in 1979, several Antarctic Treaty Consultative Meetings have been held in accordance with Article IX of the Antarctic Treaty. The regulations have been amended from time to time based on recommendations adopted at these meetings. The amendments that are the subject of this rule implement recommendations XVI–4, XVI–8 and XVI–9 of the 16th Antarctic Treaty Consultative Meeting (16th ATCM). Because the amendments merely implement recommendations adopted at the 16th ATCM, public comments were not obtained before making the amendment effective.

The recommendations which are the subject of this amendment are as follows:

Recommendation XVI–4 re-designates Site of Special Scientific Interest No. 30, Avian Island, Marguerite Bay, Antarctic Peninsula as Specially Protected Area No. 21 and provides that it be subject to the management plan accompanying the description of the protected area.

Recommendation XVI–8 provides that Cryptogram Ridge, Mount Melbourne, Victoria Land, be designated as Specially Protected Area No. 22 and be subject to the management plan annexed thereto.

Recommendation XVI–9 provides that Forlidas Pond and Davis Valley Ponds be designated as Specially Protected Area No. 23 and be subject to the management plan annex thereto.

Specially Protected Area No. 21: Avian Island (67°46′ S, 68°54′ W) lies 0.25 km south of the south-west tip of Adelaide Island in north-west Marguerite Bay, south-west Antarctic Peninsula. The Area consists of Avian Island together with its littoral zone. It is 1.45 km long by 0.8 km at its widest (total area about 49 ha), and rises to just over 40 m altitude in the south. It is almost entirely ice-free in summer. There are several shallow melt pools, the largest being on the eastern raised beach terrace. There are two small dilapidated refuge huts, one near the north-west and the other near the mid-east shores of the island. The Area is unique in the Antarctic Peninsula region for its abundance and diversity of breeding seabirds. The Blue-eyed shag colony is one of the largest known in the Antarctic, and the Adelie penguin colony is the largest on the Antarctic Peninsula.

Specially Protected Area No. 22: Mount Melbourne (74°21′ S, 164°42′ W lies between Wood Bay and Campbell Glacier, northern Victoria Land, on the western side of the Ross Sea. The Area includes most of Cryptogram Ridge on the southern rim of the main summit crater (2,733 m altitude), and extends to about 1,200 m by 500 m. Geothermal activity occurs along about 300–400 m of the ridge and is marked by discontinuous areas of ice-free ground, surrounded by numerous ice hummocks up to 1 m high and scattered hollow ice towers up to several meters in diameter and 4 m high. The warm ice-free areas are mostly gently sloping with narrow terraces up to 1.5 m wide. The geothermal ground within the Area supports a unique community of bryophytes, algae and microbiota, including the only known occurrence in the Antarctic of the moss *Campylopus pyriformis*.

Specially Protected Area No. 23: Forlidas Pond, about 100 m in diameter, is situated near the east end of the Dufek Massif in a small unnamed dry valley about 1 km to the east of the northern edge of the Forlidas Ridge and about 1 km northwest of Davis Valley. The unnamed dry valley is separated from Davis Valley by a northeast trending ridge several kilometers long. The position of Forlidas Pond is 82°27′15″ S, 15°21′ W. The Area includes smaller ponds that occur along the ice margin at the northern edge of Davis Valley, a short distance east of Forlidas Pond. The Area consists of two parts about 500 meters apart and includes all that area within 500 m of the center of Forlidas Pond and all that area within a 500 m radius of several meltwater ponds at the ice margin along the northern edge of Davis Valley. The Area contains some of the most southerly freshwater ponds known in Antarctica containing plant life.

Determinations

I have determined, under the criteria set forth in Executive Order 12866, that this rule is not a significant regulatory action requiring review by the Office of Information and Regulatory Affairs. I have also determined that this rule involves a foreign affairs function of the United States and is, therefore, exempt from the notice requirements of section 553 of the Administrative Procedure Act and from regulatory flexibility analysis requirements of the Regulatory Flexibility Act, 5 U.S.C. 601–612. Finally, I have reviewed this rule in light of section 2 of Executive Order 12778 and certify for the National Science Foundation that this rule meets the applicable standards provided in sections 2(a) and 2(b) of that order.

List of Subjects in 45 CFR Part 670

Antarctica, Conservation.

Pursuant to the authority granted by 16 U.S.C. 2405(b)(3), NSF hereby amends 45 CFR Part 670 as set forth below.

PART 670—[AMENDED]

1. The authority citation for Part 670 continues to read as follows:

Authority: 16 U.S.C. 2405, as amended.

2. Section 670.30 is revised to read as follows:

§ 670.30 Designation of specially protected areas.

The Act states that the Director shall designate as a specially protected area, each area identified under the Agreed Measures as needing special protection. The following areas have been so identified and designated as Specially Protected Areas:

(a) SPA 1, Taylor Rookery, MacRobertson Land
(b) SPA 2, Rookery Islands, Holme Bay
(c) SPA 3, Ardrey Island and Odbert Island, Budd Coast
(d) SPA 4, Sabrina Island, Balleny Islands
(e) SPA 5, Beaufort Island, Ross Sea
(f) SPA 7, Cape Hallett, Victoria Land
(g) SPA 8, Dion Islands, Marguerite Bay, Antarctic Peninsula
(h) SPA 9, Green Island, Berthelot Islands, Antarctic Peninsula
(i) SPA 13, Moe Island, South Orkney Islands
(j) SPA 14, Lynch Island, South Orkney Islands
(k) SPA 15, Southern Powell Island and adjacent islands, South Orkney Islands
(l) SPA 16, Coppermine Peninsula, Robert Island
(m) SPA 17, Litchfield Island, Arthur Harbor, Palmer Archipelago
(n) SPA 18, North Coronation Island, South Orkney Islands
(o) SPA 19, Lagotellerie Island, Marguerite Bay
(p) SPA 20, 'New College Valley', Caughley Beach, Cape Bird, Ross Island
(q) SPA 21, Avian Island, North-west Marguerite Bay
(r) SPA 22, Cryptogram Ridge, Mount Melbourne, Victoria Land
(s) SPA 23, Forlidas Pond and Davis Valley Ponds

Note: Maps specifying these areas in greater detail may be obtained from the Director.

§ 670.34 [Amended]

3. Section 670.34 is amended by removing paragraph (b)(30) and redesignating paragraphs (b)(31)–(b)(36) as paragraphs (b)(30)–(b)(35).

Dated: August 18, 1995.

Lawrence Rudolph,

General Counsel, National Science Foundation.

[FR Doc. 95–21978 Filed 9–5–95; 8:45 am]

BILLING CODE 7555–01–P

DEPARTMENT OF TRANSPORTATION

Federal Highway Administration

49 CFR Part 393

[FHWA Docket No. MC–94–9]

RIN 2125–AD37

Parts and Accessories Necessary for Safe Operation; Automatic Brake Adjusters and Brake Adjustment Indicators

AGENCY: Federal Highway Administration (FHWA), DOT.

ACTION: Final rule.

SUMMARY: The FHWA is adopting a final rule requiring the use of automatic brake adjusters (ABAs) on hydraulically-braked commercial motor vehicles (CMVs) and air-braked CMVs manufactured on or after October 20, 1993, and October 20, 1994, respectively. This rulemaking is intended to: Ensure that the operational standards for brakes in the Federal Motor Carrier Safety Regulations (FMCSRs) are consistent with the manufacturing standards in the Federal Motor Vehicle Safety Standards (FMVSSs), Nos. 105 and 121, which now require the installation of automatic brake adjusters and adjustment indicators on certain CMVs manufactured on or after these dates; and improve the safety of operation of CMVs by reducing the incidence of brakes that are out of adjustment.

EFFECTIVE DATE: October 6, 1995.

FOR FURTHER INFORMATION CONTACT: Ms. Deborah M. Freund, Office of Motor Carrier Standards, (202) 366–2981, or Mr. Charles Medalen, Office of the Chief Counsel, (202) 366–1354, Federal Highway Administration, Department of Transportation, 400 Seventh Street, SW., Washington, DC 20590. Office hours are from 7:45 a.m. to 4:15 p.m., e.t., Monday through Friday, except Federal holidays.

