

**federal register**

n-96-01  
III-A-2

TUESDAY, OCTOBER 29, 1974.

WASHINGTON, D.C.

Volume 39 ■ Number 209



PART III

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**ENVIRONMENTAL  
PROTECTION  
AGENCY**

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**MOTOR CARRIERS  
ENGAGED IN  
INTERSTATE  
COMMERCE**

**Noise Emission Standards**

Title 40—Protection of Environment  
CHAPTER I—ENVIRONMENTAL  
PROTECTION AGENCY

[FRL 201-0]

PART 202—MOTOR CARRIERS ENGAGED  
IN INTERSTATE COMMERCE

On July 27, 1973 notice was published in the Federal Register (38 FR 20102) that the Environmental Protection Agency (EPA or Agency) was proposing noise emission standards for motor carriers engaged in interstate commerce.

The purpose of this notice is to establish final noise emission standards for motor carriers engaged in interstate commerce by establishing a new Part 202 of Title 40 of the Code of Federal Regulations. This final rulemaking is promulgated pursuant to section 18 of the Noise Control Act of 1972; 86 Stat. 1234; Public Law 92-574.

INTRODUCTION

In section 2 of the Noise Control Act, Congress expressed its judgment "that, while primary responsibility for control of noise rests with State and local governments, Federal action is essential to deal with major noise sources in commerce, control of which require national uniformity of treatment." As a part of this essential Federal action, section 18 requires the Administrator to promulgate noise emission regulations for motor carriers engaged in interstate commerce. Such motor carriers include common carriers by motor vehicle, contract carriers by motor vehicle and private carriers of property by motor vehicle as these terms are defined by paragraphs (a) (14), (a) (15), and (a) (17) of section 303 of the Interstate Commerce Act [49 USC 303(a)]. After the effective date of a regulation under section 18, applicable to noise emissions resulting from the operation of any motor carrier engaged in interstate commerce, no State or political subdivision thereof may adopt or enforce any standard applicable to the operation of the same equipment of such motor carrier, unless such standard is identical to a standard applicable to noise emissions resulting from such operation prescribed by these regulations. The Administrator, after consultation with the Secretary of Transportation may, however, determine that the State or local standard, control, license, regulation, or restriction is necessitated by special local conditions and is not in conflict with regulations promulgated under section 18. Procedures for State and local governments to apply under section 18(c) (2) of the Act will be published by this Agency within 120 days of promulgation of this regulation.

The EPA regulations promulgated under section 18 are to include "noise emission standards setting such limits on noise emissions resulting from operation of motor carriers engaged in interstate commerce which reflect the degree of noise reduction achievable through the application of the best available technology taking into account the cost of compliance." These final

regulations are being promulgated following consultation with the Secretary of Transportation to assure appropriate consideration for safety and for availability of technology. The Administrator, after consultation with the Secretary of Transportation, has determined that the regulations are to take effect one year after promulgation in order to permit the development and application of the requisite technology. Appropriate consideration has been given to the cost of compliance within the one year period.

The regulations promulgated under section 18 may be revised from time to time, in accordance with subsection 18(a). They shall be in addition to any regulations proposed for new motor vehicles under section 8.

Section 18 of the Noise Control Act reflects the desire of Congress to protect both the public health and welfare and interstate commerce through the establishment of uniform national noise emission regulations for those operations of interstate motor carriers which require national uniformity of treatment in order to facilitate interstate commerce. Such treatment is requisite for those operations of interstate motor carriers which would be burdened by conflicting State and local noise controls. Preemption under section 18 occurs only for State or local noise regulations on operations of interstate motor carriers for which Federal regulations are in effect.

After final interstate motor carrier noise emission standards have been promulgated by EPA and after consulting with the Administrator of EPA, the Secretary of Transportation is responsible for promulgating regulations to insure compliance with the EPA standards. This will be accomplished through the use of the Secretary's powers and duties of enforcement and inspection as authorized by the Interstate Commerce Act, the Department of Transportation Act, and the Noise Control Act of 1972.

In March 1974, in accordance with section 5(a) (2) of the Noise Control Act of 1972, EPA published a document in which levels of environmental noise requisite to protect public health and welfare were identified.

Recognizing that the Noise Control Act was enacted to protect the public from adverse health and welfare effects due to noise, EPA is carrying out its regulatory responsibilities for abating noise from motor carriers through regulatory actions under sections 6 and 18, in particular, of the Act. These regulatory actions are in consonance with the levels identified in the March 1974 document, considering the mandated constraints of available technology and cost of compliance.

Studies have been performed to measure the noise levels in residential areas and to estimate the number of people subjected to noise in those areas. The data collected clearly indicate that motor vehicles are the principal source of environmental noise in urban residential areas. Accordingly, EPA has developed a regulatory strategy that places high

priority on the control of motor vehicle noise.

The Noise Control Act contains two sections of primary importance for the control of motor vehicle noise. Section 6 contains authority by which EPA may promulgate noise emission performance standards for new motor vehicles that are applicable at the time of sale of such vehicles. Section 18 of the Act requires EPA to promulgate noise emission regulations for motor carriers engaged in interstate commerce.

Accordingly, EPA has developed and is now implementing a motor vehicle noise control strategy based on sections 6 and 18 of the Act that should prove to be effective in reducing environmental noise from motor carriers in many areas to the levels identified as protective of public health and welfare. The strategy calls first, for the reduction, within one year of the promulgation of these regulations under section 18, of the noise from vehicles over 10,000 pounds GVWR or GCWR operated by motor carriers engaged in interstate commerce, to the lowest noise level consistent with the noise abatement technology available for retrofit application during the one year period, taking into account the cost of compliance.

Subsequently, under section 8, new product noise emission standards will be proposed for medium and heavy duty trucks. It is contemplated that the new product standards will be maintained for new trucks beyond the initial point of sale and through subsequent modification to these Initial Interstate Motor Carrier Regulations to require that vehicles manufactured to comply with new product performance standards and used in interstate commerce shall maintain noise emission levels during operation which are consistent with noise abatement technology available and required at the time of manufacture.

Additionally, it is anticipated that the performance standards in the Interstate motor carrier regulations relating to older vehicles will be made more stringent as more advanced retrofit technology becomes available and the cost of compliance permits.

A number of component changes required for compliance with the regulations could potentially affect the consumption of fuel, but overall, these regulations are expected to have a negligible effect on fuel consumption. The installation of a muffler suitable for attaining the noise abatement levels prescribed by these regulations could result in an increase in the back pressure on the engine and in turn increase the fuel consumption. Considering the wide variety of mufflers available, however, a significant increase in back pressure is avoidable. For those trucks requiring installation of a quieter, more efficient fan, the amount of engine power wasted may be reduced, and the addition of a thermostatically controlled fan clutch on some trucks may decrease fuel consumption by 1 to 1.5 percent.

