

**Part 573 Safety Recall Report****14V-727****Manufacturer Name :** Hino Motors Sales U.S.A., Inc.**Submission Date :** NOV 11,2014**NHTSA Recall No. :** 14V-727**Manufacturer Recall No. :** A9930**Manufacturer Information :**

Manufacturer Name : Hino Motors Sales U.S.A., Inc.

Address : 41280 Bridge Street

Novi MI 48375

Company phone : 248-699-9300

**Population :**

Number of potentially involved : 0

Estimated percentage with defect : 0

**Vehicle Information :**

Vehicle : 2012-2015 HINO XFC

Vehicle Type : BUSES, MEDIUM &amp; HEAVY VEHICLES

Body Style :

Power Train : DIESEL

**Descriptive Information :** The output shaft of the Hybrid Vehicle (HV) motor may break. If the output shaft breaks the vehicle will lose the ability to move under its own power.

Production Dates : AUG 27, 2011 - NOV 07, 2014

**VIN (Vehicle Identification Number) Range**

Begin : NR

End : NR

☐ Not sequential VINs**Description of Defect :**

**Description of the Defect :** When a driver, while driving, repeatedly accelerates and decelerates, over a short period of time, excessive stress will be applied to the output shaft of the HV motor. The design strength of the output shaft is insufficient and cannot endure such excessive stress. As a result of the rapid acceleration/deceleration and design, the output shaft will become worn, ultimately causing the output shaft to break.

**Description of the Safety Risk :** If the output shaft breaks, the vehicle will lose the ability to move under its own power.

This condition could increase the risk of a crash in the worst case.

**Description of the Cause :** NR

**Identification of Any Warning that can Occur :** If the output shaft breaks, the vehicle will lose the ability to move under its own power.

**Supplier Identification :****Component Manufacturer**

Name : NR

Address : NR

NR

Country : United States

**Chronology :**

March 24, 2014

HML obtained information from HMS via Hino Motors Manufacturing (HMM) that certain hybrid vehicles had been brought to dealers because the vehicles would not move under their own power. Vehicle inspections indicated that the output shaft of the HV motor had broken.

April, 2014

HML received an initial investigation report from the supplier; inspection of the collected parts confirmed that the output shaft had broken. Further inspection confirmed the presence of wear on the output shaft. It was also reported that investigation as to the cause of such breakage and wear would be continuing, and that testing would be conducted to try to reproduce the failure condition.

July, 2014

HML received a report from the supplier regarding testing to reproduce the failure condition. It was presumed that repeated stress had been directed to the output shaft axis because the output shaft was worn in the direction of such axis. It was also presumed that the stress was caused by repeated engine acceleration and deceleration. Based upon these presumptions, a new test involving repeated engine acceleration and deceleration was conducted. The supplier confirmed that the output shaft was worn in the direction of the shaft axis and that such wear progressed, although breakage of the shaft was not observed during that test. As a result, the supplier decided to continue further testing.

August, 2014

HML received a report regarding the output shaft used during testing. The output shaft broke when engine acceleration and deceleration occurred repeatedly over a short period of time. As a result, a determination was made to continue the investigation to verify the actual occurrence of such output shaft breakage in the field.

October, 2014

HML received the final investigation report indicating that output shaft breakage would not occur if the strength of the output shaft would be increased. It was determined that the cause of such breakage was excessive stress being applied to

**Description of Remedy :**

Description of Remedy Program : The design strength of the output shaft will be increased. The strength will be increased by enlarging the shaft diameter and the corner radius of the shaft.

How Remedy Component Differs from Recalled Component : NR

Identify How/When Recall Condition was Corrected in Production : NR

**Recall Schedule :**

Description of Recall Schedule : HML will provide the HV motor equipped with the improved output shaft. As soon as the HV motor has been provided, notification will be issued to customers and the HV motors will be replaced. The completion of parts preparation and notification to the customer is planned for February, 2015. An interim notification letter will be issued to the customer no later than 60 days from today explaining the recall schedule.

Planned Dealer Notification Date : NR - NR

Planned Owner Notification Date : NR - NR

\* NR - Not Reported