SUPPLEMENTARY INFORMATION:

Background

On August 3, 1994, the FHWA published a notice of proposed rulemaking in the **Federal Register** (59 FR 39518) to require the use of ABAs on hydraulically-braked CMVs manufactured on or after October 20, 1993, and air-braked CMVs manufactured on or after October 20, 1994. These were the effective dates of the National Highway Traffic Safety Administration's (NHTSA) amendments to its Federal Motor Vehicle Safety Standards (FMVSSs) Nos. 105 and 121. The FHWA also proposed a requirement for brake adjustment indicators (BAIs) on air-braked CMVs with external adjustment mechanisms manufactured on or after October 20, 1994.

Because the FHWA also believed there were opportunities for improvements to the operational safety of CMVs manufactured prior to the effective dates of the amendments to FMVSS Nos. 105 and 121, the agency requested information regarding the potential impacts of requiring CMVs subject to the FMCSRs to be retrofitted with ABAs, and of requiring air-braked CMVs with external adjustment mechanisms to be retrofitted with BAIs. The FHWA requested comments on eight questions specifically concerning the issue of retrofits:

1. Should air-braked CMVs manufactured before the effective date of NHTSA's rule be required to be retrofitted with ABAs?

2. Should all air-braked CMVs with external brake adjustment mechanisms be required to be retrofitted with brake adjustment indicators?

3. If certain CMVs are to be retrofitted, how much time should be allowed for installation of the new equipment?

4. Are there certain types or configurations of air-braked vehicles that cannot be equipped with ABAs because of space limitations around the axles and wheels?

5. Should different periods be specified for retrofitting single-unit trucks, tractors, converter dollies, and trailers?

6. The requirements proposed by this NPRM would exclude air-braked vehicles that were not subject to FMVSS No. 121 on the date of manufacture. (Vehicles not subject to the requirements are listed under paragraph S3 of § 571.121, and include certain types of limited- or specialized-use vehicles such as wide trailers, vehicles equipped with an axle with a gross axle weight rating of 13,154 kilograms (29,000 pounds) or more, any truck or bus that has a speed attainable in 3.2 kilometers (2 miles) of not more than 53 km/hr (33 mph), heavy hauler trailer sets, and load divider dollies.) Should specific types of CMVs, or CMVs used in unique operations, (i.e., CMVs that are *not* subject to the requirements of FMVSS 121, but are subject to the FMCSRs) be exempt from a requirement to be retrofitted with ABAs? Should these specific types of air-braked CMVs manufactured on or after October 20, 1994, be required to be *equipped* with ABAs prior to being placed in operation in interstate commerce? Please provide details.

7. What are the costs associated with retrofitting an ABA compared to replacement of a manual brake adjuster (MBA)? Please include the cost of the device, the time required to complete the installation, and a representative hourly salary of the mechanic performing the installation. Please also include a ''loss of use'' cost figure if a CMV were to be taken out of revenue service for retrofitting at some time other than a time when a brake adjuster would normally be due for replacement. How often do tractors and trailers visit a facility where retrofitting could take place?

8. Should the FHWA consider a retrofitting requirement for hydraulically-braked CMVs? Please address the cost questions asked in Question 7.

Discussion of Comments

Twenty-seven commenters responded to the notice: The Heavy Duty Brake Manufacturers Council (HDBMC), an association of 10 heavy duty brake component manufacturers; 3 manufacturers of brake components (Rockwell International, Haldex Corporation, Midland-Grau Heavy Duty Systems); a manufacturer of brake adjustment indicators (Tattle-Tale); a motor carrier using a brake adjustment indicator of its own design (Sebring Container Corporation); a private motor carrier (Wilbur-Ellis); a manufacturer of trucks and truck-tractors (Volvo GM Heavy Truck Corporation); a manufacturer of heavy construction equipment (Cedarapids Inc.); 6 national transportation and trade associations (Steamship Operators Intermodal Committee (SOIC), American Trucking Associations (ATA), National Automobile Dealers Association (NADA), National Private Truck Council (NPTC), National School Transportation Association (NSTA), Petroleum Marketers Association of America (PMAA); 2 CMV leasing companies (Riteway Leasing Company and XTRA Corporation); a drivers' organization (the Owner Operator Independent Drivers Association (OOIDA)); a public transportation authority (Metro-Dade Transit Authority); an intermodal transportation provider (Union Pacific Railroad Company); the Commercial Vehicle Safety Alliance (CVSA), an association of Federal, State, and Provincial officials responsible for the administration and enforcement of motor carrier safety regulations in the United States, Canada, and Mexico; the European Union, which submitted its comments via the European Commission General Agreement on Tariffs and Trade (GATT) Enquiry Point; 2 State highway safety enforcement agencies (Maine State Police, State of

Connecticut Department of Motor Vehicles); 2 highway safety organizations (Insurance Institute for Highway Safety (IIHS) and Advocates for Highway and Auto Safety (AHAS)); and 1 private individual.

In-Use Requirement

Almost without exception, commenters who addressed the proposed requirement to adopt rules parallel to the NHTSA's recent amendments to FMVSSs Nos. 105 and 121 responded favorably. These commenters included the Maine State Police, the State of Connecticut Department of Motor Vehicles; HDBMC; Wilbur-Ellis; IIHS, NPTC, AHAS, OOIDA, NSTA, and Midland-Grau. Haldex and Rockwell International limited their comments to air-braked vehicles.

The ATA noted that manufacturers have provided, and motor carriers voluntarily used, automatic brake adjusters for a number of years, and that, even in the absence of Federal regulations, the marketplace is adopting this technology on its merits. Although it generally favored the proposed in-use requirement, the ATA raised several arguments concerning ABAs and brake maintenance. It stated that out-of-adjustment brakes are a maintenance problem that ''can be compounded if the addition of such equipment causes fleets to determine that they will no longer need to look at their brakes as frequently and if the automatic adjusters are not serviced.'' The ATA also quoted a NHTSA study, which noted that carefully-maintained manual brake adjusters (MBAs) can keep strokes within tolerances comparable to ABAs. The ATA added that MBAs ''can be set to a closer adjustment'' than ABAs because ABAs ''must provide extra stroke to prevent over-adjustment when brake drums are hot.''

The FHWA generally agrees with this portion of the ATA's comment; however, the cited research performed by the NHTSA (''Automatic Brake Adjusters for Heavy Vehicle Air Brake Systems,'' February 1991, report DOT–HS–807–724 (PB 91–215814)) and the National Transportation Safety Board (''Heavy Vehicle Airbrake Performance,'' April 29, 1992, report NTSB/SS–92/01 (PB 92–917003)) has demonstrated that not all MBAs are well maintained. (Copies of both of these reports have been placed in the docket.) The preambles to the FHWA's NPRM and the NHTSA's rulemakings on ABAs clearly stated that ''automatic'' brake adjusters do not in any way imply that they are ''maintenance-free'' devices. Nevertheless, the FHWA continues to believe that ABAs can reduce instances of brakes out-of-adjustment, and CMVs being declared out-of-service, due to this condition.

The ATA asserted that ABAs ''are not mandatory for safety.'' It argued that, should a regulation be imposed prohibiting the replacement of an ABA with an MBA, the vehicle should not be placed out of service because of the substitution unless the vehicle's brakes are found to be out of adjustment.

The FHWA's intent in issuing this rulemaking is to require an ABA installed in accordance with the requirements of FMVSS Nos. 105 or 121 to be replaced in kind, so the vehicle continues to perform as originally manufactured. Motor carriers have considerable experience selecting replacement parts; the replacements must be chosen to ensure that the systems in which they are installed continue to operate safely.

Regarding the ATA's concern about a CMV equipped with an MBA (where an ABA is required by the FMVSSs and the FMCSRs) being placed out of service, the FHWA notes that, under the current provisions of the CVSA's North American Uniform Out-of-Service Criteria, the presence of an MBA would not be a cause for placing a CMV out-of-service unless the condition of the brake, or its state of adjustment, were such that it would be likely to cause an accident or a breakdown. The FHWA notes that the CVSA's comments to this docket did not address changing the criteria with respect to the presence or absence of ABAs.

