



Fleet Maintenance Starts with a Robust Plan

Organizations that operate fleet vehicles (owned, rented or leased) are responsible for ensuring their vehicles are safe to operate on the road. Regardless of the size of the operation and the type of vehicles they operate, it is crucial to establish a maintenance program that is part of the overall fleet risk management strategy.

In general, vehicle maintenance encompasses a variety of aspects, including reliability, efficiency, resale value, cost avoidance (such as downtime), driver satisfaction, and regulatory compliance. Inadequate vehicle maintenance leads to increased maintenance expenses, equipment breakdowns, and a higher likelihood of accidents.

This article discusses the importance of fleet maintenance and its best practices.

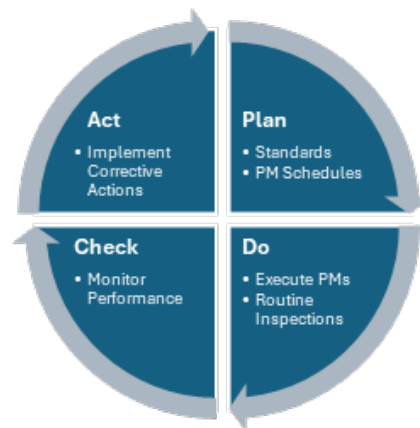
What is Fleet Maintenance?

Fleet maintenance is a systematic and proactive process designed to ensure that all fleet vehicles operate safely, efficiently and comply with legal and regulatory standards. Implementing a program that regularly inspects equipment and reports defects will promptly identify essential repairs.

This includes:

- Regular inspections
- Preventive maintenance
- Recordkeeping

Cycle of Fleet Maintenance



This process involves more than managing vehicle breakdowns. The focus should be on anticipating issues before they arise, minimizing downtime, and extending the lifespan of fleet assets. Fleet maintenance is a crucial component of a comprehensive fleet risk management strategy. Effective fleet maintenance contributes to lowering operational costs, improving fuel efficiency, and enhancing driver safety.

A strong record-keeping system can help fleet supervisors and provide visibility to:

- common maintenance defects
- problems of abuse or overloading
- vehicle lifecycle
- expenditure allocation by department, location and drivers

Plan

A robust fleet maintenance plan starts with creating a policy and a standard that should include all types of vehicles the fleet operates, including those owned, rented, or leased. This program will act as an organizational standard and does not need to be complicated – it can be as simple as a written or digital schedule that outlines when each vehicle will be required to be inspected. The interval can be defined based on time (such as every 3 months or 90 days), mileage driven (such as every 8,000 km), or engine hours (such as every 600 hours), etc.

Fleets operating **commercial vehicles** in Ontario are required to follow the standards set out under the Ontario Highway Traffic Act, i.e. O. Reg 199/07. Every province has adopted a similar standard from the **CCMTA Commercial Vehicle Safety National Standard 11**.

Operators Responsibility

✓ Under this regulation, section 107(1) requires the operator must create and maintain a system to regularly inspect and maintain all commercial motor vehicles and trailers under their control. They also need to keep records of all the maintenance.

✓ In the maintenance standard, considerations should be given to mentioning the different preventative maintenance services that need to be performed on fleet vehicles, for example, Defined Interval Preventative Service, also referred to as Preventative Maintenance Vehicle Inspection (PMVI), Tire Rotations, Winter Maintenance and Annual Safety Checks. These preventative maintenance services should be standardized with defined intervals based on mileage driven or engine hours.

✓ Operators must store any required records or documents at their main business location or another designated terminal or business address.

Driver's Responsibility

✓ Drivers must perform daily inspections before they start driving the fleet vehicle, complete the Driver Vehicle Inspection Report (DVIR), and notify of any defects.

✓ For any major defects, vehicles should be put out of service immediately.

SAMPLE - SCHEDULED VEHICLE MAINTENANCE

Any component requiring repair and/or maintenance will be addressed promptly as needed. Records of the maintenance activities will be stored in the respective vehicle file. The municipality will perform routine and ongoing maintenance inspections and repairs according to the following intervals:

Maintenance Inspections & Repairs	Vehicle Type	Inspection Interval (KM, TIME OR HOURS)	Comments
Daily Trip Inspections	Light Utility Vehicles, Trucks, Trailers	Every 24 Hours (Start & end of each Shift)	Complete the written Daily Trip Inspection form before and after all shifts. Report all defects and document all repairs.
Scheduled Maintenance Inspections	Light Utility Vehicles, Trucks, Trailers	The organization defines service intervals and may consider manufacturer specifications.	
Annual Safety Inspection	Trucks/Trailers – registered gross weight or manufacturer's gross vehicle weight rating of more than 4,500 kg.	Annually	Must be completed by a certified mechanic, with a copy of the certification kept in the vehicle and the decal affixed to it.

Do

Different Types of Inspections

1. Pre-Trip Inspections

This is an essential step for drivers to ensure their vehicle is safe to operate before hitting the road. The fleet driver should be able to conduct a thorough inspection and fill out the report accurately. Although preventing all breakdowns is not feasible, daily checks before starting a shift will reduce the frequency and ensure compliance with regulations.

2. Post-Trip Inspections

The driver will conduct this after they end their shift. This helps identify any issues that occurred during the trip. Early detection of problems ensures readiness for the next trip and maintains vehicle health.

3. Monthly Inspections

This is a comprehensive check-up to maintain long-term vehicle health. The management staff can perform it to ensure the drivers do their part. This process prevents major repairs, extends vehicle lifespan, and ensures optimal performance. To demonstrate due diligence and commitment to safety, regular inspections should include tire tread depth and brake measurement.

