

August 2, 2022

**Investigation Results by the Special Investigation Committee,
and Recurrence Prevention Measures and Other Responses**

Hino Motors, Ltd. (“Hino” or “the Company”) commissioned a Special Investigation Committee comprised of outside experts to investigate the misconduct concerning engine certification announced on March 4, 2022, and has received the investigation report. Hino has today notified the relevant ministries and agencies of the investigation results, together with the key measures that it plans to take.

The Special Investigation Committee’s investigation revealed long-term misconduct concerning applications for engine certification. Hino considers that the background to this incident is its management’s failure to sufficiently engage with the frontline workforce, creating an environment and mechanism prioritizing meeting schedules and numerical goals over due processes. The Company’s inward-looking and conservative culture also prevented each employee from carrying out his or her work with a sense of involvement and solidarity. Hino also lacked awareness in and a mechanism for managing its business operations as a corporate organization, for which Hino believes its management bears responsibility. Hino takes the Committee’s report seriously, will identify with whom the responsibility lies, and implement strict measures.

Hino will implement comprehensive measures to ensure that these issues will never recur in the future. Hino will return to its fundamental principle as a commercial vehicle manufacturer and carry out company-wide rebuilding efforts to regain the trust of its stakeholders.

Hino deeply apologizes again for causing a significant inconvenience to its customers and other stakeholders.

1. Overview of the misconduct uncovered by the Special Investigation Committee

(i) Vehicle diesel engines (on-road engines)

Emissions-related:	Misconduct was found relating mainly to durability tests for a wide range of models released at the time of the 2003 emissions regulations (new short-term regulations/E6) and thereafter.
--------------------	--

Fuel efficiency-related:	Misconduct was found relating to fuel efficiency measurements mainly in heavy-duty engines after the introduction of the 2005 emissions regulations (new long-term regulations/E7) when fuel efficiency standards for heavy-duty vehicles were introduced and the relevant vehicles became eligible under the tax benefit system.
--------------------------	---

(ii) Industrial diesel engines (off-road engines)

Emissions-related:	Misconduct was found relating mainly to durability tests for a wide range of models released at the time of the 2011 regulations (Tier 3.5 regulations) and thereafter.
--------------------	---

- (iii) False reporting in response to a request by the Ministry of Land, Infrastructure, Transport and Tourism (“MLIT”) in 2016 calling for Hino to report whether any misconduct occurred during emissions/fuel efficiency tests conducted before applying for certification

2. Results of engine performance confirmed by in-house technical verification

Hino has found non-achievement of performance as set forth below through in-house technical verification that it conducted concurrently with the investigations by the Special Investigation Committee (additional findings following the March 4 release).

(1) Vehicle diesel engines (on-road engines)

2016 emissions regulations (post- post-new long-term regulations/E9)	
Heavy-duty engine “E13C”	There is a possibility that this engine may exceed the emissions regulation values due to aging.
2009 emissions regulations (post-new long-term regulations/E8); 2005 emissions regulations (new long-term regulations/E7)	
Heavy-duty engine “E13C”	Actual fuel efficiency performance failed to meet the specification values.
Heavy-duty engine “A09C”	Actual fuel efficiency performance failed to meet the specification values.

Notes:

- No engine performance issues have been found in the current models other than the above.
- The above three engines are also installed in the Gala, a heavy-duty sightseeing bus manufactured by Isuzu Motors Limited.

(2) Industrial diesel engines (off-road engines)

2014 emissions regulations (Tier 4 regulations)	
Heavy-duty engine “E13C-YS”	There is a possibility that this engine may exceed the emissions regulation values due to aging.
Heavy-duty engine “E13C-YM”	There is a possibility that this engine may exceed the emissions regulation values due to aging.
Heavy-duty engine “P11C-VN”	There is a possibility that this engine may exceed the emissions regulation values due to aging.

Note:

- No engine performance issues have been found in the models subject to the current regulations other than the above.

3. Hino's response

(1) Recurrence prevention

While fully cooperating with the Special Investigation Committee's investigation, Hino has been drafting and implementing new recurrence prevention measures to address the issues that have been found, as well as enhancing existing controls. In relation to development and certification structures and processes, Hino is implementing comprehensive measures to prevent misconduct and the outflow of non-compliant products into the market. Hino has provided information on these recurrence prevention efforts to the Special Investigation Committee, which accepted the efforts as being "adequate for the time being". Furthermore, Hino will continue to improve and reinforce these recurrence prevention measures to make them more effective.