Finally, while the ATA agreed with the intent of the NPRM, it expressed concern that the proposed language would specifically reference an FMVSS. The ATA stated that, by requiring vehicle users to ensure that replacement parts meet the FMVSS, the FHWA would, in effect, require consumers [motor carriers, CMV operators] to ''create the technical expertise of manufacturers for themselves.'' The ATA asserted that, if the FHWA wants CMV users to purchase parts which meet the FMVSS, then the FHWA must work with the NHTSA to assure that new parts are labeled with compliance information or a code, similar to the requirements for fuel tanks under § 393.67(f) of the FMCSRs.

An in-use requirement for a CMV part or accessory that references an FMVSS does not place any unique burden on the CMV's operator. For example, § 393.11 provides an in-use standard for lighting devices and reflectors; it states that CMVs must meet the requirements of 49 CFR 571.108 (FMVSS 108) in effect at the time of manufacture of the vehicle. Commercial motor vehicle operators have ample experience in obtaining replacement parts for vehicle subsystems. In fact, at least one ABA manufacturer (Gunite) provides cross-reference lists to show appropriate replacements for original equipment manufacturers' devices.

In closing, the ATA recommended that the FHWA and the NHTSA work together to focus the FMVSSs and the FMCSRs on CMV maintenance difficulties. The ATA stated that such items as wear indicators, component identification, and access for inspection have been largely ignored in the Federal standards, yet they play a major role in equipment operation and ease of inspection. The FHWA takes these concerns into account to the greatest extent practicable, and will continue to do so as the agency works to develop performance-based regulations through its Zero-Base Regulatory Review Program.

The CVSA did not take a position on the proposed in-use requirements. It noted that most inspectors are familiar with ABAs, although they may need some minimal ''recognition'' training for new or different systems. The CVSA was concerned that BAIs provide consistent information to motor carrier personnel throughout the BAI's service life. The CVSA made the observation that some BAIs use paint on the pushrod to indicate adjustment status, and that, when the paint wears, it may give a false reading.

The FHWA has consulted with the NHTSA regarding this matter. Some manufacturers use epoxy and baked-on coatings for marking/color-coding pushrods, but it is possible that some may use paint. If a BAI is not maintained to provide an accurate reading of brake adjustment status, the motor carrier will be in violation of the FMCSRs.

Sebring Container Corporation commented on their favorable experience with BAIs. Two commenters noted that many buses are equipped with ABAs: the NSTA indicated that its members who responded to a small survey all used ABAs, and Metro-Dade Transit Authority buses all have ABAs. Union Pacific Railroad Company favored the in-use rule. The European Commission expressed a concern that the FMVSS requirement was more restrictive than European requirements.

Volvo and the ATA addressed the wording of the proposed rule. Volvo suggested the language be modified to define more clearly the class of vehicles subject to the requirement, specifically CMVs with air brake systems that meet the requirements of FMVSS No. 121 (49

CFR 571.121, paragraph S5.1.8) at the time of manufacture. It pointed out that FMVSS No. 121 exempts some vehicles, such as those with gross axle weight ratings in excess of 13,154 kg (29,000 lbs.), and that the language originally proposed would have required ABAs on all CMVs, irrespective of the FMVSS No. 121 requirements. This would necessitate retrofitting for which components may not exist.

The FHWA has revised the language of § 393.53(a) and § 393.53(b) to clarify their applicability to CMVs that are subject to the requirements of FMVSS Nos. 105 and 121, respectively, at the time of their manufacture.

The ATA also offered alternative language for the proposed rule: ''Each commercial motor vehicle manufactured with a hydraulic brake system on or after October 20, 1993, and equipped with an automatic means of brake adjustment to comply with FMVSS 105, shall remain equipped with an automatic brake adjustment system.'' Similarly for CMVs equipped with air brakes: ''Each commercial motor vehicle manufactured with an air brake system on or after October 20, 1994, and equipped with an automatic means of brake adjustment to comply with FMVSS 121, shall remain equipped with an automatic brake adjustment system.''

The FHWA disagrees with the ATA's suggested rewording because it could be interpreted to permit devices that do not comply with the ABA requirements of FMVSSs Nos. 105 and 121 at the time when the CMV was manufactured to be used as replacement parts. The agency's intent, in proposing an in-use rule, was to require that replacement ABAs continue to conform to the FMVSSs, much as replacement lighting devices and reflectors must continue to conform to the requirements of FMVSS No. 108.

Retrofitting ABAs on Hydraulically-Braked CMVs

The following commenters addressed the questions concerning a potential retrofitting requirement, but did not address the proposed in-use requirement: Riteway Leasing Company, SOIC, Tattle-Tale, NADA, PMAA, Cedarapids, Michael J. Meyer, and XTRA Corporation.

With two exceptions, those who commented on this issue were strongly opposed to a retrofitting requirement for these vehicles. Most cited potential major engineering changes that would be required for axles as well as brakes. For example, HDBMC stated that hydraulic disc brakes inherently provide automatic adjustment. It added that automatically-adjusted hydraulic drum brakes have internal adjustment mechanisms, and retrofitting would, in most cases, require replacement of the entire brake assembly. In some cases, the hub and drum, or even the entire axle, would have to be replaced. The HDBMC noted that, since the 1983 model year, all class 6, 7, and 8 hydraulic brake trucks [1] manufactured by major U.S. manufacturers have had automatic adjustment features. Mandating a retrofit would therefore be superfluous except for a very few vehicles, and their retrofitting costs would be exorbitant.

Both Rockwell International and Wilbur-Ellis noted that hydraulically-braked CMVs provide the driver an indication of brake adjustment through the brake pedal travel.

The ATA's comments reiterated many of the points made by others. It noted that adjustment systems for hydraulic drum brakes are internal to the brakes, integral to their design, and cannot practically be retrofitted.

The NADA and the NPTC were opposed to a retrofit for hydraulically-braked CMVs. Haldex stated that retrofit is impractical for hydraulic brakes. The NSTA was concerned with potential retrofitting problems, including safety and voiding of the FMVSS certification applicable at the time of manufacture. It also questioned whether retrofit kits would be available for older buses in fleets, some of which are over 20 years old, and whether they could be installed and made to operate properly. Midland-Grau Heavy Duty Systems noted that the majority of hydraulically-braked CMVs already are equipped with ABAs. Union Pacific Railroad Company recommended against retrofits for hydraulically-braked CMVs because of the high costs involved. It noted that hydraulically-braked vehicles have had self-adjusting brakes on most units for many years, and that relatively few CMVs currently in service are not so equipped. The CVSA commented that hydraulic brake systems are not disassembled to inspect their component parts during the course of inspecting a CMV, and that a decision regarding hydraulic brake systems would not affect inspection procedures.

Commenting in favor of a retrofit requirement for hydraulically-braked CMVs, the AHAS stated that ABAs are necessary for all CMVs. The AHAS was ''convinced that the benefits gained by retrofitting ABAs and BAIs to the entire existing commercial fleet would far outweigh any costs to industry, especially if a reasonable phase-in program was put in place.'' The AHAS did not, however, provide any figures to substantiate this statement. The AHAS also stated that it was unsure of the benefits of BAIs for hydraulic or air-over-hydraulic systems, and that it did not know how BAIs could be retrofitted.

The Maine State Police (Maine) also stated that retrofits should be required, without differentiating between air-braked and hydraulically-braked CMVs. It recommended effective dates of October 20, 1996, for tractors and trucks, and October 20, 1997, for trailers, semitrailers, and converter dollies. Maine also recommended that limited- or specialized-use vehicles also be subject to a retrofitting requirement, but it provided no additional information or technical material to support this viewpoint.

The FHWA acknowledges the concerns expressed by the commenters over retrofitting hydraulically-braked CMVs. The engineering work required to accomplish this retrofit would be complex and costly. The engineering complexity of designing and installing a retrofitted system would potentially go beyond the maintenance capabilities of all but the most sophisticated organizations. Because the design of hydraulic brakes is generally not amenable to this type of modification, an engineering retrofit, if done improperly, could actually degrade the performance of the brake system, or render it inoperative. Therefore, in view of the possible adverse safety impacts, the FHWA has decided not to require retrofitting for hydraulically-braked CMVs.

