



CITY OF RAPID CITY

RAPID CITY, SOUTH DAKOTA 57701-2724

OFFICE OF THE CITY ATTORNEY

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MEMORANDUM

TO: The Honorable Mayor Shaw and the Legal and Finance Committee

FROM: Karie A. Price, Assistant City Attorney

DATE: 3/21/06

RE: Dynamic Braking System – recommendations for amendments or repeal of the ordinance

CC: Public Works Committee, Police Department, Fire Department, and City Attorney's Office

During the March 1, 2006, Legal and Finance Committee, concerned truckers spoke against Section 10.20.120 of the Rapid City Municipal Code which prohibits the use of dynamic braking devices within city limits. The speakers stated that if the ordinance was adopted due to noise complaints, it is the muffler or lack thereof that causes the noise and not the dynamic brake. Additionally, the speakers stated that there are areas within city limits where the use of these brakes is "absolutely necessary" due to safety concerns. Specific areas mentioned include all streets designated as truck routes, the truck bypass near Highway 16, the Haines Avenue exit, and the bypass close to the Flying J Truck Stop.

Several different amendments to the ordinance were suggested. The recommended amendments include: 1) allowing the brake to be used in certain areas within City limits, 2) allowing the brake to be used within certain daytime hours, 3) regulating mufflers instead of the use of the brakes, and 4) repealing the ordinance.

A motion was made and carried to continue the discussion of the prohibition of the dynamic braking device to the March 29, 2006, Legal and Finance Committee meeting. Additionally, it was requested that staff look at the proposed changes to the ordinance, including the proposal to

disband the ordinance entirely. I have researched the issues at hand as requested. Below are my conclusions.

The objective of the ordinance in question was to reduce the amount of noise. Its existence was spurred by noise complaints expressed by residents of the City. The preamble of the ordinance states that "the excessive noise emitted by dynamic braking devices is detrimental to public health, welfare and quality of life," and that the City Council "deems it to be in the City's best interests to prohibit the use of dynamic braking devices to protect people from the harmful effects and inconvenience of such sounds and to help promote peacefulness within the City." The adopted ordinance is attached hereto as Exhibit A.

It is my opinion that the objective to reduce noise can be accomplished through amending the ordinance to prohibit the use of such brake when the vehicle is poorly muffled or unmuffled or when the exhaust system is illegally modified or poorly maintained. Jacobs Vehicle Systems, the maker of one brand of dynamic brakes, states on its official website that:

Truck, engine and equipment manufacturer studies have consistently found that improperly muffled vehicles are the root cause of this noise issue. Vehicle operating sound levels have been shown repeatedly to be much higher for vehicles with improper, defective or deteriorated mufflers. The problem is most pronounced on vehicles equipped with "straight stack" exhaust systems (i.e., no muffler). Studies have found that the sound level from "straight stacks" is 16 to 22 dB(A) higher than from original equipment mufflers.¹ Studies have also shown that the operation of an engine brake produces sound levels that are similar to those produced during acceleration on properly muffled vehicles.² A question that can be asked is how prevalent are improperly muffled exhaust systems on commercial vehicles? One survey observed a moderate traffic volume consisting of about 300 trucks per hour traveling on a stretch of Indiana highway. It found 5.3 percent of the trucks did not have a functioning muffler; in fact, 2.4 percent of the vehicles inspected were operating with "straight stacks" installed.³

www.jakebrake.com/about-us/vehicle-noise-and-compression-release-engine-braking.php

Many state and local governments have opted to reduce the amount of noise by regulating exhaust systems instead of prohibiting the use of the brake device. *See* Exhibit B attached hereto. The State of Colorado as done such by prohibiting the use of unmuffled engine brakes. In the September 2001 issue of the Colorado Motor Carriers Association's monthly newsletter, an article that appeared in a local Colorado newspaper was included. The article is attached hereto as Exhibit C. It states that since the Colorado law has gone into effect, the once "common place" noise complaints are now "virtually nonexistent." In addition to individual states and local

¹ Citing Reinhart, Thomas E., "U.S. Vehicle Noise Regulations and the Effects of Vehicle Condition", SAE Paper 912709, Society of Automotive Engineers, Inc., 1991.

