Part 573 Safety Recall Report 17V-201

Manufacturer Name : Hino Motors Sales U.S.A., Inc.
Submission Date : NOV 10, 2017
NHTSA Recall No. : 17V-201
Manufacturer Recall No. : AA6N0

NHTSA
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

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 : 1,815
Estimated percentage with defect : 100 %

Vehicle Information :

Vehicle 1 : 2013-2018 HINO XFC710L, XFC720L, XFC730L, XFC740L
Vehicle Type : BUSES, MEDIUM & HEAVY VEHICLES
Body Style : ALL
Power Train : HYBRID ELECTRIC
Descriptive Information : All manufactured Hybrid Vehicle (HV) motors deemed to be defective and are included in this recall.
Vehicles not included in the recall were manufactured with the improved HV motor and damper.

Production Dates : JUN 05, 2012 - DEC 27, 2016

VIN Range 1 :	Begin :	JHHLPL1HXCK001001	End :	JHHSPM2HXHK002012	☑ Not sequential
VIN Range 2 :	Begin :	JHHLPL1HXCK001001	End :	JHHSPM2HXHK002012	☑ Not sequential
VIN Range 3 :	Begin :	JHHLPL1HXCK001001	End :	JHHSPM2HXHK002012	☑ Not sequential

Description of Defect :

Description of the Defect : (1)The clutch drum spline of the front module of the HV motor may wear out.
(2) The damper spline of the front module of HV motor may wear out.
If the clutch drum spline or damper spline wears out, the vehicle will lose the ability to move under its own power.
(2) Because the wear resistance of the damper spline is insufficient, the damper spline may deteriorate due to torque variation caused by sympathetic vibration while driving.

FMVSS 1 : NR
FMVSS 2 : NR

Description of the Safety Risk : If the clutch drum spline wears out, 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 :	(1) Because the wear resistance of the drum spline is insufficient, the drum spline may deteriorate due to torque variation caused by sympathetic vibration while driving, or as a result of PTO operation.
Identification of Any Warning that can Occur :	If the clutch drum spline or damper spline wears out, the vehicle will lose the ability to move under its own power.

Supplier Identification :

Component Manufacturer

Name :	Aisin Seiki Co., Ltd.
Address :	2-1 Asahi-machi Kariya Aichi FOREIGN STATES 448-8650
Country :	Japan

Chronology :

Feb. 6, 2015
Hino started a recall for replacement of the front module on hybrid vehicles; the new front module contained a strengthened output shaft.
Sep. 22, 2016
Hino received information that a hybrid vehicle, to which the front module recall was implemented, was not able to move, Hino inspected the vehicle. As a result, Hino assumed that there was a possibility of a front module fault and collected the parts for examination.
Oct. 5, 2016
Hino issued service alert SA-16-026 to facilitate the collection of parts for evaluation.
Oct., 2016
The supplier examined the collected parts. As a result, it was determined that the drum spline of the front module was worn out.
Oct., 2016
The supplier performed duplication testing to identify the failure mode.
Oct. to Nov., 2016
The supplier worked on measures to increase wear resistance of the drum spline, created parts with an increased wear resistance, and performed durability testing.
Dec. 22, 2016
Because there was a gap between the assumed mechanism causing the failure, and the actual condition of failures in the field, and the cause had not been clarified, Hino decided to examine the failures in the field. Although the cause was not clear, Hino decided to increase the hardness of the drum spline as a provisional measure and monitor the results.
Jan.to Feb., 2017
Hino performed vehicle examination in the field, and began to monitor the effectiveness of the drum spline with increased hardness.
Mar.17, 2017

Hino continued evaluating the effectiveness of the increased hardness and the quality in mass-production. Under this condition, Hino held a Safety Committee meeting and determined that a safety-related defect existed.
Oct. 27, 2017
Hino investigated damper spline wear, and it was found that the damper spline may deteriorate due to torque variation caused by sympathetic vibration while driving. As a result, it was determined that the increased hardness of damper spline was effective against wear.

Description of Remedy :

Description of Remedy Program :	HV Motor and damper will be replaced by the Hino dealer at no cost to the vehicle owner.
How Remedy Component Differs from Recalled Component :	Improved HV Motor part# G110037053 will replace current part# G110037052. Improved Damper part# 3129037020 will replace current part# 3129037011
Identify How/When Recall Condition was Corrected in Production :	Hino increased the hardness of the drum spline beginning Dec. 22, 2016. Hino increased the hardness of the damper spline beginning Sep. 25, 2017.

Recall Schedule :

Description of Recall Schedule :	An interim notification letter was issued to customers by May 22, 2017. And final notification to customers was mailed on November 9, 2017 and the front module and damper of the subject vehicles will be replaced with the improved part.
Planned Dealer Notification Date :	NOV 01, 2017 - NOV 01, 2017
Planned Owner Notification Date :	NOV 09, 2017 - NOV 09, 2017

* NR - Not Reported