

# Owner's Manual Excerpt for Driving Support Systems

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This document contains excerpts from the vehicle's Owner's Manual for certain driving support systems.

Refer to the full Owner's Manual for detail on all vehicle systems. All page numbers refer to the page of the Owner's Manual.

# **Toyota Safety Sense 3.0 software update**

It is necessary to enter a connected services contract, provided by Toyota, to use these functions. For details, contact your Toyota dealer.



#### WARNING

#### For safe use

When the Toyota Safety Sense 3.0 software is updated, the operating methods of functions may change. Using this system without knowing the correct operating methods may lead to an accident resulting in death or serious injury.

 Make sure to read the Digital Owner's Manual which corresponds to the software version of the system, available at the Owner's Manual website, before using this system.

# Content of the Toyota Safety Sense 3.0 Owner's Manual

This Owner's Manual contains information for Ver. 2. For the latest information about the controls, use, warnings/precautions, etc. of each function of Toyota

Safety Sense 3.0, refer to the Digital Owner's Manual at the Owner's Manual website.

Before using this system, be sure to read the Owner's Manual which corresponds to the software version of the system.

#### ■ Precautions for use

- Be aware that some functions may temporarily be disabled if a legal or safety related issue occurs.
- If a connected services contract has not been entered or has expired, software updates will not be able to be performed wirelessly.

# Checking your vehicle's Toyota Safety Sense 3.0 version

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.

# Checking the version using Toyota App

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

### Selecting your vehicle's Toyota Safety Sense 3.0 version

**1** Access the following URL using a computer or smartphone:

Language		URL	QR code
For U.S.A. own- ers	English	https://www.toyota.com/ owners/resources/ warranty-owners-manuals/ manual?om=om12s98u. grcorolla.2025.2409.cv.vh	
For Canadian owners	English	https://www.toyota.ca/toyota/ owners/manual? om=om12s98u.grcorolla. 2025.2409.cv.vh	
	French	https://www.toyota.ca/toyota/ owners/manual? om=om12s98d.grcorolla. 2025.2409.cv.vh	

2 Select the file which includes the previously checked system version.

### Updating the software

If a software update is available, a notification will be displayed by Toyota App. Follow the instructions displayed on the screen.

#### ■ Software update precautions

- After a software update has been performed, it will not be possible to revert to a previous version.
- Depending on the communication environment and the content of an update, a software update may take several hours. Although an update will be suspended when the engine switch is turned off, it will resume when the engine switch is changed back to ON.
- Toyota Safety Sense 3.0 can still be used while a software update is being performed.

# ■What can be checked using the Toyota App

The following items can be checked or performed.

- Software version, update details, precautions, use methods, etc.
- Software update

# **Toyota Safety Sense** 3.0

The Toyota Safety Sense 3.0 consists of the driving assist systems and contributes to a safe and comfortable driving experience:



#### WARNING

#### ■Toyota Safety Sense 3.0

The Toyota Safety Sense 3.0 operates under the assumption that the driver will drive safely, and is designed to help reduce the impact to the occupants in a collision and assist the driver under normal driving conditions.

As there is a limit to the degree of recognition accuracy and control performance that this system can provide, do not overly rely on this system. The driver is solely responsible for paying attention to the vehicle's surroundings and driving safely.

#### For safe use

- Do not overly rely on this system. The driver is solely responsible for paying attention to the vehicle's surroundings and driving safely. This system may not operate in all situations and provided assistance is limited. Over-reliance on this system to drive the vehicle safely may lead to an accident resulting in death or serious injury.
- Do not attempt to test the operation of the system, as it may not operate properly, possibly leading to an accident.

- If attention is necessary while performing driving operations or a system malfunction occurs, a warning message or warning buzzer will be operated. If a warning message is displayed on the display, follow the instructions displayed.
- Depending on external noise, the volume of the audio system, etc. it may be difficult to hear the warning buzzer. Also, depending on the road conditions, it may be difficult to recognize the operation of the system.
- ■When it is necessary to disable the system

In the following situations, make sure to disable the system.

