

THE PROCESS OF TURNING MAINTENANCE DATA INTO ACTIONABLE INFORMATION

Maintenance providers can help fleets gather crucial maintenance data and integrate it into the entire data stream to create intelligence that will improve operations.







3 Intro

2

- Technician as Data Gatherer 4
- **5** Spotlight: The Creation of the Data Stream
- Telematics 6
- 6 Spotlight: Telematics as a Maintenance Tool
- Integrating the Data Stream 7
 - 1. Setting up Preventive Maintenance (PM) Schedules
 - 2. Monitoring Workforce Quality
 - 3. Identifying the Best Prices, Quality Suppliers, and Warranties
- **Spotlight: Predictive Maintenance** 8
- Improving Overall Operations
- **10** About Amerit Fleet Solutions



www.ameritfleetsolutions.com

There's little argument that in today's fleet operations, data has become king. It is the key element to improving every aspect of fleet operations, including monitoring and measuring efficiency, safety, and maintenance.

Every bit of fleet data is important, but capturing fleet maintenance data is particularly valuable, because it touches so many aspects of a fleet's operations. Maintenance data is used to develop cost and warranty controls, manage life cycles, improve preventive maintenance, maximize vehicle uptime, and control repair quality, among many others.

While fleet maintenance data is captured in a number of ways, including through automated systems such as telematics, the most useful and powerful maintenance data is actually gathered by the technicians working on the vehicles. This necessitates fleets, or their maintenance providers, to employ technicians that not only know how to gather the data, but more importantly, understand why this is now a crucial part of their work and can do so accurately.

Ultimately, data needs to be transformed into actionable intelligence through a process of integrating the data coming in from all sources. The days of siloed operational, safety, or maintenance data are gone.







TECHNICIAN AS DATA GATHERER

Unlike other areas of the fleet operation, the collection of maintenance data is fundamentally a human-centered process. There is no rule who should be capturing maintenance data. Some fleets rely on administrative or other fleet personnel to input maintenance data into a database or fleet management system (FMS). However, the best and most effective method of capturing data is having a technician gather the data in real time while the maintenance work is being done.

Because of their expertise, technicians are the best personnel to entrust with the task of entering this data. They are able to answer the 3 Cs: complaint, cause, and correction for each failure in the subsequent repair. This technician-generated data creates the foundation of the maintenance data stream, and allows fleets to manage uptime and route schedules, effectively measure total cost of ownership (TCO), and consequently be better able to cycle vehicles at the correct time.

For example, in some cases, fleets are able to monitor the repair process in real time and are notified when the vehicle is ready. This allows fleets to better plan routes, and if it's a complex repair, determine whether a rental or other option should be used to manage delivery and service schedules.

Today's technician is more than just an expert in repairs. He or she must also be computer literate and, more fundamentally, understand why it is important to capture data for the fleet client. From a fleet operations perspective, accuracy and thoroughness in data gathering



is just as important as repairing the vehicle correctly the first time. This parallel level of mechanical and data gathering expertise are qualities that a maintenance provider such as Amerit, cultivates in all of the technicians that it provides its fleet clients.

SPOTLIGHT: THE CREATION OF THE DATA STREAM

From a data perspective, technicians are crucial in creating the stream of information fleets rely on to measure the effectiveness of its operations and the life cycle of its vehicles. Ideally, technicians are capturing data operating in the fleet's fleet management system (FMS).

Among the data and pertinent information in the work order they are capturing:

- Repair reasons
- Task codes
- OBD Trouble codes
- Component codes
- Mileage
- Vehicle number
- Customer number
- Shop number
- Technician ID
- Time of day

Even if they operate in the same industry, every fleet is different and the data that needs to be captured is dependent on the specific needs of the fleet. For example, Amerit is able to operate in any way a fleet needs to capture data, either through the fleet's own FMS, Amerit's FMS, or uploading files to a database or other data management system.



TELEMATICS

For many fleets, telematics has become the bedrock of its data gathering processes. But for maintenance operations, telematics is more limited.

From a maintenance perspective, telematics can't provide the kind of details that a technician working on the vehicle can give through firsthand observation in the context of his or her experience. For instance telematics is limited in its ability to determine:

- Preventive vs. corrective maintenance
- Driver-induced vs. accident damage
- Some information about warrantable failures

Telematics is useful in reporting up-front driver interaction with the vehicle, vehicle operation, and vehicle engine codes, but it takes the technician as data gatherer to interpret the cause of and solutions for maintenance damage.

