

Memo

Date: June 1, 2018

To: Village Board

From: Brad Lange

Re: Compression Brakes

Trustee Atwood had raised the question on when or if compression braking is allowed on STH 172. I followed up with the Wisconsin Department of Transportation and have received the following response from Eric Sikorski, Traffic Engineer with WisDot:

"The Department has policy on the use and location of Compression Brake signing. In accordance with the policy, the Department does not permit Compression Brake signs on Freeway or Expressway highways. STH 172 is considered a Freeway in this location."

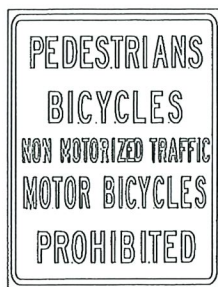
Mr. Sikorski also provided a quick excerpt of the policy as it applies to freeway/expressway.

*Only the standard ENGINE BRAKE MUFFLERS REQUIRED sign (R10-64) may be used on highways under state maintenance responsibility and those signs may be installed only on conventional highways at or near the corporate limits of the community. This sign **shall not** be used on freeways, expressways, interchange ramps, or site-specific locations on conventional highways.*

Based on the response I have received from Mr. Sikorski, it appears nothing can be done at this time regarding the use of Compression Brakes on STH 172.

placed after the last at-grade intersection and the R5057B sign (see Figure 2) BEYOND NEXT EXIT *may* be used to supplement the R5-7 sign. The R5-57 sign *should* be placed on all freeway on-ramps after this point.

Figure 1



R5-57

Figure 2



R5-57B

2-2-30 Engine Brake Signing

January 2018

PURPOSE

One method of slowing the motion of a vehicle is to use the compression of the engine as part of vehicle braking. This method is often referred to as compression braking or exhaust braking. Engine braking can produce excessive, undesirable noise when muffler systems are not functioning as designed or are otherwise inadequate.

Noise from engine braking in vehicles with inadequate muffler systems has led some communities to take actions to restrict the noise. Compression braking is typically an unavoidable result of operating a vehicle that the driver cannot prevent or fully disengage. However, for some vehicles there are driver choices as to whether or when engine compression braking is used. Objectionable noise levels *may* be produced by any car or truck when using compression braking and often are related to equipment failure or aftermarket modifications.

There are several advantages to compression braking on vehicles and especially on large trucks. In addition to assisting deceleration, when a truck engine brake system is engaged, it helps prevent the conventional truck air brakes from overheating, thus saving on the normal wearing life of the truck air brakes. This is especially true on roadways with steep downgrades with long distances, where the safety of the truck can be enhanced using engine brakes.

Communities have installed or requested signing on state highways to address noise concerns associated with use of compression braking. The Department controls traffic signs on highways maintained by the state. Local governments do not have the authority to erect signs on those highways except when written permission is provided by the Department.

The Department supports efforts to deal with excessive noise from all vehicles and encourages enforcement of laws requiring effective mufflers (for example, [State Statute Section 347.39](#)). The use of signs specific to engine or compression braking has become popular among many communities, although it is unclear whether those signs are effective or necessary. Generally, the Department does not allow installation of traffic signs on state highways that have not been shown to be necessary or effective. In the case of engine braking, the Department has chosen to work with communities and allow limited use of these signs on state highways under certain conditions, despite the lack of evidence that they are effective in reducing noise problems.

POLICY

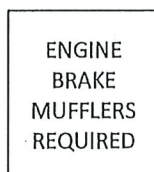
The Department *may* permit local governments to place signs on highways under WisDOT jurisdiction subject to

the requirements included here:

1. Requests for a permit to allow these signs must be in writing to the WisDOT Regional Office and *should* contain the following information
 - a. Locations where signs are to be installed, including state highway route number and distance to the nearest public roadway intersection
 - b. Sign offset (distance from edge of travel lane) and type of post to be used
 - c. Assurance that sign will be free standing (not attached to other signs)
2. The local government **shall** be responsible for supplying, installing, and maintaining the signs in conformance with the permit. The local government **shall** furnish their identification sticker on the sign.
3. The local government must be committed to actively enforce the requirements of the signs with local law enforcement personnel.
4. Only the standard ENGINE BRAKE MUFFLERS REQUIRED sign (R10-64) *may* be used on highways under state maintenance responsibility and those signs *may* be installed only on conventional highways at or near the corporate limits of the community (see Figure 1). This sign **shall not** be used on freeways, expressways, interchange ramps, or site-specific locations on conventional highways.
 - a. For freeway locations going through communities, engine brake signs *may* be permitted on conventional state highways after the entry point to the conventional highway from the freeway, provided signs are already approved at the city/village limits.
 - b. Engine brake signs *may* be allowed for urbanized townships provided they have the means to enforce it. Documentation **shall** be provided by the local law enforcement indicating that the ordinance will be enforced throughout the township. Urbanized townships are defined by having at least two of the following features:
 - i. Urban cross section
 - ii. Residential development abutting the highway that meets the definition of "semi urban district" as defined in Wisconsin State Statutes 346.57(1)(b)
 - iii. Reduced speed zone
 - iv. Qualify for an unincorporated community sign.

For qualifying urban townships, only 1 sign is allowed in each direction on any given state highway. The signs **shall** be installed at the township limits.
 - c. The local government must obtain the approval of the appropriate Regional office for the location of the sign. The sign language **shall** meet the requirements of the WisDOT R10-64 sign plate as described in item 4.
 - d. Any other signs related to use of engine braking installed on highways under WisDOT jurisdiction within or for the local government that do not meet the requirements of this policy *should* be replaced by the local government, as opportunities arise (knockdowns, improvement projects or replacement due to age) to comply with this policy.

Figure 2. R10-64 Sign



2-2-35 Littering Signs

September 2000

PURPOSE

The intent of this guideline is to eliminate signs that inform the public about fines for littering since the signs are not necessary for the guidance or warning of traffic.

Signs with the message \$500 FINE FOR THROWING LITTER OR TRASH ON HIGHWAYS KEEP WISCONSIN CLEAN (R5-56) have been installed on state highways in the past. The purpose of these signs was to discourage littering and to reinforce to motorists the maximum statutory fine for littering on highways. While littering has the potential to create safety hazards as well as diminishing the quality of state highways, there is reason to believe that usage of these signs has a minimal effect on curbing littering problems. The State Patrol has mentioned that these signs have little effect on the motoring public, the law is very difficult to enforce, and citations have very rarely been given out. The State Patrol does not object to removing these signs. Due to