



U.S. Department
of Transportation

**National Highway
Traffic Safety
Administration**

ODI RESUME

Investigation: PE 21-023
Date Opened: 12/21/2021
Investigator: Roy Nelson
Approver: Stephen Ridella
Subject: Tesla Passenger Play

Date Closed: 05/26/2023
Reviewer: Gregory Magno

MANUFACTURER & PRODUCT INFORMATION

Manufacturer: Tesla, Inc.
Products: 2017-2022 Model 3, S, X, Y equipped with "Passenger Play"
Population: 580,121

Problem Description: Tesla vehicles equipped with "Passenger Play" allows the gameplay to function on the front center touchscreen while the vehicle is in motion and may present a distraction to the driver.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	1	0	1
Crashes/Fires:	0	0	0
Injury Incidents:	0	0	0
Fatality Incidents:	0	0	0

ACTION / SUMMARY INFORMATION

Action: Close this Preliminary Evaluation

Summary:

The Office of Defects Investigation (ODI) opened Preliminary Evaluation (PE21-023) on December 21, 2021, to evaluate the driver distraction potential and use frequency / circumstances of in-vehicle game-play functionality referred to as "Passenger Play" in certain model year (MY) 2017-2022 Tesla Model 3, S, X, and Y vehicles. Distracted driving can result in an increased risk of a crash. PE21-023 was prompted by the receipt of Vehicle Owners Questionnaire (VOQ) 11439598 from the owner of a 2021 Model 3 on November 6, 2021. ODI sent an Information Request (IR) letter to Tesla on January 20, 2022 and received Tesla's response on March 4, 2022.

On December 24, 2020, Tesla introduced Passenger Play to vehicles equipped with the Intel Atom processor (receiving an aftersale software update) via its 2020 holiday release. Passenger Play permitted occupants to play specific games selected by Tesla for primarily turn-based play style and limited gameplay motion with the transmission in Drive and the vehicle in motion. Under these conditions, a notification would display on the screen and the screen area devoted to the game would reduce from 100% to accommodate vehicle controls and driving task data readout. Specific changes varied among models.

On December 21, 2022, Tesla voluntarily disabled Passenger Play capability with Firmware Release 2021.44.25.1 in response to NHTSA's request. Tesla reported a month later that a 97% completion rate was achieved through Tesla's Over the Air (OTA) update.

ODI opened PE 21-023 to evaluate the driver distraction potential of Tesla "Passenger Play" while the vehicle is being driven including aspects of the feature, frequency, and use scenarios.

Based on the analysis conducted, PE21-023 has been closed. The closing of this investigation does not constitute a finding by NHTSA that no safety-related defect exists. Furthermore, it does not foreclose the Agency from taking further action, if warranted, or the potential for a future finding that a safety-related defect exists through additional

information the Agency may receive.

See attached Closing Report for a detailed summary of the investigation findings.

PE21-023 Closing Report

The Office of Defects Investigation (ODI) opened Preliminary Evaluation (PE21-023) on December 21, 2021, to evaluate the driver distraction potential and use frequency / circumstances of in-vehicle game-play functionality referred to as “Passenger Play” in certain model year (MY) 2017-2022 Tesla Model 3, S, X, and Y vehicles. Distracted driving can result in an increased risk of a crash. PE21-023 was prompted by the receipt of Vehicle Owners Questionnaire (VOQ) 11439598 from the owner of a 2021 Model 3 on November 6, 2021. ODI sent an Information Request (IR) letter to Tesla on January 20, 2022 and received Tesla’s response on March 4, 2022.

Introduced to the fleet in June 2019, the Tesla Arcade function permitted occupants to play video games on the vehicle center screen with the transmission selector in Park. Gameplay would end if the transmission selector were moved out of the Park position.

On December 24, 2020, Tesla introduced Passenger Play to vehicles equipped with the Intel Atom processor (receiving an aftersales software update) via its 2020 holiday release. Passenger Play permitted occupants to play specific games selected by Tesla for primarily turn-based play style and limited gameplay motion with the transmission in Drive and the vehicle in motion. Under these conditions, a notification would display on the screen and the screen area devoted to the game would reduce from 100% to accommodate vehicle controls and driving task data readout. Specific changes varied among models.