Major recurrence prevention efforts *See the attached "Reference (ii)" for further details

- A. Improvement of development and certification structures and processes
- a. Establishment and reinforcement of checking structure(checking systems)
 - Transfer of certification testing and application functions from the Development Department to the Quality Department
 - The chief engineering compliance officer under the direct oversight of the president confirming the status and providing instructions, and the Internal Audit Department conducting audit
 - Improvement of the quality assurance structure and efforts at the mass production stage
 - b. Reinforcement of process management
 - Establishment of the "Certification Test Transition Meeting" during which Hino will assess the completion of engine development and transition to the certification stage based on technical and objective grounds
 - c. Establishment and revision of the relevant rules and standards
 - Establishment and revision of the relevant rules in line with revisions to the organizational structure, and clarification of roles and responsibilities related to certification
 - Establishment and revision of rules and technical standards with respect to key engine development
 - d. Other efforts to reinforce certification functions
 - Reorganization of the structure to understand and share the latest laws and regulations
 - Establishment of the structure to keep certification data records
 - Expansion of personnel in charge of certification and implementation of related training
- B. Improvement of corporate culture and environment and reinforcement of company-wide compliance
- a. Efforts to reform corporate culture and environment
 - Revision and restructure of the "Basic Philosophy System" that will be used to guide all corporate activities in order to share values and promote the ideal state of the Company (the Hino Basic Philosophy, the Hino Sustainability Policy, and the Hino Code of Conduct shall be collectively referred to as the "Hino Way"), and establishment of opportunities for dialogue at each level and workplace of the Company for practical implementation.
 - Regular communication from management and efforts to create an environment in which employees can speak up safely and are encouraged to do so

- Sharing of contents of the report by the Special Investigation Committee and the Company's efforts in response to the report with each and every employee
- b. Reinforcement of compliance structure and activities
- Reorganization of the Compliance Committee, enhancement and expansion of human resources, including by external recruitment, establishment of the Compliance Promotion Office, establishment of a chief engineering compliance officer/group, expansion of employee training, and strengthening of the internal reporting system

(2) Responses by model and vehicle type

(i) Current models for which emissions regulation values might have been exceeded:

Shipping of the relevant models has been suspended. Hino will consider and implement measures regarding engines in the market as promptly as possible. Hino will similarly address its industrial engines in consultation with construction machine manufacturers.

(ii) Current engine models or vehicle models, for which misconduct related to the engine certification process was detected (except those pertaining to (i) above):

Hino has suspended shipping of the engine models or vehicle models equipped with engines for which emissions regulation values were not exceeded, but where misconduct related to the engine certification process was detected pursuant to the MLIT's instructions. Hino will be following further instructions issued by the MLIT.

(iii) Impact on tax benefits

Hino will carefully examine the impact on tax benefits related to emissions and fuel consumption and bear the cost of any additional tax payments that may be required.

4. Future action

Hino takes the Special Investigation Committee's recommendations based on a root cause analysis seriously. Going forward, Hino will work towards establishing a sound governance system through measures such as creating a company-wide, cross-sectional quality management system, improving its corporate structure (including organizations and culture), and bolstering its control and supervision functions. Hino anticipates compiling these measures, including establishing executive structures toward promoting the measures in around three months' time.

Hino will resolutely commit itself to regaining the trust of its stakeholders

End

■ Outline of the investigations into engine certification application processes and the technical verification of engine performance

1. Overview of the investigations and verification

Hino established the Special Investigation Committee on March 11, 2022 to completely clarify the misconduct announced on March 4, 2022, which occurred in applying for certification of engines subject to Japanese laws and regulations. Hino had the Committee investigate vehicle engines and industrial engines, including their previous models (Table 1, A). Hino also voluntarily conducted technical verification of engine performance concerning emissions and fuel efficiency. As part of this effort, Hino made inquiries about applicable laws and regulations, test methods, and other relevant matters with MLIT (Table 1, B).

In terms of overseas laws and regulations, Hino reported the results of its voluntary investigation to the U.S. authorities and is fully cooperating with U.S. authorities' investigations. Hino is also undertaking a comprehensive review of its certification procedures for engines subject to other laws and regulations including European laws and regulations.

