



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

ODI RESUME

OFFICE OF DEFECTS INVESTIGATION

Investigation: EA23003

Prompted By: PE23005

Date Opened: 11/29/2023

Date 01/28/2025

Closed:

Investigator: Stefanie Oldenburg

Reviewer: Sharon Yukevich

Approver: Tanya Topka

Subject: Momentary Increased Steering Effort

MANUFACTURER & PRODUCT INFORMATION

Manufacturer: Honda (American Honda Motor Co.)

Products: 2022-2023MY Honda Civic, 2023MY Honda CR-V, 2023MY Acura Integra

Population: 532,535 (Estimated)

Problem Description: Vehicle steering can stick and cause a momentary increase in steering effort that could potentially cause overcorrection and an increased risk of a crash

FAILURE REPORT SUMMARY

	ODI	Manufacturer	EWR D&I	Other	Total	EWR Field Reports
All Incidents:	1,419	3,386	0	0	4,569*	CONF
Crashes/Fires:	23	22	0	0	37*	0
Injury Incidents:	4	6	0	0	8	0
Number of Injuries:	4	6	0	0	8	0
Fatality Incidents:	0	0	0	0	0	0

Description of Other:

*Total eliminates duplicates received by the manufacturer

ACTION/SUMMARY INFORMATION

Action: This Engineering Analysis (EA) is closed with recall 24V744.

Summary:

On November 29, 2023, the Office of Defects Investigation (ODI) opened this Engineering Analysis (EA23003) to assess allegations of momentary increase in steering effort in model years

(MY) 2022-2023 Honda Civic, 2023MY Honda CR-V, and 2023MY Acura Integra vehicles (subject vehicles). The complaints received by ODI alleged that the subject vehicles experienced a momentary increase in required steering effort (described as “sticky steering”) occurring mostly at highway speeds after driving for an extended amount of time; these complaints could not be duplicated during dealer service technicians’ quick test drives. The complaints had been received over the previous two years with most occurring with low vehicle mileage. The steering gear of these vehicles is aided by an electrical power assist unit. This power assist unit inputs force on the steering rack via a worm gear and worm wheel assembly.

During PE23005, Honda stated this condition of momentary increase in steering effort occurs due to two factors within this power assist unit. First, during manufacturing, the steering worm wheel goes through annealing and component conditioning processes. These processes cause internal stress and strain within the steering worm wheel. This strain is slowly released over the first few months of the vehicle life. Over time, the released strain causes deformation of the teeth on the worm wheel, causing the worm gear to catch on the worm wheel. This catching results in the driver’s momentary increased steering effort. Second, the manufacturing process did not guarantee consistent grease application and, therefore, some subject vehicles received insufficient grease which contributed to the momentary increase in steering effort.

During EA23003, ODI further analyzed the potential safety related consequences of the momentary increase in steering effort. NHTSA’s Vehicle Research and Test Center (VRTC) duplicated the allegations of increased steering effort. In addition, VRTC discovered the steering worm wheel and worm gear tended to push grease out of the meshing area, resulting in large amounts of grease resting on top of the worm wheel. Information Request responses collected and reviewed by ODI showed Honda had also discovered this additional root cause during NHTSA’s EA. In addition, Honda discovered the preload of the worm wheel gear spring was set too high, increasing the gear slide load and resulting in higher friction and increased torque fluctuation when steering.

The number of consumer complaints made to ODI continued to increase with the expansion of scope from the PE to the EA. Additionally, during EA23003, ODI received ten complaints alleging a crash, in addition to the 13 complaints ODI had received as of the time it opened EA23003. In total, 23 crashes have been reported to ODI due to this alleged defect.

On October 3, 2024, Honda filed NHTSA Recall No. 24V-744 to address this defect. The recall will provide consumers with a new steering worm wheel gear spring with a decreased load. Additionally, dealerships will add additional grease and relocate any grease sitting on top of the worm wheel back into the meshing area. The scope of this recall includes all Honda vehicles that were manufactured with this specific improperly produced steering worm wheel and spring.

In view of the recall action being taken by Honda, ODI is closing EA23003. NHTSA reserves the right to take additional action if warranted by future circumstances. To review the ODI reports cited in the Closing Resume ODI Report Identification Number document, go to [NHTSA.gov](https://www.nhtsa.gov).