



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

## ODI RESUME

Investigation: EA04-020  
Prompted By: PE04-030  
Date Opened: 07/22/2004  
Principal Investigator: Kyle Bowker  
Subject: Steel Wheel Fracture

Manufacturer: Kia Motors America, Inc.  
Products: 2001 Kia Rio  
Population: 24,507

Problem Description: Standard equipped 13x5J steel wheels fracture in a circumferential pattern on the wheel disc at or around the wheel hat area.

### FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	6	25	30
Crashes/Fires:	0	0	0
Injury Incidents:	0	0	0
# Injuries:	0	0	0
Fatality Incidents:	0	0	0
# Fatalities:	0	0	0
Other*:	0	576	576

\*Description Of Other: Warranty claims paid by Kia for replacement of 1 or more wheels for any or unspecified cause.

Action: An Engineering Analysis has been opened.

Engineer: Kyle M. Bowker KMB  
Div. Chief: Jeffrey L. Quandt  
Office Dir.: Kathleen C. DeMeter

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Summary: On March 24, 2004, the Office of Defects Investigation (ODI) opened a Preliminary Evaluation (PE04-030) to investigate alleged steel wheel fractures in certain Model Year (MY) 2001 Kia Rio vehicles. The subject vehicles are equipped with wheels manufactured between May 12 and October 18, 2000. Wheels were manufactured during this period using a tool (ring die) that had improper surface treatment. This allowed tool damage to develop with accumulated use and resulted in an irregular shaped stamping on the wheel disc at the hat area. The irregular shaped hat area creates a stress riser that may lead to the formation of cracks.

ODI is aware of 30 non-duplicative consumer reports alleging wheel fracture and 3 alleged wheel separation incidents on the subject vehicles. Kia has paid 576 warranty claims for wheel replacement on the subject vehicles.

An Engineering Analysis has been opened to further study the scope and safety consequences of this issue.

KMB  
7/22/04