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November 4, 2013

**BY E-MAIL AND FEDERAL EXPRESS**

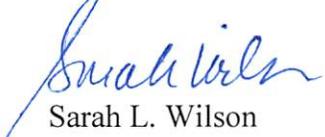
Ms. Kelly Schuler  
Safety Recall Specialist  
Recall Management Division  
Office of Defects Investigation Enforcement  
National Highway Traffic Safety Administration  
1200 New Jersey Avenue SE  
Washington, DC 20590  
Kelly.Schulder@dot.gov

Re: 573 Report for Econix DPF-A Filters

Dear Ms. Schuler:

Please find enclosed the 573 Report and draft letter to owners for the Econix DPF-A Filter. Please do not hesitate to contact me with any questions about this matter.

Sincerely,

  
Sarah L. Wilson

Enclosures

**PART 573 Defect and Noncompliance Report**

SK Innovation Co., Ltd. has agreed with the California Air Resources Board (CARB) to conduct a recall of its Econix DPF-A diesel particulate filters in order to address California emission control issues. Because certain of the DPF-A filters were sold outside of California based upon their certification by CARB, SK Innovation has decided to conduct a nation-wide recall. In addition, the Owner's Manual for the DPF-A filter did not make clear that annual replacement of certain expendable parts of the filter is required, and a lack of replacement could lead to failure of the filters and present a risk of filter melting, given the absence of certain secondary safety measures in the filter. Accordingly, out of an abundance of caution and to facilitate a nation-wide recall, SK Innovation is furnishing notification to the National Highway Traffic Safety Administration in accordance with 49 C.F.R Part 573.

Date this report was prepared: November 4, 2013

Furnish the manufacturer's identification code for this recall (if applicable): Not Applicable

Identify the full corporate name of the fabricating manufacturer/brand name/trademark owner of the recalled item of equipment. If the recalled item of equipment is imported, provide the name and mailing address of the designated agent as prescribed by 49 U.S.C. § 30164.

Manufacturer's corporate name: SK Innovation Co., Ltd.

Equipment's brand or trademark name owner(s) (where applicable): SK Innovation Co., Ltd.

Designated Agent: Mr. Barry C. Day  
Manager of Business Development & Global Technology Support  
SK USA, Inc.  
55 E. 59th St., 10th Floor  
New York, NY 10022  
Tel: +1 (212) 583-2434  
Fax: +1 (212) 583-2439  
barry.day@skusa.com

Identify the corporate official, by name and title, whom the agency should contact with respect to this recall.

Please direct all contact to:

Sarah L. Wilson, Esq.  
Covington & Burling LLP  
1201 Pennsylvania Ave., N.W.  
Washington, DC 20004  
Tel: (202)-662-5397

Fax: (202)-778-5397  
swilson@cov.com

Company Representative:

Barry Day – Manager of Business Development & Global Technology Support  
SK USA, Inc.  
55 East 59<sup>th</sup> Street, 11<sup>th</sup> Floor  
New York, NY 10022

Name and Title of Person who prepared this report.

Sarah L. Wilson, Esq.  
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Signed:

**I. Identification of the Recall Population and Its Size**

Type of Equipment:	Econix DPF-A Diesel Particulate Filters
Part/Model number:	Not Applicable
Size and function (where applicable):	dia. 350mm* len. 450mm, including the metal filter within
Inclusive dates of manufacture (month and year)	August 2009
Other information necessary to describe this equipment:	The metal filter assembly in the DPF-A filter consists of three layers of stainless steel sheets (thickness 1.5 to 2 mm), which are designed to prevent/minimize heat transfer from the metal filter within to the outer surface of the assembly. The manufacturer is FiberTech (www.metalfiber.com), and a relevant catalogue is also attached.
Total number of these items of equipment:	327

Provide the following information as to all the items of equipment (“the recall population”) identified above:

Grand total number of items of equipment in the recall population: 327 units.

