

March 4, 2022
Hino Motors, Ltd.

Misconduct concerning Engine Certification

Hino Motors, Ltd. (Hino) has identified past misconduct in relation to its applications for certification concerning the emissions and the fuel economy performance of its engines for the Japanese market.

Hino has identified misconduct concerning the falsification of engine performance data in its emissions durability testing for the A05C (HC-SCR) medium duty engine, and in the measurement of fuel economy performance in certification tests for two heavy duty engine models, A09C and E13C. Hino has also confirmed that those engines have problems in engine performance.

Accordingly, today, Hino has decided to suspend the sale of those three engine models and their corresponding vehicles in Japan.

In addition, Hino has identified a problem concerning the fuel economy performance of the N04C (Urea-SCR) light duty engine. However, no misconduct in relation to the certification testing of this engine has been identified to date.

Hino has reported those issues and its decision to the Japanese Ministry of Land, Infrastructure, Transport and Tourism (MLIT) and Ministry of Economy, Trade and Industry (METI).

Hino deeply apologizes for any inconvenience caused to its customers and other stakeholders.

1. Background

After internally identifying potential issues regarding certification testing to determine the emissions performance of on-road engines for the North American market, Hino voluntarily commenced an investigation led by outside counsel and provided an initial report of its findings to the relevant regulators. Subsequently, the U.S. Department of Justice commenced an investigation. Hino is fully cooperating with investigations by the relevant authorities.

Hino then expanded the scope of the investigation to include a review of emissions certification procedures for engines certified to Japanese regulatory standards. In conjunction with that investigation, Hino has also conducted verification testing of engine performance including emissions and fuel economy.

Hino has identified misconduct related to the certification procedures for multiple engine models subject to the 2016 emissions regulations (so-called ‘post- post- new long-term regulations’; the “2016 Emission Regulations”) and fuel economy standards in Japan and found problems in engine performance. Therefore, Hino has decided to suspend the sale of the A05C (HC-SCR), A09C, E13C engines and vehicles equipped with those engines. While Hino also identified a problem concerning the fuel economy performance of the N04C (Urea-SCR) engine, no misconduct in relation to its certification testing has been identified to date.

Accordingly, Hino reported its findings and decision to MLIT and METI today.

2. Current Findings and Hino’s Decision

Hino’s current findings and plan to address the engines subject to the 2016 Emission Regulations are as follows.

- **A05C (HC-SCR), medium duty engine**

Findings:

Hino discovered that, in a durability test for emissions performance, which is one of the engine certification tests, the second muffler* of the emissions after-treatment system was replaced during the test and the test was continued using the replaced muffler. This change was made after learning that emissions performance would deteriorate over time and that the engine may not meet the regulatory emissions standards.

In addition, Hino has also confirmed through emission durability retesting that there is a possibility that this engine may exceed regulatory emissions standards over the course of the vehicle’s full useful life.

*The second muffler is an emissions after-treatment system component by which NOx emitted from the engine is made to react with hydrocarbons to purify it into nitrogen and water.

Decision:

Hino will suspend sales of HINO Ranger vehicles equipped with this engine model. In addition, Hino will prepare measures, up to and including a recall, as soon as possible for in-use vehicles to address the risk that emissions from the affected vehicles may exceed regulatory limits over their full useful life.

Hino will also implement remedial measures in order to resume sales.

- **A09C and E13C, heavy duty engine**

Findings:

Hino discovered that, while measuring fuel consumption in a certification test, the fuel flow rate calibration value of the dynamometer panel was altered to make it appear advantageous in relation to fuel economy. This caused an altered value that was better than the actual value to be displayed on the fuel consumption meter.

In addition, Hino has confirmed through a technical review that the actual fuel economy performance does not meet the reported value.

Decision:

Hino will suspend sales of its heavy duty truck, the HINO Profia, and its heavy duty bus, the HINO S'elega, which are equipped with those engine models.

Hino will implement remedial measures in order to resume sales.

At the same time, Hino will confirm the correct reported value and take necessary measures for in-use vehicles.

*These two engine models are also installed in the Isuzu Gala vehicle, a heavy duty bus manufactured by Isuzu Motors Limited.

- N04C (Urea-SCR), light duty engine

Findings:

The investigation is ongoing and Hino has not identified any misconduct in relation to engine testing to date. However, the technical review has identified that the engine's actual fuel economy may not meet the reported fuel economy value.

Decision:

Hino will confirm the correct reported value and take necessary measures for in-use vehicles.

