



U.S. Department of Transportation
National Highway Traffic Safety Administration

ODI RESUME

Investigation: PE24016
Prompted By: Incident reports
Date Opened: 05/13/2024
Investigator: Neil Dold **Reviewer:** Scott Simmons
Approver: Tanya Topka
Subject: Unexpected ADS behavior

MANUFACTURER & PRODUCT INFORMATION

Manufacturer: Waymo LLC
Products: Waymo 5th Generation automated driving system (ADS)
Population: 444 (Estimated)
Problem Description: ADS behavior causing single-party crashes and potential traffic safety law violations

FAILURE REPORT SUMMARY

	ODI	Manufacturer	EWR D&I	Other	Total	EWR Field Reports
All Incidents:	0	0	0	22	22	0
Crashes/Fires:	0	0	0	17	17	0
Injury Incidents:	0	0	0	0	0	0
Fatality Incidents:	0	0	0	0	0	0

Description of Other:
 Reports of crashes submitted under SGO 2021-01 and non-crash incidents from public sources.

ACTION/SUMMARY INFORMATION

Action: Open this Preliminary Evaluation (PE)

Summary:
 The Office of Defects Investigation (ODI) has received reports of 22 incidents involving Waymo vehicles equipped with Waymo’s 5th generation automated driving system (ADS) wherein the ADS-equipped vehicle was the sole vehicle operated during a collision or wherein the ADS-equipped vehicle exhibited driving behavior that potentially violated traffic safety laws. Reports include collisions with stationary and semi-stationary objects such as gates and chains, collisions with parked vehicles, and instances in which the ADS appeared to disobey traffic safety control devices. In certain incidents, a collision occurred shortly after the ADS exhibited unexpected

behavior near traffic safety control devices. Waymo submitted incident reports involving collisions to NHTSA under Standing General Order 2021-01 (SGO). Other incidents, such as vehicles driving in opposing lanes with nearby oncoming traffic or entering construction zones, were identified based on publicly available reports.

Based on initial evaluation of these incidents, NHTSA understands that the Waymo ADS was either engaged throughout the incident or, in certain cases when supervised by an in-vehicle test driver, the ADS disengaged in the moments just before an incident occurred.

ODI has opened a Preliminary Evaluation to investigate the Waymo 5th Generation ADS's performance in the incidents identified in this resume and similar scenarios, as well as to more closely assess any commonalities in these incidents. The investigation will evaluate the ADS's performance in detecting and responding to traffic control devices and in avoiding collisions with stationary and semi-stationary objects and vehicles.

The SGO reports cited in the Opening Resume can be found by report identifiers listed below on NHTSA's SGO website: <https://www.nhtsa.gov/laws-regulations/standing-general-order-crash-reporting#data>

SGO 2021-01 report IDs:

30270-1160

30270-1220

30270-1494

30270-4363

30270-5081

30270-5318

30270-5758

30270-6133

30270-6548

30270-6561

30270-6838

30270-6981

30270-7048

30270-7054

30270-7058

30270-7308

30270-7312

30270-7534