Failure to do so may lead to the system not operating properly, possibly leading to an accident resulting in death or serious injury.

- When the vehicle is tilted due to being overloaded or having a flat tire
- When driving at extremely high speeds
- When towing another vehicle
- When the vehicle is being transported by a truck, ship, train, etc.
- When the vehicle is raised on a lift and the tires are allowed to rotate freely
- When inspecting the vehicle using a drum tester such as a chassis dynamometer or speedometer tester, or when using an on vehicle wheel balancer
- When the vehicle is driven in a sporty manner or off-road
- When using an automatic car wash

### A

#### WARNING

- When a sensor is misaligned or deformed due to a strong impact being applied to the sensor or the area around the sensor
- When accessories which obstruct a sensor or light are temporarily installed to the vehicle
- When a compact spare tire or tire chains are installed to the vehicle or an emergency tire puncture repair kit has been used
- When the tires are excessively worn or the inflation pressure of the tires is low
- When tires other than the manufacturer specified size are installed
- When the vehicle cannot be driven stably, due to a collision, malfunction, etc.

### **Driving assist system**

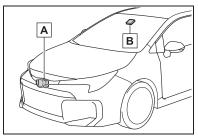
- AHB (Automatic High Beam)
- $\rightarrow$ P.156
- PCS (Pre-Collision System)
- →P.173
- LTA (Lane Tracing Assist)
- →P.184
- LDA (Lane Departure Alert)
- →P.189
- PDA (Proactive Driving Assist)\*
- →P.195

- \*: If equipped
- RSA (Road Sign Assist)\*
- →P.201
- \*: If equipped
- Dynamic radar cruise control (vehicles without brake-hold)\*
- →P.203
- \*: If equipped
- Dynamic radar cruise control\*
- →P.213
- \*: If equipped
- Cruise control
- →P.223

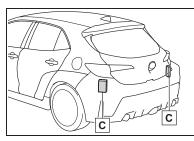
# Sensors used by Toyota Safety Sense 3.0

Various sensors are used to obtain the necessary information for system operation.

Sensors which detect the surrounding conditions



- A Front radar sensor
- **B** Front camera



c Rear side radar sensors



#### WARNING

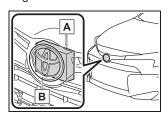
#### ■ To prevent malfunction of the radar sensors

Observe the following precautions. Failure to do so may lead to a radar sensor not operating properly, possibly leading to an accident resulting in death or serious injury.

Keep the radar sensors and radar sensor covers clean at all times.

Clean the front of a radar sensor. or the front or back of a radar sensor cover if it is dirty or covered with water droplets, snow, etc.

When cleaning the radar sensor and radar sensor cover, use a soft cloth to remove dirt so as to not damage them.



- A Radar sensor
- **B** Radar sensor cover

- Do not attach accessories, stickers (including transparent stickers), aluminum tape, etc. to a radar sensor or radar sensor cover and their surrounding area.
- Do not subject a radar sensor or its surrounding area to impact.

If a radar sensor, the front grille, or front bumper has been subjected to a impact, have the vehicle inspected by your Toyota dealer.

- Do not disassemble the radar. sensors.
- Do not modify or paint the radar sensors or radar sensor cover, or replace them with anything other than Toyota genuine parts.
- In the following situations, recalibration of the radar sensors will be necessary. For details, contact your Toyota dealer.
- When a radar sensor is removed and installed, or replaced
- When the front bumper or the front grille has been replaced

#### ■To prevent malfunction of the front camera

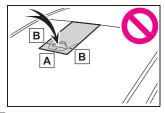
Observe the following precautions.

Failure to do so may lead to the front camera not operating properly, possibly leading to an accident resulting in death or serious injury.

- Always keep the windshield clean.
- If the windshield is dirty or covered with an oily film, water droplets, snow, etc., clean the windshield.

