THE ULTIMATE GUIDE

11 SECTIONS OF A COMMERCIAL VEHICLE SAFETY (CVIP)



If you're running a business dependent on trucks, trailers, or buses – you should already be aware of the CVIP.

The Commercial Vehicle Inspection Program is the mandatory safety inspection program required by the government to operate any truck, tractor, trailer or combination of over 4,500 kg (sometimes higher depending on the province) or a bus with a seating capacity of more than 10, including the driver, that is meant for transporting passengers.

It's essentially a Safety for a large commercial vehicle, and it's incredibly important for any businesses using such vehicles to make sure they're on top of any and all things that could possibly make your vehicles ineligible for one.

If you don't have it, your vehicle isn't cleared to drive – plain and simple. Apart from that, regular inspections and exceeding the minimum regulations keep your drivers safe, other drivers safe, and you free from related liability.

In this article, we're going to cover the following

- 1. How often you need to get your vehicles inspected by an authorized inspector
- 2. What they're looking for
- 3. How often you (or your service provider) should be inspecting your own vehicles

The biggest problem with the CVIP is that the regulations and requirements you need to meet changes from province to province, and even more so from mechanic to mechanic. No two pair of eyes are the same, the forms in every province technicians fill out are completely different, (links to example forms below) and even though someone in Alberta cleared your vehicle for travel, you could open up shop in Quebec and have to end up spending thousands of dollars making adjustments you didn't realize you had to. To summarize – consistency is the main problem, and whichever province your truck, trailer, or buses home base location ends up being is the set of provincial guidelines you have to follow.

British Columbia CVIP Checklist
 Alberta CVIP Checklist
 Saskatchewan CVIP Checklist
 Manitoba CVIP Checklist

At Maxim, we run 15 service shops that conduct over 1,000 CVIPs annually on trucks, trailers, and buses across Canada. We've created this first article in a series of articles to come to better explain this crucial component to the commercial vehicle business so you can save time, money, and fend off an unbelievable amount of stress.



How often you need to get your vehicles inspected by an authorized inspector

The Preventative Maintenance Vehicle Inspection (PMVI), formally known as the Periodic Commercial Motor Vehicle Inspection, is a mandatory vehicle inspection conducted by an authorized inspector your trucks and trailers must go through annually, and your buses semi-annually. There is slight variation in this from province-to-province, so here is a quick table showing you the exact timeframe you have to get a PMVI done. These inspections must be conducted in a government establishment or at an inspection facility approved by a government agency.

The objective of the PMVI standard is to reduce collisions due to mechanical defects on vehicles, improve highway safety, and ensure the consistency of periodic inspections across Canada.



Inspection Intervals by Province, Weight, and Months

Jurisdiction	Weight Threshold (kg)	Truck (months)	Trailer (months)	Bus (months)
British Columbia	8,201	6	6 or 12	6
Alberta	11,794	12	12	6
Saskatchewan	11,794	6 or 12	12	6 or 12
Manitoba, Quebec, New Brunswick, Nova Scotia, PEI, Newfoundland and Labrador, Northwest Territories, Ontario	4,500	12	12	6



What commercial vehicle inspectors are looking for

Each vehicle will go through a variety of test and checks in the following categories: Power Train, Suspension, Brakes, Steering, Instruments and Auxiliary Equipment, Lamps, Electrical System, Body Chassis, Tire and Wheels, Coupling Devices, and Fuel Systems.

We'll be quickly going over the main things they're looking at in each category and you can find the specific minimum requirements you have to meet to make sure your vehicle will pass their inspection here.

1. Power Train (Page 58-69)

- Accelerator Pedal/Throttle Actuator
- Exhaust System
- Emission Control Systems and Devices
- Drive Shaft
- Clutch and Clutch Pedal
- Engine/Transmission Mount
- Engine Shut Down
- Engine Start Safety Feature
- Gear Position Indicator
- Engine or Accessory Drive Belt
- Hybrid Electric Vehicle & Electric Vehicle
 Power Train System
- Gasoline or Diesel Fuel System
- Pressurized or Liquefied Fuel System (LPG, CNG and LNG)

2. Suspension (Page 70-75)

- Suspension and Frame Attachments
- Axle Attaching and Tracking Components
- Axle & Axle Assembly
- Spring and Spring Attachment
- Air Suspension
- Self-Steer and Controlled-Steer Axle
- Shock Absorber/Strut Assembly

3. Hydraulic, Electric and/or Air Brakes (Page 76-122)

- 3H Hydraulic Brakes
- Hydraulic System Components
- Brake Pedal/Actuator

- Vacuum Assist (Boost) System of Truck or Bus
- Hydraulic Assist (Boost System on Truck or Bus
- Air Assist (Boost System on Truck or Bus
- Air-Over-Hydraulic Brake System
- Surge Brake Controller on Trailer
- Vacuum System on Trailer
- Air-Boosted Trailer Brake System
- Electric Brake System on Trailer
- Brake System Indicator Lamps
- Drum Brake System Components
- Disc Brake System Components
- Mechanical Parking Brake
- Spring-Applied Air-Released (SAAR) Parking Brake
- Spring-Applied Hydraulic-Release (SAHR) Parking Brake
- Anti-Lock Brake System (ABS) on Truck or Bus
- Stability Control System
- Brake Performance
- 3A Air Brakes
- Air Compressor
- Air Supply System
- Air System Leakage on a Trailer
- Air Tank
- Air Tank Check Valves
- Brake Pedal/Actuator
- Treadle Valve and Trailer Hand Valve

