

Speed Limiters: The Law of the Land 2009

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Starting January 1, 2009, most large trucks travelling within or through the jurisdictions of Ontario and Quebec will be required to use an electronic speed limiting system that caps their speed at a maximum of 105 kilometers per hour. US and out of Province based fleets that come into Quebec and Ontario will be required to operate trucks with speed limiters set at 105 while in either Ontario or Quebec. [Section 68.1 of the Highway Traffic Act and Regulation 587, Section 14(1).]

Speed limiters electronically limit the maximum attainable road speed and have been standard equipment on the majority of heavy trucks built since mid 1990. Most new trucks are built with the required hardware to limit speed, but up until now, the truck purchaser has had the choice of whether or not to activate the speed limiter. Many fleets set the speed limiter once upon delivery of a new truck according to the company's speed control policy. It is estimated that approximately 60% of all fleets in North America are using speed limiter systems.

The activation of speed limiters through the trucks electronic control module (ECM) is relatively simple but requires the manufacturer's computerized software program, a laptop and some additional hardware to link the laptop to the ECM. Typically the information kept within the EMC such as the speed limiter setting and related calibration parameters (tire size, transmission gear ratios) is protected by a password that is given to the owner of the vehicle when it is purchased.

For speed limiting to work properly, it is not only necessary that the maximum speed limit be programmed into the engine control module, but that the computer module receives a vehicle speed signal. At the time that the engine is installed in a vehicle the system must be properly programmed with the vehicle axle ratio, tire size and other variables in order to properly interpret the signal from the vehicle speed sensor. These variables, such as the tire-rolling radius and rear axle gear ratio are essential for the ECM to calculate an accurate top speed.

According to the Ministry of Transportation, Ontario has no intention of imposing the speed limiter requirements outside of Ontario. As such, the speed limit setting could conceivably be adjusted within the cab of the truck assuming the necessary hardware/software and password were available. The speed limit would have to be changed after leaving Ontario and prior to returning to Ontario.

A driver/owner equipped with the proper diagnostic tool could connect to the diagnostic port in the cab and adjust the "maximum road speed" setting. The computer software would have to be purchased from the engine manufacturer. It is suggested in some articles state that it would take a driver about 5 - 10 minutes to change the setting, provided they have the necessary tools and software.

The major problem is that the cost for computer software, connectors and other hardware seem to vary drastically. An initial report from the Truck Manufacturers Association as posted on the Transport Canada website stated that the cost for the computer software would be approximately \$450, while the connectors and other hardware needed would cost about \$650 - \$700.00. (US). Some other sources (service technicians) have suggested that the program and necessary hardware might cost upwards of \$2500.00. These estimations do not include the cost of a laptop which would be required as well.

There are specific sections of the Highway Traffic Act that prohibit the sale of tampering devices and the use of such devices is strictly prohibited. The new legislation allows the seizure of any device or equipment suspected to be used to tamper with the speed limiting system.

Tampering includes unauthorized changes to ECM settings such as adjusting tire size or transmission gear ratios to allow the true vehicle speed to exceed the speed limiter settings. There are devices on the market that cause inaccurate information to be transmitted to ECM about the vehicle's speed or engine revolutions per minute.

Under the new legislation, drivers must allow police officers and MTO officers access to the vehicle computer system, surrender any device or equipment carried in the vehicle that operates as part of the speed-limiting system and surrender any records required to be carried by the driver under the regulations.

I contacted an individual at the at the Ministry of Transportation who was part of the speed limiter "team" to clear up a few questions that I had after reading Section 68.1 and the regulations.

I was curious as to how in depth the current roadside inspections will be. I was informed that officers are currently looking at speed limit setting and cruise control settings. Other parameters that affect the speed limit setting as outlined above might also be reviewed if the officer feels that it is necessary. A physical inspection of the vehicle could be performed to confirm the information stored in other ECM parameters that affect vehicle speed (rolling radius of the vehicle tires, the rear axle ratio). The officer would compare the data stored in the engine ECM to what is actually on the truck.

There is a question of how enforcement is going to deal with those drivers having a laptop and computerized program that will allow the changing of the speed limiting system within the ECM. I was concerned that the laptop could be seen as tampering device and be seized by officers.

I was advised that Ministry officers will be checking what the maximum speed limit and cruise control settings are set at while the vehicle is in Ontario. Charges cannot be laid against a driver who changed the speed limiting system outside of Ontario.

Further to that conversation, I would strongly discourage any driver from having his laptop in plain sight with the engine computer software still running during the time of the roadside inspection. If the laptop is still "plugged into" the vehicle's ECM, it is then obvious that the computer is part of the speed limiting system. The computer would have to be surrendered to the officer for inspection as it is clearly a part of the speed monitoring system. If the circumstances are such that the officer is aware that the speed limiting system was modified while in Ontario, the laptop could be viewed as a tampering device and would be subject to seizure by the officer.

Drivers use laptops for various things within the cab of a truck and as such, it should not be routine practice for roadside officers to ask to see the contents of the laptop computer unless a driver gives the officer reason to suspect that the laptop had been used to alter the speed limiting system while in Ontario.

Vehicles that were manufactured before 1995 or have a manufacturers gross vehicle weight of under 11,794 kgs do not have to have a speed

limiting system. For additional exceptions, please look under Regulation 587, Section 13.

Fines:

Fines for not complying with this new legislation can vary between \$250 - \$20,000.00 (Section 68.1(8)). It is important to note that at the present time, the Ministry has stated that fines under this new regulation will not carry CVOR points. It is then likely that fines will likely start in the \$500.00 range.

What is interesting is that the Act also makes it possible for a driver/operator to be charged with not having a working speed limiting system if the vehicle is found to be travelling 115 km/hr or greater. The driver would likely then be ticketed for not only speeding but for contravention of this section as well.

The Ministry website indicates that there will be soft enforcement of this legislation for a 6 month period, after which time fines will be levied.

Logging Ramifications:

One of the side notes to the speed limiter legislation is that it will be presumed that all drivers are travelling at a rate of 105 km/hr throughout North America unless the driver has the ability to change the speed limiting system in his truck. Drivers should keep this in mind when completing their logs in terms of time vs. distance travelled.

If the driver is able to change his speed limit, proof of purchase of the manufacturer's software should likely be kept on file for that driver in the case of a Ministry audit.

Other sources of information:

Transport Canada

A good place to start if you want to find out more about speed limiters and the thought process behind the legislation is the Transport Canada Website. A large amount of research was undertaken prior to the drafting of this legislation. This website provides background information of the environmental, safety and cost saving benefits of speed limiters. These reports can be found at www.tc.gc.ca. Choose English, click on Modes of Transportation; click on Road Transportation; click on Road and Motor Vehicle Safety; Choose the

topic of Motor Carriers and then click on Heavy Trucks Speed Limiter Reports.

Ministry of Transportation:

To review what the Ministry of Transportation has to say about speed limiters, go to www.mto.gov.on.ca then click on Trucks and Buses, and you'll see right in the middle under "What's New" the topic of Mandatory Truck Speed Limiting Systems. If you click on this it will take you to webpage that provides a brief summary of the rules regarding Speed Limiters.

On this page you will see that there are two links that you can click on.

Link 1 – Legislation:

This takes you to the Highway Traffic Act and your screen should start right at Speed Limiting Systems, Section 68.1. These are the new rules under the Highway Traffic Act.

Link 2 – Regulation:

This link takes you directly to Regulation 578. This regulation includes a number of items, and the regulations for speed limiting devices show up under Sections 12 – 18.