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13V-355  
(3 pages)



August 9, 2013

Ms. Nancy Lewis  
Associate Administrator for Enforcement  
National Highway Traffic Safety Administration  
1200 New Jersey Avenue, SE  
Washington, D.C. 20590

RE: Defect Information Report

Dear Ms. Lewis:

Pursuant to Part 573 of Title 49 of the Code of Federal Regulations, Hyundai America Technical Center is submitting information concerning a recall that is being voluntarily initiated. Specific information as required by Section 573.6 is as follows:

573.6(c)(1)

Manufacturer – KIA Motors Manufacturing Georgia, Inc. for Hyundai Motor Company

Distributor - Hyundai Motor America

Distributor - Hyundai de Puerto Rico

573.6(c)(2)

2013 model year Hyundai Santa Fe Sport front wheel drive vehicles equipped with 2.4 liter engines produced beginning on July 13, 2012 through March 12, 2013 are affected.

Component Manufacturer Identification:    Seo Han USA  
246 Teague Court  
Auburn, AL 36830  
334-750-9374

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**6800 Geddes Road, Superior Township, MI 48198**  
**TEL: 734-337-9499    FAX: 734-483-5919**  
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HATCI is an authorized representative of both Hyundai Motor Company and Kia Motors Corporation; which are separate and distinct automotive manufacturers.

573.6(c)(3)

Approximately 20,000 2013 model year Hyundai Santa Fe Sport front wheel drive vehicles equipped with 2.4 liter engines are affected in the United States. Approximately 300 Hyundai Santa Fe Sport front wheel drive vehicles equipped with 2.4 liter engines are affected in Puerto Rico.

573.6(c)(4)

All of the vehicles identified above in 573.6(c)(2) are potentially affected.

573.6(c)(5)

Hyundai has determined that on certain 2013 model year Hyundai Santa Fe Sport front wheel drive vehicles equipped with 2.4 liter engines, the right front axle shaft may fracture. A fracture of the right front axle shaft can result in a loss of motive power or a vehicle moving unintentionally when parked without a fully applied parking brake.

573.6(c)(6)

Hyundai began production of the subject vehicles in July, 2012. In January, 2013, Hyundai received reports of axle shaft failures and undertook an investigation to determine the root cause.

The right front axle assembly contains an axle “stub” that is welded to the axle shaft tube on one end, while the other end is splined and inserted into the axle assembly’s constant velocity joint. Preliminary analysis of incident field parts indicated the forged steel stub portion of the axle shaft had fractured under load on each incident part, typically when initially moving the vehicle from a stop.

Hyundai’s failure analysis, conducted during February-March, 2013, disproved a preliminary theory that the fractures were related to corrosion. Further analysis found microscopic cracks in the grain structure of the stub assembly forging. The ongoing investigation during March-May, 2013 focused on an evaluation of the high-frequency heat treatment applied during the axle shaft manufacturing process as well as on whether the welding process may have contributed to the potential for microscopic cracks. Attempts to induce axle shaft failure, however, were unsuccessful. Hyundai learned in July, 2013, through further investigation and inquiry, that a sub-supplier for the axle stub had replaced its forging press in January, 2013. This had been a planned equipment update at the sub-supplier. Hyundai reviewed magnetic particle inspection records on axle stub assemblies made with the original and with the replacement equipment. The investigation found that some stub assemblies manufactured with the previous equipment were rejected for microscopic chips near the surface, a condition that was not found on stub assemblies manufactured with the updated equipment. A review of the warranty claims has confirmed that all reported failures have occurred on axle shafts produced using the prior equipment and none have been reported on stub assemblies produced following the sub-supplier’s equipment upgrade. Hyundai has received 60 warranty claims and 7 customer complaints relating to this issue, and no reports of any accidents or injuries.

As the result of its investigation, Hyundai has concluded the axle shaft fracture condition was the consequence of the axle stub supplier’s manufacturing process and will conduct a recall to replace the

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right front axle shafts in model year 2013 Hyundai Santa Fe Sport front wheel drive vehicles equipped with 2.4 liter engines that were manufactured through March 12, 2013 to address this condition. This recall also responds to NHTSA PE13-025.

573.6(c)(8)

Hyundai Motor America will notify all owners of the Hyundai vehicles described in 573.6(c)(2) above to return their vehicles to their Hyundai dealers to replace the right front axle shaft assembly.

Hyundai anticipates that owners will begin to be notified by mail in August of 2013 after NHTSA has approved the owner notification letter.

The right front axle shaft assembly for the vehicles affected by this recall are covered for 5 years or 60,000 miles under Hyundai's new vehicle limited warranty. As owners of these vehicles would not have incurred expenses for the warranted repair as a result of this condition, no notification regarding reimbursement under section 577.11 is necessary.

573.6(c)(10)

A draft of the Technical Service Bulletin will be forwarded when available.

A draft copy of the dealer communication will be forwarded when available.

573.6(c)(11)

A draft of the owner notification letter will be forwarded when available.

573.6(c)(12)

Hyundai has assigned "Campaign 112" as the designation for the campaign.

Sincerely,

A handwritten signature in black ink that reads "Robert Babcock". The signature is written in a cursive, slightly slanted style.

Robert Babcock  
Director, HATCI Certification and Compliance Affairs