² Citing Reinhart, Thomas E. and Wahl, Thomas J., "Reducing Compression Brake Noise", SAE Paper 971870, Society of Automotive Engineers, Inc., 1997.

³ Citing Reinhart, Thomas E., "U.S. Vehicle Noise Regulations and the Effects of Vehicle Condition", SAE Paper 912709, Society of Automotive Engineers, Inc., 1991.

governments passing ordinances that prohibits unmuffled engine brakes, the Multi-State Highway Agreement, which includes eight western states, has recently adopted a resolution to reduce noise by mandating mufflers on vehicles with the braking device. The resolution is attached hereto as Exhibit D, along with an article about its passage.

In light of the above-stated information, the suggested options to allow the brake to be used in designated areas or during certain times, or the repeal of the ordinance entirely may not be the best choice. Although all of these alternatives address the concerns about safety, they do not thoroughly address the concerns about noise. First, the noise emitted interferes with the peace and repose of residents at varying hours during both the day and night and thus, a limitation of the use of the brake to certain hours may not limit complaints. Second, if designated areas are exempt from the prohibition, residents living close to those areas are left to endure the noise. Lastly, if the ordinance is repealed in whole, the noise issue is left completely unaddressed.

In regard to the safety concerns, the current ordinance does include an exception to the prohibition of the braking device if it is necessary to avert imminent danger. However, if the Council concludes that this exception does not thoroughly address the concern about safety, the ordinance may be amended to address these concerns by adding the following suggested language:

If a vehicle does not contain a muffler, the driver may still use the dynamic braking device if the driver reasonably believes that an emergency exists that requires the use of the device to:

- (a) protect against an immediate threat and the physical safety of the driver or others;
- (b) protect against an immediate threat to property; or
- (c) reduce the speed of the vehicle on a downhill grade.

Please feel free to contact me with any questions or concerns about the above matter.

ORDINANCE NO. 5112

**AN ORDINANCE PROHIBITING THE USE OF DYNAMIC BRAKE DEVICES
WITHIN THE CITY OF RAPID CITY BY ADDING SECTION 10.20.120 TO CHAPTER
10.20 OF THE RAPID CITY MUNICIPAL CODE.**

WHEREAS, the Rapid City Municipal Code does not currently prohibit the use of dynamic braking devices within the City of Rapid City; and

WHEREAS, a massive burst of energy comes through the exhaust pipe when a dynamic braking device is engaged causing a very loud noise; and

WHEREAS, the excessive noise emitted by dynamic braking devices is detrimental to public health, welfare and quality of life; and

WHEREAS, the Common Council of the City of Rapid City deems it to be in the City's best interests to prohibit the use dynamic braking devices to protect people from the harmful effects and inconvenience of such sounds and to help promote peacefulness within the City.

NOW THEREFORE, BE IT ORDAINED by the City of Rapid City, South Dakota, that Chapter 10.20 of the Rapid City Municipal Code be amended by adding Section 10.20.120 to read as follows:

Section 10.20.120 Use of Dynamic Brake Device Prohibited.

A dynamic braking device is a device used primarily on trucks which convert the engine from an internal combustion engine to an air compressor for the purpose of braking without the use of wheel brakes. These devices are commonly referred to as "air brakes," "Jacob's Brakes" or "Jake Brakes." The use or operation of a dynamic braking device is hereby prohibited within the City of Rapid City, unless:

- (a) Use of the dynamic braking device is necessary to avert imminent danger; or
- (b) Used by emergency vehicles.

