

Isuzu Develops Vehicle Diagnostic System for Heavy-Duty Trucks-"Mimamori-Kun"

Isuzu Motors Limited has developed "Mimamori-Kun," a vehicle diagnostic system that analyzes and examines various vehicle operations data from heavy-duty trucks, such as fuel consumption, and uses that information to provide logistics companies with ideas for more efficient ways to operate their vehicles.

This system is compatible with 2000 and later year models of the Isuzu GIGA heavy-duty truck series, and is expected to go on sale in January 2002.

Truck transportation in Japan has been afflicted by difficulties resulting from the long-term economic recession, as the need to decrease transportation costs has become more urgent. Other important problems in the industry involve reducing fuel consumption and facilitating safe operations.

In light of these conditions, Isuzu has developed Mimamori-Kun, a vehicle diagnostic system that extracts and analyzes data collected from each vehicle to give fleet managers and drivers driving tips and fuel-saving hints based on actual driving conditions.

With this system, a "Mimamori Unit" installed in the vehicle collects various kinds of driving information from the computer that controls the engine. This information is then sent periodically to a "Mimamori Center" set up by Isuzu to analyze and examine that data. The results are provided to the user in the form of a "Mimamori Report" which offers advice on vehicle management.

The introduction of Mimamori-Kun offers the following advantages:

1. Advantages for fuel saving

- It is possible to offer effective fuel-saving driving hints to individual drivers, because driving patterns, which determine fuel consumption, can be identified for each vehicle,
- Evaluation standards can be set when providing instructions to drivers, because fuel-saving driving methods can be quantified and specifically analyzed,

2. Advantages for safer drive

- Logistics company can identify areas that need improvement in order to promote safer driving, and can encourage cautious driving techniques that protect loads being hauled, because the report shows specific problems, such as drastic changes in speed or the frequency of sudden braking,

3. Advantages for maintenance cost saving

- By implementing the fuel-saving driving techniques suggested by the report, drivers can reduce the wear and tear on the vehicle, helping to extend the life of the vehicle and reduce repair costs.

The system is named "Mimamori-Kun" because its computer protects ("mimamoru" in Japanese) the vehicle's daily operations.

* How the Mimamori System Works

Our newly developed Mimamori Unit is installed in a vehicle, where it collects information from the computer that controls the engine, transmission, and brakes. Isuzu analyzes and examines this driving information, and provides a report on its findings to the user.

* Driving Information Collected by the Mimamori Unit

(1) Speed by road type

Records the average speed, maximum speed, and average fuel consumption during city driving and highway driving.

(2) Changes in number of times the throttle opens and closes

Records the average number of times the throttle opens and closes during city driving and highway driving.

(3) Brake deceleration G

Records the brake deceleration G

(4) Idling time

Records idling time and idling fuel consumption.

(5) Frequency of gear use

Records the frequency of the use of each gear during city driving and highway driving.

(6) Number of engine revolutions when shifting up

Records the average number of engine revolutions when shifting up.

This driving information is analyzed by Isuzu and provided to the user. The data is also comprehensively evaluated to provide suggestions for improving fuel consumption and promoting safer driving.

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