Fleet maintenance best practices across industries.

Fleet maintenance helps keep vehicles in good condition to maximize their reliability, safety, and lifespan. With maintenance best practices, fleet operators can reduce downtime, minimize repair costs, and ensure road safety. Effective fleet maintenance also supports compliance, improves driver retention, and can have significant financial benefits over the long term.

This article outlines best practices in general fleet maintenance before taking a closer look at how to best maintain and service fleets in specific industries.

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Develop a fleet maintenance schedule

Keeping a regular maintenance schedule can prevent unexpected vehicle breakdowns and avoid major repairs that lead to costly downtime. When you develop a schedule for maintenance, you can also identify potential safety hazards in advance, such as worn-out brakes or tires, and prevent accidents on the road.

**Maintenance scheduling** also helps extend the lifespan of your vehicles and can save your business money in the long run by getting the most out of your asset investment. You’ll also see sustainability gains as a properly maintained fleet is **more fuel-efficient** and reliable, which can lead to significant cost savings for the business.

**Simplify fleet maintenance with Motive.**

Create a maintenance schedule

Creating a maintenance schedule for fleets requires careful planning and ongoing monitoring to ensure that vehicles are well-maintained and running smoothly. Maintenance scheduling involves several steps:

* Evaluate fleet vehicles to determine their individual maintenance needs. Consider factors such as age, mileage, usage patterns, and manufacturer recommendations.
* Identify the maintenance tasks that each vehicle requires, including preventive maintenance, inspections, and repairs. Consider tasks such as oil changes, brake inspections, tire rotations, and fluid checks.
* Develop a maintenance schedule that outlines when each vehicle requires maintenance tasks. This can be based on a combination of time, mileage, or usage metrics. Using fleet management software or other technology tools can help you manage the maintenance schedule and track performance metrics. This provides valuable insights into fleet performance to help identify areas for improvement.
* Determine who will be responsible for carrying out the maintenance tasks, whether it’s an in-house maintenance team or an outsourced provider. Assign specific tasks and timelines to ensure accountability and track progress.
* Monitor the effectiveness of the maintenance schedule and make adjustments as needed. This may involve tweaking the schedule to better align with actual usage patterns or modifying maintenance tasks based on performance data.

Scheduling factors to consider

When building out your fleet maintenance schedule, there are several factors to consider. These include:

* **Vehicle age.** Older vehicles generally require more frequent maintenance as wear and tear can take a toll on various parts and components.
* **Vehicle usage.** Vehicles that are driven more frequently, carry heavier loads, or operate in harsher conditions may require more frequent maintenance.
* **Manufacturer recommendations.** These account for the vehicle’s specific design and intended usage.
* **Regulatory requirements.** Depending on the industry and location, there may be**regulatory requirements** for vehicle maintenance.
* **Seasonal changes.** Weather and temperature impact the maintenance needs of vehicles.
* **Performance metrics**. Use performance data to inform maintenance scheduling decisions. Data on vehicle breakdowns, fuel consumption, and maintenance costs can provide insights into when and how often maintenance tasks should be performed.
* **Budget.** Consider the available budget and prioritize essential maintenance tasks and ensure that the budget can accommodate the necessary repairs and replacements.

Conduct regular inspections

Fleets should schedule regular inspections to ensure that their vehicles are operating safely, reliably, and efficiently. These inspections can help identify issues before they become more serious and costly.

Inspections help ensure regulatory compliance as well. It’s important for fleet operators to know the industry- and jurisdiction-specific safety regulations that require regular inspections and maintenance.

Regular inspections optimize vehicle performance and improve fuel efficiency, which can save you money and **reduce environmental impact**. At the same time, you can cut your liability risks. By prioritizing safety through regular inspections and maintenance, fleets can reduce the risk of accidents and associated liability claims.

Types of inspections to conduct

Fleets should conduct various types of inspections to keep vehicles in optimal condition. Vehicle type, the industry, and regulatory requirements will play a role in your inspection schedule, but typically fleet operators consider the following:

* Drivers should conduct **pre-trip inspections** before operating the vehicle each day. A **pre-trip inspection** typically involves checking basic safety features such as brakes, lights, tires, and fluid levels.
* **Regular maintenance inspections** should be conducted on a schedule, which may be based on mileage, time, or usage. These inspections typically involve checking various systems such as brakes, suspension, steering, tires, and fluids.
* Depending on the industry and location, fleets may be subject to **Department of Transportation (DOT) inspections**which typically involve a more comprehensive inspection of the vehicle, including the engine, transmission, and exhaust systems. In some areas, fleets may also be required to undergo an **annual inspection** to ensure regulatory compliance.
* If a vehicle is involved in an accident, conduct a **post-accident inspection** to assess the damage and identify any issues that may have contributed to the accident.
* Fleets may need to conduct **specialized inspections** as well. For example, a fleet that operates **hazardous materials** vehicles may need to conduct specialized inspections to ensure that the vehicles are properly equipped and maintained

Frequency of inspections

Prioritize regular inspections to ensure fleet vehicles are in optimal working condition. Operators should consult regulatory requirements, manufacturer recommendations, and industry best practices to determine the appropriate frequency of inspections for their specific needs.