CITY OF RAPID CITY

Mayor

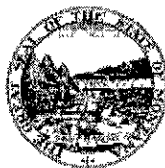
ATTEST:

Finance Officer
(SEAL)

First Reading:
Second Reading:

2003 Montana Legislature

About Bill -- Links



HOUSE BILL NO. 237
INTRODUCED BY BRUEGGEMAN, WANZENRIED

AN ACT REQUIRING A MOTOR VEHICLE EQUIPPED WITH AN ENGINE COMPRESSION BRAKE DEVICE TO HAVE A MUFFLER; ALLOWING USE OF AN ENGINE COMPRESSION BRAKE DEVICE EQUIPPED WITH A MUFFLER; PROVIDING A PENALTY; AND PROVIDING A DELAYED APPLICABILITY DATE.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MONTANA:

Section 1. Engine compression brake device -- use. (1) A commercial motor vehicle, as defined in 61-1-134, equipped with an engine compression brake device must be equipped with a muffler in good working condition to prevent excessive noise.

(2) An operator of a commercial motor vehicle that has an engine compression brake device with a factory-installed muffler or an equivalent after-market muffler may not be prohibited from using the engine compression brake device.

Section 2. Violation of engine compression brake device provisions. A person who violates the provisions of [section 1] is guilty of a misdemeanor and upon conviction shall be fined not to exceed \$500.

Section 3. Codification instruction. (1) [Section 1] is intended to be codified as an integral part of Title 61, chapter 9, part 3, and the provisions of Title 61, chapter 9, part 3, apply to [section 1].

(2) [Section 2] is intended to be codified as an integral part of Title 61, chapter 9, part 5, and the provisions of Title 61, chapter 9, part 5, apply to [section 2].

Section 4. Applicability. [Section 2] applies to violations occurring on or after April 1, 2004.

- END -

Latest Version of HB 237 (HB0237.ENR)

Processed for the Web on April 9, 2003 (4:29pm)

New language in a bill appears underlined, deleted material appears stricken.

Sponsor names are handwritten on introduced bills, hence do not appear on the bill until it is reprinted.

See the [status of this bill](#) for the bill's primary sponsor.

[Status of this Bill](#) | [2003 Legislature](#) | [Leg. Branch Home](#)

[This bill in WP 5.1](#) | [All versions of all bills in WP 5.1](#)

[Authorized print version w/line numbers \(PDF format\)](#)

Prepared by Montana Legislative Services

(406) 444-3064

An Act

HOUSE BILL 00-1142

BY REPRESENTATIVES Witwer, Gordon, Lawrence, Mace, Scott, and S. Williams;
also SENATORS Arnold, Hernandez, Matsunaka, Rupert, Sullivant, Tebedo, and Weddig.

CONCERNING THE REQUIREMENT FOR COMMERCIAL VEHICLES THAT ARE EQUIPPED WITH ENGINE COMPRESSION BRAKE DEVICES TO HAVE MUFFLERS FOR SUCH DEVICES.

Be it enacted by the General Assembly of the State of Colorado:

SECTION 1. 42-4-225 (3), Colorado Revised Statutes, is amended, and the said 42-4-225 is further amended BY THE ADDITION OF A NEW SUBSECTION, to read:

42-4-225. Mufflers - prevention of noise. (1.5) ANY COMMERCIAL VEHICLE, AS DEFINED IN SECTION 42-4-235 (1) (a), SUBJECT TO REGISTRATION AND OPERATED ON A HIGHWAY, THAT IS EQUIPPED WITH AN ENGINE COMPRESSION BRAKE DEVICE IS REQUIRED TO HAVE A MUFFLER.

(3) Any person who violates any provision SUBSECTION (1) of this section commits a class B traffic infraction. ANY PERSON WHO VIOLATES SUBSECTION (1.5) OF THIS SECTION SHALL, UPON CONVICTION, BE PUNISHED BY A FINE OF FIVE HUNDRED DOLLARS. FIFTY PERCENT OF ANY FINE FOR A

Capital letters indicate new material added to existing statutes; dashes through words indicate deletions from existing statutes and such material not part of act.

