

## A Validation Experiment to Improve Truck Operation Rate by Predicting Tire Troubles ~ Collaborating with Sumitomo Rubber to Monitor Tire Pressure and Temperature ~

LOGISTEED, Ltd. is pleased to announce that the commencement of a validation experiment aimed at improving truck operation rates through tire pressure and temperature management in collaboration with Sumitomo Rubber Industries, Ltd. (Sumitomo Rubber) starting from July 2024.

Through the development of the digital platform for transportation “SSCV® (Smart & Safety Connected Vehicle),” our company aims to support the resolution of various issues faced by transportation operators, such as ensuring transportation safety, compliance with laws and regulations, improving operational efficiency, and achieving sustainable management, thereby realizing sustainable logistics. This time, we have introduced Sumitomo Rubber’s “Tire Pressure and Temperature Management Solutions Service,” which monitors tire pressure and temperature and notifies of any anomaly, into the vehicles owned by our group, and have started a validation experiment aimed at improving truck operation rates.

### 1. Background and Purpose

From April 2024, the revised Labor Standards Act has also applied to the transportation industry, and restrictions on overtime work for truck drivers was tightened. Due to the resulting shortage of trucks, there are concerns about social impacts such as a decline in transportation capacity. In this context, various measures are required for each transportation company, such as improving transportation efficiency and ensuring driver safety. Preventive measures to avoid operational stoppages due to vehicle breakdowns are also one of them. The purpose of the study is to improve vehicle operating rates by predicting tire problems through the “Tire Pressure and Temperature Management Solutions Service” provided by Sumitomo Rubber, and to verify the efficiency of inspection work, improvement of fuel efficiency, and tire life.

### 2. About the “Tire Pressure and Temperature Management Solutions Service”



The Tire Pressure Monitoring System (TPMS) installed on trucks monitors tire pressure and temperature. When an anomaly occurs in the tires during driving, the driver is notified, and the operation manager is also notified by email through the cloud from the onboard communication device. It is also possible to detect slow punctures\*<sup>1</sup>, which are difficult to find with general tire pressure inspections, at an early stage. This reduces vehicle downtime due to tire troubles and ensures the safety of drivers and cargo. Furthermore, it contributes to improving fuel efficiency through proper air pressure management and streamlining pre-departure inspections using this system.

\*<sup>1</sup> Slow puncture: A condition where air gradually leaks due to very small holes or cracks, air leaks between the rim and tire bead, or leaks from the air valve.

# News Release

### 3. Details of the Validation Experiment

TPMS is installed on LOGISTEED Group's trucks to collect various data.

(1) Data items to be collected:	GPS data, acceleration, load weight, tire wear
(2) Duration:	Approximately one year
(3) Main verification items:	a) Reduction in pre-departure inspection time with TPMS installation b) Frequency of puncture occurrences c) Verification of slow puncture detection d) Comparison of fuel efficiency/tire life with air pressure management e) Comparison of fuel efficiency/tire life by load weight f) Comparison of fuel efficiency/tire life before and after TPMS installation

#### About Sumitomo Rubber Industries, Ltd.

Sumitomo Rubber is a comprehensive rubber product manufacturer that globally develops tire, sports, and industrial product businesses. In the tire business, it develops passenger car, truck, bus, and industrial vehicle tires with DUNLOP and FALKEN as the main brands. To achieve high safety and environmental performance compatible with CASE\*<sup>2</sup> / MaaS\*<sup>3</sup>, it is also working on providing new solution services using various data obtained through digital tools.

URL: <https://www.srigroup.co.jp/english/index.html>

\*2 CASE: Next-generation vehicle technologies such as Connected, Autonomous, Shared, and Electric.

\*3 MaaS: Mobility as a Service. A next-generation mobility service that allows the seamless use of different transportation modes with IT.

**(Reference) Sumitomo Rubber Industries, Ltd. Press Release:** Sumitomo Rubber and LOGISTEED start a Joint Proof-of-Concept to Predict Tire Failures by Monitoring Tire Pressure and Temperature, Aiming to Improve Truck Operation Rates

URL: [https://www.srigroup.co.jp/newsrelease/2024/sri/2024\\_052.html](https://www.srigroup.co.jp/newsrelease/2024/sri/2024_052.html) (Japanese language)

Under the corporate philosophy, "to deliver high-quality services that will help make the world a better place for people and nature for generations to come," the LOGISTEED Group strives to achieve sustainable growth by solving issues and creating values through various collaborative innovation.

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