### **MARNING**

- Even if a glass coating agent is applied to the windshield, it will still be necessary to use the windshield wipers to remove water droplets, etc. from the area of the windshield in front of the front camera.
- If the inner side of the windshield where the front camera is installed is dirty, contact your Toyota dealer.
- Do not attach stickers (including transparent stickers) or other items to the area of the windshield in front of the front camera (shaded area in the illustration).



- A Approximately 1.6 in. (4 cm)
- **B** Approximately 1.6 in. (4 cm)
- If the part of the windshield in front of the front camera is fogged up or covered with condensation or ice, use the windshield defogger to remove the fog, condensation, or ice.
- If water droplets cannot be properly removed from the area of the windshield in front of the front camera by the windshield wipers, replace the wiper insert or wiper blade.
- Do not attach window tint to the windshield.

 Replace the windshield if it is damaged or cracked.

If the windshield has been replaced, recalibration of the front camera will be necessary. For details, contact your Toyota dealer.

- Do not allow liquids to contact the front camera.
- Do not allow bright lights to shine into the front camera.
- Do not damage the lens of the front camera or allow it to become dirty.

When cleaning the inside of the windshield, do not allow glass cleaner to contact the lens of the front camera. Do not touch the lens of the front camera.

If the lens of the front camera is dirty or damaged, contact your Toyota dealer.

- Do not subject the front camera to a strong impact.
- Do not change the position or orientation of the front camera or remove it.
- Do not disassemble the front camera.
- Do not modify any parts around the front camera, such as the inside rear view mirror or ceiling.
- Do not attach accessories which may obstruct the front camera to the hood, front grille, or front bumper.

For details, contact your Toyota dealer.

 If a surfboard or other long object is to be mounted on the roof, make sure that it will not obstruct the front camera

#### **WARNING**

- Do not modify or change the headlights and other lights.
- Front camera installation area on the windshield

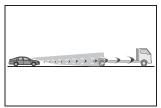
If the system determines that the windshield may be fogged up, it will automatically operate the heater to defog the part of the windshield around the front camera. When cleaning, etc., be careful not to touch the area around the front camera until the windshield has cooled sufficiently, as touching it may cause burns.

- Situations in which the sensors and the systems may not operate properly
- When the height or inclination of the vehicle has been changed due to modifications
- When the windshield is dirty, fogged up, cracked or damaged
- When the ambient temperature is high or low
- When mud, water, snow, dead insects, foreign matter, etc., is attached to the front of the sensor
- When in inclement weather such as heavy rain, fog, snow, or a sandstorm
- When water, snow, dust, etc. is thrown up in front of the vehicle, or when driving through mist or smoke
- When the headlights are not illuminated while driving in the dark, such as at night or when in a tunnel
- When the lens of a headlight is dirty and illumination is weak
- When the headlights are misaligned
- When a headlight is malfunctioning

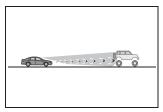
- When the headlights of another vehicle, sunlight, or reflected light shines directly into the front cam-
- When the brightness of the surrounding area changes suddenly
- When driving near a TV tower, broadcasting station, electric power plant, radar equipped vehicles, etc., or other location where strong radio waves or electrical noise may be present
- When a wiper blade is blocking the front camera
- When in a location or near objects which strongly reflect radio waves, such as the following:
- Tunnels

4-5. Using the driving support systems

- Truss bridges
- Gravel roads
- Rutted, snow-covered roads
- Walls
- Large trucks
- Manhole covers
- Guardrail
- Metal plates
- When near a step or protrusion
- When a detectable vehicle is narrow, such as a small mobility vehicle
- When a detectable vehicle has a small front or rear end, such as an unloaded truck
- When a detectable vehicle has a low front or rear end, such as a low bed trailer