VIOLATION OF SUBSECTION (1.5) OF THIS SECTION OCCURRING WITHIN THE CORPORATE LIMITS OF A CITY OR TOWN, OR WITHIN THE UNINCORPORATED AREA OF A COUNTY, SHALL BE TRANSMITTED TO THE TREASURER OR CHIEF FINANCIAL OFFICER OF SAID CITY, TOWN, OR COUNTY, AND THE REMAINING FIFTY PERCENT SHALL BE TRANSMITTED TO THE STATE TREASURER AND CREDITED TO THE HIGHWAY USERS TAX FUND.

SECTION 2. 42-4-1701 (4) (a) (I) (D), Colorado Revised Statutes, is amended to read:

42-4-1701. Traffic offenses and infractions classified - penalties - penalty and surcharge schedule. (4) (a) (I) Except as provided in paragraph (c) of subsection (5) of this section, every person who is convicted of, who admits liability for, or against whom a judgment is entered for a violation of any provision of this title to which the provisions of paragraph (a) or (b) of subsection (5) of this section apply shall be fined or penalized, and have a surcharge levied thereon pursuant to section 24-4.2-104 (1) (b) (I), C.R.S., in accordance with the penalty and surcharge schedule set forth in sub-subparagraphs (A) to (P) of this subparagraph (I); or, if no penalty or surcharge is specified in the schedule, the penalty for class A and class B traffic infractions shall be fifteen dollars, and the surcharge shall be two dollars. These penalties and surcharges shall apply whether the defendant acknowledges the defendant's guilt or liability in accordance with the procedure set forth by paragraph (a) of subsection (5) of this section or is found guilty by a court of competent jurisdiction or has judgment entered against the defendant by a county court magistrate. Penalties and surcharges for violating specific sections shall be as follows:

Section Violated	Penalty	Surcharge
(D) Equipment violations:		
42-4-201	\$ 35.00	\$ 4.00
42-4-202	35.00	4.00
42-4-204	15.00	2.00
42-4-205	15.00	2.00
42-4-206	15.00	2.00
42-4-207	15.00	2.00
42-4-208	15.00	2.00
42-4-209	15.00	2.00

PAGE 2-HOUSE BILL 00-1142

ORDINANCE NO. 2000-01-01

An ordinance adopting Section 10.02.025 prohibiting the non-emergent use of compression brakes.

WHEREAS, Clark County Public Works has received complaints from citizens regarding the noise created by trucks using compression brakes to slow their vehicles; and

WHEREAS, the noise created by the use of compression brakes interferes with the peace and repose of Clark County citizens at varying hours during both the day and night; and

WHEREAS, this matter is being considered at a duly advertised public hearing; and

WHEREAS, the Board finds that adoption of this ordinance would further the public health, safety and welfare of Clark County citizens; now, therefore,

BE IT ORDERED AND RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF CLARK COUNTY, STATE OF WASHINGTON, as follows:

Section 1. A new section 10.02.025 is added the Clark County Code to read as follows:

Section 10.02.025 Unmuffled Compression Brakes Prohibited.

A. Except as provided in this section, no person shall use motor vehicle unmuffled compression brakes within the unincorporated area of Clark County. It shall be an affirmative defense that said unmuffled compression brakes were applied in an emergency to protect persons and/or property.

B. This section shall not apply to vehicles of any municipal fire department, whether or not responding to an emergency.

C. As used in this section, the term "compression brakes" means the use of the engine and transmission to retard the forward motion of a motor vehicle by compression of the engine. "Compression brakes" are also referred to as "jake brakes."

D. The County engineer shall post at reasonable locations within the boundaries of the County signs indicating "unmuffled compression brakes prohibited" or substantially similar wording. The engineer shall have authority to post signs pursuant to this section on roads in the unincorporated area in response to reasonable requests from the community, the County Executive or the Board. Existing compression brake signs on County roads shall remain and be maintained and replaced, when necessary, with language consistent with this section.