Table 1: <Scope published this time>

		Investigations into the existence or non-existence of misconduct concerning the engine certification process	Engine performance technical verification
Engines subject to Japanese laws and regulations	Current regulations	A: Investigations by the Special Investigation Committee	B: In-house technical verification
	Previous regulations		B: In-house technical verification (Emissions: ongoing)

2. Future plans

In regard to past models of engines subject to the Japanese laws and regulations, Hino will urgently confirm the performance for engine, which is currently being implemented. If any problems are found, Hino will promptly take necessary measures.

Hino will continue to cooperate with investigations by the relevant authorities concerning the engines subject to the U.S. laws and regulations, and Hino will also continue to proceed with a comprehensive review of certification application processes for engines subject to other laws and regulations including European laws and regulations. Hino will make further announcements as appropriate.

■ Outline of investigation results by the Special Investigation Committee

(1) Vehicle diesel engines (on-road engines)

<Issues related to emissions>

For a wide range of models, after the introduction of the 2003 emissions regulations (new short-term regulations/E6), when Hino adopted emissions after-treatment systems to comply with stricter regulation values, and accordingly, introduced tests to confirm emissions durability performance (durability tests), misconduct was discovered, mainly in relation to the durability tests, as detailed below.

*1 There is a possibility of exceeding the regulation values.

*2 Deviates from the specification values of fuel consumption.

	2016 emissions regulation (Post- post- new long-term regulations/E9),							2009 emissions regulations Post- new long-term regulations/E8)	2005 emissions regulations (New long-term regulations/E7)	2003 emissions regulations (New short-term regulations/E6)
	E13C *1*2	A09C *2	A05 (Urea-SCR)	A05C (HC-SCR) *1	J05E	N04C (Urea-SCR) *2	N04C (HC-SCR) 2019 model [current model]			
(1) Measured emissions values at the measurement points considerably different from those stipulated under laws and regulations		■							■	■
(2) Neglected measuring emissions values at the measurement points stipulated under laws and regulations			■	■				■	■	■
(3) Ceased performing durability tests in the middle of such tests and did not run engines until the end of the time specified under laws and regulations									■	■
(4) Did not perform durability tests								■	■	■
(5) Altered the test data to falsely reflect that emissions values were measured at the measurement points stipulated under laws and regulations		■						■	■	■
(6) Diverted other data, such as the data measured at the time of development, because there was no test data which measured emissions values at the measurement points stipulated under laws and regulations			■	■				■	■	■

(1) - (7), (8), (10): Issues related to durability tests

(9): Issues related to regeneration tests

<i>(7) Did not use actual durability test results and calculated the deterioration factor by altering test data by diverting other data or fabricated values, such as the data measured at the time of development</i>	■				■			■	■	■	■
<i>(8) Among items stated in durability test documents, made false statements on test conditions, such as “Running time” or “Method to measure emissions,” or deterioration factor</i>	■	■	■	■	■			■	■	■	■
<i>(9) Did not perform regeneration tests stipulated under laws and regulations, and as a result, did not calculate regeneration correction coefficient through actual measurement</i>									■		
<i>(10) Continued durability tests without undergoing necessary procedures despite replacing parts, etc. during the durability tests</i>		■		■		■			■		

<Issues related to fuel consumption measurement>

Since the introduction of the 2005 emissions regulations (new long-term regulations/E7), whereby Hino became subject to tax preferential treatment as a result of the fuel consumption standards for heavy-vehicles introduced, misconduct was discovered in relation to the fuel consumption measurements, mainly for heavy-duty engines.

- Heavy-duty engines, “E13C” and “A09C”

At the time of the 2005 emissions regulations (new long-term regulations/E7), it was discovered that Hino aimed to achieve the fuel consumption standards in order to be eligible for tax preferential treatment but failed to achieve its goal, and thus, it engaged in misconduct by intentionally adjusting the calibration values of the fuel flowmeter in order to meet the specification values required for application. Thereafter, Hino proceeded with development on the premise that the fuel consumption standards had been achieved under the 2005 emissions regulations. Regarding the 2009 emissions regulations (post- new long-term regulations/E8) and 2016 emissions regulations (post- post- new long-term regulations/E9), Hino continued to intentionally adjust the calibration values of the fuel flowmeter.

- Light-duty engine, “N04C (Urea-SCR)”/2016 emissions regulations (post- post- new long-term regulations/E9)

In order to satisfy the specification values, Hino measured the idling fuel flow quantity before the fuel flow quantity was stabilized and engaged in misconduct by intentionally selecting advantageous fuel consumption data.