If the installation of a suitable muffler increases engine back pressure, it can cause a change in the composition of the

emission of gaseous air pollutants. However, since a significant increase in back pressure is avoidable and undesirable from a truck performance standpoint, no significant increase in engine back pressure is anticipated as a result of these regulations. Accordingly, these regulations are not expected to have any significant effect on motor vehicle air pollutant emissions.

The legal basis and factual conclusions which support promulgation of this regulation were set forth in substantial detail in the notice of proposed rulemaking published in the Federal Register on July 27, 1973 (38 FR 20101). This publication solicited public comment, with the comment period extending from July 27, 1973 to September 10, 1973.

On November 7, 1973, a notice was published in the Federal Register (38 FR 23869) announcing the availability of the "Background Document to the Proposed Interstate Motor Carrier Regulations" and further soliciting public comment. This comment period extended from November 7, 1973 to December 5, 1973.

To ensure that all the issues involved in the proposed regulations had been fully addressed prior to the promulgation of final regulations, a public hearing was held on March 20 and 21, 1974 in Washington, D.C. The principal issues reviewed at this meeting related to the adequacy of the available technology to meet requirements in the proposed standards and the impact of Federal preemption of State and local noise regulations by these Federal Regulations. The transcript of this hearing, plus additional materials submitted for the record, constitute a third body of public comment. This comment period extended from March 21, 1974 to April 4, 1974.

Public comments received during each of the three public comment periods are maintained at the EPA headquarters, 401 M Street SW., Washington, D.C. 20460 and are available to the public during normal working hours (Monday to Friday, 9 am to 4:30 pm).

**SUMMARY OF COMMENTS RECEIVED**

The EPA has considered carefully all of the comments received and a discussion of these comments with the Agency's response thereto follows:

(1) Some commenters requested clarification of the types and numbers of vehicles subject to the regulations.

The Agency has addressed further in this preamble the types of vehicles to which these regulations are applicable. The number of vehicles subject to these regulations may be identified through the definition of "interstate commerce" used in these regulations.

The definition of "interstate commerce" contained in section 203(a) of the Interstate Commerce Act was adopted in relevant part by EPA. Section 203(a) of that Act is cited in the Noise Control Act of 1972 as defining the term "motor carrier" and is considered to be appropriate for defining "interstate commerce," as used in these regulations. Section 203(b) (3) of the In-

terstate Commerce Act expressly exempts the operation of carriers within the commercial zone of an interstate metropolitan area. EPA has not adopted such commercial zone exemption since the Noise Control Act of 1972 does not refer to section 203(b). Thus, a motor carrier will be subject to these regulations if it transports commodities which cross state lines.

There are approximately 5.2 million motor vehicles over 10,000 pounds GVWR/GCWR in the existing fleet, many of which are not involved in interstate commerce as defined in the regulations. The number of motor vehicles actually engaged in interstate commerce as defined is not accurately known. The Agency believes that most commercial vehicles will, by definition of interstate motor carrier, be found to be subject to these regulations. Further, the Agency has conservatively assumed that all 5.2 million registered trucks could be subject to this interstate motor carrier regulations.

(2) Four commenters indicated that further classification of motor vehicles into categories over 10,000 pounds and promulgation of standards for each category would be desirable. Six commenters indicated that further classification would be neither meaningful nor desirable.

Studies performed for EPA indicate that motor vehicle mean noise levels increase with vehicle size (or number of axles) and speed. Accordingly, standards are being promulgated for both high and low speed motor vehicle operations in order to quiet both engine-related noise and tire noise. The Agency considered the development of classification scheme for trucks based on variations in weight and number of axles. This was done in order to permit consideration of requiring the use of "best available technology" as it might apply to trucks of varying configurations. Although there is a difference between the mean noise levels of medium and heavy duty trucks, it was found that there is considerable overlap in the distributions of noise levels of trucks of different sizes and that meaningful classification of vehicles at speeds under 35 MPH within the 10,000 pound GVWR/GCWR category is not practical at this time. The basic problem is that noisy propulsion systems are not confined to heavy duty trucks. Many truck manufacturers offer, and have traditionally sold, the same diesel engines in trucks having two or three axles, and due to the rise in fuel prices, more and more medium duty trucks are expected to be built with diesel engines, which until recently were installed primarily in heavy duty trucks. The non-existence of a breakpoint with regard to propulsion system selection has also characterized the use of noisy gasoline engines.

An analysis of the feasibility of classifying trucks at speeds over 35 MPH indicated that 88 dB(A) could likely be achieved by two-axle vehicles, since they use fewer tires than multi-axle combination vehicles. However, the analysis of the environmental impact of the high speed standard indicated that highway

noise levels are determined almost entirely by the noise levels of the heaviest trucks (those with four and five axles). In the Agency's analysis, the requirement of an 88 dB(A) limit on two-axle trucks above 10,000 pounds GVWR, and an 82 dB(A) limit on all passenger cars and light trucks, in addition to the coverage imposed by the proposed standards, was shown to produce essentially no further decrease in highway noise levels beyond that of the proposed standards. The Agency will, however, continue its activities in endeavoring to identify particular classifications of vehicles which will permit additional noise quieting considering available technology and the costs of compliance. Accordingly, no change has been made at this time in the proposed standards in the regulations.

(3) Several commenters recommended modifications in the coverage of the regulations with regard to the vehicle weight rating. Some commenters recommended the addition of light duty vehicles under 10,000 pounds GVWR, while other commenters recommended that medium duty vehicles above 10,000 pounds GVWR be excluded from coverage in the regulations.

The Agency analyzed the effect of limiting coverage to motor vehicles over 26,000 pounds GVWR, or to motor vehicles having three or more axles because several States had requested that coverage be limited in order that more stringent State regulations could be applied to vehicles under 26,000 pounds GVWR. Limiting coverage to motor vehicles over 26,000 pounds GVWR would potentially exclude 56 percent of all trucks over 10,000 pounds GVWR from Federal regulations. Limiting coverage to motor vehicles with more than two axles would exclude approximately 73 percent of all trucks over 10,000 pounds GVWR from Federal regulation.

Even though only about 3 percent of all two-axle trucks over 10,000 pounds GVWR exceed 86 dB(A) at speeds under 35 MPH, or 90 dB(A) at speeds over 35 MPH, the actual number of trucks exceeding the standards is not small. The intent of section 18 is clearly to provide nationwide noise regulation for vehicles involved in interstate commerce. Further limitation of coverage would allow medium duty trucks involved in interstate commerce to go unregulated in many States. The Agency has determined that at this time all trucks over 10,000 pounds GVWR operated in interstate commerce should be subject to Federal regulations.

Prior to proposing regulations applicable only to vehicles over 10,000 pounds GVWR/GCWR, the Agency analyzed both the relative noise contribution to traffic noise levels and the typical use patterns of different kinds of motor vehicles. Light trucks and automobiles were separated from medium and heavy duty trucks for the analysis because they have a higher power-to-weight ratio, they are quieter in normal operation and they have different uses than larger vehicles.