E. Violation of this section shall constitute a traffic infraction and shall be punishable by a maximum penalty of \$250 per violation.

ADOPTED this 11th day of January 2000

Attest:

Shirley Richards
Clerk to the Board

BOARD OF COUNTY COMMISSIONERS
FOR CLARK COUNTY, WASHINGTON

By: _____
Judie Stanton, ~~Chair~~

Approved as to Form Only

By: *Craig A. Pridemore*
Craig A. Pridemore, Commissioner *chair*

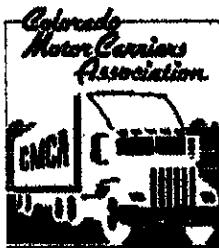
ARTHUR D. CURTIS
Prosecuting Attorney

By: _____
Betty Sue Morris, Commissioner

Christopher Horne
Christopher Horne
Deputy Prosecuting Attorney

September 7, 2001
Volume 5 Number 35

Route to:
Perkins, Burnett
Mauricio Stawski



CMCA
Hotsheet
4060 Elati Street • Denver, CO 80216-4814

Phone (303) 433-3375 • Fax (303) 477-6977 • E-mail: greg@cmca.com

Traveling through Colorado? Don't Forget the Chains!
September usually signals the first snowstorms in Colorado. Weather forecasters already are predicting snow in the Colorado mountains for this weekend. For truckers traveling on I-70 and other mountain corridors through Colorado, they should make sure they have chains or adequate cables for the truck. The Colorado State Patrol has already indicated they plan on aggressively enforcing the Chain Law to reduce road closures. Last year, the Colorado DOT reported 17 road closures on I-70 with 15 of the closures caused by trucks without chains who jackknifed or spun out.

Truck drivers caught violating the Chain Law face a \$100 fine that could increase to \$500 if the lack of chains caused the truck to block the highway.

Over the last several months CMCA has been working with state officials to identify additional chain up areas, add more variable message signs, and provide improved traveler information to truck drivers on road conditions.

CMCA strongly encourages its members and other trucking companies throughout the country to comply with the Chain Law and make sure their trucks have chains or cables if they plan on traveling through Colorado over the next several months.

Colorado Law Costly for Trucks without Mufflers

If you have a big rig equipped with an engine brake (jake brake), you better have a muffler or face a fine of \$500 when traveling through Colorado. State law enforcement officials have been enforcing the law for over a year and to date have written over 400 tickets.

The law is the result of legislation that passed in 2000 and was enacted in July 2001. Since the passage of the measure, dealers and muffler manufacturers have indicated that hundreds of mufflers have been sold and communities appear noticeably more quiet.

The legislation was brought forward by Rep. John Witwer of Jefferson County who worked closely with CMCA, state officials, city and county representatives, and Jacobs Equipment Corporation. The measure was in response to numerous complaints from many communities throughout the state relating to the noise from jake brakes. Many of these



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C

September 7, 2001
Volume 5 Number 35
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i-sim

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communities had sought to ban trucks with jake brake from traveling in their towns. CMCA had opposed these bans based on safety concerns and was successful in blocking the passage of most of these measures.

In developing the legislation, the working group sought to craft a measure which addressed the noise concerns of citizens while recognizing the value and importance of engine brakes as a safety device. In addition, law enforcement officials wished to have a law that was clear and easy to enforce. In investigating the issue, CMCA and others found the real problem rested with those trucks with jake brakes and no mufflers. The noise level of an unmuffled truck with a jake brake is 102 dB vs 81 dB with a muffler.

The working group found the simplest and most effective means to reduce truck noise was to mandate that all trucks with an engine brake is required to have a muffler. Clearly the effects of the measure have been felt throughout the state. Since its passage, not one community has sought a jake brakes ban and complaints about jake brakes to CMCA and state and officials have substantially dropped.

