# Extended Fault Monitoring

## Reduce Repair Costs and Gain Drive Time through Proactive Vehicle Monitoring

Transportation is changing rapidly. Operational costs continue to rise, while margins stay thin and competition increases. To succeed, fleets must do more with less while reducing operating expenses. Nearly 10% of average fleet operating expenses are attributed to maintenance and repairs.

According to ATRI research, the cost tends to increase for medium-sized to large fleets:



Figure 7: Respondent Repair and Maintenance Cost per Mile by Fleet Size
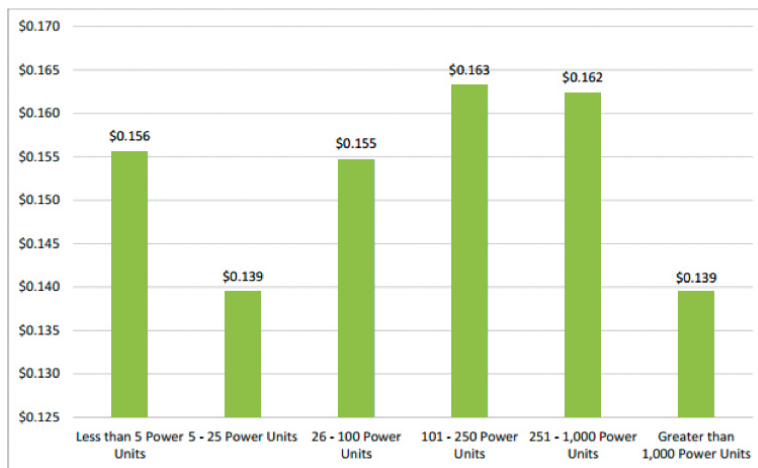
To really put the data in perspective, it's critical to look at how the cost-per-mile trends over time:
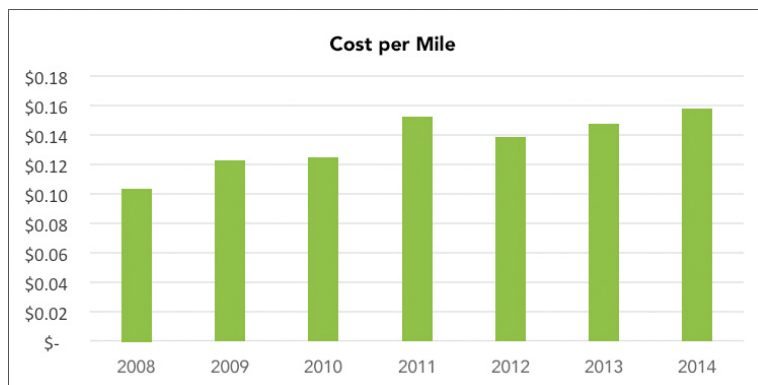
In a span of seven years, maintenance and repair costs rose a jaw-dropping 53%. How would an additional 53% affect your bottom line? Most fleets simply cannot raise rates to match this type of increase, meaning the hit must be taken to profit margins.

There's one other important underlying story in the data — why do expenses flat-line between 251 – 1000 units, and then decrease by 14% in fleets with over 1000 units? There's certainly a number of reasons, but one important factor is increased technology adoption. Larger fleets have tended to lead the way in implementing the newest technology to cut costs and boost productivity.

The hottest new technology transforming how fleets approach maintenance and repair costs is Extended Fault Monitoring (EFM). This technology takes traditional diagnostic capabilities to new heights — enabling small fleets to compete with the bigger players, and large fleets stay a step ahead of their core competitors.

# What is Extended Fault Monitoring?

Many fleets already know of, and are taking advantage of, the myriad benefits of fault monitoring. This is especially true in today's environment, when there has been so much focus on ELD technology. In addition to the safety benefits ELDs have to offer, fleets are leveraging this technology to increase productivity, lower costs, and provide tangible value to growth.

In order to fully understand Extended Fault Monitoring, one must first understand the value, and limitations, of standard diagnostics, otherwise known as fault monitoring. Fault monitoring provides engine fault code data for the most common faults. These faults involve those that can put a truck off the road immediately or cause significant, immediate need for costly repairs. By finding these faults early on, fleets can save money and increase productivity by preventing expensive breakdowns. This allows fleets to proactively manage maintenance, reducing expensive on-road and out-of-network repairs, and keeping vehicles running and generating revenue.

