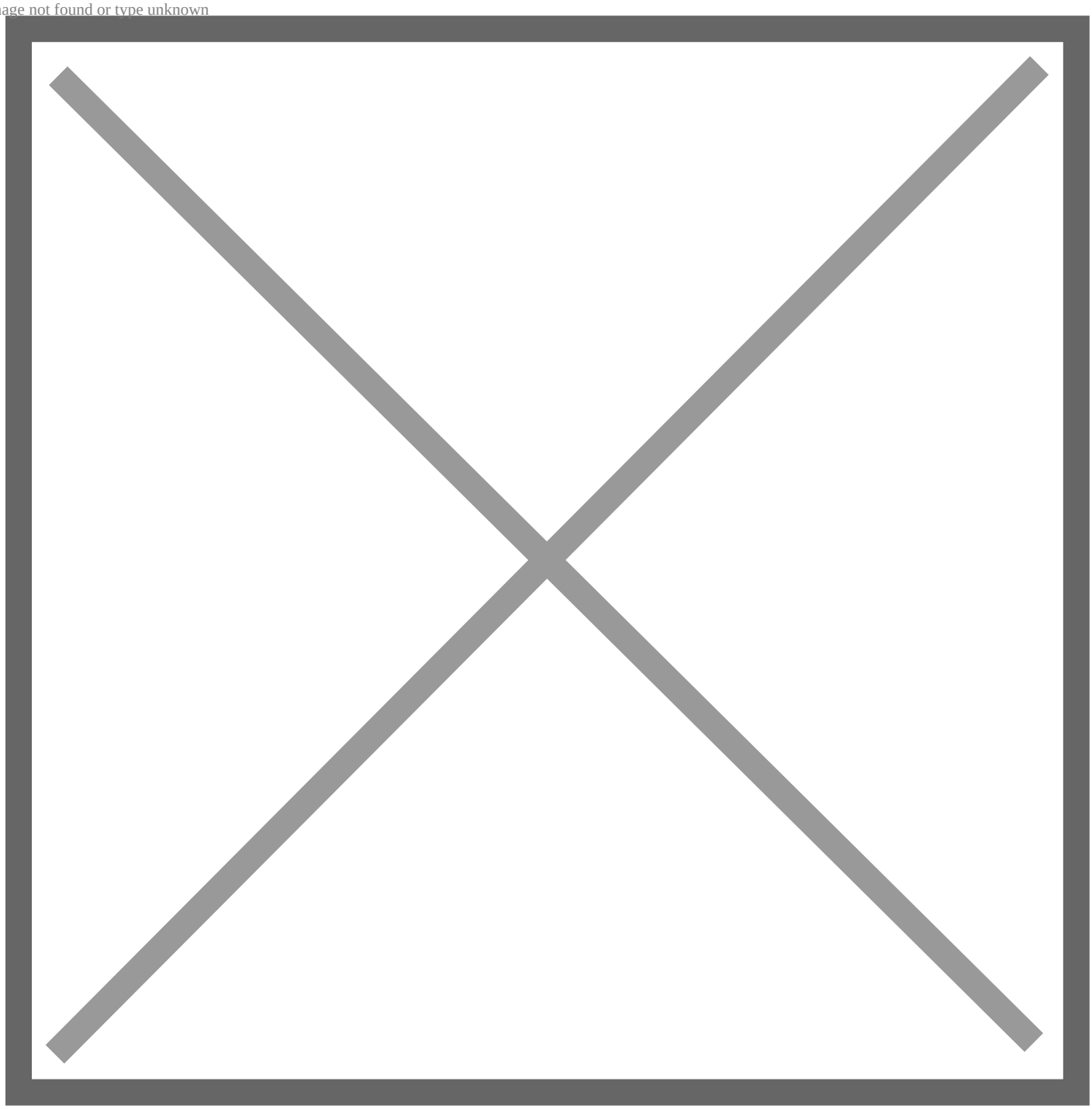
Teammate Advanced Drive Backgrounder

June 03, 2021

Image not found or type unknown



WHAT TO KNOW:

- Teammate advanced driver assistance technology is an SAE Level 2 system, based on Toyota's Mobility Teammate Concept, that provides two functions: Advanced Drive and Advanced Park.
- It will be available on select 2022 Lexus LS 500h models with AWD.
- Teammate's Advanced Drive function was designed to partner with and assist the driver to promote safety and convenience while driving on the highway.
- When activated, Advanced Drive enables automatic steering, acceleration and braking on the highway under active supervision of the driver. It can also perform more complicated driving tasks, including maintaining a set distance between other vehicles, changing lanes, merging and passing or "overtaking" other vehicles.
- Advanced Drive integrates with the vehicle's state-of-the-art navigation and localization system ("HD-Map"). It can plan actions for approximately 6 miles ahead to help reach the destination.
- Advanced Drive can benefit the driver by reducing fatigue over long periods of driving.
- Safety is a priority of our automated driving development program, and Advanced Drive is emblematic of this commitment. "Redundancy" is a key element of the system's design, which includes a series of fail-safe operations designed to help prevent the loss of control for up to four seconds in the event of a system malfunction or limitation.
- Advanced Drive was developed in close coordination between Toyota Motor Corporation and Toyota Motor North America. Engineers used the same test vehicles and software in both the U.S. and Japan, allowing for U.S.-specific considerations, such as HOV lanes and draw bridges, to be incorporated into the design and performance of vehicle systems.