Questions Concerning Retrofitting of ABAs and BAIs on Air-Braked CMVs

The remaining questions posed by the NPRM covered retrofitting ABAs and BAIs on air-braked CMVs. While few commenters expressed strong opinions for or against retrofitting, nearly all voiced concerns. Commenters cited the current limited production capacity of ABA manufacturers, potential engineering modifications required for brake system component mountings because of the limited space around brake chambers on some vehicles, and potential difficulty in locating the vehicles and taking them out of revenue service to retrofit ABAs. Specific comments on each of the numbered questions asked in the NPRM follow, along with the FHWA's response:

1. Should air-braked CMVs manufactured before the effective date of NHTSA's rule be required to be retrofitted with ABAs?

[1] Class 6: 8,446–11,794 kg (19,501–26,000 lbs); Class 7: 11,795–14,969 kg (26,001–33,000 lbs); and Class 8: over 14,969 kg (33,000 lbs).

In Favor

The AHAS stated it would strongly support such an initiative as an appropriate complement to the FMVSSs. The AHAS strongly believes that the FHWA should not consider mandating ABAs without also requiring (1) the use of BAIs, and (2) submissions of certifications by interstate carriers of their preventive maintenance programs which ensure optimal maintenance and operation of ABAs.

Maine believed that retrofits should be required.

Metro-Dade stated it would support an ABA retrofit proposal, noting that its urban bus fleet is equipped with ABAs.

Sebring stated that it will install ABAs as replacements for manual brake adjusters, as needed.

Opposed

Wilbur-Ellis opposed retrofitting because the cost would not justify the safety benefit, and ABAs must still be maintained and brake clearances checked. It recommended aggressive roadside enforcement.

The ATA opposed mandatory retrofit for existing equipment, reasoning that motor carriers lack technical expertise to assure replacement parts comply with the FMVSSs; this is the responsibility of the manufacturer. It stated that hydraulic brakes and some air brakes cannot be retrofitted, and that motor carriers are ''unable to redesign equipment which was built not having to comply * * *.'' The ATA stated that most tractors manufactured since the late 1980s have ABAs, but that ABAs have not been standard equipment on most trailers. It contended that the current rule requiring brakes to be kept in adjustment is ''actually more comprehensive'' than a retrofit requirement, because the mere presence of ABAs does not guarantee that brakes will be kept in adjustment. The ATA added that retrofits should not be required because many installations lack the space to make the substitution; there may be design limitations within the initial system; and current systems operate safely but may not do so after retrofitting. It stated that consumer reworking of vehicles could create legal liability issues: an example would be a retrofit that could require removing brackets from heat-treated axles, potentially leading to a structural failure. Finally, the ATA asserted that the record demand for ABAs for new CMVs subject to FMVSS No. 121 has rationed aftermarket supply.

The NADA believed the requirements would be unduly burdensome to the motor carrier industry.

The NPTC stated ''There is still some concern surrounding the effectiveness of ABAs * * *. (T)he technology still has room for improvement * * *.'' While it opposed retrofitting, the NPTC proposed that vehicles that had already been retrofitted be required to maintain their ABAs.

The OOIDA stated that it was adamantly opposed to a retrofit requirement. ''Time and cost are not justified by the marginal safety benefit that would result.'' It believed that retrofitting would be cost-prohibitive ''for a vast portion of the trucking industry, especially owner-operators,'' and that the FHWA should defer to the opinion and expertise of the NHTSA.

Haldex was concerned that retrofitted ABAs might not be able to keep air chambers operating within allowable limits due to wear and lack of maintenance of other brake components. It stated that ''Improvement in overall operational safety of these retrofitted vehicles may be less than expected unless other brake maintenance is performed at the time of the retrofit.'' Haldex also stated that, although the company would benefit from a requirement to retrofit all CMVs, it could not enthusiastically support such a proposal because of the potential high costs to the trucking industry and because it believed that past maintenance histories would lead to uncertain future benefits from the devices.

The NSTA was concerned that retrofitting could affect safety and potentially void the FMVSS certification applicable at time of manufacture. It questioned whether retrofit kits would be available for older buses (up to 20 years old), and whether the ABAs could be installed and made to operate properly.

The PMAA cited safety and economic concerns, particularly for small businesses. The PMAA believed that current regulations requiring brake inspection and adjustment were sufficient.

Union Pacific cited an extremely high cost burden, and added that the time during which vehicles would be out of revenue service would jeopardize the transportation system's ability to move the Nation's freight on a timely basis.

Mr. Michael J. Meyer, a mechanic with 14 years of experience and 14 additional years as an owner-operator, believed a retrofitting requirement would lead drivers to ignore brakes, as well as to miss other potential equipment problems, because they would take shortcuts in performing under-vehicle inspections.

XTRA Corporation cited cost, possible customer non-awareness of the applicability of a retrofitting requirement to leased trailers, and the difficulty of customers in ''obtaining adequate compliance with the technical aspects of retrofitting.'' It added that a substantial number of its trailers are not used in long-distance hauls, but are drayed to and from intermodal ramps. It also noted that many of its trailers are leased for storage and for use as offices, and should not be required to be retrofitted.

Other Commenters' Concerns

The HDBMC believed that the FHWA should consider air-braked CMV ABA retrofits ''when physically possible and economically feasible.'' While the HDBMC declared that consideration of retrofitting ''is laudable,'' it cautioned that many concerns would need to be addressed; for example, not all automatic slack adjusters interchange with manual slack adjusters.

Volvo echoed the HDBMC's view, stating that retrofits will, in some cases, require more than a one-for-one replacement. Volvo noted that design changes go ''forward'' to new products, and that not all are backward-compatible for use as service replacements with older equipment.

Midland-Grau stated that a complete analysis of all combinations of ABAs and foundation brake set-ups must be made. It urged an evaluation of the risk of incomplete or incorrect installation against potential safety benefits, and advised the FHWA to review past experiences with retrofit requirements, such as that for steering axle brakes. Midland-Grau also recommended that the FHWA include requirements to use devices that meet the appropriate SAE Recommended Practices, and to perform technical evaluations to prevent safety degradation for incomplete or incorrect retrofits.

The State of Connecticut Department of Motor Vehicles supported a retrofit proposal, provided confirmation of compatibility could be made in advance.

Rockwell believed that ABAs ''do not function in exactly the same manner and that adjustment rate and clearance can affect brake certification,'' although it stated that it did not have data to validate its concern. Rockwell asserted it would be prudent to recommend that replacement ABAs and BAIs be of the same type with which the brake was originally equipped. Rockwell contended that ''new, small, unproven suppliers'' may introduce devices designed to conform to ''somewhat ambiguous NHTSA requirements,'' and

that their lack of knowledge and experience may result in the introduction of ineffective and non-conforming devices. If retrofitting were to be mandated, Rockwell asks the FHWA to consider (1) production capabilities and parts availability, (2) expense and inconvenience to CMV owners, and (3) such technical and performance issues as fit, possible mechanical incompatibility, and mixing of different types of ABAs on a single vehicle.

The CVSA questioned whether there would be a sufficient supply of ABAs over a short retrofit period. It suggested that ''[o]ne alternative to consider is the discontinuance of the manufacture of non-ABAs and when replacing systems, replace them with ABAs.''

Agency's Response to These Comments

It is certainly not the FHWA's intent to force CMV operators to attempt to redesign brake systems or axles in order to accommodate ABAs. If a motor carrier is considering retrofitting ABAs, it should consult with appropriate technical experts (such as the original-equipment manufacturers of the vehicle and the brake system) to ensure that the CMV and its brakes will continue to operate safely.

As for the AHAS' recommendation for certification of preventive-maintenance programs, it should be noted that § 396.3(a)(1) of the FMCSRs requires that: ''Parts and accessories shall be in safe operating condition *at all times*'' (emphasis added). Preventive maintenance is a central element of a CMV maintenance program, and FHWA compliance reviews include an assessment of motor carrier maintenance records. Furthermore, CMVs are subject to roadside inspection programs, using uniform CVSA inspection procedures, and to the periodic inspection requirement of § 396.17. In addition, § 396.25 requires brake inspectors to be capable of performing brake service or inspection tasks through brake-related training, experience, or a combination thereof totaling at least one year. The FHWA believes that an additional program to ''certify'' motor carriers' preventive maintenance programs would achieve little.

The agency disagrees with CVSA's comment that the manufacture of MBAs should be halted. The FHWA does not have the regulatory authority to place such a requirement on manufacturers. Also, as other commenters have pointed out, some CMVs were never designed to accept ABAs, even as an option. Replacing MBAs with ABAs could require engineering modifications to the affected CMVs.