When a detectable vehicle has extremely high ground clearance



- When a detectable vehicle is carrying a load which protrudes from its cargo area
- When a detectable vehicle has little exposed metal, such as a vehicle which is partially covered with cloth, etc.
- When a detectable vehicle is irregularly shaped, such as a tractor, sidecar, etc.
- When the distance between the vehicle and a detectable vehicle has become extremely short
- When a detectable vehicle is at an angle
- When snow, mud, etc. is attached to a detectable vehicle
- When driving on the following kinds of roads:
- Roads with sharp curves or winding roads
- Roads with changes in grade, such as sudden inclines or declines
- Roads which is sloped to the left or right
- Roads with deep ruts
- Roads which are rough and unmaintained
- Roads which frequently undulate or are bumpy
- When the steering wheel is being operated frequently or suddenly
- When the vehicle is not in a constant position within a lane
- When parts related to this system, the brakes, etc. are cold or extremely hot, wet, etc.
- When the wheels are misaligned
- When driving on slick road sur-

- faces, such as when it is covered with ice, snow, gravel, etc.
- When the course of the vehicle differs from the shape of a curve
- When the vehicle speed is excessively high when entering a curve
- When entering/exiting a parking lot, garage, car elevator, etc.
- When driving in a parking lot
- When driving through an area where there are obstructions which may contact your vehicle, such as tall grass, tree branches, a curtain, etc.
- When driving in strong wind
- Situations in which the lane may not be detected
- When the lane is extremely wide or narrow
- Immediately after changing lanes or passing through an intersection
- When driving in a temporary lane or lane regulated by construction
- When there are structures, patterns, shadows which are similar to lane lines in the surrounding
- When there are multiple white lines for a lane line
- When the lane lines are not clear or driving on a wet road surface
- When a lane line is on a curb
- When driving on a bright, reflective road surface, such as concrete
- Situations in which some or all of the functions of the system cannot operate
- When a malfunction is detected in this system or a related system, such as the brakes, steering, etc.
- When the VSC, TRAC, or other safety related system is operating
- When the VSC, TRAC, or other safety related system is off

# ■ Changes in brake operation sound and pedal response

- When the brakes have been operated, brake operation sounds may be heard and the brake pedal response may change, but this does not indicate a malfunction.
- When the system is operating, the brake pedal may feel stiffer than expected or sink. In either situation the brake pedal can be depressed further. Further depress the brake pedal as necessary.

# LTA (Lane Tracing Assist)

#### LTA functions

• When driving on a road with clear lane lines with the dynamic radar cruise control operating, lane lines and preceding and surrounding vehicles are detected using the front camera and radar sensor, and the steering wheel is operated to maintain the vehicle's lane position.

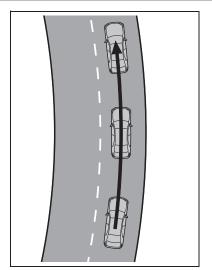
Use this function only on highways and expressways.

If the dynamic radar cruise control is not operating, the function will not operate.

In situations where the lane lines are difficult to see or are not visible, such as when in a traffic jam, support will be provided using the path of preceding and surrounding vehicles.

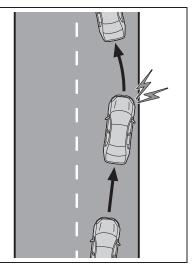
If the system determines that the steering wheel has not been operated for a certain amount of time or the steering wheel is not being firmly gripped, the driver will be alerted and this function will be temporarily canceled.

If the steering wheel is firmly gripped, the function will begin operating again.



 When the function is operating, if the vehicle is likely to depart from its lane, the driver will be alerted via a display and buzzer.

When the buzzer sounds, check the area around the vehicle and carefully operate the steering wheel to move the vehicle back to the center of the lane.



#### $\Lambda$

#### WARNING

#### ■Before using the LTA system

- Do not overly rely on the LTA system. The LTA system is not a system which provides automated assistance in driving and it is not a system which reduces the amount of attention necessary for safe driving. The driver is solely responsible for paying attention to their surroundings and operating the steering wheel as necessary to ensure safety. Also, the driver is responsible for taking adequate breaks when fatigued, such as when driving for a long time.
- Failure to perform appropriate driving operations and pay careful attention may lead to an accident.
- When not using the LTA system, turn it off using the LTA switch.