In addition to monitoring faults, fault monitoring offers intuitive notification tools for both the driver and fleet manager. For the fleet manager, fault monitoring offers an intuitive, easy-to-use dashboard view that allows fleets to have near real-time access to faults as they happen. In addition, fleets can see faults by vehicle, and set up alert parameters to generate custom reports based on their individual fleet requirements. For the driver, fault activity is reported on the telematics unit, allowing drivers to know the proper action to take in the event of a fault.

Extended Fault Monitoring takes the concept of fault monitoring, and expands upon it to offer fleets a much deeper level of insight into potential issues that may arise.

There are three key components to this:

**1** *More Robust Fault Detection*

While fault monitoring is beneficial in finding the basic critical issues that can immediately take a vehicle off the road, there's thousands of additional data points constantly being generated by your trucks. The critical issues of tomorrow are hidden in this data today. The ability to pinpoint the issues likely to become critical in the future allows for a proactive approach to maintenance and repairs that will slash cost and keep trucks generating revenue.

Imagine your maintenance team having access to detailed reports not only listing the issues of today, but the weaknesses in the vehicle that will become issues down the road. What could they accomplish with this type of data? Empowering them with Extended Fault Monitoring will help productivity rise and costs disappear.

## 2 OEM and Tier 1 Supplier Integration

Having the proper insights around what is wrong with a vehicle is the first part of the value proposition of Extended Fault Monitoring. However, in order to maximize the full value of this powerful application, fleets must understand and be able to interpret exactly what the faults mean. By enabling partnerships with OEMs and Tier 1 Suppliers, fleets are able to receive expert guidance directly from the manufacturer, displaying the formerly cryptic codes in clear English, and recommending the best course of action to avoid serious issues down the road.

Omnitracs Extended Fault application currently integrates with two of the most recognizable names in the transportation industry: *Navistar* and *Cummins.*

### Navistar OnCommand™ Connection

There are two major issues with having large amounts of fault data. The first is knowing how to interpret the data. The other, because of this large amount of data from various providers, is needing to connect to multiple remote diagnostic systems. This can be difficult from an integration, training,and cost perspective. OnCommand™ Connection allows fleets to connect their systems to a single portal, thus eliminating the need for multiple remote diagnostic systems. Navistar also provides action plans for more than 18,000 engine and fault codes, allowing fleets to gain access to Navistar's vast knowledge base and removing any ambiguity around what exactly to do if a fault does occur.



**HOW ONCOMMAND CONNECTION WORKS:**

OnCommand Connection uses real-time data to make fleet management more efficient by doing the following:

1. TRANSMITS TRUCK DATA (FAULT, LOCATION, SPEED, ETC.)
2. DIAGNOSES FAULTS AND IDENTIFIES SEVERITY
3. INFORMS FLEET MANAGERS
4. INCREASES UPTIME AND LOWERS REPAIR COSTS

### Cummins Connected Diagnostics

Connected Diagnostics identifies and prioritizes fault codes from Cummins engines. Connected Diagnostics provides a diagnosis of the fault, and provides a clear recommendation around next steps, including the need for immediate service or how to continue to operate the vehicle.
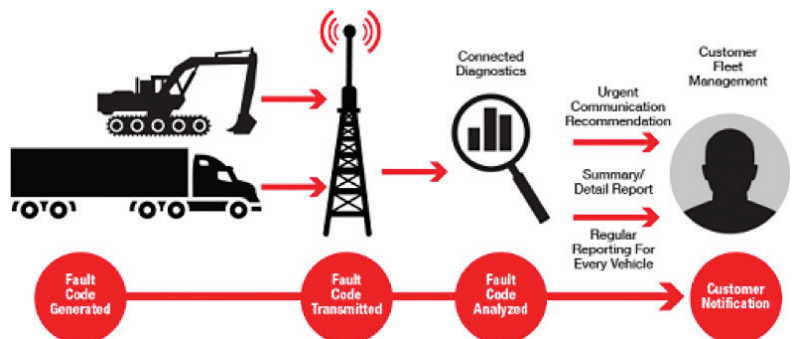


## 3 Scalability

For a fault monitoring application to provide maximum value, the ability to scale is key. As OEMs and Tier 1 Suppliers add the ability to analyze fault monitoring data, it is important that your ELD provider offer the ability to add additional layers of functionality, whether it be integration with vehicle manufacturers, engine manufacturers, transmission manufacturers, or others.

