



U.S. Department
of Transportation

Memorandum

Federal Motor Carrier
Safety Administration

ACTION: Enforcement Policy Concerning

Subject: Trailers Equipped With Surge Brakes

Date: SEP 14 2004

From: John H. Hill, Assistant Administrator
and Chief Safety Officer

Reply to
Attn. of:

MC-PSV

To: Field Administrators
Division Administrators and State Directors
National Enforcement Team

This is to advise you of the Agency's decision to allow the use of surge brakes on trailers operated in interstate commerce, provided certain conditions are satisfied. This decision is a followup to the Federal Motor Carrier Safety Administration's (FMCSA's) decision to grant a petition for rulemaking from the Surge Brake Coalition to allow the use of surge brakes. FMCSA is requesting that agency field staff and State enforcement officials refrain from citing motor carriers operating surge brake-equipped trailers for violations of 49 CFR 393.48 and 49 CFR 393.49, provided the conditions set forth in this memorandum are satisfied. This enforcement policy will remain in effect pending completion of the rulemaking we will initiate in response to the petition.

BACKGROUND

On October 31, 1975 (40 Fed. Reg. 50671, 50688), the Federal Highway Administration's (FHWA) Bureau of Motor Carrier Safety published Motor Carrier Safety Interpretations. The interpretations included guidance concerning 49 CFR 393.48, indicating "the Bureau's position regarding surge brakes has been that they did not comply with the requirement of Section 393.48 of the Motor Carrier Safety Regulations." The guidance explains that a surge brake which is only operative under certain preset conditions would not be in compliance with the regulation, and that surge brakes are generally only operative when the vehicles are moving in the forward direction. By contrast, the Bureau's guidance concerning § 393.49 indicated surge brakes meet the requirements of that section. Subsequent regulatory guidance published by FHWA on November 17, 1993 (58 Fed. Reg. 60734, 60755), indicated that surge brakes did not comply with both §§ 393.48 and 393.49. This guidance was also included in FHWA's April 4, 1997 (62 Fed. Reg. 16370, 16415 and 16416) publication, "Regulatory Guidance for the Federal Motor Carrier Safety Regulations."

PETITION FOR RULEMAKING TO ALLOW THE USE OF SURGE BRAKES

The Surge Brake Coalition petitioned FMCSA to allow the use of surge brakes for certain combinations of commercial motor vehicles (CMVs) to operate in interstate commerce.¹ The Petitioner believes surge brakes may be used under certain conditions, based on brake performance testing it conducted, and has requested that the Agency revise its regulations.

The Petitioner has requested that FMCSA amend 49 CFR 393.48 and 393.49, which have been interpreted as prohibiting the use of surge brakes on CMVs. Section 393.48 requires all brakes on a CMV must be capable of being operating at all times. Section 393.49 requires all service brakes on a CMV or a combination of CMVs to be applied by a single application valve.

The Petitioner believes 49 CFR 393.48 should be amended by:

- Revising paragraph (a) to read:
 - (a) General rule. Except as provided in paragraphs (b), (c), and (d) of this section, all brakes with which a motor vehicle is equipped must at all times be capable of operating.
- Adding a new paragraph (d) to read:
 - (d) Surge brakes. Paragraph (a) of this section does not apply to:
 - (1) Any trailer with a gross vehicle weight rating (GVWR) of 12,000 lbs or less, equipped with inertial surge brakes when its GVWR does not exceed 1.75 times the GVWR of the towing vehicle; or
 - (2) Any trailer with a GVWR greater than 12,000 lbs, but less than 20,001 lbs, equipped with inertial surge brakes when the GVWR does not exceed 1.25 times the GVWR of the towing vehicle.

The Petitioner has requested that the following exception be added to 49 CFR 393.49: “This requirement shall not apply to trailers equipped with inertial surge brakes that satisfy the conditions provided in § 393.48(d).”

CURRENT USE OF SURGE BRAKES

The Petitioner argues that surge brakes provide a safe, practical braking system for CMV combinations, especially for scenarios in which the trailer is likely to be towed by a variety of vehicles. For example, in the rental market, trailers are rented separately from towing vehicles, and towing vehicles frequently are not wired for electric brake controls. The Petitioner indicated that rental companies believe it is “prohibitively expensive and impractical” to install or adapt a brake control system on each towing vehicle every time they rent a trailer or piece of mobile equipment. The Petitioner estimates that more than 25 percent of the rental trailer fleet is equipped with surge brakes.