- (2) Industrial diesel engines (off-road engines)

For a wide range of models, after the introduction of the 2011 regulations (Tier 3.5 regulations), it was discovered that misconduct occurred, mainly in relation to the durability test processes, as detailed below. In particular, for the three models of heavy-duty engines (E13C-YS, E13C-YM, and P11C-VN), performance values were intentionally falsified,

despite individuals being aware of the possibility of such values not conforming with the values required by the regulations.

(1) to (3), (5) to (9): Issues related to durability tests (4), (10): Issues related to regeneration tests	2014 regulations Tier 4 regulations							2011 regulations Tier 3.5 regulations
	E13C-YS*	E13-YM*	P11C-VN*	J08E-VV·WW	J08E-YD	J05E-UM·UN	J05E-VB·VA	
<i>(1) Altered test data to make it appear as if emissions values were measured at the measurement points specified under laws and regulations</i>	■		■	■	■	■	■	■
<i>(2) Altered data to values different from the actually measured results</i>	■		■	■		■		■
<i>(3) Continued durability tests by replacing engine parts and without undergoing necessary procedures</i>	■	■		■		■		■
<i>(4) Calculated regeneration coefficients using measurement results of both the warming up and cooling down conditions of the NRTC mode, while it was necessary to calculate the regeneration coefficients using the warming up condition of the NRTC mode</i>								■
<i>(5) Improper frequency of regeneration test</i>	■		■	■		■		■
<i>(6) Failed to explain to the certifying body the reasons for non-selection of measurement results, among the measurement results of durability tests</i>					■		■	
<i>(7) Used fabricated data for calculation of deterioration factor when there were no results measured at the measurement points specified under laws and regulations</i>			■					
<i>(8) Arbitrarily selected values after performing multiple measurements at each measurement point specified under laws and regulations</i>	■	■						
<i>(9) Diverted data as if it was measured at the specified measurement points, despite results having been measured at the non-specified measurement points specified under laws and regulations</i>	■	■						
<i>(10) Changed the ECU settings to improve emission performance at the time of durability tests or monitored certification tests</i>	■	■	■					

- c. False reporting during the fact-finding investigations by the MLIT in 2016 to determine whether misconduct took place during certification tests

Hino reported that there were no instances of misconduct during the MLIT's 2016 fact-finding investigation pertaining to measurement data for emissions/fuel consumption tests at the time

of obtaining certification. However, it was discovered that the data used as the basis of that report was created at the time of Hino's response to the investigation because Hino did not have any material or test data at the time of application for certification, or it was wrongfully adjusted at the time of application.

Reference (i) Special Investigation Committee Investigation Report*

* The report is released only in Japanese.

- Special Investigation Committee Investigation Report Outline
- Special Investigation Committee Investigation Report (Summarized Version)
- Special Investigation Committee Investigation Report (Full Version)

Reference (ii) List of major recurrence prevention measures

A. Improve the systems and processes of the development and certification

No.	Item	Purpose and point of recurrence prevention measures	Current status
a. Establishment and reinforcement of checking structure (checking systems)			
A-1	Establish and reinforce checking structure (checking systems) related to the certification function	Transfer the certification test and application functions from the Development Department to the Quality Department for reorganization purposes in order to have a sound internal checking system.	Implemented
A-2	Establish a function to audit the regulation certification by an external department	Newly establish in the Internal Audit Department an audit function for the technical area independent from the Development/Quality Division. Conduct audits in collaboration with the chief engineering compliance officer.	Implemented
A-3	Develop a mechanism of and reinforce efforts for quality assurance for the mass production stage	<ul style="list-style-type: none"> • Reinforce the check system by revising the quality assurance rules in the mass production stage, such as audit of the shipment management values and inspection results, and sample fuel consumption inspection. • Rebuild a company-wide quality management system (QMS) including external audit. 	Implemented Being prepared
b. Reinforcement of process management			
A-4	Improve the certification test transition management process	Establish and commence the “Certification Test Transition Meeting” by the Regulation Certification Department, separately from the development evaluation, to determine the completion of development based on technical and objective grounds.	Implemented
c. Establishment and revision of the relevant rules and standards			
A-5	Establish rules related to implementation of certification tests	Standardize the correct procedures of the certification tests, include prohibitions, and prepare standard manuals for work relating to checking/recording certification test data (prohibit changes of adjustment values of fuel flow quantity, creating detailed rules for exchange of parts during a test, etc.).	Implemented
A-6	Establish rules related to the certification application procedures	Clarify the roles and authority of the Regulation Certification Department in the certification process, and establish rules based on certification work processes.	Implemented

