

Owner's Manual

Driving support software update
<Ver.2.02 - Ver.2.03>

Your Toyota dealer

Your Toyota dealer will provide quality maintenance and any other assistance you may require.

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- In the U.S. mainland or Canada:
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- In Canada or the U.S. mainland:
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Objectives and key points of this manual

Objectives and contents of this manual

This manual comprises excerpts from vehicle Owner's Manual on Toyota Safety Sense 3.0 descriptions, to notify you of changes to operations and necessary/important items triggered by software updates.

Note the following points :

- This is a shared manual among all Toyota brand models for which software updates are applicable.
- For functions of Toyota Safety Sense 3.0 which are constantly available regardless of software updates , as well as warnings and information on use of other systems and functions, refer to the "OWNER'S MANUAL" and "MULTIMEDIA OWNER'S MANUAL".
- Depending on the implementation timing of software updates, content of this manual may not be same as your vehicle features .
- Depending on the model, content of updates may differ from what is described. Some functions described may not be available on your vehicle.
- Due to the spec difference, etc., features shown on illustrations herein may not be the same as your vehicle.

Software version relevant to content described in this manual

This manual has been compiled for models which have implemented updates to software version 2.0. For changes triggered by updates to software versions other than that herein , refer to the manual specifically for that version. To check software versions: [Accessing an Owner's Manual which matches the system specifications\(→ P.4\)](#)

Reading this manual

This section explains symbols used in this manual.

■ Meanings of symbols in the text

The names and meanings of symbols are as follows:



● **WARNING**

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



● **NOTICE**

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

¹ ² ³...

● **Step number**

Indicates operating or working procedures. Follow the steps in numerical order.



● **Info**

Explains important points other than functions and operating methods.

Accessing an Owner's Manual which matches the system specifications

If the software of this system has been updated after initial purchase of the vehicle, to access the appropriate Owner's Manual, it is necessary to check the software version of the system and then visit the Owner's Manual website.

INFORMATION

■ Digital Owner's Manual

A printed version of the Owner's Manual can be purchased. For details, contact your Toyota dealer.

Checking the version using Toyota App

The software version of the system can be checked using Toyota App.

Owner's Manual content affected by system software updates

Update history

Owner's Manual changes are triggered by the following software updates:

► **Software version: Ver. 2.03**

Revision Type	Operable functions
Add	PCS (Pre-Collision System)

► **Software version: Ver. 2.02**

Revision Type	Operable functions
Add	PDA (Proactive Driving Assist)

Pre-Collision System

The pre-collision system uses sensors to detect objects in the path of the vehicle. When the system determines that the possibility of a frontal collision with a detectable object is high, a warning operates to urge the driver to take evasive action and the potential brake pressure is increased to help the driver avoid the collision. If the system determines that the possibility of a collision is extremely high, the brakes are automatically applied to help avoid the collision or help reduce the impact of the collision.

Detectable objects

The system can detect the following as detectable objects. (Detectable objects differ depending on the function.)

<The following item has been added. >

- Walls

System functions

□ INFORMATION

■ Operating conditions of each function of the pre-collision system

- Acceleration Suppression at Low Speed

<The following item has been added. >

Detectable objects	Vehicle speed	Relative speed between your vehicle and object
Wall	Approximately 0 to 9 mph (0 to 15 km/h)	Approximately 0 to 9 mph (0 to 15 km/h)

■ Situations in which the system may not operate properly

<The following item has been added.>

In certain situations, such as the following, walls may not be detected as a target object and the Acceleration Suppression at Low Speed function may not operate properly:

- When scenery behind the wall is visible, such as a glass door, grid fence, etc.
- When the wall is slanted or low
- When the wall is narrow, such as a pole, etc.

- When the wall is made of plants, such as a hedge, etc.
- When the road, etc. is reflected on the wall
- When the vehicle is approaching the wall at an angle

Proactive driving assist

<The following item has been added.>

PDA (Proactive Driving Assist)

When a detectable object (→ P.8) is detected, the proactive driving assist operates the brakes and steering wheel to help prevent the vehicle from approaching too close to the object.