This becomes even more important as vehicles continually become more advanced and emissions standards get tighter every few years. Having partnerships with key OEM partners that can provide the latest insights and guidance will increasingly be more essential over time.

## Did you know?

On average, each truck is likely to break down at least once per year. The minimum cost to check out a non-functioning vehicle is $250. The cost to tow a vehicle is at least $400. This does not take into account any additional repairs that could cost thousands of dollars. For small fleets, having trucks not on the road can be detrimental to their operations. For large fleets, huge repair costs multiplied by many vehicles can destroy already thin profits.

Even if Extended Fault Monitoring were to prevent a single breakdown per truck per year, the financial benefits far outweigh the cost of the service.

## Benefits for Big Fleets...and Smaller Ones, Too

Whether you have a large or small fleet, Extended Fault Monitoring provides many benefits. In the past, fleets would need to have specialized knowledge of what each fault meant. Without this insight, the data provided would be useless. Through the power of Extended Fault Monitoring, combined with the partnerships with OEM providers and Tier 1 Suppliers, fleets of all sizes, including the smaller ones are able to get access to large amounts of critical insights previously unavailable to them. In addition, lowering maintenance costs and increasing productivity can make huge impacts across large operations freeing up capital to invest in growth.

## Did you know?

Engine diagnostic codes were originally developed to help vehicle manufacturers adhere to emissions regulations in the U.S. If a problem were to occur, the system would record a Diagnostic Trouble Code (DTC) and notify the driver of a problem via the check engine light. Over time, it was determined that additional codes could be reported for issues beyond emissions, and this added functionality is what became known as fault monitoring.

# In Conclusion

This is an exciting time for telematics and the transportation industry. Rapid innovation, best-in-class technology acquisitions, and ever-increasing device-to-device connection has changed the scope of what's possible in fleet performance. The best fleets are quickly realizing that technology adoption is one of the most powerful ways to gain the edge in an industry where changing regulations and skyrocketing costs make it increasingly difficult to run a successful operation.

Whether you are currently using fault monitoring or not, Extended Fault Monitoring represents a powerful way for fleets to receive expert guidance and insights to lower operating costs, reduce downtime due to untimely repairs, and let drivers spend more time driving.

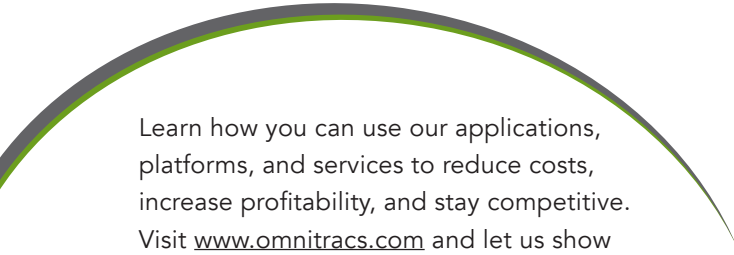## Why choose Omnitracs?

- **Award-winning, 24/7/365 support teams** that understand your business.
- **ELD Mandate thought leadership** — we've helped shape the legislation and we share important resources at www.eldfacts.com
- **Proven solutions for every stage of your growth** — fleets of all sizes, including eight of the ten largest for-hire fleets and the five largest private fleets in North America use Omnitracs.
- **Robust integrations** — and the technical expertise to maximize your tech stack.
- **Intuitive solutions and a focus on the end-user experience** — making drivers' lives easier, building a positive image for your company, and retaining your workforce.

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## About Omnitracs, LLC

Omnitracs, LLC is a global pioneer of fleet management, routing and predictive analytics solutions for private and for-hire fleets. Omnitracs' nearly 1,000 employees deliver software-as-a-service-based solutions to help more than 50,000 private and for-hire fleet customers manage nearly 1,500,000 mobile assets in more than 70 countries. The company pioneered the use of commercial vehicle telematics over 25 years ago and serves today as a powerhouse of innovative, intuitive technologies.  Omnitracs transforms the transportation industry through technology and insight, featuring best-in-class solutions for compliance, safety and security, productivity, telematics and tracking, transportation management (TMS), planning and delivery, data and analytics, and professional services.

Learn how you can use our applications, platforms, and services to reduce costs, increase profitability, and stay competitive. Visit www.omnitracs.com and let us show you how you can save time and money.

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