The data resulting from the analysis clearly indicated that medium and heavy duty motor vehicles contribute the most sound energy to the environment of any highway vehicles and that any individual medium or heavy duty truck will typically be perceived to be louder than other motor vehicles.

In addition to their higher noise emissions, medium and heavy duty motor vehicles are distinguished from lighter vehicles by their typical use for long distance intercity and interstate hauling. They are, therefore, operated many more miles per year on the average than light duty vehicles which are normally used for general service and delivery work within a relatively small area.

Additionally, medium as well as heavy duty motor vehicles operated by interstate motor carriers are, in significant numbers, constantly in transit between different jurisdictions, and it would be impractical for them to comply with a different noise emission standard in different jurisdictions. Thus, "medium duty" as well as "heavy duty" motor vehicles operated by interstate motor carriers are construed by the Agency to be major noise sources in commerce, control of which require uniform national treatment under section 18 of the Noise Control Act.

Conversely, since light duty vehicles are typically used for general service and delivery work within relatively small areas and are not usually subject to the noise emission regulations of many different jurisdictions, national uniformity of treatment of the noise emission resulting from their operation does not appear necessary at this time.

The specifications of a precise delineation between "light duty" or "small" vehicles and "medium and heavy duty" vehicles for purposes of regulation is largely an exercise of technical judgment. EPA has chosen to make that delineation at 10,000 pounds GVWR/GCWR in these regulations.

A break at 10,000 pounds GVWR/GCWR is convenient because most States use that weight rating as a distinction in their vehicle registration categories. The Department of Commerce and the Motor Vehicle Manufacturers Association divide light duty and medium duty vehicles at that weight rating. In addition, it is a standard weight category distinction used by the Department of Transportation (DOT) in their safety regulations, and compatibility of the Interstate Motor Carrier Regulations with the present DOT weight categories is advantageous because DOT is the Federal enforcement agent. However, if in the future it appears that the coverage of the Interstate Motor Carrier Regulations should be changed, these regulations may be revised pursuant to subsection 18(a).

Additional wording under the Applicability section of the regulations and clarification within the preamble has been added in response to these comments.

(4) Certain industry and environmental groups questioned whether the

data collected in three States (California, Washington, and New Jersey) were representative of nationwide truck noise levels.

The Agency, in order to verify previous estimates of potential nationwide violation rates, has reviewed new highway noise survey data collected in Colorado, Illinois, Indiana, Kentucky, Maryland, New York, Texas and Pennsylvania. These States, together with California, Washington, and New Jersey, contain over one-third of the total number of trucks registered in the United States.

The data indicate that in some areas as few as five percent of the trucks measured exceed the 90 dB(A) level, while in other areas the percentage of trucks measured above the 90 dB(A) level may be as high as 55 percent. The areas reflecting the higher percentages directly correspond to those areas in which the greatest percentage of heavy duty trucks operate. In areas in which a small percentage of heavy duty trucks operate, or areas in which State and local noise regulations are already being enforced, a smaller percentage of trucks are expected to violate the standard.

On a nationwide basis approximately 23 percent of the trucks measured in the above cited studies exceed 90 dB(A) at highway speeds. The preamble to the proposed rule-making had estimated 19 percent of the trucks measured would exceed 90 dB(A) at highway speeds based on a much more limited data base than is now available.

Further analysis was completed relating measured truck highway passby noise levels to medium and heavy duty motor vehicle State registration data. Results indicate that approximately seven percent of the registered in-service motor vehicles over 10,000 pounds GVWR will exceed 90 dB(A) at highway speeds when measured at typical roadside sites. The difference between measured highway passby violation rates and predicted violation rates for registered vehicles is due to the difference in over-the-road operating times for interstate motor vehicles which is higher than those of other vehicles. For example, 5-axle combination trucks average 63,000 miles per year while single unit trucks average less than 11,000 miles per year. The new data is presented in the Background Document to this Final Rule-making.

There has been no change in the basis on which the regulations were originally proposed, and thus no change in the regulation has been made as a result of the new data or these comments.

(5) Some commenters expressed concern that the Agency had underestimated the costs to the trucking industry of compliance with these regulations. Agency estimates of costs are based on the actual expenditures in 1973 of \$50-200 that were required to retrofit vehicles to comply with State and local noise standards identical to the standards in these regulations. The average cost estimate of \$114 for motor vehicles in violation of similar standards in 1973 was based to a large extent on a thorough

evaluation of data describing the actual modifications made on some 7,000 medium and heavy duty trucks.

Since prices of most commodities and services have risen over the past year, and appear likely to continue to rise in the next year, the average retrofit cost can be expected to rise as well. Accordingly, the Agency believes that a reasonable average retrofit cost estimate for 1975 will be \$135 per applicable motor vehicle requiring retrofit in order to meet the standards.

The Agency estimates that approximately one million motor vehicles over 10,000 pounds GVWR are engaged in interstate commerce and that seven percent of them would require retrofit at an average cost of \$135 per vehicle. The total direct retrofit cost to the trucking industry is therefore estimated to be \$95 million.

However, if, as a worst case, it is assumed that all 5.3 million motor vehicles above 10,000 pounds GVWR would be required to meet the standards, then the total direct retrofit cost to the trucking industry could be as high as \$56 million assuming 8 percent required retrofit.

The Agency is of the opinion that a retrofit cost of \$135 per vehicle does not constitute a major burden for the interstate motor carrier industry. For a truck running 50,000 revenue miles per year a \$135 retrofit cost represents, an increased expense of \$.003 per revenue mile when amortized over a single year. This increase may be compared with the 1970 average expense of the industry of \$1.20 per revenue mile.

From a review of the estimated number of vehicles which will require some degree of retrofit, the costs of such retrofit, and the costs to the industry, the Agency does not believe that the anticipated retrofit requirement costs are as stringent as to preclude the promulgation of these noise emission standards as required by the Act.

The high speed standard exceeds the low speed standard only by the noise differential associated with the increase in tire noise at higher speeds. Considerable high speed noise reduction can be obtained through the replacement of "pocket retread" tires by crossbar tires at no increase in cost or loss of performance. A four decibel margin has been added to the 86 dB(A) low speed standard in order to take tire noise into account at high speeds. Actual experience indicates that this will require the elimination of some crossbar tires on some heavy trucks that have a very large number of axles. However, it should still be possible for these trucks to operate with crossbar tires on the drive axles.

One industry association has indicated that the total direct and indirect costs of compliance might be as high as \$150 million. No data have been submitted to support this estimate, but even should this estimate be correct the Agency does not believe it represents an unreasonable burden.

(6) Several industry commenters indicated that 86 dB(A) at speeds under 35 MPH was too stringent and unachievable within one year, while other indus-

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try commenters stated that such standards were feasible.