WARNING

■ For safe use

Driving safely is solely the responsibility of the driver.

- The proactive driving assist is designed to provide some assistance for regular braking and steering operations, as well as helping to prevent the vehicle from approaching too close to a detectable object. However, the scope of this assistance is limited.

The driver should perform brake and steering operations as necessary. Read the following items carefully. Do not overly rely on the proactive driving assist and always drive carefully. (→ P.10)

- The proactive driving assist is not a system which reduces the amount of attention necessary for safe driving. Even if the system is operating correctly, the surrounding conditions as recognized by the driver and detected by the system may differ. It is necessary for the driver to pay attention, assess risks, and ensure safety. Over-reliance on this system to drive the vehicle safely may lead to an accident resulting in death or serious injury.
- Proactive driving assist is not a system which allows for inattentive driving and is not a system which assists in poor visibility conditions. The driver is solely responsible for paying attention to their surroundings and driving safely.

■ When turning proactive driving assist off

- Situations in which the sensors may not operate properly: *1
- When it is necessary to disable the system: *1

System operating conditions and detectable objects

According to the driving conditions, the operation and detectable objects of the proactive driving assist will change as follows.

*1 : Refer to the "OWNER'S MANUAL"

Function	Conditions	Operation	Detectable objects
Obstacle Anticipation Assist	A detectable object is detected crossing the road	Assistance with some brake operations is provided in order to reduce the possibility of a collision.	<ul style="list-style-type: none"> ● Pedestrians ● Bicyclists
	A detectable object is detected on the side of the road	Assistance with some brake and steering wheel operations are provided according to the surrounding conditions to help prevent the vehicle from approaching too close to a detected object.	<ul style="list-style-type: none"> ● Pedestrians ● Bicyclists ● Parked vehicles
		Assistance with steering wheel operations is provided within a range that the vehicle will not deviate from its current lane.	
Deceleration Assist	A preceding vehicle or an adjacent vehicle cutting in front of the vehicle is detected	The vehicle is gently decelerated so that the vehicle-to-vehicle distance will not be excessively short.	<ul style="list-style-type: none"> ● Preceding vehicles ● Motorcycles
	A curve is detected ahead of the vehicle	The vehicle is gently decelerated if the vehicle speed is determined to be too high for the curve ahead.	None

INFORMATION

■ Vehicle speeds at which the system can operate

- Detectable object crossing the road assistance
Approximately 20 to 35 mph (30 to 60 km/h)
- Detectable object on the side of the road assistance
Approximately 20 to 35 mph (30 to 60 km/h)
- Preceding vehicle deceleration assistance
Approximately 15 mph (20 km/h) or more

- Curve deceleration assistance

Approximately 15 mph (20 km/h) or more

■ System operation will be canceled when

- In the following situations, system operation will be canceled:
 - When the dynamic radar cruise control or cruise control is operating
 - When the PCS is off
 - Situations in which some or all of the functions of the system cannot operate: *2
 - When the P, R or N shift position is selected
- In the following situations, the brake operation assist will be canceled:
 - Approximately 9 mph (15 km/h) or less
 - When a certain vehicle speed has been reached, as judged by the system, according to the surrounding conditions
- In the following situations, system operation may be canceled:
 - When the brake control or output restriction control of a driving support system operates
(For example: PCS, drive-start control)
 - When the system determines that a detected object has moved away from the vehicle
 - When lane lines can no longer be detected
 - When the brake pedal has been depressed
 - When the accelerator pedal has been depressed
 - When the steering wheel has been operated with more than a certain amount of force
 - When the turn signal lever is operated to the left/right turn position