In view of the potential adverse safety impact of a retrofit rule, should it be performed incorrectly, and the significant costs of such a rule, the FHWA will not require retrofitting ABAs on air-braked CMVs.

2. Should all air-braked CMVs with external brake adjustment mechanisms be required to be retrofitted with brake adjustment indicators?

In Favor

The HDBMC stated it would support BAI retrofit when it is physically possible and economically feasible. It asked that the FHWA consider specifying SAE standards designating BAI markings and identification. It also suggested that replacement brake chambers with SAE-marked BAIs be mandated.

Connecticut would strongly support BAI retrofit for air brakes to ease pretrip inspections and reduce the time necessary for maintenance and roadside inspections.

Riteway recommended that all tractors, trailers, trucks, and buses be equipped with ''air brake stroke indicators.'' It noted that the company has used indicators ''for some time'' and has not had a BAI-equipped unit cited for out of adjustment brakes.

Lindy's Enterprise Inc., manufacturer of Tattle-Tale, a visual brake stroke indicator, enclosed product literature and a partial list of customers. ''Our products have been on many over-the-road tractors, trailers, and trucks with great success. We not only feel that our product could save annual inspection costs but help achieve safety results as well.''

Sebring developed a BAI for its own fleet. It believes that its brake maintenance and adjustment programs have improved.

Wilbur-Ellis recommended BAI retrofit for s-cam brakes.

The NPTC stated it would support a BAI retrofit requirement, but that the method used to indicate brake out-of-adjustment status should not be specified.

Metro-Dade supported a BAI retrofit requirement.

The CVSA stated that retrofit of BAIs would be desirable as it would aid in recognizing brake adjustment problems.

Opposed

Maine opposed BAI retrofitting because benefits would be very limited.

Rockwell believed that the benefit of BAIs is marginal compared to ABAs. It cited factors such as the expense of the devices, control of the placement accuracy of retrofit marks/indicators, safety issues from owners improperly disassembling or assembling a brake chamber, and the production capability of established suppliers.

The ATA believed that internal system BAIs using air chamber assemblies incorporating marked pushrods are the most satisfactory arrangement. It feared that required retrofitting might involve replacing brake chambers to achieve a proper match of size and brake stroke. It was also concerned that aftermarket BAIs may be easily knocked out of position by road debris, dirt, snow, and physical contact with other vehicle parts.

The NADA opposed BAI retrofitting for the same reasons it opposed ABA retrofitting.

The AHAS believed that ABAs will not correct chronic problems with out-of-adjustment air brakes unless used with easily-seen adjustment indicators and ''vigorous educational campaigns by Federal and State authorities.'' It stated that the FHWA should not consider mandating ABAs without also requiring the use of BAIs. The AHAS expressed particular concern on retrofitting CMVs with ''boot-covered'' air brake pushrods, because it believed that BAIs were probably not feasible for that design. The AHAS added that ''this proprietary approach to air brake chamber design can permanently forswear the considerable additional benefits of supplementing ABAs with BAIs on air brakes,'' and recommended that the FHWA coordinate with the NHTSA.

The OOIDA opposed any requirement for retrofitting of brake components. It believed that, given the ''typical useful life'' of Class 7 or 8 motor vehicles, and allowing for ''any reasonable'' amount of time fully to implement a retrofit rule, a manufacturing standard would achieve virtually the same result.

Haldex cited fleet turnover in its opposition to BAI retrofit. It believed that a mandate for stroke indicators could be made without one for ABAs, but that an ABA retrofit without including BAIs could create a false sense of security due to maintenance concerns on older vehicles.

Midland-Grau cautioned that a complete brake system analysis would be required, as for an ABA retrofit.

Union Pacific and XTRA Corporation would oppose retrofit of BAIs for the same reasons that they would oppose ABA retrofit.

Agency's Response to These Comments

As several of the brake manufacturers pointed out, the original design of the brake system must be considered in

determining whether or not a retrofitted item would function properly. The accuracy, precision, and, most notably, the durability of most retrofitted BAIs is questionable. While marked pushrods on replacement air chamber assemblies might prove the most durable, it is not reasonable to expect a motor carrier to replace an air chamber in proper operating condition for that sole purpose.

The FHWA has consulted with the NHTSA on the matter of BAIs on boot-covered pushrods. Very few CMVs use boot-covered pushrods. Those CMVs that are so equipped are generally used for operations where the brake chambers could be contaminated with dust and debris. They are exempt from the FMVSS BAI requirement because they do not have an exposed pushrod. This is not a loophole for manufacturers, but a recognition that certain operating environments require enclosed pushrods.

3. If certain CMVs are to be retrofitted, how much time should be allowed for installation of the new equipment?

Comments

Commenters suggested phase-in periods ranging from one to seven years. Metro Dade suggested that only one year would be necessary to retrofit a transit fleet. The NPTC suggested a minimum two-year retrofit period for hydraulically-braked CMVs and a minimum of a five-year retrofit for air-braked CMVs. The OOIDA and Union Pacific recommended at least three years, while the ATA and the AHAS recommended four years. The SOIC and Haldex recommended at least five years. XTRA Corporation stated that the responsibility to retrofit would fall upon their customers because it has relinquished control to the lessee. It noted that most leases run five to six years, so its commercial situation dictated against requiring retrofitting in a shorter period than seven years.

Midland-Grau commented that retrofit time required would be a function of the specific products selected, and any vehicle modifications needed, such as brake chamber pushrod length changes to fit a new ABA and clevis, interference rework, and brake chamber modifications to fit stroke indicator components.

Other factors cited by commenters that would affect a phase-in period included the ability of manufacturers to meet the demands for new CMVs as well as retrofitted ones, time lags in distribution channels, scheduling of vehicles for retrofit, and costs to CMV operators. In particular, Haldex and the ATA contended that ABA manufacturers currently have inadequate capacity to simultaneously supply ''record levels'' of new CMVs and a large retrofit demand.

The AHAS recommended two alternative phased-in schedules. In the first, 10 percent of the entire existing commercial fleet would be retrofitted beginning one year following the promulgation of the final rule, followed by 25 percent in the second year, 60 percent in the third year, with 100 percent compliance by the end of the fourth year. The AHAS also suggested, as an alternative choice for motor carriers, a two-year implementation delay after a final rule was issued, followed by a requirement for 100 percent compliance in the third year.

Agency Response to These Comments

Since the agency has decided not to require retrofitting of any kind, a discussion of these comments is unnecessary.

4. Are there certain types or configurations of air-braked vehicles that cannot be equipped with ABAs because of space limitations around the axles and wheels?

Comments

Rockwell, Haldex, the PMAA, and the ATA stated that space limitations can prevent installation of ABAs, and have in fact done so. Rockwell added that an improperly installed ABA may impair brake performance by limiting brake chamber stroke, and that use of long stroke chambers may influence performance as well.

Haldex noted that, in the last five years, most U.S.-built CMVs offered ABAs at least as an option, but, because of design differences, not all manufacturers' ABAs fit each application. Haldex stated that some vehicles built over 15 years ago, as well as some Japanese vehicles, use a ''camshaft spline'' with uncommon dimensions which is not currently available from any ABA manufacturer. (Haldex did not provide specifics on the design.) Haldex stated that it has had difficulties retrofitting other Japanese vehicles which were not originally designed to offer ABAs as an option.

The ATA commented that slack adjusters, which it believes comprise at least 95 percent of the adjustment mechanisms used for air brakes, must fit into cramped quarters between brake, axle, suspension, and frame components. ''This problem is particularly difficult on tractors but also occurs with trailers, especially those of a specialty nature.'' The OOIDA repeated this concern, adding that ''[t]he modifications that would be necessary to accommodate ABAs on such vehicles vary from relatively small machining operations to outright wheel replacement.''

The PMAA also expressed concerns about space and necessary clearances for retrofitted ABAs to work effectively. The PMAA believes that ''[w]hile a newly-designed vehicles could easily accommodate the variety of components on the market, older vehicles would not be able to follow suit. This is primarily due to the fact that the brake and structural system of the existing vehicle or trailer is already fixed in place during the manufacturing process. Adding adjusters to these vehicles and trailers would require extensive alterations requiring cutting welded bracket anchors from the brake system and engineering a completely redesigned brake system.'' The PMAA believed that such redesign is beyond the technical capabilities of operators like petroleum marketers and truck/trailer service facilities. It believed that a leading cause of ABA failure is improper installation, and that, even when performed by factory-trained personnel, many units still fail. ''It is reasonable to surmise that the more technically-difficult retrofit by untrained personnel would yield a higher rate of brake failure * * *.''