Tesla has stated that Passenger Play was designed for passenger use only and the design creates no unreasonable driver distraction risk. Tesla further explained that these concerns are mitigated by:

1. The disclaimer screen at the beginning of the game that includes a button for the game user to affirm that they are a passenger;
2. Reduction of screen area devoted to the game while driving;
3. Relatively static screen imagery of the Passenger Play games (which Tesla asserted was no more distracting to the driver than a navigational map); and
4. Existing vehicle controls remain FMVSS 101 compliant.

Tesla further stated that no consumer complaints or collisions had been reported concerning the use of Passenger Play in the subject vehicles during a year of use.

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Tesla’s IR response indicated that during its year of operation, Passenger Play was active during a small portion of overall vehicle trips logged in the subject vehicle fleet. Of those trips, approximately a third logged Passenger Play use in motion with no passenger seat occupant identified by the front passenger seat occupant classification system.

Tesla stated that Passenger Play had not been associated with complaints, collisions, or a trend of active safety system interventions.

Notwithstanding these points, NHTSA maintains concerns about the introduction of graphical content into the driver's line of sight that is completely unrelated to the dynamic driving task - particularly content that even when operated by the passenger poses the potential to add to driver visual and cognitive distraction. To address these concerns while still promoting innovation, NHTSA published Guidelines for Reducing Visual-Manual Driver Distraction during Interactions with Integrated, In-Vehicle, Electronic Devices Version 1.01 ("Guidelines") in late 2014 (published in the Federal Register at 79 Fed. Reg. 55530 (September 16, 2014)). Although not binding, these guidelines were published after extensive research and consideration of comments from the public, safety advocates, and industry. Passenger Play fits the description of content recommended for Per Se Lockout (should always be inaccessible to the driver while driving) in Section V F of the Guidelines:

1. As indicated by the Tesla disclaimer screen, the game content featured in Passenger Play would qualify as a device function not intended to be used by a driver while driving;
2. The general description of the turn- based gameplay aligns with several categories under the per se lockout section, namely:
 - a. Video images;
 - b. Information detail not critical to navigation;
 - c. Non-video graphical or photographic images; and
 - d. Non-driving task-related text

Safety recalls and other actions taken by vehicle manufacturers to restore malfunctioning video interlocks and production decisions such as passenger screens either actuated by driver gaze monitoring cameras or physical arrangements and privacy filters would indicate that industry in general shares concerns regarding the driver viewing images not related to navigation or the driving task, and that vehicle manufacturers recognize in some instances, that distraction can constitute a safety defect.

While ODI acknowledges Tesla's decision to repeal Passenger Play, analysis of the data provided through Tesla's Information Request (IR) response produced significant concerns about driver distraction during the time that it was available, both with Passenger Play's intended use by a passenger and its misuse (operation by the driver). The Model 3 and Model Y, representing 86 percent of the subject vehicles, have all driving information (including speed, state of charge, Autopilot status) presented solely on the same center screen as used by Passenger Play while driving, increasing the chance of driver visual attention capture. Information furnished by Tesla concerning apparent driver use of Passenger Play while not in Park in approximately a third of the trips in which the feature was in use demonstrates the importance of affirmative technology-based lockouts over administrative controls such as labeling or disclaimer screens.

The removal of Passenger Play from the subject vehicles resolved ongoing concerns. Findings from PE21-023 indicate that many drivers will disregard on-screen notifications and that more affirmative (technological) controls must be present to prevent engagement in non-driving tasks while the vehicle is in motion.

To support further work by NHTSA in the area of driver distraction, ODI has briefed involved NHTSA staff outside the office on the findings of this investigation to better inform ongoing agency efforts into controlled human factors studies, naturalistic study analyses, and crash statistics studies examining the real-world effects of distraction on safety.

Concurrently, ongoing agency efforts set forth in Engineering Analysis (EA22-002) aim to better understand human factors with respect to Tesla interfaces and the dynamic driving task.

Based on the analysis conducted, PE21-023 has been closed. The closing of this investigation does not constitute a finding by NHTSA that no safety-related defect exists. Furthermore, it does not foreclose the Agency from taking further action, if warranted, or the potential for a future finding that a safety-related defect exists through additional information the Agency may receive.

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