▲ WARNING

■ Situations in which the system may not operate properly

- Situations in which the lane may not be detected: *2
- When a detectable object stops immediately before entering the path of the vehicle
- When passing extremely close to a detectable object behind a guard-rail, fence, etc.
- When changing lanes while overtaking a detectable object

*2 : Refer to the "OWNER'S MANUAL"

▲ WARNING

- When passing a detectable object that is changing lanes or turning left/right
- When there are objects (guardrails, power poles, trees, walls, fences, poles, traffic cones, mailboxes, etc.) in the surrounding area
- When there are patterns or a painting ahead of the vehicle that may be mistaken for a detectable object
- When passing through a place with a low structure above the road (tunnel with a low ceiling, traffic sign, signboard, etc.)
- When driving on snowy, icy, or rutted roads
- When a detectable object is approaching your vehicle
- When your vehicle or a detectable object is wandering
- When the movement of a detectable object changes (change in direction, sudden acceleration or deceleration, etc.)
- When suddenly approaching a detectable object
- When a preceding vehicle or motorcycle is not directly in front of your vehicle
- When there is a structure above a detectable object
- When part of a detectable object is hidden by another object (large luggage, umbrella, guardrail, etc.)
- When multiple detectable objects are overlapping
- When a bright light, such as the sun or headlights of another vehicle, is reflecting off of the detectable object
- When the detectable object is white and looks extremely bright
- When the color or brightness of the detectable object causes it to blend in with its surroundings
- When a detectable object cuts in front of or emerges from beside a vehicle
- When approaching a vehicle ahead which is perpendicular or at an angle to the vehicle, or is facing the vehicle
- If a parked vehicle is perpendicular or at an angle to the vehicle
- When a bicycle is a child sized bicycle, is carrying a large load, is carrying an extra passenger, or has an unusual shape (bicycles equipped with a child seat, tandem bicycles, etc.)
- When a pedestrian or bicyclist is shorter than approximately 3.2 ft. (1 m) or taller than approximately 6.5 ft. (2 m)

▲ WARNING

- When the silhouette of a pedestrian or bicyclist is unclear (such as when they are wearing a raincoat, long skirt, etc.)
- When a pedestrian or bicyclist is bending forward or squatting
- When a pedestrian or bicyclist is moving at high speed
- When a pedestrian is pushing a stroller, wheelchair, bicycle or other vehicle
- When a detectable object blends in with the surrounding area, such as when it is dim (at dawn or dusk) or dark (at night, in a tunnel, etc.)
- When the lane width is 13.1 ft. (4 m) or more
- When the lane width is 8.2 ft. (2.5m) or less
- When the vehicle has not been driven for a certain amount of time after the engine was started
When the vehicle has not been driven for a certain amount of time after the hybrid system was started
- While turning left or right or a few seconds after turning left or right
- While changing lanes or a few seconds after changing lanes
- When entering a curve, driving around a curve and a few seconds after driving around a curve

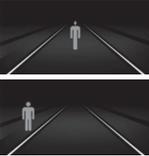
Changing proactive driving assist settings

- The proactive driving assist can be enabled/disabled through a customize setting. → [P.20](#)
- The following settings of the proactive driving assist can be changed through customize settings. → [P.20](#)

System operation display

Depending on the situation, the following indicators or icons will be displayed.

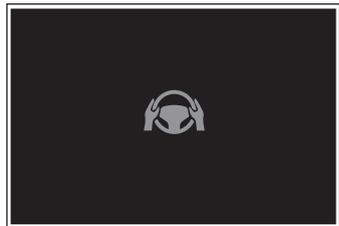
Some icons cannot be displayed unless the display is changed to the driving safety support function information screen.