You’ll want to track your inspections with **driver vehicle inspection records (DVIRs)**. Whether you complete a DVIR on paper or electronically, **electronic DVIRs (eDVIRs)** make the process more efficient. Especially if you’re using an **electronic logging device (ELD)**with vehicle inspection functionalities.

Keep maintenance records on fleet vehicles

Fleet maintenance records are essential for the effective management of a fleet. Your records provide a comprehensive history of vehicle maintenance and repairs, which can be used to track maintenance costs, identify trends, and make informed decisions about future maintenance needs.

Further, keeping accurate maintenance records can help ensure **compliance with regulatory requirements**. Many fleets must meet specific requirements for maintaining maintenance records. Failure to comply can result in penalties and fines.

Your maintenance records can also help support warranty claims, and maintain the resale value of the vehicle. They could prove useful as well in the event of an accident. Having a comprehensive maintenance history available can demonstrate that the fleet took reasonable steps to maintain the vehicle and ensure its safety.

Types of records to keep

Fleets have many types of maintenance records to track for effective management of their vehicles. By prioritizing record-keeping and maintaining accurate and up-to-date records, fleets can improve compliance, reduce costs, and mitigate liability risks.

Common types of maintenance records operators retain include:

* Vehicle information. Basic information about the vehicle, such as the make, model, and VIN number can be used to identify the vehicle and ensure maintenance records are associated with the correct vehicle.
* Maintenance and repair history. A comprehensive record of all maintenance and repairs performed on the vehicle includes the date, type of service, parts used, and cost of the service.
* Preventive maintenance schedules. This records preventive services such as oil changes, tire rotations, and**brake inspections** and the mileage or time interval for each service, and the date and cost of each service performed.
* Inspection reports. Retain reports from any inspections performed on the vehicle, such as DOT inspections, annual inspections, and pre-trip inspections. These reports should include any defects or violations found during the inspection and the actions taken to correct them.
* Warranty claims. If you submit a warranty claim for the vehicle, keep a record including the date of the claim, the type of claim, and any documentation required to support the claim.
* Fuel and usage records. Tracking and recording **fuel purchases**and vehicle usage, such as mileage or hours of operation, can help fleet managers gauge fuel efficiency and identify opportunities to reduce fuel costs.

Implement preventive maintenance

**Preventive maintenance** refers to the proactive, periodic, and routine upkeep of vehicles, equipment, and other business assets. Fleet managers perform preventive maintenance while their vehicles and assets still function well. The purpose is to keep assets in optimal condition, maximize availability, and prevent sudden, expensive malfunctions and subsequent downtimes.

Running an effective preventive maintenance program in **fleet management** offers several benefits including improved vehicle reliability for maximized availability. This supports improved fleet productivity.

Further, you can uncover issues before they become serious concerns requiring larger-scale repairs. This can lengthen vehicle life span and lower your total cost of ownership, which directly impacts a business’s bottom line.

Plus, your drivers can feel more confident on the road. With an ongoing truck driver shortage, anything you can do to help **retention and recruitment** has a real, positive impact.

Typical preventive maintenance activities

Preventive maintenance activities will vary for every vehicle classification. Some may require more regular fluid or parts replacements while others may need more rigorous compliance inspections. Still, some common examples of preventive maintenance include:

* Oil changes
* Tire rotations
* Brake inspections
* Electrical system component checks
* Cooling and fuel system inspections
* Filling, changing, and repairing fluids
* Transmission and engine mount assessments
* Suspension and steering system evaluations

Use fleet maintenance software

Fleet maintenance software streamlines all these best practices making it simpler for you to develop your schedules, track inspections, keep accurate records, and plan preventive maintenance.

Providing fleet maintenance managers with software to automate manual processes (such as scheduling maintenance, tracking fuel usage, and managing driver logs) can reduce administrative overhead and increase operational efficiency. With the technology enhancing insights into fuel consumption and vehicle downtime, optimizing maintenance schedules to take a proactive approach gets easier too.

No longer having to rely entirely on manual processes, written driver logs, and files crammed with paper documentation, you gain real-time visibility into vehicle status and usage. This clear understanding of fleet operations supports informed decisions, ensures regulatory compliance, and improves overall fleet performance.