The NADA and the NPTC also believed that some CMVs cannot be equipped with ABAs. XTRA Corporation stated that it owned approximately 1,000 older remanufactured trailers which cannot be converted.

Several commenters did not view a potential retrofitting requirement as a problem. Sebring believed that all its tractors and trailers could be easily equipped. Union Pacific stated that it was not aware of any type of trucks, tractors, or trailers that cannot be equipped due to space limitations. The HDBMC, Midland-Grau, Metro Dade, and the CVSA recommended that the FHWA defer to the judgement of CMV manufacturers.

While it opposed the notion of a retrofitting requirement, the ATA suggested that the requirement only apply to those CMVs which, when new, had ABAs offered as a substitute option for MBAs. The ATA stated that it recognized that there may be problems identifying those vehicles.

Agency's Response to These Comments

The FHWA agrees with the commenters' concerns regarding the difficulty of making engineering modifications (relocation of welded brackets, replacement of atypical components, reconfiguration of components in tight quarters) to permit

some CMVs originally equipped with MBAs to retrofit ABAs. With the exception of Haldex, none of the commenters provided information on specific classes of CMVs that could be readily identified as presenting unique retrofit challenges.

As discussed in the agency's response to the comments to Question 1, it has never been the FHWA's intent to promulgate a rule which would force CMV operators to attempt to redesign brake systems or axles in order to accommodate an ABA. The FHWA will not prohibit retrofitting of ABAs. Nevertheless, motor carriers considering retrofitting ABAs when MBAs are replaced should consult the appropriate technical experts to ensure that the brake system of the affected CMV will continue to operate safely.

5. Should different periods be specified for retrofitting single-unit trucks, tractors, converter dollies, and trailers?

Comments

Maine recommended that trucks and tractors be retrofitted by October 20, 1996, and that trailers, semitrailers, and converter dollies be retrofitted by October 20, 1997.

Rockwell suggested that the FHWA might set priorities for vehicle types based on model years and benefit-risk analysis.

The HDBMC and Haldex advised that any retrofitting requirement be phased-in by vehicle type and year of manufacture. Haldex believed that trailers should have priority over tractors because they have longer useful lives, but receive less maintenance during their lives. Haldex cautioned that combination vehicles are susceptible to jackknife accidents if the tractor brakes are in better working order than trailer brakes. Haldex also noted that new vehicles accumulate more miles, and older vehicles would be retired from service before a retrofit were to be required.

While the NADA indicated that its survey respondents were universally opposed to retrofits, it requested that the time-frame for a potential requirement consider limitations in labor, parts, and shop facilities.

The AHAS believed that its recommended phase-in period discussed earlier should apply simultaneously to tractors, trailers, and single-unit tankers that carry hazardous materials. It suggested that additional lead time be provided for other CMVs and non-air-braked CMVs.

While opposing retrofitting, the OOIDA maintained that different periods should not be specified because they would lead to confusion, needless enforcement activity, and penalties for mistakes of fact.

Sebring said that different periods may be needed but did not elaborate on that statement.

Midland-Grau believed that different periods should be specified according to potential installation problems, but it did not elaborate.

Metro-Dade stated that this issue was not applicable to transit agencies.

Union Pacific opposed the notion of different retrofit periods for different types of CMVs because it would require excessive management to enforce.

The CVSA asked that the FHWA consider a phase-in period and the need for mechanic training.

XTRA Corporation urged that no retrofitting requirements be imposed on intermodal containers, trailers, or chassis, or on remanufactured trailers, or on mobile storage trailers.

Agency's Response to This Comment

As stated earlier in this notice, retrofitting requirements will not be imposed.

6. Should specific types of CMVs, or CMVs used in unique operations, (i.e., CMVs that are *not* subject to the requirements of FMVSS 121, but are subject to the FMCSRs) be exempt from a requirement to be retrofitted with ABAs? Should these specific types of air-braked CMVs manufactured on or after October 20, 1994, be required to be *equipped* with ABAs prior to being placed in operation in interstate commerce?

Comments

Maine and Sebring believed that limited or specialized use vehicles not subject to the FMVSS No. 121 requirements should be subject to a requirement for retrofit of ABAs. Neither provided elaboration. The CVSA recommended that CMVs currently equipped with slack adjusters be required to have ABAs unless there is a specific retrofitting problem for that type of vehicle. Those situations should be handled as exceptions.

The HDBMC, Rockwell, Haldex, Midland-Grau, and the ATA recommended against including CMVs not subject to the FMVSSs. Rockwell believed it ''might be awkward'' to require ABAs on vehicles ''not subject to other federal braking requirements.'' Haldex argued that there was insufficient justification for ABAs on limited- and specialized-use vehicles, noting that there is little industry experience with ABAs on these vehicles, and that retrofitting might be impractical because of installation difficulties.

The ATA stated that specialized vehicles which are exempt from FMVSS No. 121 requirements have been given this status by the NHTSA ''based on the facts that doing so will not compromise public safety and that these vehicles cannot be constructed in a manner consistent with more 'normal' equipment.'' The ATA added that these vehicles could not have been readily built with ABAs, that retrofit should not be considered, and that these vehicles must still meet the FMCSR's requirements for inspection and safe operation.

The NADA stated that its members support ''maximum possible grandfathering'' of non-FMVSS 121 CMVs as part of their universal opposition to a retrofit mandate.

The NPTC stated that a member had suggested that trucks and trailers over 8,165 kg (18,000 lbs) GVW, which have been equipped with ABAs, be required to maintain the ABAs or improve them, but that any retrofitting requirement exempt trucks under 8,165 kg (18,000 lb) GVW because the benefits of ABAs on those vehicles are not clear. The NPTC did not elaborate on that comment.

The AHAS believed that no vehicle or load-carrying dolly should be exempted if it can sustain highway speeds. However, it allowed that low-speed vehicles that usually operate for short distances and under special permit can be considered as long as the FHWA ''will avoid the creation of a loophole for exploitation.''

The OOIDA opposed retrofitting of any air-braked vehicles, and stated that the FHWA ''should defer to NHTSA'' on this issue.

Union Pacific stated that certain vehicles should be excluded.

Cedarapids opposed retrofitting construction equipment, citing an economic impact without an increase in highway safety. It was concerned that ABAs could exacerbate brake problems because dirt and dust would cause high failure rates of ABAs while providing a false sense of security to construction equipment operators. However, ''[f]or normal highway vehicles, we agree and applaud your efforts to increase highway safety.''

XTRA Corporation urged that no retrofitting requirements be imposed on intermodal containers, trailers, or chassis, or on remanufactured trailers, or on mobile storage trailers.

Agency's Response to This Comment

As noted above, this final rule does not require retrofitting of any kind.

Some of the comments nonetheless deserve a brief response.

The FHWA agrees with the ATA's and Cedarapids' comments. The NHTSA is responsible for determining compliance with, or exemptions from, FMVSS No. 121. The definition of off-road construction equipment is to be narrowly construed and limited to equipment which, by its design, appearance, and function, is obviously not intended for use on a public road. The FHWA has provided regulatory guidance (58 FR 60734, November 17, 1993) concerning the applicability of the FMCSRs to ''off road'' motorized construction equipment, i.e., motor scrapers, backhoes, compactors, excavators, tractors, trenchers, and bulldozers (Question 6 to § 390.5, Definitions), as follows:

> Such equipment is routinely found at construction sites and is operated by personnel requiring specialized skills. Occasionally, such equipment is moved to or from construction sites by ''driving'' the ''vehicles'' short distances on public highways. Their appearance on the highway is only incidental to their primary function, they are not designed to operate in traffic, and their mechanical manipulation often requires a different set of knowledge and skills. The types of construction equipment discussed above do not come within the definition of a ''CMV'' and hence the operators and equipment are not subject to the FMCSRs.

As for the NPTC's comment concerning an exemption for CMVs under 8,165 kg (18,000 lbs) GVWR, the general applicability of the FMCSRs to CMVs over 4,536 kg (10,000 lbs) GVWR is required by statute (49 U.S.C. 31132(1)).