The percentage of the recall population you estimate actually contain the defect or noncompliance: 100%

Identify and describe how the recall population was determined (e.g., on what basis the recalled models were selected and how the inclusive dates of manufacture were determined):

The Econix DPF-A equipment has two differently sized models, CAT1 and CAT2. The relevant Owner’s Manual and metal filter assembly were components of all 327 units sold. Therefore, the recall population is all 327 units.

Describe how the recall population is different from any similar items of equipment not subject to this notification:

Not Applicable.

## **II. Description of the Defect or Noncompliance and Chronology of Events**

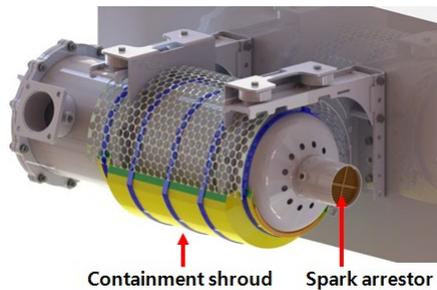
Describe the defect or noncompliance, including a summary and detailed description of the nature and physical location (if appropriate) of the defect or noncompliance. Graphic aids should be provided where necessary.

The Econix DPF-A is an active regeneration type diesel particulate filter (DPF) system. To ensure proper operation of the filter, the following maintenance is required: (i) periodic checks on general operation; (ii) removal of ash from the metal filter, on an annual basis, and (iii) annual replacement of expendable parts, namely the nozzle and igniter.

SK has determined that improper maintenance and operation of the Econix DPF Filter may lead to partial filter melting and/or failure of the product. Specifically, extended usage of the expendable parts of the filter (nozzle and igniter) far beyond the service requirements may result in repetition of inadequate regenerations, which increases the amount of particulate matter (PM) left in the metal filter. Once un-regenerated PM reaches a critical amount, the next regeneration of the filter can result in a thermal event, which may damage the metal filter and create a risk of partial filter melting, possibly presenting a fire risk.

In the Owner’s Manual, annual replacement of expendable parts (nozzle and igniter) was not expressly specified. Rather, the manual only referred to “recommended” as opposed

to “mandatory” annual inspection and cleaning. This might have caused customers to be unaware of certain aspects of proper operation and maintenance of the DPF-A filter, including annual replacement of the expendable parts. Although a reasonable degree of customer’s attention to the service requirements was assumed and would result in safe operation, addition of a containment shroud of ceramic wool, a spark arrester, or other safety device, as a means of secondary safety measure, in case of improper operation or maintenance of the filter (see the picture below) would substantially mitigate the risks.



Describe the cause(s) of the defect or noncompliance condition.

The Owner’s Manual does not contain instructions that the annual replacement of expendable parts is mandatory. Certain secondary safety measures were not included in the filter design.

Describe the consequence(s) of the defect or noncompliance condition.

Improper maintenance and/or operation of the filter may lead to partial filter melting and/or failure of the product. Extended usage of the expendable parts far beyond the service requirements (which call for replacement of the nozzle and igniter once a year) may result in repetition of inadequate regenerations, which increases the amount of PM left in the metal filter. Once un-regenerated PM reaches a critical amount, the next regeneration of the filter may cause a thermal event, which will likely damage the metal filter, can pose a risk of partially melting the filter, and in turn possibly present a fire risk.

Identify any warning(s) that may precede the defect or noncompliance condition.

Accumulation of PM in the metal filter is continuously monitored by the ECU (Electrical Control Unit). Audible and visible warnings are provided from the Alarm System installed in the cabin when the PM amount reaches certain thresholds; the warning signals from the Alarm System repeatedly remind the vehicle operator that regeneration is needed. The time interval between the alarms will gradually shorten if inadequate regeneration continues to occur.

*For defects*, provide a dated, chronological summary of all the principal events that were the basis for the determination that the defect is related to motor vehicle safety, including a summary of all warranty claims, field or service reports, and other information such as numbers of crashes, injuries and fatalities.

In November, 2011, in Roseville, California, a partial filter melting incident occurred. The product was not serviced for extended period: the expendable parts (nozzle and igniter) had not been replaced for 2 years, and ash removal from the metal filter had never been performed.