¹ The Petitioner defines a surge brake as a system in which the hydraulic brakes of a trailer are actuated as a result of the forward pressure of the trailer against the towing vehicle during deceleration. The Petitioner also describes a surge brake as an “automatic hydraulic inertia brake system” and defines it as a self-contained mechanism that applies the trailer brakes in coordination with the braking action of the towing vehicle. The interaction between the towing vehicle’s deceleration and the continuing forward movement of the trailer activates the hydraulic trailer brakes. The brake application pressure developed is proportional to the total trailer weight and deceleration rate of the towing vehicle.

The Petitioner believes surge brakes are a popular alternative to electric brakes because surge brakes activate automatically, adapt to the weight of the load, have fewer components, and require less maintenance. These features make surge brakes ideal for flatbed and van-type trailers with a GVWR of 20,000 lbs or less, and trailers serving the marine industry. The Petitioner stated that manufacturers install approximately 250,000 surge brake systems annually on small to medium sized trailers.

FMCSA's ANALYSIS OF THE PETITION

FMCSA believes the petition has merit and third-party engineering tests the Petitioner commissioned provide sufficient information to support issuing a Notice of Proposed Rulemaking to amend the FMCSRs to allow surge brakes. Because the petition includes specific towing vehicle to trailer GVWR ratios, the requested change would enable motor carriers and enforcement officials to clearly distinguish between vehicle combinations that may be equipped with surge brakes and vehicle combinations for which such brake systems are prohibited.

We believe the status quo is not desirable from a safety perspective because it encourages each State to adopt intrastate laws or regulations concerning surge brakes that are potentially (1) based on little, if any, engineering testing or analysis, (2) contrary to FMCSA's regulations for CMVs operating in interstate commerce, and (3) inconsistent with other States' intrastate regulations applicable to surge brake-equipped trailers.

The Agency believes it is in the interest of safety that uniform regulations concerning surge brakes be developed. The Petitioner has presented what appears to be a reasonable proposal based on brake performance testing of numerous combinations of towing vehicles and trailers equipped with surge brakes.

For the reasons given above, the Agency has granted the Surge Brake Coalition's petition for rulemaking to amend 49 CFR 393.48 and 393.49. Granting the petition means the Agency intends to initiate a notice-and-comment rulemaking proceeding during which all interested parties will have the opportunity to comment on whether the regulations in question should be amended to allow the use of surge brakes.

FMCSA ENFORCEMENT POLICY

In consideration of the Agency's decision to grant the Surge Brake Coalition's petition for rulemaking, I am instructing all FMCSA enforcement personnel to cease issuing citations for violations of 49 CFR 393.48 and 393.49 for instances in which an inertial surge brake system is used on:

- (1) A trailer with a gross vehicle weight rating (GVWR) of 12,000 lbs or less, provided its GVWR does not exceed 1.75 times the GVWR of the towing vehicle; or
- (2) A trailer with a GVWR greater than 12,000 lbs, but less than 20,001 lbs, provided the GVWR does not exceed 1.25 times the GVWR of the towing vehicle.

COMMUNICATION OF FMCSA POLICY WITH STATE AGENCIES

Division Administrators are to contact the lead Motor Carrier Safety Assistance Program (MCSAP) agency in their State and advise them of FMCSA's enforcement policy concerning commercial motor vehicles equipped with surge brakes. Please request that the States refrain from penalizing motor carriers that use trailers equipped with surge brakes when their personnel conduct vehicle inspections. Additionally, State agencies should be advised that trailers equipped with inertial surge brakes should not be considered to have "inoperable brakes" solely on the basis that it is a surge brake system. Such brake should not be considered inoperable unless the enforcement official determines the brakes are not capable of operating when brake application mechanism on the tongue of the trailer is engaged.

EFFECTIVE PERIOD FOR FMCSA's ENFORCEMENT POLICY

This policy will remain in effect until the Agency has completed its rulemaking in response to the Surge Brake Coalition's petition. However, this policy memorandum should not be construed to suggest that the outcome of the rulemaking has been predetermined. The sole intent of this enforcement policy memorandum is to reduce to the greatest extent practicable, the likelihood of motor carriers being penalized for using surge brake systems which, based on engineering data, appear to be safe for use in interstate commerce under certain circumstances. If, after reviewing the public comments received in response to the Notice of Proposed Rulemaking, the Agency determines inertial surge brakes should not be allowed on commercial motor vehicles for safety reasons, this policy memorandum will be rescinded immediately.

If you have any questions concerning this issue, please contact Luke Loy in the Vehicle and Roadside Operations Division, at 202-366-0676 or via e-mail: luke.loy@fmcsa.dot.gov.