Icon	Meaning
<p>Type A: </p> <p>Type B: </p>	<ul style="list-style-type: none"> ● White: Monitoring for detectable objects ● Green: Detectable object crossing the road or detectable object on the side of the road assistance operating
	<p>A pedestrian has been detected as crossing the road or on the side of the road and brake or steering assistance is operating</p>
	<p>A vehicle has been detected on the side of the road and brake or steering operation assistance is being performed</p>
	<p>Steering operation assistance is being performed to prevent the vehicle from approaching too close to a detectable object on the side of the road</p>
	<p>Preceding vehicle deceleration assistance is being performed</p>
	<p>Warning to maintain appropriate vehicle-to-vehicle distance</p>
	<p>Curve deceleration assistance is being performed</p>

 **INFORMATION**

■ Hands off steering wheel warning operation

In the following situations, a message urging the driver to grip the steering wheel and the icon shown in the illustration will be displayed on the display to warn the driver. If the system detects that the steering wheel is held, the warning will be canceled. When using the system, make sure to grip the



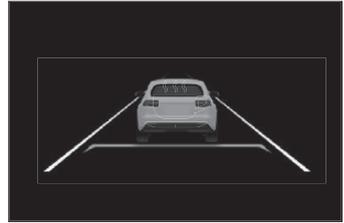
steering wheel firmly, regardless of whether the warning is operating or not.

- When assistance to a detectable object crossing the road or assistance to a detectable object on the side of the road is performed and the system determines the driver is not holding the steering wheel

If no operations are detected for a certain amount of time, a buzzer will sound, the warning will operate. This warning may also operate if the driver only operates steering wheel a small amount continuously.

■ Warning operation after preceding vehicle deceleration assistance has ended

After preceding vehicle deceleration assistance has ended, if the driver does not operate the brake pedal or accelerator pedal and the vehicle approaches the preceding vehicle, the display will flash and a buzzer will sound to urge the driver to decelerate. If the system determines that the driver is operating the brake pedal or accelerator pedal, the warning will be canceled.



If a warning light turns on/flashes

Calmly perform the following actions if any of the warning lights comes on or flashes. If a light comes on or flashes, but then goes off, this does not necessarily indicate a malfunction in the system. However, if this continues to occur, have the vehicle inspected by your Toyota dealer.

INFORMATION

■ Warning buzzer

In some cases, the buzzer may not be heard due to being in a noisy location or audio sound.

PDA indicator (warning buzzer)

<The following item has been added.>

Condition	Cause / Remedy
Type A:  (Yellow)	Indicates a malfunction in the PDA (Proactive Driving Assist)
Type B:  (Yellow)	Follow the instructions displayed on the display.

If a warning message is displayed

The multi-information display shows warnings for system malfunctions and incorrectly performed operations, and messages that indicate a need for maintenance. When a message is displayed, perform the appropriate corrective action for the message.

If a warning message is displayed again after the appropriate actions have been performed, contact your Toyota dealer.

Additionally, if a warning light comes on or flashes at the same time that a warning message is displayed, take the appropriate corrective action for the warning light.

 **INFORMATION**

■ Warning messages

The warning messages explained below may differ from the actual messages according to operation conditions and vehicle specifications.

■ Warning buzzer

In some cases, the buzzer may not be heard due to being in a noisy location or audio sound.

"System Malfunction Visit Your Dealer"

Cause	Remedy
<p>Indicates one of the following systems is disabled.</p> <p><The following item has been added.></p> <ul style="list-style-type: none"> ● PDA (Proactive Driving Assist) 	<ul style="list-style-type: none"> ● Have the vehicle inspected by your Toyota dealer immediately.

"System Stopped See Owner's Manual"

Cause	Remedy
<p>Indicates one of the following systems is disabled.</p> <p><The following item has been added.></p> <ul style="list-style-type: none"> ● PDA (Proactive Driving Assist) 	<ul style="list-style-type: none"> ● Follow the following correction methods. <ul style="list-style-type: none"> ● Check the voltage of the battery <ul style="list-style-type: none"> Check the voltage of the 12-volt battery ● Check the sensors that the Toyota Safety Sense 3.0 uses for foreign matter covering them. Remove them if any.*3 ● Check if the back door is open.

