



# TOYOTA SAFETY SENSE™ 3.0

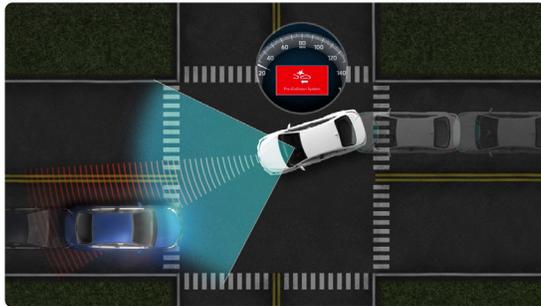


**Toyota Safety Sense™,<sup>1</sup> or TSS, is a suite of active safety technologies and advanced driver assistance systems.** Toyota Safety Sense™3.0 (TSS 3.0) introduces several enhancements over the previous generation, including an upgraded forward-facing camera with higher resolution and wider angles, and an improved radar sensor for a longer and wider field of view.

As a result, these updates help enhance some of the features that make up TSS 3.0.

Additionally, this latest safety suite includes the capability of over-the-air (OTA) software updates to TSS 3.0 systems on certain vehicles that can bring future improvements and functionalities, without needing a trip to the dealer.

**Here is a quick look at TSS 3.0's systems and what's new.**



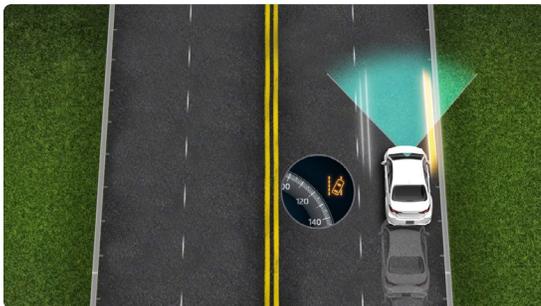
## PRE-COLLISION SYSTEM

Pre-Collision System,<sup>2</sup> or PCS, is designed to help drivers mitigate or avoid frontal collisions by detecting a vehicle, pedestrian, or bicyclist and providing an audio and/or visual forward collision warning and brake assist under certain circumstances.

### WHAT'S NEW

↔ Enhanced intersection support with improved detection range capability, including (in certain circumstances), oncoming vehicles in more than one lane while turning and vehicles approaching from a lateral direction

Along with a vehicle, a bicyclist, or a pedestrian, now capable of detecting a motorcyclist in certain circumstances

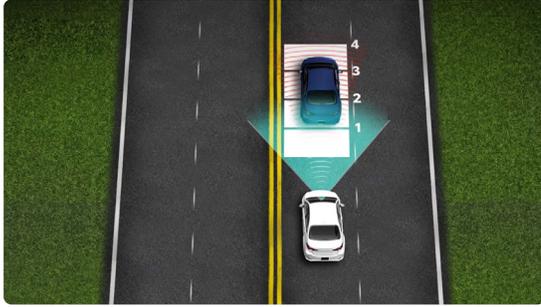


## LANE DEPARTURE ALERT

Lane Departure Alert,<sup>3</sup> or LDA, is designed to detect inadvertent lane departure at speeds above 30 miles per hour and issue an audio and visual warning. If the driver does not take corrective action, the system will provide gentle corrective steering to help keep the vehicle in the lane.

### WHAT'S NEW

Lane Departure Alert now provides enhanced lane recognition to detect certain three-dimensional objects used to define the lane, like certain types of guard rails



## DYNAMIC RADAR CRUISE CONTROL

Dynamic Radar Cruise Control,<sup>4</sup> or DRCC, is an adaptive cruise control system that uses vehicle-to-vehicle distance control to help maintain a preset distance from the vehicle ahead of the driver at cruising speeds set above 20 miles per hour.

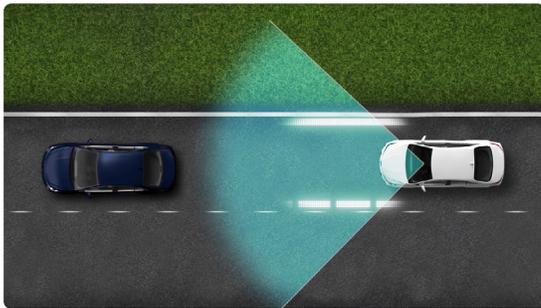
### WHAT'S NEW



Update from three to four cruise distance settings



Enhanced vehicle detection that enables the system to help provide smoother, more natural speed adjustments



## LANE TRACING ASSIST

Lane Tracing Assist,<sup>5</sup> or LTA, is designed to help the driver keep the vehicle centered in its lane. LTA functions when DRCC is activated, and detects lane markings, as well as the path of the vehicle ahead, and is designed to actively provide steering inputs that help keep the vehicle centered in its lane.