EPA believes that a noise level of 86 dB(A), measured at typical roadside sites, similar to those used in the surveys described in Section 4 of the Background Document, is achievable within one year through the use of best available technology by almost all medium and heavy duty trucks in the existing fleet. Trucks are already being retrofitted to reach 86 dB(A) for this condition as a result of noise regulations enacted in several States. Additionally, at least one major truck manufacturer has indicated its intention to work with suppliers to develop a retrofit noise control package to bring older trucks into compliance with noise standards already proposed or which are being anticipated for the future. It is also achievable by buses, since they use the same engines and tires as trucks.

Most trucks currently exceeding 86 dB(A) at speeds below 35 MPH require only the addition of a muffler where none was being used before, or the replacement of a now defective muffler in order to be in compliance. Muffler manufacturers have testified in public hearings that adequate mufflers can be available in sufficient numbers to permit compliance of all trucks with these Interstate Motor Carrier Regulations within one year of promulgation.

(7) Three industry commenters indicated that more than a muffler improvement would be needed for their trucks to meet the 86 dB(A) and 90 dB(A) levels.

There is no disagreement with the comment since all sources of noise from the various components are intended to be included. The regulation is not directed at noisy mufflers alone. The economic analysis considered the total problem of retrofit. The Agency indicated in the Background Document to the proposed rulemaking that ten percent of all vehicles in violation of the proposed regulations might require retrofit of all or part of the fan installation and that five percent would need minor work on the air intakes system. The Agency also indicated that approximately two percent of the in-use heavy duty diesel fleet that is in violation might be uneconomical to retrofit, and considered this to be reasonable in terms of "cost of compliance." Industry commenters have indicated that the two percent number is low. However, no specific data has been provided by such commenters, nor is additional information available to EPA which supports a higher national percentage estimate of vehicles which will not be economical to retrofit.

(8) Two commenters indicated that the regulations permit quiet vehicles to become noisier through the use of minimally effective replacement mufflers. Three commenters indicated that this did not appear to have occurred in States having similar regulations.

Since, at the present time, a large proportion of medium-duty vehicles have noise levels that are considerably below 86 dB(A) at speeds above 35 MPH, it has been suggested that upon promulgation

of these regulations, an increase in the sound level of these vehicles could occur. However, since at present several States enforce noise regulations equal to the proposed Federal regulations, while in most States vehicle noise is currently unregulated, there is no a priori reason to believe that the change from the current situation to one of Federal regulation should cause any vehicle to become noisier than it would be otherwise.

The available data indicate that promulgation of similar State regulations in the past may well have resulted in a further reduction of the noise emissions of trucks that were already below 90 dB(A) at speeds above 35 MPH prior to State regulation. Therefore, the Agency has no reason to believe that quiet vehicles will become noisier after the passage of noise regulations.

Nevertheless, the Agency is interested in this potential problem, and in the event that future studies of the noise levels of motor vehicles to which these regulations are applicable indicate that motor carriers are, for example, using replacement mufflers that are inferior to original equipment, regulations may be developed to label mufflers, or these regulations may be revised to require the use of mufflers comparable or superior to original equipment.

The Agency is aware that muffler manufacturers currently provide information to purchasers so that they will be able to comply with State and local regulations. EPA supports such voluntary activities. However, it is desirable that such information on the noise abatement characteristics of mufflers be provided to consumers in a uniform manner. Accordingly, the Agency may review these activities under section 8 of the Noise Control Act to insure that a uniform measurement methodology is used to present muffler attenuation characteristics, either voluntary or through regulations promulgated pursuant to section 8.

The Agency believes that the retention of the proposed section which requires that motor vehicles to which these regulations are applicable be equipped with an adequate exhaust system is sufficient and appropriate at this time.

(9) Numerous comments were received regarding "special local conditions." Industry commenters felt strongly that there should be one uniform national standard. Some States and localities felt that "special local conditions" should be interpreted broadly, and some commenters felt that where stricter State and local standards were feasible they should not be preempted by Federal regulations.

The Agency believes that section 18(c)(2) is intended to provide certain limited relief from a national uniform standard due to "special" local conditions. Conversely, section 18(a) calls for national uniform standards which could be significantly diluted through an overly broad interpretation of what constitutes special local conditions. The Administrator, under section 18(c)(2) of the Act, will make specific case-by-case determinations which in his judgment balance

the need for national uniform standards against the need for exceptions to the national regulations in some particular situations.

(10) Several commenters stated that the Stationary Run-Up Test should be the only standard in the regulations. Another commenter expressed concern about data which appeared to show a poor correlation between stationary and pass-by test results, and between the results of repeated stationary tests of the same vehicle.

The Agency has specified both stationary and pass-by tests in the regulations in order to provide the flexibility needed for enforcement at Federal, State, and local levels. Since it is the opinion of EPA that the tests correlate well, the existence of more than one test should not constitute any additional burden on the trucking industry. Some data submitted suggest that the stationary run-up test is not a reliable test procedure. The data appear to reflect the results of a series of tests which are not representative of either the prescribed stationary run-up test or the SAE J-368a test when these tests are performed according to the required procedures. Previous data compiled by the Society of Automotive Engineers on 877 trucks are presented in the Background Document and show a good correlation between the tests. Accordingly, the Agency has retained both tests in the regulations.

(11) Comments received indicate that confusion has arisen over whether the 86 dB(A) limit included in the under 35 MPH standard refers to measurements taken according to conditions specified under SAE J368a or to measurements taken under typical roadside conditions.

The passby standards are intended to apply without the use of acoustic correction factors for surface absorption so long as the highway is paved and the surface between the microphone and highway or highway shoulder is unpaved. These standards are intended to be "reference values" for typical sites which are available to enforcement officers. Sites of this type were used in the collection of data which the Agency has used to predict the number of vehicles which emit noise in excess of the levels specified in the standards.

The standards are defined with sufficient particularity that their stringency is established for all practical purposes. EPA anticipates that the compliance regulations of the Department of Transportation will include a measurement methodology which contains correction factors for variation in site conditions. Such correction factors would make practical enforcement feasible at more sites and would thereby enhance the effect of the noise standards.

EPA has determined that technology is available to quiet trucks to 86 dB(A) as measured on a typical open roadside site. In actual practice, enforcement of the noise emission standards contained in these regulations may occur on sites

having surfaces that range from fully paved between the source and the microphone (hard site) to largely grass between road edge and microphone (soft site).

Specific measurement methodology was not included in the proposed regulations as, under the Act, the DOT has the responsibility after consultation with EPA, for promulgating compliance regulations; specific measurement methodology is more appropriately addressed by that Department through their regulatory responsibility. EPA has indicated the rationale used to specify the sound levels in the standards and anticipates that the DOT compliance regulations will be consistent with this rationale.

The stationary run-up test is a means of determining maximum propulsion system noise. A vehicle propulsion system which emits a given sound power by this test will typically emit that same value in use when power requirements are maximum for conditions of load, acceleration, and grade on a hard surface open site. Trucks sometimes exhibit slightly different noise levels when tested according to both the stationary run-up tests and SAE J366a, but the correlation between the two tests is sufficient to establish their equivalency.