A-7	Establish rules related to the preservation of certification test records	Establish work rules and manuals related to the preservation of certification test data records.	Implemented
A-8	Establish audit programs of the Internal Audit Department	Establish audit programs (audit items, procedure manual, etc.) for audits over certification work, and commence audits.	Implemented
d. Other efforts to reinforce certification functions			
A-9	Establish systems to collect information about laws and regulations and precisely interpret laws and regulations	Strengthen the system for collecting and accumulating information on laws and regulations, increase the number of laws and regulations officers, establish a system to expand information on laws and regulations and to consider the interpretation of such laws and regulations, and establish rules for the management of information on such laws and regulations.	Implemented
A-10	Establish a system to preserve test records	<ul style="list-style-type: none"> Establish a system to preserve certification test records, which will secure traceability and access control. Plan to automate the preservation of data by introducing external systems. 	Implemented Being implemented
A-11	Improve management of changing control software	Strengthen the following management of control software used in certification/durability tests from the perspective of laws and regulations: - linking control software used in development tests to the test results; and - controlling “running changes” upon changes of control software	Being implemented
A-12	Expand departments engaged in the regulation of certification work	Increase the number of personnel engaged in certification work (as of July 2022, increased by 140% from July 2020). Further increase this number in the future.	Implemented
A-13	Provide compliance training for development and certification	Continuously provide education on relevant laws and regulations, including applicable environmental laws and regulations, to the employees engaged in development/certification work.	Being implemented
A-14	Improve certification and development schedules	Establish process rules to clearly designate a flexible schedule modification procedure and the manager.	Implemented
A-15	Build a system to secure appropriate human resources	Make visible any human resource shortages, and establish a mechanism to ensure that necessary actions are taken.	Implemented

A-16	Install additional benches	Consider whether there is a need to install additional test benches for certification tests. An additional E9-compliant emissions certifications bench already has been installed.	Implemented
A-17	Clarify budget approval procedures for capital investment	Clarify the process for budget approval requests, decision-making processes, and record-keeping processes for capital investment.	Implemented
A-18	Organizational restructuring within the development department	Newly establish a planning group responsible for interpreting regulations and ensuring that development volumes and resources are appropriate, as well as a system of evidence management and transition confirmation meetings, from planning to the completion of development. In addition, newly establish a Development Audit Group.	Implemented

B. Improvement of the corporate culture and environment and reinforcement of company-wide compliance

No.	Item	Purpose and point of recurrence prevention measures	Current status
a. Efforts to reform the corporate culture and environment			
B-1	Revise the Basic Philosophy and the Code of Conduct	Return to the basics, and revise and restructure “Basic Philosophy System,” as well as the Basic Philosophy, the Sustainability Policy, and the Code of Conduct (collectively, the “Hino Way”). Create opportunities for dialogue at each internal level and workplace.	Implemented
B-2	Messages by management	The management, including the President, and the Chief Compliance Officer, regularly send out messages advocating for a compliance-first culture and encouraging employees to speak up.	Being implemented
B-3	Culture change plans	Continuously take measures to nurture compliance awareness at each workplace by issuing periodic bulletins or hanging posters.	Being implemented
b. Reinforcement of compliance structure and activities			
B-4	Establish the Compliance Committee	Establish the Compliance Committee, including outside officers and specialists as members, and hold discussions at the management level once every quarter.	Implemented
B-5	Expand the Compliance Department	Establish the Compliance Promotion Office and upgrade and expand resources, including external human resources with experience and knowledge. Newly appoint/establish a chief engineering compliance officer/group.	Implemented
B-6	Establish, revise and improve compliance rules	Establish and revise related rules in order to strengthen compliance structure and activities.	Being implemented
B-7	Strengthen the internal reporting system	Establish the internal reporting system in order to give employees confidence to speak up.	Being implemented
B-8	Compliance training	Continuously implement training to improve compliance awareness of officers and employees.	Being implemented
B-9	Employee surveys	Periodically implement compliance awareness surveys and utilize them for planning measures. Discuss the results at Compliance Committee meetings.	Being implemented
B-10	Reflect in personnel evaluation	Clarify that compliance is essential to the ideal employee model required by the company.	Being implemented
B-11	Recurrence prevention follow-up system	Establish a cross-departmental task force in order to put recurrence prevention measures into practice, and perform periodic confirmation with	Implemented

		the participation of outside attorneys.	
--	--	---	--

<Reference (iii)> Outline of findings by models

(1) Vehicle diesel engines (on-road engines)