The FHWA cannot ''defer to NHTSA'' on operational standards for CMVs, as OOIDA suggested, because that agency's regulatory authority is limited to manufacturing standards. However, the FHWA and the NHTSA work closely together on regulations of common interest to both agencies.

7. What are the costs associated with retrofitting an ABA compared to replacement of an MBA? Include: the cost of the device, installation time, mechanic's hourly salary, and a ''loss of use'' cost figure if a CMV were to be taken out of revenue service for retrofitting at some time other than a time when a brake adjuster would normally be due for replacement. How often do tractors and trailers visit a facility where retrofitting could take place?

Comments

The HDBMC stated that detailed answers to this question would be furnished in individual responses from HDBMC member companies.

The SOIC estimated a range of labor and materials costs for each intermodal chassis from $185 to $275, averaging around $220. It estimated a cost of $48 million for its members to retrofit, and questioned the ''indeterminate reductions in traffic accidents'' that would result. The SOIC stated that it anticipated no technical problems related to a retrofitting requirement, but that administrative difficulties of locating, capturing, and transporting chassis to repair facilities may be significant and difficult to quantify. It suggested a program of conversion ''in association with annual inspections required by the FMCSRs.''

Sebring estimated that in 1990 a local repair shop needed one hour per wheel to install four automatic slack adjusters (ASAs). Labor charges were $25 per hour, and the ASAs cost approximately $55 each. The first retrofit of a BAI of Sebring's own design took 30 minutes, and others took 10 minutes/wheel.

Rockwell estimated the cost of parts and labor to replace MBAs at $50 per wheel; to retrofit an ABA, $100 per wheel.

Wilbur-Ellis estimated costs at around $80 for an ASA, installation time of 0.75 to one hour each, and a labor rate of $45 to $50 per hour. Downtime was estimated at one day per truck, and perhaps more. The total retrofitting cost for three-axle delivery truck would be approximately $700. Most of Wilbur-Ellis' locations are in rural areas where air brake repair facilities are not readily available.

The ATA believed that ''re-engineering'' systems to accommodate ABAs on CMVs not originally designed for them would be a major cost element of retrofitting. The ATA stated that, ''in many instances, the vehicle would have to be either scrapped or sold somewhere else in the world where it could be used, since the retrofit could not be economically justified.'' The ATA estimated the following costs for retrofit of vehicles originally designed to accommodate ASAs: One hour per brake, assuming no severe corrosion or other interfering factor; labor, $25 per hour (different in various parts of the country); $65 for an ABA, $12.50 for an MBA. If brake chambers needed to be replaced to accomplish a BAI retrofit, they would cost an additional $55 each. The ATA believed that costs for parts and labor alone would make retrofit cost-prohibitive; it did not include costs of vehicle down-time in these figures. The ATA estimated that 3.8 million trailers would require 12 million ABAs to be retrofitted ''within the given period'' at a cost of $108 million.

The NADA estimated costs at from $75/brake to $250/tandem and believed there would be considerable CMV-to-CMV variation.

The NPTC estimated costs at $200 to $750 for straight trucks and single axle trailers, and $900 to $1000 for tandem-axle tractors.

While the AHAS was ''convinced that the benefits gained by retrofitting ABAs and BAIs to the entire existing commercial fleet would far outweigh any costs to industry, especially if a reasonable phase-in program was put in place,'' it did not provide any figures to substantiate this statement.

The OOIDA stated that costs can vary considerably, depending on application, configuration of foundation brake mounting, make and type of ABA, and where the work is performed. It provided the following information, based on discussions with several midwest truck dealerships: ABAs, $35 to $75; hourly shop rates from $47 to $49.50; time to simply remove brake adjusters and install ABAs, from 20 to 90 minutes. The OOIDA added that retrofit may require replacement of other system components to conform to ABA design and various mounting configurations. The OOIDA asserted that owner-operators are already operating on thin profit margins, and that any that any loss of use of a CMV would be an unjustifiable burden.

Haldex stated that ABAs retail for approximately 4 to 5 times the cost of an MBA; aftermarket prices range from $50 to $75. It estimated installation time at around 15 minutes per wheel; however, the potential need to change air chamber pushrod length could double that time. ''On the average, a vehicle would be out of [revenue] service for no less than 90 minutes for an ABA retrofit.'' Haldex also stated that data available to the company indicated that major fleets generate an average of approximately $100 to $150 per hour in revenue, so each vehicle undergoing retrofit would also cost the motor carrier $150 to $225 in revenue foregone.

Metro-Dade stated that the ''Cost to retrofit would be insignificant if done in conjunction with a brake rebuild.''

The PMAA believed that costs might include re-engineering of brake and structural systems to provide additional space needed for installation. It believed that, in many cases, retrofitting may not be economically feasible because of the complexity of the redesign. In other cases, redesign would not be technically possible. It stated ''In cases such as these, the cost of compliance would equal the cost of the vehicle and

trailer.'' The PMAA estimated the following costs for CMVs that could be retrofitted: $65 for ABAs; labor, $40 per hour; 6 hours for installation if there is no extensive corrosion; total: $670. For a complex brake system redesign, it estimated costs up to $2300 per vehicle. The PMAA estimated costs for its industry segment at $14,740,000.

Midland-Grau stated that it was difficult to estimate a typical cost, and that an evaluation was needed.

Union Pacific provided the following cost estimates. Tandem tractors: material, $400; labor, 2 hours at $60 per hour; total $520. Tandem trailers: material, $300; 3 hours labor at $60 per hour; total $480.

XTRA Corporation estimated direct costs of approximately $300/unit for its entire fleet of trailers and chassis, including materials and an average of 2.5 hours of labor. It noted that additional costs that needed to be considered included loss of revenue, recordkeeping, and customers' costs resulting from temporary removal of their trailers from service. Logistical considerations would be XTRA Corporation's time to locate the CMV and to plan and schedule its retrofit, and their customers' cooperation in accomplishing it.

Agency's Response to This Comment

The ABAs were estimated to cost between $35 and $75; most commenters estimated a range of $50 to $75. They might take from 20 minutes to 1.5 hours to install; 45 minutes to one hour was the most common range noted. Mechanics' hourly salaries were figured at $25 to $60, with $40 to $45 most commonly noted.

At the low end of the range, a $50 ABA that takes a mechanic earning $40 per hour 0.75 hour to install would cost the motor carrier $80. At the high end, a $75 ABA that takes a $45 per hour mechanic one hour to install would cost the motor carrier $120. For purposes of estimating, the FHWA will use a rounded average of $100 per ABA installed, excluding the motor carrier's revenue loss for the time the CMV is not in service.

Estimates of the numbers of registered CMVs from the FHWA's 1993 edition of *Highway Statistics* are as follows: Commercial and private trucks (excluding truck tractors, and light and farm trucks), 2.4 million; truck tractors, 1.3 million; private and commercial trailers and semitrailers, 3.9 million; and private and commercial buses, 115,000. However, many of these 7.6 million CMVs are not in interstate commerce. The FHWA estimated in 1993 that there were 3.6 million CMVs operating in interstate commerce. The agency believes that the ATA's estimate of 3.8 million CMVs potentially subject to a retrofitting requirement may be somewhat high because single-unit trucks and buses with hydraulic brake systems would not have been included in such a proposal. The ATA estimated slightly more than three retrofitted ABAs per vehicle (12 million ABAs/3.8 million CMVs=3.15 ABAs/CMV). This also might be a low estimate: Most semitrailers would need 4 ABAs, and one-axle semitrailers would need two ABAs, but tractors would need up to 6. However, using the ATA's estimate of 12 million ABAs, the cost for parts and labor would be $1.2 billion, rather than the $108 million figure stated in its docket comment. If we were to exclude tractors and air-braked single-unit CMVs, some 2.7 million trailer retrofits (two-thirds of the U.S. trailer and semitrailer fleet), requiring four ABAs each, would cost an estimated $1.08 billion for parts and labor.

Some commenters noted, and the FHWA agrees, that the logistical costs of locating a CMV for retrofitting and removing it from revenue service could exceed the costs of labor and materials. On the other hand, the cost of retrofitting ABAs probably would not exceed the value of the CMV unless the vehicle was at or past the end of its useful life. In general, however, the data and cost estimates show that retrofitting ABAs would involve significant expense to the motor carrier industry.