The motor carrier regulation includes three different tests which enforcement agents may choose to use as best meets their circumstances. Motor carriers may thus encounter any or all of these tests from time to time. These three tests are intended to be equally stringent, so that those vehicles which meet the requirements of one test should have little or no difficulty with the others. An exception to this relation is intended: If a vehicle is equipped with tires which emit more noise than does its propulsion system, the vehicle noise could exceed the standard for high speed but be within the limits of the other two standards.

There are two roadside pass-by tests, one for speed zones of 35 MPH and less the other for speed zones of over 35 MPH. There is not a high correlation to be expected in absolute noise levels measured in the two speed ranges because the noise sources may be different, i.e., propulsion system noise dominating at low speeds and tire noise at high speeds. The high speed standard is 4 dB higher than the low speed standard because the maximum noise including tires is a function of vehicle speed. The intent of the regulation is to limit maximum propulsion system noise to the same level in both speed zones, but to provide a necessary additional margin to account for tire noise.

The comprehensive surveys conducted by EPA show that the noise level standards applicable to the two speed zones are equally stringent in that equal numbers of vehicles are out of compliance at the regulatory noise limits.

The Society of Automotive Engineers' J366a test, which is currently performed by many vehicle manufacturers, their customers, and their suppliers, is wholly unsuitable for use in roadside enforcement of a motor carrier regulation be-

cause of its technical requirements. However, the J366a test correlates well with the Stationary Runup test of these regulations. This enables a comparison to be made between the methodology used by industry and the requirements of the regulation.

The stationary standard is stated as 88dB(A) while the low speed standard is 86dB(A) because of the different measurement sites expected to be used. EPA could have stated both standards as equal numbers if both were to be implemented on pavement on a hard site or both on grassy, or soft sites. This number would have been the same if the J366 maximum noise test were included in the standards. In a tabular form the relation is:

	Stationary runup	Max-noise low speed passby	J366a
Hard site.....	88	88	88
Soft site.....	86	86	86

(12) Four commenters indicated that the proposed regulations were not adequate to protect public health and welfare.

The noise emission standards impact directly upon those motor vehicles which presently make the most noise. The principal noise reduction will be of the intrusive noise peaks which have been widely acknowledged as more objectionable to people than much lower levels of continuous noise. These peaks can be 12 dB or more above ambient highway noise levels. Therefore, significant noise reduction benefits will be realized by the effective date of these regulations, producing substantial benefits in terms of public health and welfare as indicated by a decrease in community noise levels near highways.

In a study performed under contract to the Agency Ldn (day-night sound level) values were computed for an interstate highway, using hourly traffic volume statistics submitted by the Maryland Department of Transportation. The baseline Ldn was computed using actual distributions of noise levels for various classes of trucks as measured in Maryland. The results of the study indicated that a 90 db(A) limit for all trucks above 10,000 lbs (GVWR/GCWR) will produce a 3.8 dB(A) decrease in Ldn for a typical Eastern U.S. Interstate Highway. This represents a decrease of about 50 percent in the average sound energy near the highway.

As mentioned above, these regulations should not be considered alone, but only as a first step in quieting motor vehicle noise. Under the specific requirements of section 18(a) the Agency believes that these regulations meet the intent of both this section and of the Noise Control Act as a whole, and no change has been made as a result of these comments.

(13) Two commenters stated that the regulations were insufficient because truck in-cab noise levels were not addressed. The Agency believes that the intent of section 18 is to set limits on motor vehicle, exterior noise emissions,

not to regulate in-cab noise levels. The Bureau of Motor Carrier Safety of the Department of Transportation has established an in-cab noise level standard. Under the Agency's authorities as defined by section 4 of the Noise Control Act, which states that EPA is to coordinate all Federal programs relating to noise research and control, EPA will coordinate with that Department in any future revision of their in-cab noise level. Accordingly, as no in-cab noise level is called for here, none has been set.

(14) Two commenters indicated that the C scale would be more appropriate for this regulation than the A scale.

It has been argued that the A-weighted sound level discriminates against low frequencies and, thus, should be replaced by C-weighted sound level. However, the ear also discriminates against low frequencies so that at low frequencies the sound pressure level must be comparatively high before it can even be heard. Since the correlations between A-weighted sound level and human response are consistently better than that obtained with the C-weighted sound level, EPA believes that the measurement procedures using the A scale on which these regulations are based are appropriate, and therefore, no change has been made.

(15) There were a number of comments from State and local governments, private citizens, and industry relating to enforcement. Numerous recommendations were offered for what measurement sites, equipment, tolerances, etc., should be used, and many industry commenters reserved the right to comment on measurement procedures adopted for enforcement purposes. EPA will bring these comments and recommendations to the attention of the Department of Transportation which is the Agency responsible for enforcement procedures.

(16) Several commenters recommended further clarification of the specific applicability of the standards to motor vehicle auxiliary equipment.

Some types of auxiliary equipment used on vehicles operated by motor carriers are necessary for the comfort or safety of passengers, or for the preservation of cargo. These noise control standards are applicable to these types of equipment and for the purpose of these regulations such auxiliary equipment constitute essentially refrigeration or air conditioning units, and concrete mixer bodies and drives. These auxiliary equipment noise emissions are at a level far enough below other significant components of total vehicle noise, as EPA's data indicate, to be masked by other noise sources during normal vehicle highway operation.

EPA has identified other auxiliary equipment as normally being operated only when the transporting vehicle is stationary or moving at a very slow speed, normally less than 5 MPH. Examples of such equipment include cranes, asphalt spreaders, ditch diggers, liquid or slurry pumps, air compressors, welders, and trash compactors. The noise from the operation of such auxiliary equipment is not intended to be covered by these regu-

tations and, therefore, these regulations are not applicable to the noise resulting from the operation of this type of equipment. The transporting vehicle, however, if operated by an interstate carrier and if above 10,000 lbs. GVWR/GCWR, is subject to the Federal noise control regulation when such vehicle is in normal highway operation.

(17) Further clarification of the applicability of these standards to emergency equipment and vehicles is also appropriate. Because of the emergency or safety aspects of their operation these regulations are not applicable to vehicles such as fire engines, ambulances, police vans, and rescue vans when responding to emergency calls. Similarly, these regulations are not intended to apply to snow plow operation.

**CONTINUING AGENCY RESPONSE TO PUBLIC COMMENTS**

As mentioned in the foregoing Agency responses to public comments, additional study is required in a number of areas. EPA will evaluate the impact of these regulations after they become effective through monitoring and other activities, including evaluation of DOT and State enforcement data.

If data collected by or made available to the Agency indicate the existence of any problem curtailing the effectiveness of the regulations, these regulations may be revised subsequent to section 18(a) (2) of the Act.

