



+Preventative +Predictive +Productive

## Castrol and Intangles. A new partnership.

Castrol® has partnered with Intangles™, a predictive maintenance and telematics company, to offer real-time analytics and predictive vehicle health data with service recommendations. Combined with Castrol's premium products and the predictive ability of Labcheck®, an industry-leading fluid analysis service, we can help fleets to improve reliability and lower costs.

Unexpected breakdowns cost fleets both time and money. To combat these breakdowns, Intangles' proprietary solution leverages the power of AI to optimize equipment performance and reduce operating costs.

At the core of the platform is Intangles' industry-leading Digital Twin technology, which recreates your fleet vehicles in a virtual environment and can uncover issues in vehicles days in advance of costly breakdowns.

Intangles' technology enables your maintenance team to see how your assets are performing in real-time from any internet-connected device (desktop, laptop, tablet, or mobile phone) from anywhere in the world.

This solution works with all major OEMs and can operate alongside your current telematics provider. Installation is not complicated; a small-profile device plugs into a vehicle's OBD port. Intangles experts are available to provide installation support at your sites.

Let Castrol® Fleet Health™ (powered by Intangles and Castrol Labcheck) help you to reduce unscheduled downtime and lower your fleet maintenance costs.

Please contact your local Castrol representative for more information.



# + Case Study: Municipal Waste Collection Fleet – Refuse



An AI-powered, predictive-analytics, fleet-intelligence system from Intangles **reduced costs and increased fuel efficiency for a large, regional municipal waste collection fleet** in the eastern U.S.

## + Situation

- The fleet manager operates a fleet of over 1,400 vehicles traveling almost one million miles a month, including **90 refuse trucks manufactured by three major OEMs**.
- The fleet manager wanted to **predict potential issues with his vehicles well in advance of a breakdown**, so his team would be able to take preventative-maintenance measures.
- The fleet manager's objectives included **reducing turnaround time on repairs, decreasing come backs and completing repairs in one day**.
- In addition, the fleet manager was seeking to **increase the fuel efficiency and availability** of the municipality's vehicles.

## + Solution

The fleet manager agreed to **install the Intangles fleet maintenance system** in his CNG refuse vehicles as part of a pilot program.

## + Success

- **Intangles detected engine faults in 30% of the trucks** during the three-month pilot and **alerted the fleet manager in real time**. Intangles identified the faults **before** the vehicles' DTC codes were triggered.
- Predictive alerts **saved the municipality an estimated \$4,200 in repairs, parts and towing costs** during the three-month pilot. **Vehicles were kept on the road and out of the shop**.
- **Intangles increased the fuel economy of pilot vehicles** by a combined 5.6% by identifying wasteful idling and engine issues.
- During the pilot, **major DTC fault code alerts were detected in real time**, including an accelerator pedal sensor malfunction, engine coolant temperature issues and engine misfires involving multiple cylinders.
- **On average, the municipality saved over \$500 per vehicle, per month** during the three-month pilot. As an added benefit, the municipality believes it will no longer need to keep five vehicles in reserve and is considering selling three trucks due to the **increase in asset availability**.

## + Result

After a successful pilot, the municipality has installed the Intangles fleet maintenance system in the remaining refuse trucks in its fleet. It is also installing the Intangles system in other fleet vehicles (beyond refuse) operated by the municipality.

**Confidentiality statement:** Data obtained in any pilot will be kept confidential unless sharing of information is approved by fleet owner/manager.



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