SPOTLIGHT: TELEMATICS AS A MAINTENANCE TOOL

As a maintenance support tool, telematics can give insight into the vehicle operation — which can be helpful in pinpointing when an event happened, for example an abrupt stop, but not the details or consequences of that event.

For deeper insight into the maintenance consequences of an event — it's still up to the technician as data gatherer to evaluate the vehicle in the shop to determine what really happened.

While not an end all for maintenance data, telematics data can complement and support the diagnosis by helping to determine the cause of the damage. For example, that abrupt stop captured by the telematics device will indicate an event occurred, but not the specifics. It will take the technician to evaluate the vehicle and determine whether a repair was the result of normal wear damage or a result of something the driver did.

INTEGRATING THE DATA STREAM

Data may be king, but its sheer volume can be overwhelming to fleets. This is why it is crucial fleets integrate data into useful, actionable intelligence.

Maintenance providers such as Amerit can help fleets manage and integrate maintenance data with other data sources to improve maintenance operations:

- 1. Setting up Preventive Maintenance (PM) Schedules: Combining maintenance data captured by a technician with operational data (such as mileage from a fuel card or telematics) can be used to set up regular preventive maintenance schedules. Maintenance data can be used to monitor demand repairs — seeing how closely these repairs are done after a regular PM; giving a clear picture about maintenance quality.
- 2. Monitoring Workforce Quality: Systems can be used to track technician's productivity and efficiencies, e.g., are repairs taking too long, are there too many callbacks?
- 3. Identifying the Best Prices, Quality Suppliers, and Warranties: Integrating maintenance data with an FMS' parts module can help monitor parts failure frequency and inform parts purchasing decisions as it relates to quality helping procurement identify the best prices and quality suppliers. An FMS also helps track vehicle manufacturer and aftermarket warranties, providing data that monitors that the claim is being captured.





Combining maintenance data captured by a technician with operational data (such as mileage from a fuel card or telematics) can be used to set up regular preventive maintenance schedules

Beyond improving operational efficiency with PMs, etc., integrating maintenance data with other operational data from telematics, fuel cards, etc., helps fleets determine the cost of their vehicles by mile and by year.

Having maintenance data integrated with this other fleet data will give a better view of the fleet's big picture — helping fleet personnel and company leadership get a better look at both uptime and the overall life cycle of the fleet vehicles.

Keep in mind the big picture will change depending on the needs of an individual stakeholder:

- A company COO may request data about the age of the fleet or average mileage to help make life cycle decisions for the fleet.
- A fleet dispatcher needs maintenance data to determine the number of vehicles that are available on a given day.

Ultimately the importance of individual data streams is different for each member of the organization.

SPOTLIGHT: PREDICTIVE MAINTENANCE

Predictive maintenance is expected to be the next step in the way fleets and their maintenance providers will be able to turn the data being gathered by technicians and telematics into actionable, useful fleet intelligence.

Being able to fully integrate repair and telematics data filtered through algorithms will allow fleets to develop a predictive model to identify when a vehicle needs a repair before a component failure.

This ability will give fleets significant operational benefits, allowing them to develop better, more comprehensive schedules to address maintenance issues to improve:

- Uptime
- Budgeting
- Life cycle planning
- Overall operational efficiency

While there are few fleets using true predictive maintenance today, it is an area of growth and focus for the industry.

IMPROVING OVERALL **OPERATIONS**

Data in and of itself is not useful, and can bury fleet managers in laborious analysis unless the provider supplies the analytic tools and expertise to help them.

Amerit provides dashboards that allow its fleet clients to monitor, track, and make decisions about their fleet. The dashboards show data detail by location, by vehicle, by region for a large number of client-determined maintenance key performance indicators (KPIs), including cost per vehicle, PM currency, and actual labor hours.

These dashboards are available in real time through a customer portal, and are used by fleet clients and their account managers to monitor Amerit's performance, spot trends, and create action plans for further reductions in cost and improvements in operations.



www.ameritfleetsolutions.com



ABOUT AMERIT FLEET SOLUTIONS

With over 120,000 vehicles and assets under contract in more than 700 locations nationwide, Amerit Fleet Solutions is one of the largest providers of dedicated fleet maintenance and management services in the U.S. today. No other fleet maintenance company can compare to our depth of knowledge and expertise in maintaining and managing the broad spectrum of vehicle and asset types, including alternative fuel vehicles; managing a diverse on-site workforce; creating customer-driven service programs and leveraging best practices in fleet services and processes to improve performance, profitability and uptime.



www.ameritfleetsolutions.com