**REVISION OF THE PROPOSED REGULATIONS PRIOR TO PROMULGATION**

The Interstate Motor Carrier Noise Emission Regulations which are now being promulgated incorporate several changes from the proposed regulations which were published on July 27, 1973. These changes are based upon the public comments received and upon the continuing study of motor carrier noise by the Agency. In all but one instance such changes are not substantial; they are only intended to further clarify the intent of the regulations.

The sole substantive change is the deletion of proposed § 202.12, "Standards for Level Street Operations 35 MPH or Under." This section was originally proposed as it was felt that vehicles which could comply with a standard of 86 dB(A) under any conditions on highways with speed limits of 35 MPH or less could be driven so as to comply with a standard of 80 dB(A) when operated at constant speed on level streets with speed limits of 35 MPH or less. It was the intent of the Agency through this section to thereby regulate the manner of operation of the vehicle, by the driver, without imposing any additional noise reduction requirement to the vehicle proper beyond that needed to meet the 86 dB(A) standard. Substantial questions were raised regarding the validity of the data upon which the standard was based. The Agency, upon review of the relevant data, agrees with the comments and accordingly, the Standards for Level Street Operations section has been deleted.

These changes made to clarify the intent of the regulations, and the reasons therefore, are as follows:

**Section 202.10—Definitions.** The definition of "motor carrier" was expanded to incorporate, by reference, the definition of related terms in paragraphs 14, 15, and 17, of section 203(a) of the Interstate Commerce Act (49 USC 303 A). This treatment more closely follows section 17(d) of the Noise Control Act and thereby insures that any question as to the definition of such related terms will be resolved by reference to the body of law which Congress intended to apply to section 18.

The definitions of "dB(A)," "sound pressure level," and "sound level," were changed slightly to be consistent with the definitions of those terms used in the document, "Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety," issued by the Environmental Protection Agency in March 1974. "Fast meter response" has been expanded for clarity.

"Gross combination weight rating" (GCWR) has been added to avoid any possible confusion over whether the regulation is applicable to combination trucks (i.e., tractor-trailer rigs) over 10,000 pounds weight rating. The provisions of Subpart B of the regulation are applicable to all single and combination vehicles over 10,000 pounds weight rating.

"Interstate commerce" has been modified to insure that any questions as to its scope would be resolved by reference to section 203(a) of the Interstate Commerce Act, consistent with the reference to that Act in section 18(d) of the Noise Control Act.

"Person" has been deleted, since (as discussed below) that word is no longer used in Subpart B of the regulations.

"Street," and "official traffic device," have been deleted, since proposed § 202.13 in which they were used has been deleted.

"Muffler" has been added to simplify the language of proposed § 202.14, "Visual Exhaust System Inspection."

"Open site" has been added to further clarify the standards.

**Section 202.11—Effective Date.** An effective date of October 1, 1974 was originally proposed for the regulations. The intent of the Agency in the notice of proposed rulemaking was that the proposed regulations would become effective one year from the date of promulgation. This intent is retained in this new section.

**Section 202.12—Applicability.** "Applicability" was moved to Subpart A of the final regulations as it is appropriately considered a "general provision" of the regulations. It has been modified to clarify the intent of the Agency that the standards do not apply to noise emission from warning devices or auxiliary equipment mounted on motor vehicles except for refrigeration and air conditioning equipment, and for concrete mixer units and drives. Illustrative examples have been cited for added clarity.

**Subpart B—Interstate Motor Carrier Operations.** The language used in Sub-

part B has been changed from, "no person shall operate," to "no motor carrier subject to these regulations shall operate" and the language in § 202.20 was modified slightly to conform to this change. This change is intended to more accurately reflect the intent of Congress and these regulations, that they are to establish uniform national noise emission regulations for those operations of interstate motor carriers which require such treatment. The revised language clearly imposes sole responsibility for meeting the requirements upon the motor carriers which own and operate the subject motor vehicles. The proposed language, using the broad term "person," would have imposed that responsibility upon the drivers of subject motor vehicles as well as the companies which operate them. "Motor carrier," as defined in these regulations, includes independent truckers who both own and drive their own vehicles.

**Section 202.21—Standards for Operation Under Stationary Test.** The language of this section has been modified to further clarify that it applies only to vehicles which have an engine speed governor. Application of a stationary run-up test to vehicles which are not equipped with engine speed limiting devices could result in engine damage.

**Section 202.22—Visual Exhaust System Inspection.** The intent of the Agency in requiring motor vehicles subject to this regulation to be equipped with exhaust system noise dissipative devices has been further clarified through modification of the language of proposed § 202.14. In addition, the exception to the proposed requirement relating to vehicles with gas driven turbochargers and equipped with engine brakes, which were demonstrated to meet the other standards of Subpart B, has been deleted. Such equipment is included in the term "other noise dissipative device," and therefore need not be treated separately.

**Section 202.23—Visual Tire Inspection.** The intent of the Agency was to specifically preclude the use of "pocket tread" tires which when new are demonstrably noisier without having any accompanying benefit in safety or cost over other types of tires. The proposed § 202.15 has been modified in response to comments by tire manufacturers that the regulation as proposed could have covered some types of tires which are not in fact exceptionally noisy.

**Proposed Section 202.16—Enforcement procedures.** This proposed section has been deleted. As the Noise Control Act places enforcement responsibilities for these regulations with the Department of Transportation, the section as proposed added nothing not specified in the Act.

**Proposed Subpart C—Special Local Conditions Determinations.** The procedure for applying for determinations as called for in section 18(e) (2) of the Act, will be published by EPA as "procedures" and not as part of this regulation. Accordingly, Subpart C has been deleted.

**Preemption.** Under subsection 18(a) (1) of the Noise Control Act, after the ef-



effective date of these regulations no State or political subdivision thereof may adopt or enforce any standard applicable to noise emissions resulting from the operation of motor vehicles over 10,000 pounds GVWR/GCWR by motor carriers engaged in interstate commerce unless such standard is identical to the standard prescribed by these regulations. Subsection 18(c)(2), however, provides that this section does not diminish or enhance the rights of any State or political subdivision thereof to establish and enforce standards or controls on levels of environmental noise, or control, license, regulate, or restrict the use, operation or movement of any product if the Administrator, after consultation with the Secretary of Transportation, determines that such standard, control, license, regulation, or restriction is necessitated by special local conditions and is not in conflict with regulations promulgated under section 18. Procedures for applying for such determinations will be published by the Agency within 120 days.

Conversely, subsection 18(c)(1) does not in any way preempt State or local standards applicable to noise emissions resulting from any operation of interstate motor carriers which is not covered by Federal Regulations. Thus, under the proposed regulations States and localities will remain free to enact and enforce noise regulations on motor carrier operations other than their operation of motor vehicles over 10,000 pounds GVWR/GCWR, without any special determination by the Administrator. Only after a Federal regulation on noise emissions resulting from a particular interstate motor carrier operation has become effective must the States and localities obtain a special determination by the Administrator under subsection 18(c)(2), in order to adopt or enforce their own use restrictions or environmental noise limits on that operation.

