Toyota Safety Sense: Preventive Safety Package-equipped Vehicles Top 10 Million Units Globally

November 26, 2018

TOYOTA CITY, Japan, November 26, 2018—Toyota Motor Corporation (Toyota) today announces the total global number of vehicles equipped with Toyota Safety Sense (TSS)[1], the Toyota-developed preventive safety package, has reached the 10 million unit mark, approximately three and a half years after its March 2015 introduction. It is anticipated that within this year, three million vehicles in Japan and five million vehicles in North America will have the package.

Toyota first introduced the package with the “Corolla” series, centered on the belief that popularizing safety technology is vital. Toyota Safety Sense is currently equipped in approximately 90 percent of Toyota and Lexus vehicles[2] for the Japanese, United States, and European markets. At present, it has been introduced in a total of 68 countries and regions, including China, other select Asian countries, the Middle East, and Australia.

Toyota Safety Sense helps avoid or mitigate damage and/or injury from serious traffic accidents, based on accident data from Japan, the United States, and Europe. It comprises the following three aspects:

- Pre-Collision System (PCS): helps prevent and mitigate damage from rear-end collisions involving vehicles and/or pedestrians[3]
- Lane Departure Alert (LDA): helps prevent vehicles from deviating from their lanes and head-on collisions[4]
- Automatic High Beam (AHB): contributes to the early detection of pedestrians and the reduction of accidents during nighttime driving[5]

Rear-end collisions—the most common type of accident in Japan—involving vehicles equipped with Toyota Safety Sense have been reduced by approximately 70 percent[6]. If TSS and Intelligent Clearance Sonar (ICS), which covers lower-speed collisions, are combined, rear-end collisions have fallen by approximately 90 percent.

Toyota Safety Sense is further evolving, based on a two-pronged approach of bolstering its adaptability to traffic accidents involving fatalities and/or injuries, and further popularizing the package, aiming toward the goal of completely eliminating traffic fatalities and injuries.

The second-generation Toyota Safety Sense, introduced in January 2018, makes improvements in detection and performance compared to the previous version, and allows the package to respond to nighttime pedestrian and/or bicycle accidents. Further development is focusing on expanding adaptability to traffic accidents involving fatalities and/or injuries, such as with pedestrians and head-on collisions with oncoming traffic at intersections.

Toyota and Lexus aim to introduce the packages in around 100 countries and regions, including Asia and Latin America, by 2020.

With a focus on providing everyone with safe, reliable mobility, Toyota considers Safety Sense a cornerstone of safe car-making. Toyota will continue to develop safety from a wide range of perspectives, including activities to raise awareness such as “Support Toyota”[7] and by supporting development of a traffic environment that includes the use of Intelligent Transport System (ITS) and connected technologies.

[1] Includes Lexus brand vehicles equipped with Lexus Safety System + and Lexus Safety System + A.
[2] Calculated from the orders/ sales of vehicles in Japan, U.S., and Europe between January and September 2018. OEM models and business cars excluded.
[3] PCS (with laser radar and a single-lens camera, certain vehicles only) can detect objects ahead of the vehicles and not pedestrians.
[4] LKA (Lane Keeping Assist) and LTA (Lane Tracing Assist) both include LDA functions
[5] Includes AHS (Adaptive High-beam System).
[6] Based on independent calculations performed by Toyota using accident data from the Institute for Traffic Accident Research and Data Analysis (ITARDA). Figures calculated based on traffic accident occurrence rates for Toyota Safety Sense-equipped versus non-equipped Corolla, Prius, Premio, and Allion vehicles (totaling 680,000 vehicles overall) between January 2015 and December 2017.
Rates are reduced by approximately 90 percent with the combination of Intelligent Clearance Sonar (Parking Support Brakes [Stationary Objects]), designed for collision avoidance and damage mitigation at ultra-low speeds.
[7] Support Toyota is the general name for Toyota's initiatives in Japan toward safety and peace of mind as part of a life with cars through raising customer awareness and further popularizing safety technology. Specifically, Support Toyota involves raising awareness of traffic safety issues (such as the City Firefly Project) and promoting a clearer understanding of our products and services, including safety technology, connected services, Safety Support Car, Welcab, and Support Toyota Plus.