CORE TECHNICAL FEATURES:

Perceptive: The system has sensors covering the 360-degree periphery of the vehicle, including driver monitoring cameras, LiDAR (front-facing only), front-facing long-range radar, front- and rear-side short-range radar, surrounding parking cameras, a front-facing telescope and locator cameras.

Intelligent: The system has onboard deep learning functions that allow for high adaptability to various driving scenarios, with onboard processing driven by four main electronic control units ("ECUs") that handle recognition, judgement and operation.

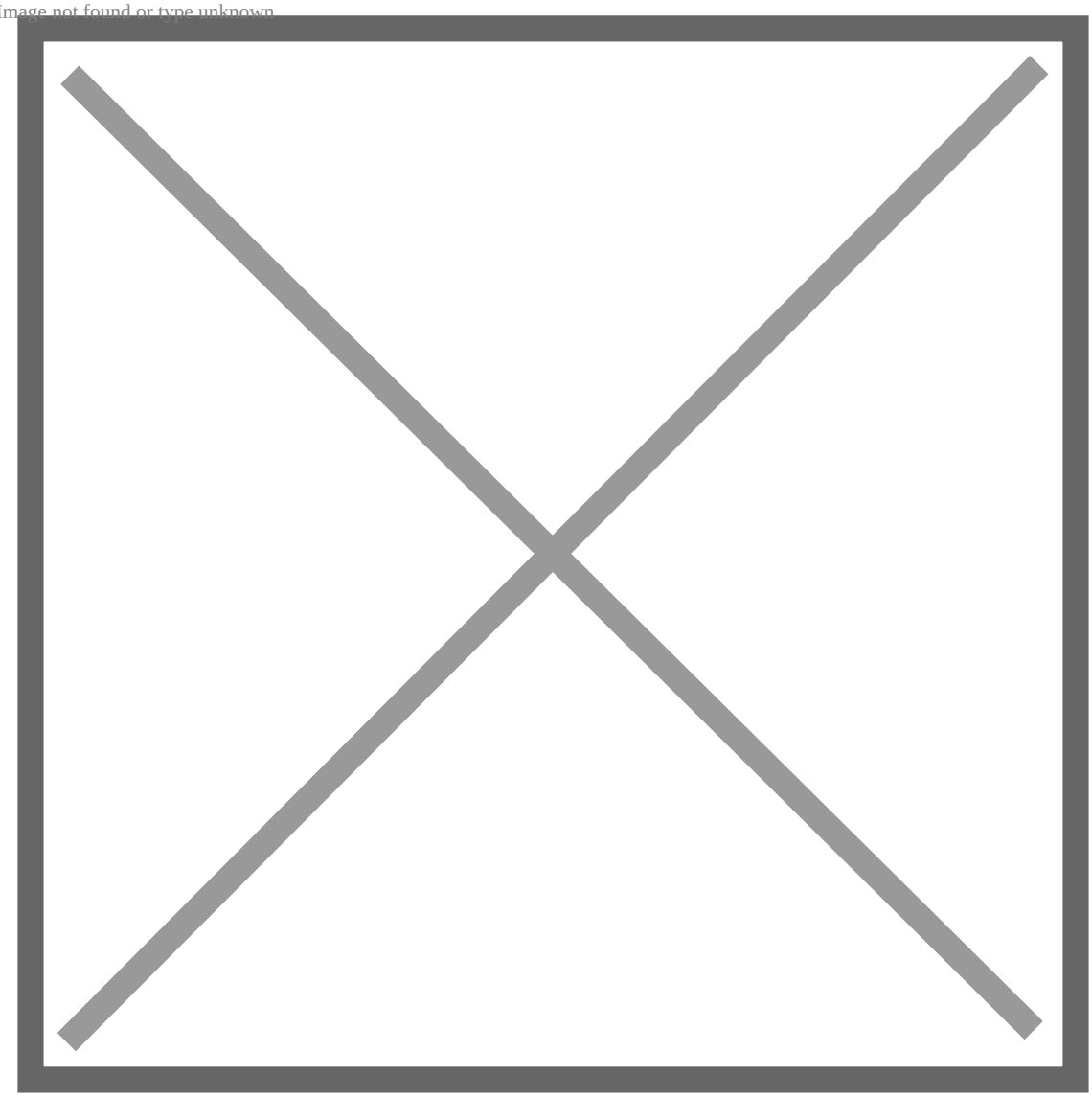
Interactive: The vehicle's human-machine interface enables two-way communication between the driver and vehicle that is easy to understand.

Reliable: Teammate Advanced Drive was designed with multiple back-up systems, including power, sensing and processing, actuator and communication to put safety at the core of the driving experience.

Upgradable: Over-the-Air software updates allow for the vehicle and system to upgrade remotely as new features become available.

SELECT FEATURES AND TECHNOLOGY:

Image not found or type unknown



Want to Learn More?

Learn about Toyota's Integrated Vehicle Systems (IVS) division: Small Team, Huge Impact