Type	Model/after-treatment system	Emissions volume	Matters related to emissions		Matters related to fuel consumption		Vehicle models equipped with the relevant engine	Release date	Total registered volume (as of the end of July 2022)	Annual registered volume (FY2021)	
			Investigations on certification process by the Committee	In-house technical verification	Investigations on certification process by the Committee	In-house technical verification					
2016 emissions regulations (post- post-new long-term regulations/E9)											
Heavy-duty engine	E13C/Urea-SCR	13L	Issues pointed out	In excess over the regulation value	Issues pointed out* ¹	Divergence from the specification value* ²	Heavy-duty truck “HINO Profia”	May 2017	20,024	4,348	◆
							Heavy-duty truck “HINO S’elega” ^{*3}	July 2017	898	21	◆
	A09C/Urea-SCR	9L	Issues pointed out	No excess over the regulation value	Issues pointed out* ¹	Divergence from the specification value* ²	Heavy-duty truck “HINO Profia”	May 2017	50,596	9,337	◆
							Heavy-duty bus “HINO S’elega” ^{*3}	July 2017	1,438	28	◆
						Articulated bus “HINO Blue Ribbon (hybrid)” ^{*4}	May 2019	14	3	●	
Medium-duty engine	A05C/Urea-SCR	5L	Issues pointed out	No excess over the regulation value	No issues pointed out	No divergence from the specification value	Medium-duty truck “HINO Ranger”	April 2017	36,608	7,267	●
							Heavy-duty bus “HINO S’elega” ^{*3}	July 2017	466	10	●
							Medium-duty bus “HINO Melpha” ^{*5}	July 2017	1,101	161	●
							Heavy-duty route bus “HINO Blue Ribbon (hybrid)” ^{*6}	August 2017	324	53	●
	A05C/HC-SCR	5L	Issues pointed out* ¹	In excess over the regulation value* ²	No issues pointed out	No divergence from the specification value	Medium-duty truck “HINO Ranger”	April 2017	45,895	9,159	◆
J05E/Urea-SCR	5L	Issues pointed out	No excess over the regulation value	No issues pointed out	No divergence from the specification value	Light-duty bus “HINO Poncho”	December 2017	1,101	191	●	
Light-duty engine	N04C/Urea-SCR	4L	Issues pointed out	No excess over the regulation value	Issues pointed out* ¹	Divergence from the specification value* ²	Light-duty bus “HINO Liesse II” ^{*7}	August 2019	2,151	563	◇
	N04C/HC-SCR (2019 model/current model)	4L	No issues pointed out	No excess over the regulation value	No issues pointed out	No divergence from the specification value	Light-duty truck “HINO Dutro” ^{*8}	May 2019	76,694	26,771	
	N04C/HC-SCR (2017 model/out of production)	4L	Issues pointed out	Under verification	No issues pointed out	No divergence from the specification value	Light-duty truck “HINO Dutro” ^{*8}	May 2017	5,250		
2009 emissions regulations (post-new long-term regulations/E8)											
Heavy-duty engine	E13C/Urea-SCR	13L	Issues pointed out	Under verification	Issues pointed out	Divergence from the specification value	Heavy-duty truck “HINO Profia”	July 2010	67,504		
							Heavy-duty bus “HINO S’elega” ^{*3}	July 2010	2,371		
	A09C/Urea-SCR	9L	Issues pointed out	Under verification	Issues pointed out	Divergence from the specification value	Heavy-duty truck “HINO Profia”	September 2010	17,768		
							Heavy-duty bus “HINO S’elega” ^{*3}	October 2011	2,725		
Medium-duty engine	A05C/HC-SCR	5L	Issues pointed out	Under verification	Issues pointed out	No divergence from the specification value	Medium-duty truck “HINO Ranger”	October 2015	122		
							Heavy-duty route bus “HINO Blue Ribbon (hybrid)” ^{*6}	December 2015	104		

