

7

THE USE OF ENGINE BRAKES

The Transportation and Works Committee recommends the adoption of the recommendations contained in the following report, June 1, 2006, from the Commissioner of Transportation and Works:

1. RECOMMENDATIONS

It is recommended that:

1. Regional Council authorize the Regional Chair to send a letter to the Minister of Transportation requesting revisions to the *Highway Traffic Act* to empower municipalities to prohibit the use of engine brakes in urban areas as designated by municipal by-laws.
2. The Regional Clerk forward this report to the Minister of Transportation and the Clerks of the local municipalities.

2. PURPOSE

This report provides information on the use of engine brakes and seeks Council support to request the Minister of Transportation to revise the *Highway Traffic Act* to include regulations to aid in the enforcement of unnecessary noise resulting from the use of engine brakes in urban areas. The report also provides an update on the current Regional program of the installation of signage requesting truckers to avoid the use of engine brakes.

3. BACKGROUND

According to the Ontario Trucking Association, heavy-duty commercial vehicles are manufactured to comply with current noise regulations, including factory-installed items such as the engine brake. The engine brake is intended to be a safety enhancement and assists with the typical wheel brakes of the vehicle. This type of braking-assistance system has been tested and approved by Transport Canada. Noise level emission with the system engaged was included in the testing stages and the approved design of the device does not exceed that of a motor without the system. Some engine brake systems are not able to be switched off by the operator. If engine noise associated with vehicles equipped with this approved braking device is a problem, vehicle inspection will show that the exhaust system on the vehicle has been altered or modified by the owner or that the vehicle is in need of repair.

Engine brakes on heavy trucks are intended as a supplement to wheel brakes and operate by increasing drag through the vehicle's drive train and ultimately to the wheels. Engine brakes save wear on the brake linings and tires of the heavy truck, but, during an emergency stop, wheel brakes outperform engine brakes and provide superior stopping ability.

According to the Ontario Trucking Association, complaints about engine brakes are always related to the noise they produce. A truck with a properly functioning exhaust muffler does not produce more noise with the engine brake applied than the same truck accelerating from a stopped position while carrying a load. Trucks that are properly maintained do not create a noise problem when applying engine brakes. Trucks that create unnecessary noise typically have modified or poorly maintained exhaust systems.

The Region has worked with many community groups and trucking companies to address the unnecessary use of engine retarder brakes over the past number of years. Staff has recently created criteria to address the many requests to install signs to discourage the use of engine brakes. Regional Council at its meeting on May 19, 2005 adopted a report regarding the installation of signage stating "*Trucks please avoid use of engine brakes*" and criteria to ensure these signs are located in the most effective locations throughout the Region.

The following criteria are used when requests are made to establish whether the signs should be placed or not and standardizes the process to ensure only necessary signs are installed on the Regional road network:

- These signs should only be installed at major truck entry points to cities, towns, townships and hamlets, at the local municipality's cost, and approved by York Region.
- The road passes through or is next to a residential area with inadequate noise protection.
- Trucks may be required to reduce speeds to stop at intersections or slow down for a reduced speed limit.
- To ensure consistency, the following wording be utilized on each sign:

TRUCKS
Please avoid use of engine brakes

- Regional and Municipal staff collectively decide on the location of these signs and that the local municipality manufacture, install and maintain these signs according to the Region's standards and specifications.

To date, these signs have been installed in 11 locations on Region roads. Although the effect of these signs is difficult to measure, over the course of time, truck drivers will become accustomed to the signage and should voluntarily avoid using engine brakes adjacent to residential areas.

Staff continue to receive complaints, however, from residents concerning noise and disturbance from heavy trucks using engine brakes in close proximity to residential areas. Roads staff now use this criteria and consider the installation of signage to “restrict” the use of engine brakes.

Local municipalities have addressed unnecessary noise from heavy trucks under their applicable noise by-laws. These by-laws apply to all types of unnecessary noise within their jurisdiction, including but not limited to engine brakes. Noise by-laws are a local municipal responsibility and are difficult to monitor and enforce; therefore, without the support of the Province of Ontario, and even with the installation of signs on Regional roads, reduction of the use of engine brakes and the associated noise from heavy trucks will be difficult to achieve. No documentation exists on the successes of enforcement or if any reduction in noise levels has been achieved from the existing signage.

4. ANALYSIS AND OPTIONS

Signage prohibiting the use of engine brakes in urban areas is an effective method to create awareness to the noise resulting from the use of engine brakes. However, without revisions to the *Highway Traffic Act* specifically directed toward the unnecessary use of engine brakes, sufficient adherence to the prohibition cannot practically be achieved. It is expected that any enforcement of exhaust system compliance will assist in reducing the noise levels when engine brakes are used.

4.1 Highway Traffic Act

Section 75 (1) of the *Highway Traffic Act* reads as follows:

Section 75 (1)

“Every motor vehicle or motor assisted bicycle shall be equipped with a muffler in good working order and in constant operation to prevent excessive or unusual noise and excessive smoke, and no person shall use a muffler cut-out, straight exhaust, gutted muffler, hollywood muffler, by-pass or similar device upon a motor vehicle or motor assisted bicycle.”

York Regional Police was asked to comment on the effectiveness of enforcing this section of the *Highway Traffic Act*. The police advise that this section of the *Highway Traffic Act* is not specifically designed to enforce the use of engine brakes, and as such, the application of these sections as an enforcement tool is not a feasible way to proceed and may present cumbersome enforcement and prosecution barriers.

As a result of our discussion with York Regional Police, it is proposed that staff be authorized to request revisions to the *Highway Traffic Act* through the Minister of Transportation. In order to assist in reducing the noise created by the use of engine brakes, amendments to the *Highway Traffic Act* would be required to empower municipalities to prohibit the use of engine brakes in urban and residential areas, as designated in municipal by-laws. Additionally, it is felt that an improved heavy truck inspection program is required to increase enforcement of trucks that do not comply with noise regulations.

5. FINANCIAL IMPLICATIONS

There are no financial implications associated with this report.

6. LOCAL MUNICIPAL IMPACT

The continuation of the courtesy sign initiative will benefit local municipalities and their residents by reducing noise pollution caused by heavy trucks. Encouraging increased enforcement, through legislation, will reduce the number of heavy trucks that do not comply with noise regulations.

7. CONCLUSION

The Minister of Transportation should be requested to revise the *Highway Traffic Act* to include regulations to aid in the enforcement of unnecessary noise resulting from the use of engine brakes in urban areas.

The Regional Clerk should forward this report to the Clerks of the local municipalities and to the Minister of Transportation.

The Senior Management Group has reviewed this report.