Some interstate motor carrier operations on which no Federal noise standards or regulations have become effective, and which may, therefore, be subjected to State and local noise standards without any special determination by the Administrator, may indirectly include motor vehicles which are covered by preemptive Federal regulations. Motor carrier maintenance shops, for example, may from time to time emit the noise of trucks undergoing tests along with noises common to many industrial operations such as forging and grinding; and motor carrier terminals and parking areas include trucks among their many types of noise sources.

In most instances, compliance with State or local standards on non-Federally regulated operations of motor carriers is achievable without affecting the Federally regulated motor vehicles within them. Standards on noise emissions from repair shops, for example, can be met by such measures as improved sound insulation in the walls of the shop, buffer zones of land between the shop and noise-impacted areas, and scheduling the operation of the shop to reduce noise at those times of the day when its impact is most

severe. Standards on motor carrier terminals and parking areas can be met by a variety of steps, including reducing the volume of loudspeaker systems by using a distributed sound system or replacing speakers with two-way radios, reducing noise emissions from equipment which is not covered by Federal regulations, installing noise barriers around noisy equipment, acquiring additional land to act as a noise buffer, and locating noisy equipment such as parked trucks with operating refrigeration equipment as far as possible from adjacent noise-sensitive property. State or local regulations on noise emissions from motor carrier operations which the motor carrier can reasonably meet by initiating measures such as these are not standards applicable to noise emissions resulting from the operation of motor vehicles over 10,000 pounds GVWR/GCWR, and thus would not be preempted by the proposed regulations. No special determination by the Administrator under subsection 18(c)(2) would be necessary. State or local noise standards on operations involved in interstate commerce such as motor carrier terminals are, of course, subject to Constitutional prohibition if they are so stringent as to place an undue burden on interstate commerce.

In some cases, however, a State or local noise regulation which is not stated as a regulation applicable to a Federally regulated operation may be such a regulation in effect, if the only way the regulation could be met would be to modify the equipment which meets the Federal regulation applicable to it. This would be the case, for example, if after the proposed regulations become effective, a State or locality attempted to adopt or enforce a limit on noise emissions from motor carrier terminals in urban areas which could not reasonably be met by measures such as noise barriers or relocating the motor vehicles to which this regulation is applicable. Such regulation would, in effect, require modifications to motor vehicles even though they met the Federal regulations and would thus be a regulation applicable to them which would be preempted under subsection 18(c)(1).

State or local use or operation regulations which are applicable to noise emissions resulting from the operation of Federally regulated equipment and facilities can, of course, stand if the Administrator made the determinations specified in subsection 18(c)(2) regarding them. The same would be true of any State or local standard on motor carrier operations which could not reasonably be met except by modifying motor vehicles which comply with the proposed Federal standards.

State and local regulations on motor carrier operations which are not directed at the control of noise, or which include noise control as only one of many purposes such as safety, traffic control, and the like, are not preempted by subsection 18(c)(1) of the Noise Control Act and require no special determination under subsection 18(c)(2) to be adopted or enforced. Thus, the designation of some

streets as truck routes, and prohibition of trucks from other streets, by State or local governments, are valid without any special determination under subsection 18(c)(2).

**Compliance Procedures.** Compliance procedures are to be developed and promulgated under separate rule making by the Department of Transportation. Such compliance procedures will specify minimum requirements for instrumentation, test sites, and other conditions necessary to insure uniformity in testing and a minimum level of precision.

Enforcement of the standards is contemplated to be more efficient under some conditions if measurements are permitted to be made at distances other than 50 feet under procedures that provide for equivalency to the standards measured at 50 feet.

**Effective Date.** The effective date of these regulations is set as one year from promulgation of these regulations to allow adequate time for interstate motor carriers to make necessary equipment modifications to their motor vehicles during a normal maintenance cycle.

#### BACKGROUND DOCUMENT

Notice of the availability of the Document entitled "Background Document to proposed Interstate Motor Carrier Regulations" was published in the FEDERAL REGISTER on November 7, 1973 (38 FR 23809). This document has been revised and new data have been added. This new Document is quite lengthy, and it would be impractical to publish it in its entirety in the FEDERAL REGISTER. Copies may be obtained from the EPA Public Information Center, PM 215, Room 2104D, Waterside Mall, 4th and M Streets SW, Washington, D.C. 20460. To the extent possible, the significant aspects of the material have been presented in summary form in the foregoing preamble. The topics contained in the Document are the following:

1. The EPA Motor Vehicle Noise Control Strategy.
2. The Technology and Cost of Quietening In-Service Motor Vehicles.
3. The Relationship Between the Standards.
4. Noise Measurement of In-Service Vehicles.
5. The Economic and Environmental Impact of the Regulations.

#### FUTURE PUBLIC COMMENT

If as a result of continuing government studies, or as the result of developments by industry or other institutions, it becomes evident to the Agency that more advanced technology is available, at some reasonable cost within a prescribed compliance period, prompt revision of the regulations will be initiated. Accordingly, comments and recommendations are solicited from all interested persons as to new or advanced technology and its projected cost or on any other topic relevant to these regulations or revisions thereof. Prior to actual formulation of any revision to these regulations, notice of proposed rulemaking will be published so that there may be maxi-



imum contribution to the rulemaking development process by interested parties. Interested persons may submit written data or views to the Office of Noise Abatement and Control, U.S. Environmental Protection Agency, Washington, D.C. 20460.

This regulation is promulgated under the authority of 42 U.S.C. 4917(a), 86 Stat. 1240.

Dated: October 21, 1974.

JOHN QUARLES,  
Acting Administrator.

Part 202 of title 49 shall read as follows:

**PART 202—MOTOR CARRIERS ENGAGED IN INTERSTATE COMMERCE**

**Subpart A—General Provisions**

- Sec. 202.10 Definitions.
- 202.11 Effective date.
- 202.12 Applicability.
- Subpart B—Interstate Motor Carrier Operations Standards
- 202.20 Standards for highway operations.
- 202.21 Standard for operation under stationary test.
- 202.22 Visual exhaust system inspection.
- 202.23 Visual tire inspection.

Authority: Section 18, 86 Stat. 1240, 42 U.S.C. 4917(a).

**Subpart A—General Provisions**

**§ 202.10 Definitions.**

As used in this part, all terms not defined herein shall have the meaning given them in the Act:

(a) "Act" means the Noise Control Act of 1972 (P.L. 92-574, 86 Stat. 1234).

(b) "Common carrier by motor vehicle" means any person who holds himself out to the general public to engage in the transportation by motor vehicle in interstate or foreign commerce of passengers or property or any class or classes thereof for compensation, whether over regular or irregular routes.