## ■Operating conditions of function

This function is operable when all of

the following conditions are met:

- The LTA system detects lane lines or the path of preceding or surrounding vehicles.
- The dynamic radar cruise control is operating.
- The lane width is approximately 10 to 13 ft. (3 to 4 m).
- The turn signal lever is not being operated.
- The vehicle is not being driven around a sharp curve.
- The vehicle is not accelerating or decelerating more than a certain amount.
- The steering wheel is not being turned with a large force.
- •The hands off steering wheel warning (→P.186) is not operating.
- The vehicle is being driven in the center of a lane.

#### ■ Temporary cancelation of functions

- When the operating conditions are no longer met, a function may be temporarily canceled. However, when the operation conditions are met again, operation of the function will automatically be restored. (→P.185)
- If the operating conditions of a function are no longer met while the function is operating, a buzzer may sound to indicate that the function has been temporarily canceled.
- The steering assist operation of the function can be overridden by the steering wheel operation of the driver.

# ■ Lane departure warning function when the LTA is operating

 Even if the LDA warning method is changed to vibration of the steering wheel, if the vehicle deviates from the lane while the LTA is operating, the warning buzzer will sound to alert the driver.

• If steering wheel operation equivalent to that necessary for a lane change is detected, the system will determine the vehicle is not deviating from the lane and the warning will not operate.

# ■ Hands off steering wheel warning operation

• When the system determines the driver is not holding the steering wheel, a message urging the driver to grip the steering wheel and the icon shown in the illustration will be displayed on the multi-information 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.

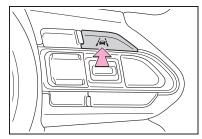


- If no operations are detected for a certain amount of time, the warning will operate and the function will be temporarily canceled. This warning may also operate if the driver only operates steering wheel a small amount continuously.
- Situations in which the hands off steering wheel warning may not operate properly
- Depending on the condition of the vehicle, handle control condition and road surface, the warning function may not operate.

# Enabling/disabling the system

The LTA will change between ON/OFF each time the LTA switch is pressed.

When the LTA is ON, the LTA indicator will illuminate.



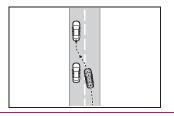
## A

#### WARNING

 Situations in which the functions may not operate properly

In the following situations, the functions may not operate properly and the vehicle may depart from its lane. Do not overly rely on these functions. The driver is solely responsible for paying attention to their surroundings and operating the steering wheel as necessary to ensure safety.

 When a preceding or surrounding vehicle changes lanes (Your vehicle may follow the preceding or surrounding vehicle and also change lanes)



- When a preceding or surrounding vehicle is swaying (Your vehicle may sway accordingly and depart from the lane)
- When a preceding or surrounding vehicle departs from a lane (Your vehicle may follow the preceding or surrounding vehicle and also depart from the lane)
- When a preceding or surrounding vehicle is being driven extremely close to the left/right lane line (Your vehicle may follow the preceding or surrounding vehicle accordingly and depart from the lane)
- When there are moving objects or structures in the surrounding area (Depending on the position of the moving object or structure relative to your vehicle, your vehicle may sway)
- When the vehicle is struck by a crosswind or the turbulence of other nearby vehicles
- Situations in which the sensors may not operate properly: →P.171
- Situations in which the lane may not be detected: →P.172
- When it is necessary to disable the system: →P.167

### Operation display of steering wheel operation support

The operating state of the LTA system is indicated.

Indicator	Lane dis- play	Steering icon	Situation
White	Gray/White	Gray	LTA is on standby
Green	Green	Green	LTA is operating
Yellow Flashing	Yellow Flashing	Green	The vehicle is departing the lane toward the side which the lane display is flashing