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April 27, 2018  
Subaru Corporation

## **Investigation Report on Measurement of Fuel Economy and Emissions During Final Vehicle Inspections at Gunma Manufacturing Division**

In connection with the identified nonconforming final vehicle inspections at the Gunma Manufacturing Division's Main Plant and Yajima Plant (the "Nonconforming Final Inspections"), on October 30, 2017, the Ministry of Land, Infrastructure, Transport and Tourism ("MLIT") issued to Subaru Corporation ("Subaru") a business improvement order, which instructed Subaru to undertake an investigation of facts related to nonconforming final vehicle inspections, and to submit a report. The findings of the investigation were submitted to MLIT on December 19, 2017, and publicly disclosed.

In the interviews conducted in the course of the investigation, certain Subaru employees stated that in the course of final vehicle inspections certain data with respect to fuel economy and emissions may have been altered. Subaru reported to MLIT that it had identified these allegations of fuel economy and emissions data manipulation.

On December 22, 2017, MLIT instructed Subaru to investigate the allegations of fuel economy and emissions data manipulation (the "Investigation") and to submit a report on same. On February 1, 2018, MLIT further instructed Subaru to investigate and report on the matter in a comprehensive and detailed way to include the facts related to emissions data as per the Safety Standards.

Considering the technical nature of the sampling fuel economy and emissions data Subaru assumed primary responsibility for the Investigation. The Investigation was conducted by an internal investigation team led by the Chair of the Compliance Committee at the time of the commencement of the Investigation and employees from the Manufacturing Division and Quality Assurance Division with extensive technical knowledge and experience. Staff from the Internal Audit Department, Legal Department, and External Relations Department also supported the Investigation.

Subaru also retained Nagashima Ohno & Tsunematsu, a law firm, which conducted the aforementioned investigation of the Nonconforming Final Inspections and is familiar with Subaru's final inspection processes, to assist in the Investigation from an objective, impartial standpoint.

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The Investigation identified the following facts:

(1) In sampling fuel economy and emissions data as part of the final vehicle inspections at the Gunma Manufacturing Division's Main Plant and Yajima Plant, certain measurements and data were inappropriately altered, and values differing from those that should have been recorded as actual measurement results were recorded in monthly reports.

Based on the review of the available data, from at least December 2012 and November 2017 fuel economy and emissions data had been manipulated as follows:

- No. of vehicles subject to sampling of fuel economy and emissions: 6,939
- No. of vehicles for which data were found in measurement equipment, etc.: 6,530
- No. of vehicles for which data were inappropriately altered: 903

Data from prior to November 2012 was not found in measurement equipment or elsewhere, and it could not be checked based on specific data whether measurement values had been inappropriately altered in that period. Based on the employees' statements, there is a high probability that such manipulation of fuel economy and emissions data commenced around 2002, however, this could not be confirmed.

(2) Alterations were decided by factory-floor inspectors and foremen (who manage a group consisting of several inspectors), and alteration methods were passed from senior to junior inspectors in the relevant workplaces. Although no instructions were issued by, and no reports by foremen were made to, Group Chiefs (who manage the Emissions Sampling Unit consisting of several groups), some Group Chiefs had been engaged in sampling of fuel economy and emissions and they are considered to have been aware of the possibility of alterations. Managers at or above the Section Chief level and executive managers were not aware of alterations.

(3) Presumed motivations for making alterations can be broadly divided into the following three categories:

- (a) Subaru's internal rules stipulate that, as a means of quality control for both fuel economy and emissions, average values for a certain number of vehicles or for a certain period of time, rather than results for each vehicle, must meet internal quality control standards. However, inspectors engaging in sampling of fuel economy and emissions were instructed by their seniors that, if results for each vehicle did not meet such standards, measurement values should be altered to those that meet such standards, and, according to such instructions, the inspectors altered measurement values.
- (b) Even if there were no problems in comparison with the internal quality control

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standards, inspectors altered measurement values with the intention of reducing variance in measurement values in order to avoid questions from the Group Chiefs and the Section Chief on such variance. It should be noted that alterations were made not only to make results better, but also to make them worse.

(c) Although the relevant laws and regulations stipulate that, in certain limited cases, measurement values could be altered in order to adjust errors caused by measurement equipment, inspectors misunderstand such adjustment method because of deficient internal rules and inadequate training. Inspectors altered measurement values by adjustment methods not stipulated in the relevant laws and regulations, without understanding that their methods were inappropriate.

(4) Subaru regards the alteration of emissions and fuel economy data found by the Investigation as inappropriate conduct and an extremely serious compliance problem. However, in the course of the Investigation, Subaru utilized data found in measurement equipment, etc. and objectively confirmed that the original measurement values were in certain range of values. Subaru used the worst value in such range to recalculate values necessary for quality control purposes, and re-verify whether such values meet the internal quality control standards. This resulted in all 903 vehicles for which data had been altered meeting quality control standards. Since Subaru's quality control standards are stricter than those stipulated in the Safety Standards, there were no data alterations that would require recalls or present other quality issues.

The causes and background of such nonconforming data alteration have many points in common with the Nonconforming Final Inspections, for example:

- Lack of awareness of public interest in, and importance of, final vehicle inspection work, etc. throughout the company from the management team down
- Lack of normative consciousness
- Inadequate training, insufficient knowledge and deficient internal rules
- Closed nature of departments responsible for the work
- Inadequate communication and indifference to the factory workplace
- Weakness of audit function
- Establishment of systems enabling alteration of measurement values

As described above, the Investigation found that, in sampling of fuel economy and emissions as part of final vehicle inspections, measurement values were inappropriately altered, and values differing from those that should have been recorded as actual measurement results were recorded in monthly reports.

Subaru takes very seriously and profoundly regrets that this issue was taking place in addition to the Nonconforming Final Inspections disclosed last year and these problems undermined the trust of its customers and other stakeholders in our final vehicle inspections,

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product performance data and catalog values released by the company, and thus in Subaru itself.

The problem stems from causes similar to those behind the Nonconforming Final Inspections, namely lack of awareness of public interest in, and importance of, final vehicle inspection work, lack of normative consciousness leading to inspection results being altered to their own advantage, and inadequate internal communication, and Subaru needs to reform its corporate culture from the ground up.

Subaru sincerely regrets the facts uncovered by the Investigation and has openly disclosed the details. In addition to taking measures to prevent recurrence of the Nonconforming Final Inspections, Subaru is determined to implement measures to prevent recurrence of this problem, to reform outdated aspects of its corporate culture such as authoritarianism, reliance on precedents, and formalism, and to become a genuine “upright company,” each employee of which thinking, “what is the right thing?” and implementing in the right way.

Subaru’s management and employees will work collectively to restore lost trust and ensure that such circumstances do not recur.

We would like to reiterate our deepest apologies for the significant trouble and inconvenience caused to our customers, partners, and all other stakeholders.

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