While ABAs have real advantages over MBAs, the FHWA has determined that the costs associated with a retrofitting requirement do not clearly exceed the benefits that could be anticipated. This is especially true given that the estimated $1 billion retrofit cost would only apply to trailers, and semitrailers, not to truck-tractors or air-braked single-unit trucks. Even with several years of lead time, the annual cost to the motor carrier industry would be several hundred million dollars. None of the commenters that favored a retrofit requirement provided an analysis or estimate of its expected impact on CMV accidents. The FHWA, therefore, will not require retrofitting.

Discussion of Final Rule

Proper brake adjustment is critical to safe CMV operation. The NHTSA has estimated that nearly 4,000 CMV accidents per year are caused by out-of-adjustment brakes. The NTSB's review of 97 serious heavy truck accidents investigated from 1969 to 1981 cited out-of-adjustment brakes as a causal or contributing factor in 28 percent of those accidents. Out-of-adjustment brakes are also the primary equipment-related cause for CMVs to be placed out of service during roadside inspections; for Fiscal Year 1992, 36.2 percent of vehicles placed out-of-service were cited for this deficiency.

Aside from the clear safety benefits of maintaining proper brake adjustment, ABAs can have a positive benefit on motor carrier productivity by preventing CMVs from being placed out of service, reducing roadside service calls and the resulting delays to transportation operations.

Virtually all commenters to the NPRM who responded to the in-use requirement were in favor of it. The ATA noted that manufacturers have provided, and motor carriers voluntarily have been using, ABAs for a number of years. Even in the absence of Federal regulations, the marketplace was adopting the technology on its merits.

Finally, the FHWA strives to maintain consistency between the manufacturing standards for commercial motor vehicles contained in the NHTSA's Federal Motor Vehicle Safety Standards (FMVSSs), and the operations and maintenance regulations contained in the FMCSRs.

The FHWA has concluded that both motor carriers and the traveling public may derive substantial operational and safety benefits from the use of automatic brake adjusters and brake adjustment indicators.

The final rule, therefore, amends the FMCSRs by adding a new § 393.53, Automatic Brake Adjusters and Brake Adjustment Indicators, to Subpart C, Brakes.

The provisions of paragraphs (a), (b), and (c) require that automatic brake adjusters and brake adjustment indicators installed on newly manufactured CMVs to comply with the requirements of FMVSS Nos. 105 and 121 be maintained by the motor carriers operating those CMVs.

These provisions will apply to all CMVs operated in the United States, irrespective of the country where the CMV is based. Canadian and Mexican vehicles manufactured on or after the effective dates of the NHTSA rules will be required to conform to this regulation.

Rulemaking Analyses and Notices

Executive Order 12866 (Regulatory Planning and Review) and DOT Regulatory Policies and Procedures

The FHWA has determined that this action is not a significant regulatory action within the meaning of Executive Order 12866 or significant within the meaning of Department of

Transportation regulatory policies and procedures. This rule makes the operational standards for brakes in the FMCSRs consistent with the manufacturing standards in the FMVSS Nos. 105 and 121. It requires automatic brake adjusters and brake adjustment indicators installed on newly manufactured CMVs in accordance with those manufacturing standards to be maintained by the motor carriers operating those vehicles. The FHWA believes that promulgation of this final rule is necessary to assure that the safety benefits of the NHTSA rule are fully realized. Based on the NHTSA's research, the FHWA believes that operation and maintenance costs of the automatic brake adjusters and adjustment indicators required under the new FMVSSs will be lower than costs of the devices previously required. It is anticipated that the economic impact of this rulemaking will be minimal; therefore, a full regulatory evaluation is not required.

Regulatory Flexibility Act

In compliance with the Regulatory Flexibility Act (5 U.S.C. 601–612), the FHWA has evaluated the effects of this rule on small entities. This rule modifies the operational standards for brakes in the FMCSRs to make them consistent with the manufacturing standards in the FMVSS Nos. 105 and 121, which now require the installation of automatic brake adjusters and adjustment indicators on certain newly-manufactured CMVs. Under this final rule, motor carriers are only required to maintain these devices. The final rule does not impose a retrofitting requirement for vehicles manufactured prior to the effective date of the NHTSA's rules. This is consistent with other requirements linking the FMCSRs to the FMVSS Nos. 105 and 121. The FHWA believes that operation and maintenance costs of the vehicles equipped with automatic brake adjusters and adjustment indicators will be lower than costs of the manual devices previously required. Therefore, the FHWA hereby certifies that this action would not have a significant economic impact on a substantial number of small entities.

Executive Order 12612 (Federalism Assessment)

This action has been analyzed in accordance with the principles and criteria contained in Executive Order 12612, and it has been determined that this action does not have sufficient federalism implications to warrant the preparation of a federalism assessment.

To be eligible for Motor Carrier Safety Assistance Program funds, a State's regulations for interstate transportation must be the same as the FMCSRs and Federal Hazardous Materials Regulations. Regulations for intrastate transportation may be at variance only so long as they fall within the parameters of the Tolerance Guidelines in 49 CFR part 350, Appendix C.

The FHWA intends to provide training and informational materials to the States to aid them in this process. The FHWA works with the Commercial Vehicle Safety Alliance on training and enforcement issues, and will continue to do so.

Paperwork Reduction Act

This action does not contain a collection of information requirement for purposes of the Paperwork Reduction Act of 1980, 44 U.S.C. 3501 *et seq.*

National Environmental Policy Act

The agency has analyzed this action for the purpose of the National Environmental Policy Act of 1969 (42 U.S.C. 4321 *et seq.*) and has determined that this action would not have any effect on the quality of the environment.

Executive Order 12372 (Intergovernmental Review)

Catalog of Federal Domestic Assistance Program Number 20.217, Motor Carrier Safety. The regulations implementing Executive Order 12372 regarding intergovernmental consultation on Federal programs and activities apply to this program.

Regulation Identification Number

A regulation identification number (RIN) is assigned to each regulatory action listed in the Unified Agenda of Federal Regulations. The Regulatory Information Service Center publishes the Unified Agenda in April and October of each year. The RIN in the heading of this document can be used to cross reference this action with the Unified Agenda.

List of Subjects in 49 CFR Part 393

Freight transportation, Highway safety, Highways and roads, Motor carriers, Motor vehicle safety.

In consideration of the foregoing, the FHWA is amending title 49, Code of Federal Regulations, part 393, as follows:

PART 393—[AMENDED]

1. The authority citation for part 393 is revised to read as follows:

Authority: Section 1041(b) of Pub. L. 102–240, 105 Stat. 1914, 1993 (1991); 49 U.S.C. 31136 and 31502; 49 CFR 1.48.

2. In subpart C, § 393.53 is added to read as follows:

§ 393.53 Automatic brake adjusters and brake adjustment indicators.

(a) *Automatic brake adjusters (hydraulic brake systems).* Each commercial motor vehicle manufactured on or after October 20, 1993, and equipped with a hydraulic brake system, shall meet the automatic brake adjustment system requirements of Federal Motor Vehicle Safety Standard No. 105 (49 CFR 571.105, S5.1) applicable to the vehicle at the time it was manufactured.

(b) *Automatic brake adjusters (air brake systems).* Each commercial motor vehicle manufactured on or after October 20, 1994, and equipped with an air brake system shall meet the automatic brake adjustment system requirements of Federal Motor Vehicle Safety Standard No. 121 (49 CFR 571.121, S5.1.8) applicable to the vehicle at the time it was manufactured.

(c) *Brake adjustment indicator (air brake systems).* On each commercial motor vehicle manufactured on or after October 20, 1994, and equipped with an air brake system which contains an external automatic adjustment mechanism and an exposed pushrod, the condition of service brake under-adjustment shall be displayed by a brake adjustment indicator conforming to the requirements of Federal Motor Vehicle Safety Standard No. 121 (49 CFR 571.121, S5.1.8) applicable to the vehicle at the time it was manufactured.

Issued on August 30, 1995.

Rodney E. Slater,

Federal Highway Administrator.

[FR Doc. 95–22077 Filed 9–5–95; 8:45 am]

BILLING CODE 4910–22–P