U.S. Department of Transportation

National Highway Traffic Safety Administration

ODI RESUME

OFFICE OF DEFECTS INVESTIGATION

NHTSA

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Investigation: PE 15-002
Date Opened: 01/13/2015 **Date Closed:** 05/22/2015
Investigator: Nate Seymour **Reviewer:** Bruce York-B
Approver: Stephen Ridella
Subject: Loss of air due to cracked wheel rim

MANUFACTURER & PRODUCT INFORMATION

Manufacturer: ACCURIDE CORPORATION
Products: 2010-2014 Accuride Steel Wheels
Population: 4,030,908

Problem Description: Steel wheels have been found to have cracks resulting in a loss of air pressure.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	0	5	5
Crashes/Fires:	0	0	0
Injury Incidents:	0	0	0
Fatality Incidents:	0	0	0
Other*:	3	216	216**

***Description of Other:** Field reports and warranty claims

** Total eliminates duplicates received by ODI and manufacturer.

ACTION / SUMMARY INFORMATION

Action: This PE is closed.

Summary:

ODI opened PE15-002 based on field reports which reported multiple incidents of air loss in the subject steel wheels. Several of the field reports indicated failures early in the vehicles's service life when used on the steer axle.

Accuride identified the subject wheels of the field reports as model 50408 which has two hand holes and an acrylic e-coat finish . Multiple hand hole options and finishes were available from Accuride. Many purchasers selected the most economical finish option which was pretreat + e-coat. The more durable pretreat + e-coat + powder coat came at a premium price however proved to be significantly more durable. To create a more competitive and longer lasting product, Accuride has created an acrylic e-coat with an epoxy e-coat paint option and minimized its availability of pretreat + e-coat only option.

A thorough review of the Information Request Response (IRR) identified two separate process conditions which contributed to some wheels loosing air pressure. A part failure in one of the welding machines was the root cause of pin holes in the butt weld. The other process issue involved the surface preparation for paint. Corrosion was evident on the tire side of the rim prior to the first tire change. Further study of the condition revealed that oxidation started below the paint. This indicated that the surface with not thoroughly cleaned and/or protected prior to paint being applied.

ODI considered wheel position in its analysis of failures. The steer axle typically experiences more stress and carries a heavier load per wheel/tire than experienced in a dual wheel configuration found on the drive or trailer axles. However, wheel position is rarely identified in the failure reports. This made it impossible to definitively assign responsibility to any one wheel position. Furthermore, of the reports that did include position it was evident that

multiple positions experienced failures.

ODI reviewed warranty and complaint data as well as surveyed fleets. Although the data did indicate there were events where a slow loss of air occurred as a result of the process failures identified by Accuride, the data did not suggest there was an unreasonable risk to motor vehicle safety. While slow air loss in a tire is undesirable, these wheels are regularly inspected and as a result there are no known events involving a crash, rapid air loss or structural failure of the rim (caused by the alleged defect) after five plus years of exposure.

In light of the low risk to motor vehicle safety, further use of agency resources does not appear to be warranted. The closing of this investigation does not constitute a finding by NHTSA that no safety-related defect exists. The agency reserves the right to take further action if warranted by the circumstances.