In May, 2012, in California, another partial filter melting incident was reported. No expendable parts had been replaced for 2 years. Repeated incomplete regenerations eventually led to the melting incident.

Due to the nature of these incidents, SK did not consider them related; each had a specific circumstance, and all did not have the same set of circumstances. At the time each incident occurred, SK did not consider the product to be defective, because these appeared to be one-off situations related to user error and the damage was limited in each event. In or around May 2013, SK became aware after further review that the filters could possibly be considered defective under NHTSA's regulations. SK then conducted a further review of these incidents and of the filter, and recently concluded that the defect described above existed.

*For noncompliances*, identify the test results and other information considered in determining the existence of the noncompliance, and provide the date of each test and observation indicative of that noncompliance.

Not Applicable.

### **III. The Remedy Program**

Describe the program for remedying the defect or noncompliance, including the plan for reimbursing those owners and purchasers who may have incurred costs to remedy the defect or noncompliance before receiving the manufacturer's notification concerning that defect or noncompliance. Also include, where applicable, details with dates concerning any production remedy that was conducted or will be conducted.

Remedy: SK Innovation has permanently discontinued importation of the DPF-A filters. SK consulted with CARB regarding a separate issue relating to certification of the filters as emission control devices under California state law, and, in lieu of resubmitting the DPF-A filters for recertification, plans to collect all 327 units sold and scrap them, after paying reimbursement payments to the buyers. In accordance with 49 U.S.C. § 30120(a), SK will provide the proposed remedies at no charge.

Replacement: In lieu of resubmitting the DPF-A filters for recertification, SK has agreed to remove the DPF-A filters from service and reimburse owners for replacement filters. Owners will be advised to contact selected DPF dealers for help in selecting a suitable replacement DPF filter that is certified by CARB and scheduling the replacement. Once the replacement is completed, owners should present proof of the original purchase price to the dealer. Once this is received from the dealer together with proof of the removal and replacement of the owner's Econix DPF Filter, a payment for the removal and replacement of the Econix DPF Filter, not to exceed the owner's original purchase price (including tax and installation cost) will be sent to the dealer on the owner's behalf. The owner will be responsible for any amount owed to the dealer above this amount

Pre-Notification Reimbursement: In accordance with 49 C.F.R. § 573.13, SK Innovation will include in its consumer notification letter information regarding the availability of reimbursement for any remedial measures taken with regard to the affected filters before those parties received notification from SK. SK will provide such reimbursement for repairs and replacement undertaken between one year before the date of this report and the date ten days after SK's last notice is mailed to consumers. SK proposes to reimburse such customers for the cost of equivalent replacement filters and related labor expenses, up to the amount of the original purchase price. SK will exclude from this pre-notification reimbursement plan any remedies that did not repair or replace the filter, as contemplated by 49 C.F.R. § 573.13(d)(3)(i), or those that do not submit to SK the documentation required by 49 C.F.R. § 573.13(d)(4), including in particular a receipt for the pre-notification remedy.

Describe the distinguishing characteristics of the remedy component/assembly versus the recalled component/assembly.

Not applicable (customers will receive reimbursements and all products will be collected and scrapped).

Identify and describe how and when the recall condition was corrected in production. If the production remedy was identical to the recall remedy in the field, so state. If the product was discontinued, so state.

SK has discontinued production of the DPF-A filter, and will work to provide relevant consumers with equivalent replacement filters produced by other manufacturers, for which SK will bear the cost.

#### **IV. The Remedy Schedule**

SK estimates that it will begin notification to the dealers and purchasers on or around December 15, 2013, after receiving NHTSA approval of the draft recall notices and mailing envelopes, in accordance with 49 C.F.R. §§ 577.5(a) and 577.7(a)(1). SK estimates that it will complete the notification program on or around December 31, 2013.

SK estimates that preparation of the recall will take 6 weeks and the recall could be completed in 6 to 9 months.