- Brake Valves and Controls
- Proportioning, Inversion or Modulating
 Valve
- Towing Vehicle (Tractor) Protection System
- Parking Brake and Emergency Application on Truck or Bus
- Parking Brake and Emergency Application on Trailer
- Air System Components
- Brake Chamber
- Drum Brake System Components
- S-Cam Drum Brake System
- Brake Shoes Travel (Wedge Brakes)
- Disc Brake System Components
- Anti-Lock Brake System (ABS) on Truck and Bus
- Anti-Lock Brake System (ABS) on Trailer
- Stability Control System on Truck or Bus
- Stability Control System (Electronic Stability Control [ESC] or Roll Stability System [RSS] on Trailer)
- Brake Performance

4. Steering (Page 123-129)

- Steering Control and Linkage
- Power Steering System (Hydraulic and Electric)
- Steering Operation (Active Steer Axle)
- Kingpin
- Self-Steer and Controlled-Steer Axle



5. Instruments and Auxiliary Equipment (Page 130-135)

- Fire Extinguisher
- Hazard Warning Kit
- Horn
- Instruments and Gauges on a Bus
- Speedometer
- Odometer
- Windshield Wiper/Washer
- Heater and Windshield Defroster
- Fuel-burning Auxiliary Heater
- Chain/'headache' Rack
- Auxiliary Controls and Devices
- Auxiliary Drive Controls
- On-board Auxiliary Equipment on a Bus
- First Aid Kit on a Bus
- Accessibility Features and Equipment on a Bus

6. Lamps (Page 136-150)

- Required Lamps
- Reflex Reflector
- Retro-Reflective Marking
- Instrument Panel Lamp
- Headlamp Aim
- Interior Lamps on a Bus
- School Bus Additional Lamps

7. Electrical System (Page 151-153)

- Wiring
- Battery
- Trailer Cord (output to a towed vehicle)
- Alternator Output on a School Bus

8. Body and Chassis (Page 154-182)

- Hood or Engine Enclosure
- Tilt Cab
- Air-Suspended Cab
- Cab Passenger-vehicle Body

- Cargo Body
- Frame, Rails and Mounts
- Unitized Body Elements
- Cab or Cargo Door
- Cargo Tank or Vessel
- Body, Device or Equipment Attached or Mounted to the Vehicle
- Refrigeration/Heater Unit Fuel System (Reefer or Auxiliary Power Unit [APU])
- Bumper
- Windshield
- Side Windows
- Rear Window
- Interior Sun Visor
- Exterior Windshield Sun Visor
- Rear-view Mirror
- Seat
- Seat Belt/Occupant Restraint
- Fender/Mud Flap
- Landing Gear on Trailer
- Sliding Axle Assembly (Sliding Bogie) on Trailer
- Aerodynamic Device and Attachment
- Rear Impact Guard (RIG) on Trailer
- Floor Pan/Baggage Floor/Step Well on a Bus
- Interior Body and Fixtures on a Bus
- Service and Exit Door on a Bus
- Emergency Exit (Door, Window and Roof Hatch) on a bus
- Passenger Compartment Window on a Bus (Except Emergency Exit Window)
- School Bus Exterior Mirror (Except Standard Left and Right Side Mirror)
- Passenger Seat on a Bus
- School Bus Body Exterior
- Auxiliary Compartment on a Bus

9. Tire and Wheels (Page 183-190)

- Tire Tread Depth
- Tire Tread Condition
- Tire Sidewall and Manufacturer Marking
- Tire Inflation Pressure
- Wheel Hub
- Wheel Bearing
- Wheel/Rim (Applies to all wheel types)
- Multi-Piece Wheel/Rim
- Spoke Wheel/Demountable Rim System
- Disc Wheel System
- Wheel Fasteners (Nuts, Bolts, and Studs)

10. Coupling Devices (Page 191-198)

- Hitch Assembly, Structure and Attaching Components
- Secondary Attachment (Safety Chain or Cable)
- Pintle Hook, Pin Hitch, or Couple Hitch
- Ball Type Hitch
- Roll-Coupling Hitch
- Automated Coupling Device
- Fifth Wheel Coupler
- Oscillating Fifth Wheel Coupler
- Ball-Bearing Type Turntable on Trailer

11. Fuel System (Page 199-209)

- Liquefied Petroleum Gas (LPG or Propane) Fuel System
- Compressed Natural Gas (CNG) Fuel System
- Liquefied Natural Gas (LNG) Fuel Systems

One Important thing to keep in mind: When reviewing the PDF we linked to above, make sure you check out "Hazardous Conditions" section of each tested part, system, etc. If you're in violation of any of these conditions, your vehicle can't be operated until the condition is fixed.





At Maxim, we give our fleet a full inspection every 90 days

How often you should be inspecting your own vehicles

At Maxim, we give our fleet a full inspection every 90 days. It helps keep your vehicles in top shape and takes away all the stress of a mandatory PMVI. Other service providers may have different service intervals based upon specific components, model, operation conditions, etc., so you should follow the schedule of whichever service provider you receive your vehicles from (for both safety and insurance reasons).

Important Takeaways

This video only goes over the high-level requirements that should keep you prepared for any inspection in any province. HOWEVER, each technician and each province does things different, so make sure you keep up-to-date with your specific province's minimum requirements. Follow the links to vists select province's CVIP info pages - British Columbia, Alberta, Manitoba, Quebec.

The rules and regulations are always changing, and certain things in this article may one day become obsolete. Make sure to regularly check in on your province's safety code updates to make sure you're staying current with the latest minimum requirements.

Main Source: NSC Standard 11: Commercial Vehicle Maintenance and Inspection (PMVI)



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