This engine model is currently not offered for sale because of a model changeover of HINO's Liesse II vehicle, a light duty bus.

*This engine model is installed in the Toyota Coaster vehicle, a light duty bus manufactured by Toyota Motor Corporation.

Additionally, Hino will carefully examine the impact in terms of the tax benefits it receives for the emissions and fuel economy performance of vehicles equipped with these engines. Hino will bear the cost of any additional tax payments that may be required.

<Engine/vehicle models subject to suspension of sales>

Type	Engine model	Emissions after-treatment system	Hino vehicle models affected	Average number of vehicles sold (per month) (FY2021)
Medium duty	A05C	HC-SCR	medium duty truck "HINO Ranger"	737
Heavy duty	A09C	Urea SCR	heavy duty truck "HINO Profia"	778
			heavy duty bus "HINO S'elega"	2
	E13C	Urea SCR	heavy duty truck "HINO Profia"	360
			heavy duty bus "HINO S'elega"	2

For other engine models, at this point of time, Hino has not identified any potential emissions exceedance beyond the regulatory standard, or potential issues in relation to the reported value for fuel economy.

3. Our commitment to customers

We sincerely apologize for the inconvenience and concern caused to our customers. In order to minimize the impact on their business, we will implement various measures immediately and with care. Customers are not required to take any action and may continue to use their vehicle until further notice from Hino with respect to our measures for in-use vehicles.

Hino will decide what measures, up to and including a recall, will need to be taken for HINO Ranger models equipped with the A05C (HC-SCR) engine, which Hino has identified as potentially operating in excess of the emissions regulatory standard over the vehicle's full useful life. Hino will immediately communicate with customers who are using the affected vehicles once the appropriate measures have been decided.

With respect to the HINO Profia equipped with A09C and E13C engines and the HINO Liesse II equipped with the N04C (Urea SCR) engine, Hino will consider its response for customers who are using vehicles equipped with these engines, whose actual fuel economy performance may not meet the reported values.

The announced misconduct and issues related to engine performance do not affect the drivability of the affected vehicles and raise no vehicle safety concerns.

4. Causes and Remedial Measures

Based on the findings to date, Hino believes that it failed to appropriately respond to internal pressures to achieve certain targets and meet schedules that were placed on Hino employees. Hino management takes these findings extremely seriously.

Going forward, Hino is committed to putting compliance first.

Hino has already begun working on improving its governance system, including organizational restructuring and commencing a review of Hino's internal processes and procedures. In addition, Hino will proceed to promote the compliance awareness of each employee.

5. Going Forward

Going forward, Hino will continue to conduct a thorough investigation of the facts related to engine certification procedures, verify compliance in the certification process, and verify engine performance.

In addition, in view of the significance of the issues, Hino will form a special investigation committee consisting of independent outside experts. The committee will conduct an investigation to clarify the extent of the identified issues and an in-depth analysis into the root causes. In addition, the committee will propose remedial measures concerning engine development processes and best practice at Hino.

In order to restore the confidence of all stakeholders, Hino commits to carefully reviewing the reports from the outside experts, taking effective remedial measures and reforming its corporate structure to put compliance first.

Reference 1: List of engines subject to 2016 Emissions Regulations

Type	Engine model	Emissions after-treatment system	Hino vehicle models affected	Launch Year	Total sales volume*	
Light duty	N04C	Urea SCR	light duty bus “HINO Liesse II”	August 2019	2,057	◆
		HC-SCR	light duty truck “HINO Dutro”	May 2017	70,156	
Medium duty	J05E	Urea SCR	light duty bus “HINO Poncho”	December 2017	955	
	A05C	Urea SCR	medium duty truck “HINO Ranger”	May 2017	34,549	
			medium duty bus “HINO Melpha”	July 2017	1,017	
			heavy duty bus “HINO S’elega”	July 2017	463	
			heavy duty bus “HINO Blue Ribbon (hybrid)”	August 2017	301	
			HC-SCR	medium duty truck “HINO Ranger”	May 2017	43,044
Heavy duty	A09C	Urea SCR	heavy duty truck “HINO Profia”	May 2017	48,827	◆
			heavy duty bus “HINO S’elega”	July 2017	1,429	◆
	E13C	Urea SCR	heavy duty truck “HINO Profia”	May 2017	19,276	◆
			heavy duty bus “HINO S’elega”	July 2017	893	◆

*As of the end of February 2022.

◆ Engine models affected by the issues identified by Hino.