of the type of snow tires being used.
- I** Snow tires should be installed on all wheels.

n Driving with tire chains

Observe the following precautions to reduce the risk of accidents.

Failing to do so may result in the vehicle being unable to be driven safely, and may cause death or serious injury.

- I** Do not drive in excess of the speed limit specified for the tire chains being used, or 30 mph (50 km/h), whichever is lower.
- I** Avoid driving on bumpy road surfaces or over potholes.
- I** Avoid sudden turns and braking, as use of chains may adversely affect vehicle handling.
- I** Slow down sufficiently before entering a curve to ensure that vehicle control is maintained.

 NOTICE**n Repairing or replacing snow tires**

Request repairs of and obtain replacement snow tires from Toyota dealers or legitimate tire retailers.

This is because the removal and attachment of snow tires affects the operation of the tire pressure warning valves and transmitters.

n Fitting tire chains

The tire pressure warning valves and transmitters may not function correctly when tire chains are fitted.

Trailer towing

Your vehicle is designed primarily as a passenger carrying vehicle. Towing a trailer will have an adverse effect on handling, performance, braking, durability, and fuel consumption. For your safety and the safety of others, do not overload the vehicle or trailer.

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

The vehicle stability and braking performance are affected by trailer stability, brake setting and performance, and the hitch.

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

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

Weight limits

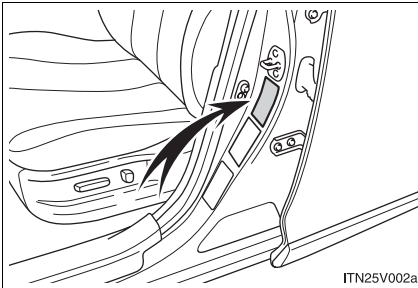
Confirm that the gross trailer weight, gross vehicle weight, gross axle weight and trailer tongue load are all within the limits.

1 The gross trailer weight must never exceed towing capacity described below.

With towing package:

- ▶ 2GR-FE engine
3500 lb. (1585 kg)
- ▶ 1AR-FE engine
2500 lb. (1130 kg)

Without towing package: 1000 lb. (450 kg)



1 The gross vehicle weight must never exceed the GVWR indicated on the Certification Label.

1 The gross axle weight on each axle must never exceed the GAWR indicated on the Certification Label.

Towing related term

Towing related term	Meaning
GVWR (Gross Vehicle Weight Rating)	The maximum allowable gross vehicle weight. The gross vehicle weight is the total weight of the vehicle. When towing a trailer, it is the sum of the vehicle weight (including the occupants, cargo and any optional equipment installed on the vehicle) and the tongue load.

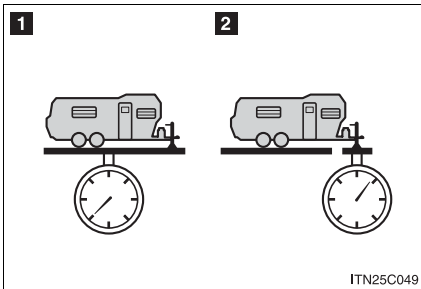
Towing related term	Meaning
GAWR (Gross Axle Weight Rating)	<p>The maximum allowable gross axle weight.</p> <p>The gross axle weight is the load placed on each axle (front and rear).</p>
Gross trailer weight	<p>The sum of the trailer weight and the weight of the cargo in the trailer.</p>
Towing capacity	<p>The maximum allowable gross trailer weight. Towing capacity is calculated considering base vehicle with necessary vehicle equipment and occupants. Additional optional equipment, passengers and cargo in the vehicle will reduce the towing capacity, gross trailer weight includes the trailer, cargo and necessary equipment for towing.</p>
Tongue load	<p>The load placed on the trailer hitch ball.</p>

Trailer tongue load

- 1 A recommended tongue load varies in accordance with the types of trailers or towing as described below.
- 1 In order to ensure the recommended values shown below, the trailer must be loaded by referring to the following instructions. The trailer cargo load should be distributed so that the tongue load is 9 to 11 % of the gross trailer weight.
(Tongue load / Gross trailer weight \times 100 = 9 to 11 %)

If the gross trailer weight is over 2000 lbs. (900 kg), it is necessary to use a sway control device with sufficient capacity.

The gross trailer weight and tongue load can be measured with platform scales found at a highway weighing station, building supply company, trucking company, junk yard, etc.



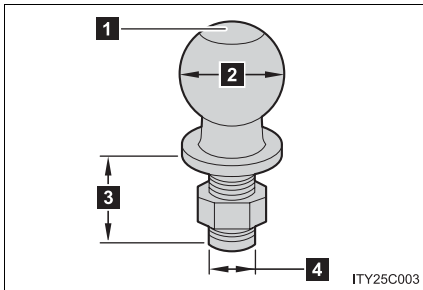
- 1 Gross trailer weight
- 2 Tongue load

Hitch

Trailer hitch assemblies have different weight capacities established by the hitch manufacturer. Even though the vehicle may be rated for towing a higher weight, the operator must never exceed the maximum weight rating specified for the trailer hitch.