Current models

	J08E/HC-SCR	8L	Issues pointed out	Under verification	Issues pointed out	No divergence from the specification value	Medium-duty truck "HINO Ranger"	July 2010	3,805
							Heavy-duty bus "HINO S'elega" ^{*3}	July 2010	688
							Heavy-duty route bus "HINO Blue Ribbon City (hybrid)" ^{*6}	June 2010	289
	J07E/HC-SCR	7L	Issues pointed out	Under verification	Issues pointed out	No divergence from the specification value	Medium-duty truck "HINO Ranger"	July 2010	47,632
							Medium-duty bus "HINO Melpha" ^{*5}	July 2011	1,401
	J05E/HC-SCR	5L	Issues pointed out	Under verification	Issues pointed out	No divergence from the specification value	Medium-duty truck "HINO Ranger"	July 2011	61,811
Light-duty bus "HINO Poncho"							August 2011	1,321	
Light-duty engine	N04C/HC-SCR	4L	Issues pointed out	Under verification	Issues pointed out	No divergence from the specification value	Light-duty truck "HINO Dutro" ^{*8}	July 2011	183,305
							Light-duty bus "HINO Liesse II" ^{*7}	August 2011	10,229

* The vehicle models equipped with A05C (Urea-SCR), which is subject to the post- post-new long-term regulations (E9), and J05E, which is subject to the post-new long-term regulations (E8), were sold in Australia and New Zealand according to Japanese regulation certification, and their shipping has also been suspended.

(2) Industrial diesel engines (off-road engines)

Type	Model/after-treatment system	Emission s volume	Matters related to emissions		Release date	Total shipment volume (as of the end of July 2022)	Annual shipment volume (FY2021)
			Investigations on certification process by the Committee	In-house technical verification			
2014 regulations (Tier 4 regulations)							
Heavy-duty engine	E13C-YS/Urea-SCR	13L	Issues pointed out	In excess over the regulation value	July 2016	762	96 ■
	E13C-YM/Urea-SCR	13L	Issues pointed out	In excess over the regulation value	June 2018	159	111 ■
	P11C-VN/Urea-SCR	11L	Issues pointed out	In excess over the regulation value	October 2015	1,179	148 ■
Medium-duty engine	J08E-VV・WV/Urea-SCR	8L	Issues pointed out	No excess over the regulation value	January 2014	3,743	291 ●
	J08E-YD/Urea-SCR	8L	Issues pointed out	No excess over the regulation value	November 2018	1,198	496 ●
	J05E-UM・UN/Urea-SCR	5L	Issues pointed out	No excess over the regulation value	January 2015	12,958	1,918 ●
	J05E-VB・VA/Urea-SCR	5L	Issues pointed out	No excess over the regulation value	January 2019	2,602	842 ●
2011 regulations (Tier 3.5 regulations)							
Heavy-duty engine	E13C-VV/DPF	13L	Issues pointed out	Under verification	February 2010	1,569	45
	P11C-VC/ DPF	11L	Issues pointed out	Under verification	August 2010	1,138	14
Medium-duty engine	J08E-UV/ DPF	8L	Issues pointed out	Under verification	July 2010	2,103	-
	J05E-TK/ DPF	5L	Issues pointed out	Under verification	June 2012	428	-
	J05E-TJ/ DPF	5L	Issues pointed out	Under verification	February 2012	8,009	-

* As E13C-YM and P11C-VN for overseas markets are the same engine model, their shipping was suspended.

* Among the models subject to Tier 3.5 Regulations, some of E13C-VV, P11C-VC, and J08E-UV continued to be shipped under the minority exception system even after the Tier 4 Regulations came into force; however, as misconduct related to the certification process was identified, their shipping has been suspended at this time.

* The shipment volume includes models for overseas markets..

<Legends>

- : Suspension of shipment at this time (misconduct related to the certification process pointed out; and no non-achievement of performance)
- : Suspension of shipment at this time (misconduct related to the certification process pointed out; and non-achievement of performance)
- ◆: Suspension of shipment on March 4, 2022
- ◇: No new shipment due to model changes

- *1: Announced misconduct identified in the in-house investigation in March 2022
- *2: Announced non-achievement of performance in March 2022
- *3: Mounted also in Isuzu Gala.
- *4: Mounted also in Isuzu Erga Duo.
- *5: Mounted also in Isuzu Gala Mio.
- *6: Mounted also in Isuzu Erga Hybrid.
- *7: Mounted also in Toyota Coaster.
- *8: Mounted also in Toyota Dyna.

End