U.S. Department of Transportation

National Highway Traffic Safety Administration

OFFICE OF DEFECTS INVESTIGATION

ODI RESUME

Investigation:	PE24033		
Prompted By:	VOQ Review		
Date Opened:	01/06/2025	**Date Closed:**	04/03/2026
Investigator:	Kareem Habib	**Reviewer:**	Scott Simmons
Approver:	Tanya Topka		
Subject:	Actually Smart Summon sessions resulting in low-speed impacts.		

MANUFACTURER & PRODUCT INFORMATION

Manufacturer:	Tesla, Inc.
Products:	2016-2025 Model S, X, 2017-2025 Model 3, 2020-2025 Model Y equipped with FSD
Population:	2,585,000 (Estimated)
Problem Description:	Actually Smart Summon sessions resulting in minor property damage due to system's surveillance limitations of the vehicle's environment or vehicle response to camera blockage or parking gates.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	EWR D&I	Other	Total	EWR Field Reports
All Incidents:	17	142	0	0	159*	0
Crashes/Fires:	15	82	0	0	97*	0
Injury Incidents:	0	0	0	0	0	0
Number of Injuries:	0	0	0	0	0	0
Fatality Incidents:	0	0	0	0	0	0
Number of Fatalities:	0	0	0	0	0	0

Description of Other:

*Total eliminates duplicates received by the manufacturer

ACTION/SUMMARY INFORMATION

Action: This Preliminary Evaluation (PE) is closed with manufacturer Over-the-Air (OTA) updates.

Summary:

On January 6, 2025, the Office of Defects Investigations (ODI) opened Preliminary Evaluation 24003 (PE24033) to investigate Actually Smart Summon (Summon) sessions resulting in crashes during active sessions. According to Tesla, Summon is a short-distance SAE Level 2 system, controlled by the user from a

cell phone within a certain distance and intended for use in parking lots and on private property. ODI analyzed complaint data provided by Tesla as well as complaints submitted to ODI from consumers to identify Summon incidents resulting in crashes. ODI's analysis indicates that almost all Summon reported crashes involved minor property damage claims with no reported incidents involving a vulnerable road user, injury, fatality, or major property damage as indicated by an air bag deployment or vehicle tow away.

Out of millions of Summon sessions, a fraction of 1% resulted in an incident. Almost all those incidents took place where, typically early in a Summon session, the system or person using the app failed to fully detect or respond appropriately to vehicle surroundings resulting in minor impacts. Incidents took place when app users did not have a complete 360-degree view of the surroundings in the app to assess situational awareness. This limited the app user’s ability to determine whether an impact was imminent during initial vehicle maneuvers such as reversing in close proximity to an obstacle or a curb. ODI found that the impacts most often occurred with parking gates, adjacently parked vehicles, and short parking bollards.

During this investigation, ODI identified two Summon crashes related to camera blockages. In both crashes, Summon attempted to navigate a snowy parking lot with snow partially or fully obstructing the forward-facing cameras. Summon did not detect the camera blockage and the vehicles collided with unoccupied parked vehicles while navigating the parking lot. App users in both instances did not command a vehicle stop or pause despite the obstructed camera visible in the camera stream in the app.

On January 15, 2025, Tesla released Over-the-Air (OTA) Software (SW) Update Action numbers 578998 and 579185 for vehicles in service to implement a camera blockage detection condition. Both OTAs improve camera blockage detection mechanisms. Additionally, on January 20, 2025, and January 30, 2025, Tesla identified additional system requirements associated with camera visibility checks and released OTA SW-578752 and SW-580322, respectively. These firmware updates reduce false negative camera blockage detections due to snow or condensation.

In its investigation, ODI identified one Summon incident where the vehicle did not yield for a gate arm blocking a garage exit lane and the app user did not command a vehicle stop or pause, resulting in an impact. On February 6, 2025, Tesla deployed OTA SW-578839 to improve vehicle reaction to dynamic gates. This OTA update upgraded vehicle perception systems through a high-fidelity occupancy determination network, which uses data from vehicle sensory systems to improve reconstruction of field objects with high accuracy. On November 20, 2025, Tesla further improved vehicle performance by adding object detections from a separate neural network through OTA SW-580514. Owners of the affected vehicles received all six OTA SW updates. Tesla also released these SW updates to production vehicles. See online public file for detailed descriptions of all six OTA SW updates.

Due to low incident occurrence and low incident severity, this preliminary evaluation is closed. The closing of this investigation does not constitute a finding that a safety-related defect does not exist. The agency reserves the right to take additional action if warranted by future circumstances. For additional information regarding this investigation, see the complete online public file.