### WHAT'S NEW



Capable of steering the vehicle within its lane to offset the vehicle's driving path to help provide more space between objects being passed in an adjacent lane



**Emergency Driving Stop System (EDSS)<sup>6</sup>** on vehicles equipped with a driver monitor camera is designed to also confirm the driver's eyes are attentive to the road ahead



If the system determines the driver is not attentive, and the driver does not respond to prompts to resume control of the vehicle, it can bring the vehicle to a stop under certain conditions



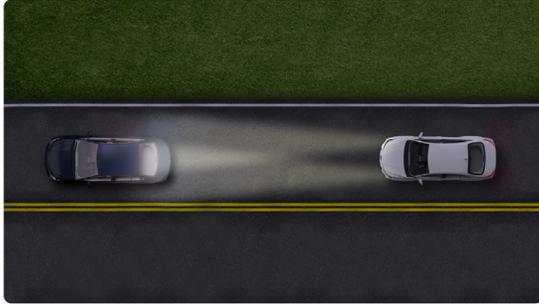
## ROAD SIGN ASSIST

Road Sign Assist,<sup>7</sup> or RSA, is designed to help detect speed limit signs, stop signs, do not enter signs, and yield signs, and display an icon of the sign on the vehicle's Multi-Information Display. The system is designed to help provide the driver with additional awareness of posted road signs and can also provide alerts, like if the vehicle's speed exceeds the posted speed limit.

### WHAT'S NEW

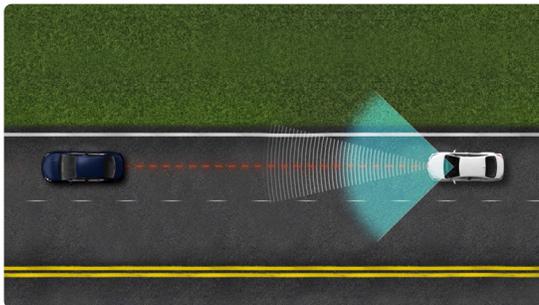


RSA is now capable of detecting a wider variety of road signs, such as warning signs like pedestrian crossing



## AUTOMATIC HIGH BEAMS

Automatic High Beams,<sup>8</sup> or AHB, are designed to help drivers see more clearly at night, while also reducing glare for surrounding drivers.



## PROACTIVE DRIVING ASSIST

Proactive Driving Assist,<sup>9</sup> or PDA, is an all-new feature on certain vehicles equipped with TSS 3.0. When conditions are met, PDA can provide gentle braking when driving into curves or gentle braking and/or steering to help support driving tasks, such as distance control between the driver's vehicle and a preceding vehicle, pedestrian, or bicyclist.

### WHAT'S NEW



The PDA feature set includes **Obstacle Anticipation Assist**, which is designed to detect vehicles parked on the side of the road, or pedestrians or bicyclists either on the side of the road or crossing the road



PDA also features **Deceleration Assist**, which is designed to provide gentle braking to gradually reduce vehicle speed when the system detects preceding vehicles, motorcycles, or certain upcoming curves in the road



**Steering Assist** is another feature of PDA and is designed to detect the lines of the roadway and vary the assistance from the power steering to help the driver stay within the lane



Want to see more? Visit Toyota's YouTube channel and search **TSS 3.0 Overview Video**.

## DISCLOSURES

1. Toyota Safety Sense effectiveness depends on many factors including road, weather and vehicle conditions. Drivers are responsible for their own safe driving. Always pay attention to your surroundings and drive safely. See *Owner's Manual* for limitations. 2. The Pre-Collision System (PCS) with Pedestrian Detection (PD) is designed to help reduce the crash speed and damage in certain frontal collisions involving a vehicle, a pedestrian, bicyclist or motorcyclist. PCS w/ PD is not a substitute for safe and attentive driving. System effectiveness depends on many factors, such as speed, size and position of vehicle, pedestrian, bicyclist or motorcyclist and weather, light and road conditions. See *Owner's Manual* for limitations. 3. Lane Departure Alert with Steering Assist is designed to read visible lane markers under certain conditions. It provides a visual/audible alert and slight steering force when lane departure is detected. It is not a collision-avoidance system or substitute for safe and attentive driving. Effectiveness depends on many factors including road, weather and vehicle conditions. See *Owner's Manual* for limitations. 4. Dynamic Radar Cruise Control is not a substitute for safe and attentive driving. See *Owner's Manual* for instructions and limitations. 5. The Lane Tracing Assist (LTA) lane centering function is designed to read visible lane markers and detect other vehicles under certain conditions. It is only operational when DRCC is engaged. Not available on vehicles with manual transmissions. See *Owner's Manual* for limitations. 6. Emergency Driving Stop System will not detect all emergency situations and only operates when Dynamic Radar Cruise Control and Lane Tracing Assist are active. See *Owner's Manual* for additional limitations. 7. Road Sign Assist only recognizes certain road signs. See *Owner's Manual* for limitations. 8. Automatic high beams operate at speeds above 25 mph. See *Owner's Manual* for instructions and limitations. 9. Proactive Driving Assist (PDA) is designed to detect certain objects or curves in the road and provide gentle braking and/or steering support. PDA is not a substitute for safe and attentive driving. System effectiveness depends on many factors, such as speed, size and position of detected objects and weather, light and road conditions. See *Owner's Manual* for additional limitations and details.