"System Stopped Front Camera Low Visibility See Owner's Manual"

Cause	Remedy
<p>Indicates one of the following systems is disabled.</p> <p><The following item has been added.></p> <ul style="list-style-type: none"> ● PDA (Proactive Driving Assist) 	<ul style="list-style-type: none"> ● Follow the following correction methods. <ul style="list-style-type: none"> ● Using the windshield wipers, remove the dirt or foreign matter from the windshield. ● Using the air conditioning system, defog the windshield. ● Close the hood, remove any stickers, etc. to clear the obstruction in front of the front camera.

*3 : refer to the "OWNER'S MANUAL"

"System Stopped Front Camera Out of Temperature Range Wait until Normal Temperature"

Cause	Remedy
<p>Indicates one of the following systems is disabled.</p> <p><The following item has been added.></p> <ul style="list-style-type: none"> ● PDA (Proactive Driving Assist) 	<ul style="list-style-type: none"> ● Follow the following correction methods. <ul style="list-style-type: none"> ● If the front camera is hot, such as after the vehicle is parked in the sun, use the air conditioning system to decrease the temperature around the front camera ● If a sunshade was used when the vehicle was parked, depending on its type, the sunlight reflected from the surface of the sunshade may cause the temperature of the front camera to become excessively high ● If the front camera is cold, such as after the vehicle is parked in an extremely cold environment, use the air conditioning system to increase the temperature around the front camera

"System Stopped Front Radar Sensor Blocked Clean Radar Sensor"

Cause	Remedy
<p>Indicates one of the following systems is disabled.</p> <p><The following item has been added.></p> <ul style="list-style-type: none"> ● PDA (Proactive Driving Assist) 	<ul style="list-style-type: none"> ● Follow the following correction methods. <ul style="list-style-type: none"> ● Check if there is any foreign matter attached to the radar sensor or radar sensor cover and clean them if necessary.*4 ● This message may be displayed when driving in an open area with few nearby vehicles or structures, such as a desert, grasslands, suburbs, etc. The message may be cleared by driving the vehicle in an area with structures, vehicles, etc. nearby.

*4 : refer to the "OWNER'S MANUAL"

"System Stopped Front Radar Sensor Out of Temperature Range Wait until Normal Temperature"

Cause	Remedy
<p>Indicates one of the following systems is disabled.</p> <p><The following item has been added.></p> <ul style="list-style-type: none"> ● PDA (Proactive Driving Assist) 	<ul style="list-style-type: none"> ● The temperature of the radar sensor is outside of the operating range. Wait for the temperature to become appropriate.

"System Stopped Front Radar In Self Calibration See Owner's Manual"

Cause	Remedy
<p>Indicates one of the following systems is disabled.</p> <p><The following item has been added.></p> <ul style="list-style-type: none"> ● PDA (Proactive Driving Assist) 	<ul style="list-style-type: none"> ● Follow the following correction methods. ● Check if there is any foreign matter attached to the radar sensor or radar sensor cover and clean them if necessary.*⁵ ● The radar sensor may be misaligned and will be adjusted automatically while driving. Continue driving for a while.

*5 : refer to the "OWNER'S MANUAL"

Customizable features

Some function settings are changed simultaneously with other functions being customized. Contact your Toyota dealer for further details.

- A** Settings that can be changed using the center display /multimedia display/audio system screen
- B** Settings that can be changed using the meter control switches
- C** Settings that can be changed by your Toyota dealer

Definition of symbols: O = Available, — = Not available

Proactive Driving Assist

<The following item has been added.>

Function	Customized setting	A	B	C
Proactive Driving Assist ⁽¹⁾	ON/OFF	—	O	—
Support timing ⁽¹⁾	Later / Default / Earlier	—	O	—

(1) This setting changes in accordance with My Settings*.

* : If equipped

Publication No.OMT3U20U

01-2406-00

Driving support software update Owner's Manual (北米 U)