Integrations for fleet maintenance software

Fleet operators can get even more value from their fleet maintenance software by integrating it with a fleet management solution. Look for an integrated solution that empowers users with features such as:

* **Real-time GPS tracking** with location history to help fleet managers **analyze routes**, cut paperwork and administrative burden, and increase efficiency.
* **Geofencing** to inform you whenever a driver enters or exits a specific location. These virtual boundary notifications can also help to minimize detention time by identifying where drivers are being held for extended periods.
* Driver risk scoring and benchmarking to help you easily identify at-risk drivers, better target **driver coaching**programs, and track improvements among drivers over time.

Industry-specific fleet maintenance practices

Fleet maintenance means different things across various industries. The above best practices still apply. Yet, successful fleet managers recognize the individual needs of their business area when working to maintain and service their physical assets.

Oil and Gas

The **oil and gas industry** presents unique challenges due to the harsh environment, rugged terrain, and heavy equipment used. Yet fleet maintenance is particularly important to smooth and safe operations.

Regularly inspect vehicles, **heavy equipment**, and specialized tools used in drilling, extraction, and transportation. Schedule checks for tire wear, brake performance, and engine oil levels, among other things. Your preventive maintenance activities should include routine fluid changes, filter replacements, and component lubrication to prevent equipment breakdowns. These can help you to minimize equipment downtime and avoid costly repairs.

It’s also important to maintain safety equipment such as fire extinguishers, first aid kits, and personal protective equipment. You’ll want to ensure fleet vehicles are equipped with spill-prevention and response equipment as well.

Fleet management best practices can also help ensure compliance with the numerous safety and environmental regulations for the oil and gas industry, such as complying with **hours-of-service (HOS)** rules and ensuring proper disposal of hazardous materials.

Construction

Maintaining vehicles and equipment is critical for successful **construction project** completion. With your assets operating in challenging environments, maintenance also plays a role in project costs and site safety.

Regular inspections of heavy equipment, such as excavators and bulldozers, and trucks can help you detect and prevent equipment failure. After all, downtime due to equipment failure can cause delays, missed deadlines, and cost overruns.

Incorporating preventive maintenance into project planning can reduce equipment downtime and **improve efficiency**. This fleet maintenance best practice can also help you to remain under warranty protection for your costly construction equipment.

Training employees on safe equipment operation and maintenance can further prevent accidents and improve worker safety. This can help you meet compliance requirements and avoid penalties or fines.

Trucking

The **trucking industry** relies heavily on vehicle reliability and safety. Regular inspections and preventive maintenance can keep trucks in good condition, extend their lifespan, and minimize the risk of breakdowns. If a fleet of vehicles isn’t maintained well, the trucking or logistics company is more likely to:

* Consume more fuel
* See an increase in accidents
* Struggle to meet service level agreements
* Run afoul of regulatory requirements
* Pay higher insurance rates
* Have difficulty recruiting and retaining drivers

In logistics, maintenance records must be kept for each vehicle to ensure compliance with safety rules and warranty requirements. Keeping up with changes in regulations is crucial.

The incorporation of technology, such as remote monitoring and predictive maintenance, can help. Telematics, GPS, and electronic logging devices can help trucking companies monitor vehicle usage to reduce downtime while also gaining real-time insights into driver performance.

Delivery

Success in the **delivery industry** depends on an ability to provide timely and efficient deliveries to maintain customer satisfaction. Effective fleet maintenance can also help a delivery business cut its environmental impact by ensuring vehicles operate at peak efficacy.

Schedule regular inspections of vehicles and equipment, such as delivery vans and hand trucks, to ensure they are in good condition and safe to use. Vehicles should also undergo preventive maintenance (e.g., oil changes, filter replacements, and brake adjustments) to keep them in top condition and avoid costly repairs and downtime.

Integrating fleet maintenance with vehicle tracking and driver training can also benefit the business. The use of GPS tracking and telematics can help optimize routes and improve fuel efficiency. Meanwhile, drivers need to know how to properly maintain and inspect vehicles and identify signs of vehicle trouble.

Explore Motive’s preventive fleet maintenance solution

Implementing fleet maintenance best practices can ensure fleet vehicles are in good working condition and minimize downtime and costly repairs. This includes:

* Developing a maintenance schedule
* Keeping maintenance records
* Embracing preventive maintenance
* Using fleet maintenance software .

Planning your fleet maintenance around specific industry needs will further enhance your business success.

Motive provides an **integrated fleet management platform** to help you prioritize preventive maintenance, improve driver education, track vehicles, simplify compliance, reduce environmental impact, and more.