Selecting trailer ball

Use the correct trailer ball for your application.



1 Trailer ball load rating

Matches or exceeds the gross trailer weight rating of the trailer.

2 Ball diameter

Matches the size of the trailer coupler. Most couplers are stamped with the required trailer ball size.

3 Shank length

Protrudes beyond the bottom of the lock washer and nut at least 2 threads.

4 Shank diameter

Matches the ball mount hole diameter size.

Trailer towing tips

Your vehicle will handle differently when towing a trailer. The 3 main causes of vehicle-trailer accidents are driver error, excessive speed and improper trailer loading. Keep the following in mind when towing.

- 1 Before starting out, check the trailer lights and the vehicle-trailer connections. Recheck after driving a short distance.
- 1 Practice turning, stopping and reversing with the trailer attached in an area away from traffic until you become accustomed to the feel of the vehicle.
- 1 Reversing with a trailer attached is difficult and requires practice. Grip the bottom of the steering wheel and move your hand to the left to move the trailer to the left. Move your hand to the right to move the trailer to right. (This is generally opposite to reversing without a trailer attached.) Avoid sharp or prolonged turning. Have someone guide you when reversing to reduce the risk of an accident.
- 1 As stopping distance is increased when towing a trailer, vehicle-to-vehicle distance should be increased. For each 10 mph (16 km/h) of speed, allow at least one vehicle and trailer length.
- 1 Avoid sudden braking as you may skid, resulting in jackknifing and loss of control. This is especially true on wet or slippery surfaces.
- 1 Avoid jerky starts or sudden acceleration.
- 1 Avoid jerky steering and sharp turns, and slow down before making turns.

- 1 Note that when making a turn, the trailer wheels will be closer than the vehicle wheels to the inside of the turn. Compensate by making a larger than normal turning radius.
- 1 Crosswinds and rough roads will adversely affect handling of your vehicle and trailer, causing sway. Periodically check the rear to prepare for being passed by large trucks or buses, which may cause your vehicle and trailer to sway. If swaying occurs, firmly grip the steering wheel, reduce speed immediately but gradually, and steer straight ahead. Never increase speed. If you make no extreme correction with the steering or brakes, your vehicle and trailer will stabilize.
- 1 Take care when passing other vehicles. Passing requires considerable distance. After passing a vehicle, do not forget the length of your trailer, and be sure you have plenty of room before changing lanes.
- 1 In order to maintain engine braking efficiency when driving on a long steep downgrade, do not use overdrive. Transmission shift range position must be in "4", in "S" mode.
- 1 Due to the added load of the trailer, your vehicle's engine may overheat on hot days (at temperatures over 85°F [30°C]) when driving up a long or steep grade. If the engine coolant temperature gauge indicates overheating, immediately turn off the air conditioning (if in use), pull your vehicle off the road and stop in a safe spot. (→P. 553)

- 1 Always place wheel blocks under both the vehicle and the trailer wheels when parking. Apply the parking brake firmly, and put the transmission in “P”. Avoid parking on a slope, but if unavoidable, do so only after performing the following:

STEP 1 Apply the brakes and keep them applied.

STEP 2 Have someone place wheel blocks under both the vehicle and trailer wheels.

STEP 3 When the wheel blocks are in place, release the brakes slowly until the blocks absorb the load.

STEP 4 Apply the parking brake firmly.

STEP 5 Shift into “P” and turn off the engine.

- 1 When restarting after parking on a slope:

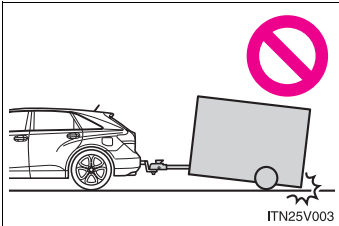
STEP 1 With the transmission in the “P” position, start the engine. Be sure to keep the brake pedal pressed.

STEP 2 Shift into “3”, “2”, “1” range of “S”, or “R” position (if reversing).

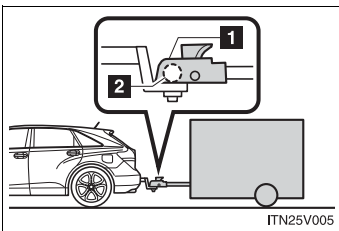
STEP 3 Release the parking brake and brake pedal, and slowly pull or back away from the wheel blocks. Stop and apply the brakes.

STEP 4 Have someone retrieve the blocks.

■ Matching trailer ball height to trailer coupler height



No matter which class of tow hitch applies, for a safe trailer hookup, the trailer ball setup on must be proper height for the coupler on the trailer.