(c) "Contract carrier by motor vehicle" means any person who engages in transportation by motor vehicle of passengers or property in interstate or foreign commerce for compensation (other than transportation referred to in paragraph (b) of this section) under continuing contracts with one person or a limited number of persons either (1) for the furnishing of transportation services through the assignment of motor vehicles for a continuing period of time to the exclusive use of each person served or (2) for the furnishing of transportation services designed to meet the distinct need of each individual customer.

(d) "Cutout or by-pass or similar device" means devices which vary the exhaust system gas flow so as to discharge the exhaust gas and acoustic energy to the atmosphere without passing through the entire length of the exhaust system, including all exhaust system sound attenuation components.

(e) "dB(A)" means the standard abbreviation for A-weighted sound level decibels.

(f) "Exhaust system" means the system comprised of a combination of com-

ponents which provides for enclosed flow of exhaust gas from engine parts to the atmosphere.

(g) "Fast meter response" means that the fast dynamic response of the sound level meter shall be used. The fast dynamic response shall comply with the meter dynamic characteristics in paragraph 5.3 of the American National Standard Specification for Sound Level Meters, ANSI S1.4-1971. This publication is available from the American National Standards Institute, Inc., 1430 Broadway, New York, New York 10018.

(h) "Gross Vehicle Weight Rating" (GVWR) means the value specified by the manufacturer as the loaded weight of a single vehicle.

(i) "Gross Combination Weight Rating" (GCWR) means the value specified by the manufacturer as the loaded weight of a combination vehicle.

(j) "Highway" means the streets, roads, and public ways in any State.

(k) "Interstate commerce" means the commerce between any place in a State and any place in another State or between places in the same State through another State, whether such commerce moves wholly by motor vehicle or partly by motor vehicle and partly by rail, express, water or air. This definition of "interstate commerce" for purposes of these regulations is the same as the definition of "interstate commerce" in section 203(a) of the Interstate Commerce Act [49 U.S.C. Section 303(a)].

(l) "Motor carrier" means a common carrier by motor vehicle, a contract carrier by motor vehicle, or a private carrier of property by motor vehicle as those terms are defined by paragraphs (14), (15), and (17) of section 203(a) of the Interstate Commerce Act [49 U.S.C. 303(a)].

(m) "Motor vehicle" means any vehicle, machine, tractor, trailer, or semi-trailer propelled or drawn by mechanical power and used upon the highways in the transportation of passengers or property, or any combination thereof, but does not include any vehicle, locomotive, or car operated exclusively on a rail or rails.

(n) "Muffler" means a device for abating the sound of escaping gases of an internal combustion engine.

(o) "Open site" means an area that is essentially free of large sound-reflecting objects, such as barriers, walls, board fences, signboards, parked vehicles, bridges, or buildings.

(p) "Private carrier of property by motor vehicle" means any person not included in terms "common carrier by motor vehicle" or "contract carrier by motor vehicle", who or which transports in interstate or foreign commerce by motor vehicle property of which such person is the owner, lessee, or bailee, when such transportation is for sale, lease, rent or bailment, or in furtherance of any commercial enterprise.

(q) "Sound level" means the quantity in decibels measured by a sound level meter satisfying the requirements of American National Standards Specification for Sound Level Meters S14-1971.

This publication is available from the American National Standards Institute, Inc., 1430 Broadway, New York, New York 10018. Sound level is the frequency-weighted sound pressure level obtained with the standardized dynamic characteristic "fast" or "slow" and weighting A, B, or C; unless indicated otherwise, the A-weighting is understood.

**§ 202.11 Effective date.**

The provisions of Subpart B shall become effective October 15, 1975.

**§ 202.12 Applicability.**

(a) The provisions of Subpart B apply to all motor carriers engaged in interstate commerce.

(b) The provisions of Subpart B apply only to those motor vehicles of such motor carriers which have a gross vehicle weight rating or gross combination weight rating in excess of 10,000 pounds, and only when such motor vehicles are operating under the conditions specified in Subpart B.

(c) Except as provided in Subsections (d) and (e) of this section, the provisions of Subpart B apply to the total sound produced by such motor vehicles when operating under such conditions, including the sound produced by auxiliary equipment mounted on such motor vehicles.

(d) The provisions of Subpart B do not apply to auxiliary equipment which is normally operated only when the transporting vehicle is stationary or is moving at a speed of 5 miles per hour or less. Examples of such equipment include, but are not limited to, cranes, asphalt spreaders, ditch diggers, liquid or slurry pumps, air compressors, welders, and trash compactors.

(e) The provisions of Subpart B do not apply to warning devices, such as horns and sirens; or to emergency equipment and vehicles such as fire engines, ambulances, police vans, and rescue vans, when responding to emergency calls; or to snow plows when in operation.

**Subpart B—Interstate Motor Carrier Operations Standards**

**§ 202.20 Standards for highway operations.**

No motor carrier subject to these regulations shall operate any motor vehicle of a type to which this regulation is applicable which at any time or under any condition of highway grade, load, acceleration or deceleration generates a sound level in excess of 88dB(A) measured on an open site with fast meter response at 50 feet from the centerline of lane of travel on highways with speed limits of 35 MPH or less; or 90 dB(A) measured on an open site with fast meter response at 50 feet from the centerline of lane of travel on highways with speed limits of more than 35 MPH.

**§ 202.21 Standard for operation under stationary test.**

No motor carrier subject to these regulations shall operate any motor vehicle of a type to which this regulation is applicable which generates a sound level in

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excess of 88dB(A) measured on an open site with fast meter response at 50 feet from the longitudinal centerline of the vehicle, when its engine is accelerated from idle with wide open throttle to governed speed with the vehicle stationary, transmission in neutral, and clutch engaged. This section 202.21 shall not apply to any vehicle which is not equipped with an engine speed governor.

§ 202.22. Visual exhaust system inspection.

No motor carrier subject to these regulations shall operate any motor vehicle of a type to which this regulation

is applicable unless the exhaust system of such vehicle is (1) free from defects which affect sound reduction; (2) equipped with a muffler or other noise dissipative device; and (3) not equipped with any cut-out, by-pass, or similar device.

§ 202.23. Visual tire inspection.

No motor carrier subject to these regulations shall at any time operate any motor vehicle of a type to which this regulation is applicable on a tire or tires having a tread pattern which as originally manufactured, or as newly retreaded, is composed primarily of cavities in the tread (excluding sipes and

local chunking) which are not vented by grooves to the tire shoulder or circumferentially to each other around the tire. This section 202.23 shall not apply to any motor vehicle which is demonstrated by the motor carrier which operates it to be in compliance with the noise emission standard specified for operations on highways with speed limits of more than 35 MPH in § 202.20 of this subpart B, if the demonstration is conducted at the highway speed limit in effect at the inspection location, or, if speed is unlimited, the demonstration is conducted at a speed of 65 MPH.

[FR Doc. 74-25033 Filed 10-25-74; 8:45 am]