Supplementary Material

1. The evolution of Toyota Safety Sense*

Date	Release title	Main details
November 26, 2014	**Toyota to Roll Out Brand New Active Safety Packages from 2015**	**Scheduled to be available for most passenger models and grades in the Japanese, North American, and European markets by 2017.**
March 30, 2015	**Toyota's Brand New Toyota Safety Package Debuts with Redesigned Corolla Japan Models**	**First use in a Toyota vehicle.**
April 15, 2015	**Toyota Safety Sense Earns Corolla Full Marks in Japan Preventative Safety Assessment Test**	**Toyota obtains the highest rank of ASV+, with feedback that its "vehicles attain high levels of preventive safety."**
August 17, 2015	**Partially Redesigned Land Cruiser 200 Debuts Toyota's Latest Safety and Driver Assistance Features**	**First use of Toyota Safety Sense P, which also detects pedestrians, in a Toyota vehicle.**
August 20, 2015	**Flagship Lexus SUV Charts New Territory**	**First use in a Lexus vehicle (Lexus Safety System +).**
December 1, 2016	**ASV++ Rating of the Japan Preventative Safety Assessment Test Attained by Four Toyota and Lexus Models Outfitted with Toyota Safety Sense P and Lexus Safety System +**	**The Crown, Prius, Lexus GS, and Lexus RX equipped with Toyota Safety Sense P/ Lexus Safety System + earn the top ranking of ASV++ in the 2016 JNCAP Preventive Safety Performance Assessment.**

June 26, 2017	**Lexus Outlines Advanced Active Safety Technologies for All-new 'LS'**	**World-first use of Active Steering Assist technology and Front Cross Traffic Alert (FCTA), which helps prevent cross-traffic collisions at intersections. Use of Lexus CoDrive, an advanced driving support technology that assists the driver in maintaining in-lane positioning and changing lanes.**
August 28, 2017	**Toyota Announces Toyota Safety Sense and ICS Safety Support Technologies that Together Reduce Rear-End Collisions by 90%**	**Rates of rear-end collisions involving vehicles equipped with the Toyota Safety Sense package experience an approximately 50 percent reduction, and vehicles with Intelligent Clearance Sonar (ICS) and Toyota Safety Sense experience an approximately 90 percent reduction, compared to vehicles without the package. Toyota will increase the number of vehicles equipped with Toyota Safety Sense and ICS to approximately 90 percent of all vehicles sold by the end of FY2018.**
November 29, 2017	**Toyota to Roll Out 2nd Generation Toyota Safety Sense Active Safety Packages from 2018**	**Improved detection and performance over the first generation TSS (added nighttime pedestrian and cyclist detection, improved performance in pedestrian detection). Added advanced driving support function (Lane Tracing Assist (LTA)). First-generation Toyota Safety Sense is now available on almost all vehicles sold in the Japanese, North American, and European markets.**
December 25,2017	**Alphard and Vellfire Debut 2nd Generation Toyota Safety Sense (Japanese–language only release)**	**Partially redesigned Alphard and Vellfire first to introduce the 2nd Generation TSS.**
April 3, 2018	**"Aqua" ("Prius c" in some markets) to Come with Pedestrian-detecting Toyota Safety Sense (Japanese-language only release)**	**Daytime pedestrian detection added to LIDAR and single-lens camera system. Existing package names (C, P, 2nd Generation, and other names) will be unified as "Toyota Safety Sense."**
November 26, 2018	**"Toyota Safety Sense" Preventative Safety Package-Equipped Vehicles Top 10 Million Units Globally**	**Current release**

*Includes Lexus Safety System+, Lexus Safety System + A.

2. Support Toyota and Toyota Safety Sense test drive/simulator locations

1. *Toyota Safety Sense-equipped vehicle test drive events*

Check the following website (Japanese-language only) for information on Support Car, Toyota Safety Sense, and pedal misapplication support braking test drive events.
(Held around 100 times per year in Japan)
https://toyota.jp/sapotoyo/event/?padid=ag443_from_sapotoyo_sapo-car_2nd

2) Toyota Safety Sense VR simulator experiences

Dealers

- Netz Toyota Tochigi (Simulators available at all dealers)
  https://www.netztochigi.co.jp/specialbusiness/t3r?bbbbb (Japanese-language only)
- Toyota Corolla Aomori (Baybridge dealer)

https://www.toyota-ca.co.jp/shop/baybridge/ (Japanese-language only)

- Akita Toyota (Omagari dealer)

https://www.akita-toyota.co.jp/shop/oomagari/ (Japanese-language only)

- Netz Toyota Hakodate (Mihara dealer)
  https://hakodate.netz-toyota-dealer.jp/event#u20180614111618 (Japanese-language only)

* Scheduled to be available at more dealers moving forward.

Toyota-related facilities

- Toyota Mobility Showroom (Nihonbashi, Chuo-ku, Tokyo)
  https://t-mobility-showroom.jp/ (Japanese-language only)

– Mega Web Technology Zone (Aomi, Koto-ku, Tokyo)
(Can be experienced with the Toyota Safety Sense Virtual Test Drive as well as the safety simulator.)
https://www.megaweb.gr.jp/area/csc/technology.html