- 1 Coupler
- 2 Trailer ball

■ Before towing

Check that the following conditions are met:

- 1 The vehicle's tires are properly inflated.
- 1 Trailer tires are inflated according to the trailer manufacturer's recommendation.
- 1 All trailer lights work.
- 1 All lights work each time you connect them.
- 1 The vehicle remains level when a loaded or unloaded trailer is hitched. Do not drive if the vehicle is not level, and check for improper tongue load, overloading, worn suspension, or other possible causes.
- 1 The trailer cargo is securely loaded.
- 1 The rear view mirrors conform to all applicable federal, state/provincial or local regulations. If they do not, install rear view mirrors appropriate for towing purposes.

n Break-in schedule

If your vehicle is new or equipped with any new power train components (such as an engine, transmission, differential and wheel bearing), Toyota recommends that you do not tow a trailer until it has been driven for over 500 miles (800 km).

However, avoid full throttle acceleration.


n Maintenance

- 1 If you tow a trailer, your vehicle will require more frequent maintenance due to the additional load. (See “Scheduled Maintenance Guide” or “Owner’s Manual Supplement”.)
- 1 Retighten the fixing bolts of the towing ball after approximately 600 miles (1000 km) of trailer towing.

CAUTION

n Trailer towing precautions

- 1 Follow all the instructions described in this section. Failure to do so could cause an accident resulting in death or serious injury.
- 1 Exceeding the towing capacity, GVWR or GAWR can cause an accident resulting in death or serious personal injuries.

 **CAUTION**

n To avoid accident or injury

- !** Do not exceed the trailer hitch assembly weight, gross vehicle weight, gross axle weight and trailer tongue load capacities.
- !** Never load more weight in the back than in the front of the trailer. About 60% of the load should be in the front half of the trailer, and the remaining 40% in the rear.
- !** Do not exceed 45 mph (72 km/h) or the posted towing speed limit, whichever is lower. As instability (swaying) of the towing vehicle-trailer combination increases as speed increases, exceeding 45 mph (72 km/h) may cause loss of control.
- !** Do not use cruise control when you are towing.
- !** Slow down and downshift before descending steep or long downhill grades. Do not make sudden downshifts.
- !** Avoid holding the brake pedal down too long or applying the brakes too frequently. This could cause the brakes to overheat and result in reduced braking efficiency.
- !** Do not tow the vehicle with the compact spare tire installed.

n Hitches

- !** If you wish to install a trailer hitch, contact your Toyota dealer.
- !** Use only a hitch that conforms to the gross trailer weight requirement.
- !** Follow the directions supplied by the hitch manufacturer.
- !** Lubricate the hitch ball with a light coat of grease.
- !** Remove the trailer hitch whenever you are not towing a trailer. After removing the hitch, seal any mounting hole in the vehicle body to prevent entry of any substances into the vehicle.

 **CAUTION****n When towing a trailer**

- I** If the gross trailer weight exceeds 1000 lb. (450 kg), trailer brakes are required. Toyota recommends trailers with brakes that conform to all applicable federal and state/provincial regulations.
- I** Never tap into your vehicle's hydraulic system, as this will lower the vehicle's braking effectiveness.
- I** Never tow a trailer without using a safety chain securely attached to both the trailer and the vehicle. If damage occurs to the coupling unit or hitch ball, there is danger of the trailer wandering into another lane.

 **NOTICE****n When installing a trailer hitch**

- I** Use only the position recommended by your Toyota dealer. Do not install the trailer hitch on the bumper; this may cause body damage.
- I** Do not use axle-mounted hitches, as they can cause damage to the axle housing, wheel bearings, wheels or tires.

n Safety chain

A safety chain must always be used between the towing vehicle and the trailer. Leave sufficient slack in the chain for turns. The chain should cross under the trailer tongue to prevent the tongue from dropping to the ground in the case that it becomes damaged or separated. For the correct safety chain installation procedure, ask your Toyota dealer.

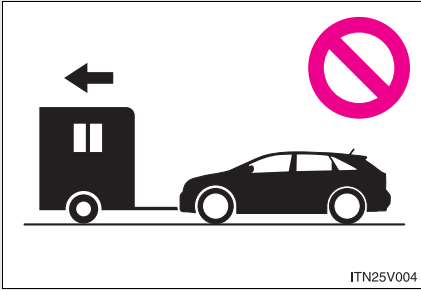
n Do not directly splice trailer lights

Directly splicing trailer lights may damage your vehicle's electrical system and cause a malfunction.

2-5. Driving information

Dinghy towing

Your vehicle is not designed to be dinghy towed (with four wheels on the ground) behind a motor home.



NOTICE

n To avoid serious damage to your vehicle

Do not tow your vehicle with four wheels on the ground.

