

Monitoring operating conditions of natural gas engines in Russia

Challenge

The BiotechnologiesTyumen company is engaged in disinfection, pest and rat control of buildings and industrial equipment. Making the environment cleaner and safer for customers, the company also contributed to ecological improvement by equipping its fleet with natural gas engines. Methane is the most environmentally friendly fuel compared to other fuel types and reduces the related costs by 36%.

However, natural gas engines are more sensitive to overheating, and their improper operation can result in damage and fuel overconsumption. Therefore, the client needed to control the engines' temperature range.

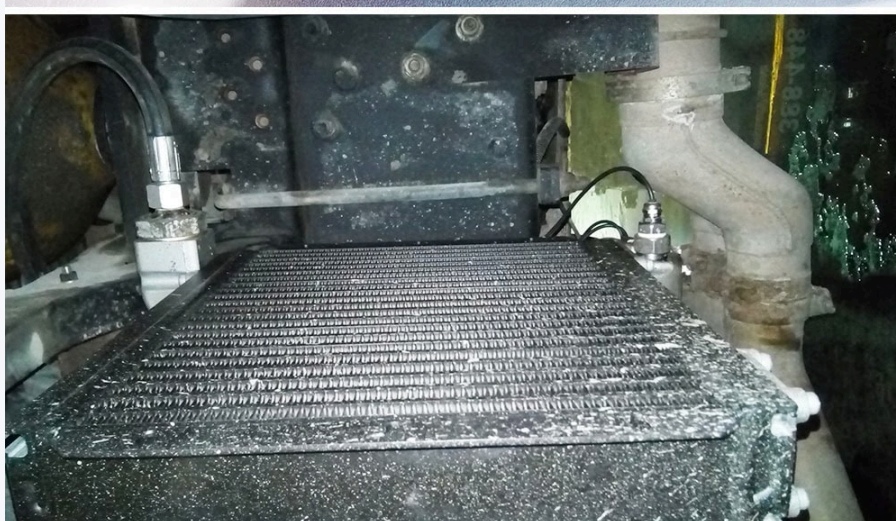
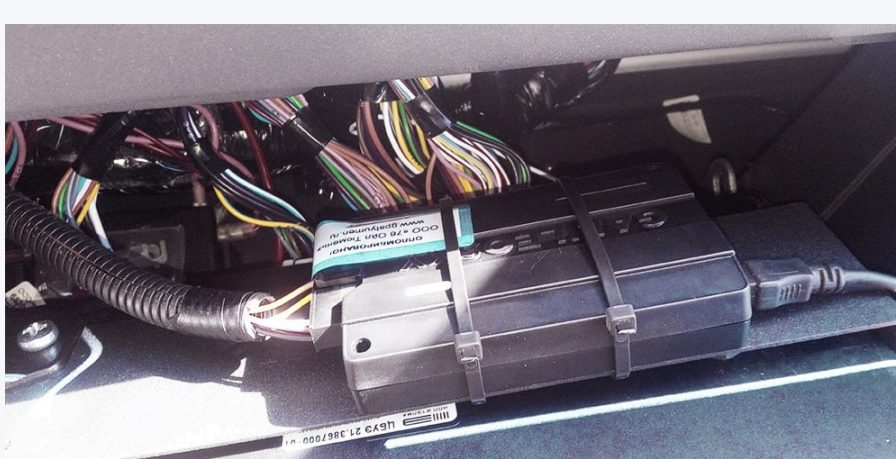
Solution

The Wialon partner, [76 Oil Tyumen](#), offered the customer a comprehensive solution that involves using hardware for reading the standard temperature and engine speed parameters via the CAN bus. Further, these readings are displayed and analyzed in [Wialon Hosting](#).

The partner created a Viber chat for prompt customer service where clients can ask their questions and get answers within 24 hours.

Project stages

- **Selection, installation, and connection of sensors:** Experts from 76 Oil Tyumen connected [SiLINES_DS18B20](#) sensors to the [Galileosky 7x](#) terminal.



- **Data collection from the CAN bus of specific cars:** upon the hardware connection, the system began to receive information on engine speed and temperature, as well as the amount of the remaining natural gas in the cylinder.
- **Software configuration:** in the monitoring system, the partner's specialists have configured the online displaying of parameters, as well as reports with temperature, engine rotation rate, and vehicle speed dependency diagrams. Dispatchers monitor the vehicle, including engine performance, in real time.

Plans

Even though the project has already been implemented, 76 Oil Tyumen has plans to extend the solution functions:

- install a LED indicator or a sound signal notifying drivers of the temperature range violation;
- set up notifications and reports on violations;
- provide the ability to read standard parameters of oil pressure and temperature from the dashboard (not available in the CAN bus) and then show them in Wialon.

Results

The solution offered by the Wialon partner allowed the client to prevent possible financial losses associated with potential damage to natural gas engines due to operating conditions violations.

Online control

Employees of the client company can quickly respond to emerging engine issues and prevent breakdowns.

Visual diagrams

Facilitate the perception of analytical data and, consequently, decision-making.


Driver control

Knowing that critical indicators are being monitored online, drivers have become more careful with vehicles.

Savings

The customer saves on using natural gas as fuel and successfully avoids additional engine repairs and overconsumption costs.

Company profile


 **IoT project of the year nomination:** Home and office services

Industry: General fleets

Solutions

 Wialon

Hardware

 Galileosky 7x

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