Commenting for CMCA, Greg Fulton noted that "we are very supportive of the new law because our members wish to be a good neighbor in our state and communities. We believe that this legislation truly shows how the state and industry can work together on a complex problem."

CSP Hazardous Material Cost Reimbursement Rules Released

The final rules Hazmat Incident Cost Reimbursement have been published and are available on the Colorado State Patrol's web site at <http://www.hazmatrans.state.co.us>. The final rules appear to be a substantial improvement over the current situation. The new rules more clearly outline eligible costs for reimbursement, requires that any direct costs for personnel and materials must be tied to the actual cost for these services and items, requires better and more documentation relating to the services performed and materials used by local responders, limits indirect costs that may be charged by a response agency, establishes a tighter timeline for claims processing, and provides an option for arbitration to resolve disputes.

Although CMCA did not accomplish all that it wished in the rulemaking process, the new rules represent a major step toward resolving a problem that has been plaguing our industry for years. These rules also represent the culmination of several years' work, which included the passage of three legislative measures to bring this problem under greater control.

Our success on this matter is greatly attributable to the efforts of our many members who spent time on this issue over the last year. If you would like a copy of the rules please contact Tracy at 303-433-3375, ext. 301.

Colorado Muffler Law Aimed at Engine Brakes

By Alison Laurio
Staff Reporter

The Colorado Motor Carriers Association said that a \$500 fine for trucks with unmuffled engine brake retarders has reduced complaints from residents about noise.

Once commonplace, complaints about the racket generated by engine brakes are now virtually nonexistent, CMCA President Gregory D. Fulton said.

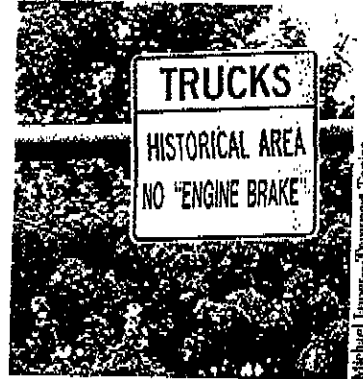
"I have not received a call yet from a community relating to Jake brake noise," he said. "In my eyes, it seems to be working."

The law represented a cooperative effort between the association, "Jake brake" manufacturer Jacobs Equipment, the state legislature and state enforcement officials.

Jacobs was the first company to manufacture engine brakes and it remains the top producer — so much so that Jake brake has become the generic term for any retarder system linked to engine compression.

"We think the law has been very effective because it clearly targets the real problem, which is trucks without mufflers," Fulton said.

Before moving ahead with the bill's introduction, the association's board of directors voted unanimously to pursue a rumor. They checked with every engine and truck manufacturer, including Jacobs, to see if removing



Alexandria, Va., is one of many communities to prohibit truckers from engaging engine braking systems because of noise complaints.

the muffler increased power and provided better fuel mileage and torque, Fulton said.

"All of these stories were debunked by them, and they noted there is no value in removing the muffler," he said. "The stories were old wives' tales."

In addition, the Environmental Protection Agency requires that mufflers be on the vehicles when they are sold to meet noise standards, Fulton said.

He said the law is effective and easy to enforce.

"We provided the latitude that it can be enforced by state and local enforcement officials, and over 400 tickets were written since its passage," Fulton said. "After the initial passage our dealers and parts suppliers indicated that they were virtually sold out of mufflers."

MHTA

MULTI-STATE HIGHWAY TRANSPORTATION AGREEMENT

RESOLUTIONS ESTABLISHING POLICY POSITIONS ON HIGHWAY TRANSPORTATION ISSUES

To Be Considered by MHTA
at the Annual Meeting
November 4-6, 2001

Quint - Jake Brake m

MULTI-STATE HIGHWAY TRANSPORTATION AGREEMENT

TITLE: RESOLUTION #6 IN SUPPORT OF ADOPTION OF COMPRESSION BRAKE OR "~~JAKE BRAKE~~" ENFORCEMENT PROGRAM.