4. Annual Inspections

A commercial fleet operator in Canada is required to ensure compliance with the national standards for vehicle inspections under the Periodic Motor Vehicle Inspection (PMVI) program. All Canadian jurisdictions have agreed, through a Memorandum of Understanding (MOU), to implement compulsory periodic inspection programs aligned with a uniform PMVI standard.

The PMVI standard applies to most commercial vehicles as defined by the National Safety Code (NSC), including:

- Trucks, truck-tractors, semi-trailers, trailers, and combinations with a registered gross vehicle weight over 4,500 kg (approx. 10,000 lbs)
- Buses designed to carry more than 10 passengers, including the driver (excluding personal-use vehicles)
- Inspection Requirements You Must Follow:
- Trucks and trailers must undergo inspection at least once per year
- Buses must be inspected at least twice per year
- Inspections must be performed by authorized inspectors at government-run or approved private inspection facilities

5. Random Inspections

These are unscheduled checks to catch unexpected issues. This adds an extra layer of safety, catches issues early, and ensures continuous readiness. Conducting random checks on drivers before they leave the premises is beneficial to ensure thorough equipment inspections. Additionally, placing tags on equipment for drivers to locate can help verify their inspections. If drivers fail to find these tags, it brings an opportunity to retrain those drivers.

Check

Monitoring

Fleets should have a mechanism to set alerts for all scheduled preventative maintenance and file all the work orders in the maintenance files. All vehicle maintenance records must be either stored on paper or in a digital file. Best practice is to have separate maintenance files for each fleet vehicle.

Vehicle files must contain all work orders for maintenance, ongoing repairs and inspections (annual and daily).

The following documents must be retained in the maintenance files:

- Vehicle maintenance records
- Inspection records
- Commercial Vehicle Inspection Report (CVIR)

CVIR inspections are those issued by the Ministry of Transportation (MTO)/police officer when inspecting any of the fleet vehicles. This includes roadside inspections and those where the officers come to your facility and do random inspections in your yard. If the officer identifies any defects in any of the vehicles and records them on the CVIR, the operator's responsibility is to have the vehicle repaired first and then file all the necessary maintenance paperwork in the vehicle's maintenance file.

Each CVIR should be stored in its own dedicated file. In Ontario, if any CVIRs are missing, fleet operators can request copies by submitting the Commercial Vehicle Inspection Report Application. This form can be completed and submitted electronically through the MTO. Once received, the MTO will reissue the requested inspection reports.

Record Retention

As a fleet operator, you must be able to produce the last 6 months of the driver's daily inspections. Driver Vehicle

Inspection Reports with no defects recorded must be kept for 6 months, and reports with defects become a maintenance report and must be retained for 2 years. According to the legislation, the maintenance records that include all the invoices and work orders should be retained for the past 24 months for all active fleet vehicles.

Ministry of Transportation - Facility Audit for Commercial Vehicle Operators

If fleet performance is unsatisfactory and the overall violation rate on the carrier profile exceeds the acceptable percentage, the MTO could issue a notice to conduct a facility audit. The enforcement officer would then take a sample of vehicles from the entire fleet and review all the maintenance records, including work orders, invoices and daily inspection reports for those vehicles. The officer would score each vehicle and assign points according to the defined rating chart.

- **40% – Detection, reporting and repair:** This includes tracking the communication stream between the operator and the driver. When a driver identifies a defect on an inspection report, the employer is responsible for addressing the issue. This includes ensuring the defect is repaired, documenting the corrective action on the inspection report, and attaching any related work orders or invoices. The complete documentation should then be filed in the vehicle's maintenance records for compliance and tracking purposes.
- **30% – Evaluating the operator's preventative maintenance program:** The auditor will review your fleet's maintenance standards and schedules, cross-referencing them with maintenance invoices to verify that your operations align with your documented procedures.
- **10% – Compliance with annual inspection requirements:** The auditor will confirm that all vehicles undergo annual inspections, that valid inspection certificates are issued, and that the appropriate decals are affixed to each vehicle as proof of compliance.
- **20% – Location and retention of records:** This reflects your ability to provide complete maintenance documentation as warranted during the audit, including all required invoices and daily inspection reports.

Act

If the fleet team discovers any performance challenges or discrepancies during the monitoring process, those should be addressed, and appropriate actions should be taken. These actions should include, but not be limited to, the following:

- Updating Policy and Procedures
 - Based on the performance data, fleet operators should adjust and revise their policies and processes.
- Updating Communication Plan
 - Ensure you have a strong communication strategy with key elements, such as:
 - Goals and objectives
 - Target audience
 - Frequency and flow of information
 - Feedback process
- Creating and Updating Standardized Documentation
 - Develop or revise templates and standardized forms to ensure consistency.
- Additional Training (Staff and Drivers)
 - Based on the identified gaps, organizations should provide targeted training, which may include, but is not limited to:
 - Policy refresher training
 - Regulatory updates bulletin
 - Recurring training sessions

Maintaining a safe, reliable and cost-effective fleet requires a structured and proactive approach. Implementing a comprehensive fleet maintenance program that includes regular inspections, timely repairs, and strong record keeping can reduce risks, improve the utilization of the vehicle, extend the life cycle and ensure compliance with regulatory standards.

Sources

<https://www.ccmta.ca/web/default/files/PDF/CCMTA-NSC-Standard-11---January-2020---English.pdf>

<https://www.ontario.ca/page/commercial-vehicle-operators-registration-cvor#section-5>

<https://files.ontario.ca/mto-commercial-vehicle-operators-safety-manual-en-2022-09-28.pdf>