WHEREAS, the MHTA states are concerned with safe guarding the general environment including noise abatement; and

WHEREAS, certain commercial vehicles operating in MHTA states utilize engine compression brake devices or "~~jake-brakes~~" which can cause loud disturbing noises when applied; and

WHEREAS, some MHTA states including Colorado, have adopted legislation concerning the requirement for commercial vehicles that are equipped with engine compression brake devices to have mufflers for such devices; and

WHEREAS, the enforcement program subjects any person who, upon conviction, be punished by a fine of five hundred dollars and if the violation occurs in a corporate limit, 50% of the fine goes to the city, town or county and 50% to the state highway fund.

NOW, THEREFORE, BE IT RESOLVED, that MHTA member states endorse and support a compression brake or "~~jake-brake~~" enforcement program in their respective states.

BE IT FURTHER RESOLVED, that the MHTA states desiring to do so, make a priority the introduction and enactment of legislation establishing an engine compression brake or "~~jake-brake~~" enforcement program.

Adopted the _____ day of November, 2001

- DISTRIBUTION:
- 1- MHTA states transportation committee chairs and vice chairs;
 - 2- Legislative leadership (Speaker and Senate President)
 - 3- Respective Governors; Western Governors Association
 - 4- Respective DOTs;
 - 5- MHTA private industry members; trucking associations.

Original

T.V.

MULTI-STATE HIGHWAY TRANSPORTATION AGREEMENT

TITLE: RESOLUTION #6 IN SUPPORT OF ADOPTION OF MUFFLER REQUIREMENTS FOR COMMERCIAL VEHICLES WITH COMPRESSION BRAKE OR "JAKE BRAKE" ENFORCEMENT PROGRAM.

WHEREAS, the MHTA states are concerned with safe guarding the general environment including noise abatement; and

~~WHEREAS, certain commercial vehicles operating in MHTA states utilize engine compression brake devices or "jake brakes" which can cause loud disturbing noises when applied; and~~

WHEREAS, some MHTA states, including Colorado, have adopted legislation concerning *requiring mufflers* the requirement for commercial vehicles that are equipped with engine compression brake devices to have mufflers for such devices; and

~~WHEREAS, the enforcement program subjects any person who, upon conviction, be punished by a fine of five hundred dollars and if the violation occurs in a corporate limit, 50% of the fine goes to the city, town or county and 50% to the state highway fund.~~

NOW, THEREFORE, BE IT RESOLVED, that MHTA member states endorse and support *a requirement for mufflers within the* compression brake or "jake brake" enforcement program in their respective states.

BE IT FURTHER RESOLVED, that the MHTA states desiring to do so, make a priority the introduction and enactment of legislation establishing an engine compression brake or "jake brake" enforcement program.

Adopted the ____ day of November, 2001

DISTRIBUTION: 1- MHTA states transportation committee chairs and vice chairs;
2- Legislative leadership (Speaker and Senate President)
3- Respective Governors; Western Governors Association
4- Respective DOTs;
5- MHTA private industry members; trucking associations.

Final

Transport
Topics
10/01

Proposal May Quiet Truck Engine Brakes

By Alison Laurio
Staff Reporter

Residents of eight western states fed up with noisy truck engine brakes may get some relief.

The Multi-State Highway Transportation Agreement recently adopted a resolution mandating the use of engine brake retarder mufflers.

State senators and representatives who comprise the MHTA now have the organization's backing when they take the resolution to their communities and decide whether a bill is needed, said Patti Herington, MHTA's executive consultant.

"Each state will deal with it in [its] own way, with our endorsement," she said.

The resolution was adopted during an annual meeting in Scottsdale, Ariz., Nov. 4-6 and echoes a new law in Colorado that has quieted truck noise complaints. The other states in MHTA that have not yet outlawed noisy truck engines are Oregon, Montana, Idaho, Wyoming, Utah, Nevada, New Mexico and Arizona. Washington is an inactive member and California is no longer a member.

One company that stands to benefit directly from more community-friendly brakes, Jacobs Equipment, viewed the vote as a "huge win," said Brian Mauriello, business development manager.

"With the precedent being advocated and enforced in Colorado, we're very hopeful it will pass in all of the western states," Mauriello said.

Jacobs was the first company to manufacture engine

brakes, and it remains the top producer - so much so that "Jake brake" has become the generic term for any retarder system linked to engine compression. Many communities responding to noise complaints by residents have passed local laws and erected signs banning truckers from engaging Jake brakes.

A cooperative effort among the Colorado Motor Carriers Association, Jacobs, the state legislature and state enforcement officials produced a bill that passed into Colorado law banning unmuffled engine brake retarders and levying a \$500 fine for violators.

CMCA President Gregory D. Fulton said the law addresses the cause of the problem, which is no muffler. Calls from the community complaining about truck noise have stopped because the real problem was addressed, he said.

As of the beginning of November, the law has resulted in about 400 citations and around \$250,000 levied in fines, he said.

"It's a simple measure to enforce, but it's very effective," Fulton said. "We think it's been very positive."

Other resolutions passed at the MHTA meeting include support for laws limiting the lengths of combined trailers, support for a proposal to permit six mid-continent states to join the organization and opposition to the Safe Highways and Infrastructure Act.

Also at the meeting were members of MHTA Inc., a sister organization that includes trucking industry companies, associations and agencies.

... from Transport Topics

LF032906-12A

Vehicle Noise Levels and Compression Release Engine Braking

Christopher L. Dutton
Jacobs Vehicle Systems
March 2, 1999

INTRODUCTION

This document is intended to inform the reader about the nature of commercial vehicle noise that is often the subject of community complaints and results in the increasing number of "No Engine Brake" signs posted along roadways. The following sections present data describing the relationship between vehicle noise and the condition of the vehicle exhaust system. The data identifies improperly muffled vehicles as the root cause of noise issues concerning communities. This document examines existing federal legislation that governs vehicle noise levels and presents suggestions for effective solutions to noise problems. References are provided for further reading on vehicle noise issues.

COMPRESSION RELEASE ENGINE BRAKES

Compression release engine brakes, or simply engine brakes, are of significant value to the trucking industry as well as to the public. That the braking power available through truck service brakes decreases significantly as the brake lining temperature increases is well established. The supplemental retarding power provided by engine brakes allows a truck operator to control vehicle speed on long downgrades without overheating the vehicles service brakes, thereby helping to avoid dangerous brake fade. The operation of engine brakes directly leads to lower maintenance costs through reduced brake lining wear. Vehicles equipped with engine brakes are more efficient and productive. Enhanced driver control also means a safer vehicle is operating on public highways.

The need for equipping commercial vehicles with engine brakes is greater today than ever before. Market requirements have driven engine power output higher due to increased speed and weight. At the same time the vehicles natural retarding power has decreased due to reductions in aerodynamic drag and rolling resistance. These improvements are beneficial for fuel consumption and operating cost reasons. However, these improvements mean that more work is required from the service brakes to maintain vehicle control. In contrast, service brakes have remained virtually unchanged during the evolution of commercial vehicles. In addition to supplementing the vehicles foundation brakes, engine braking is also used to control vehicle speed in cruise control, to assist shifting with certain transmissions, and is integral to newly introduced collision avoidance systems. These factors are why over 70 percent of heavy-duty vehicles produced in North America are equipped with engine brakes when delivered from the vehicle manufacturer.

Compression release engine brakes are only applied to diesel engines. The operation of an engine brake causes a sudden release of the compressed air from the cylinder by quickly opening the exhaust valve near top dead center of the compression stroke when no fuel is being injected to the cylinder. The characteristic sound of an engine brake in operation is distinctive, and can be generally described as a staccato sound.