3. Section 76.502 is revised to read as follows:

§ 76.502 Three-year holding requirement.

(a) Except as otherwise provided in this section, no cable operator may sell, assign, or otherwise transfer controlling ownership of a cable system within a three-year period following either the acquisition or initial construction of such cable system by such cable operator.

(b) For initially constructed cable systems, the three-year holding period shall be measured from the date on which service is activated to the system's first subscriber through the proposed effective date of the closing of the transaction assigning or transferring control of the cable system. The holding period for acquired systems shall be measured from the effective date of the closing of the transaction in which control of the cable system was acquired through the proposed effective date of the closing of the transaction assigning or transferring control of such cable system.

(c) A cable operator who seeks to assign or transfer control of a cable system is required to certify to the local franchise authority that the proposed assignment or transfer of control of such cable system will not violate the three-year holding requirement. Such certification shall be submitted to the franchise authority at the time the cable operator submits a request for transfer approval to the local franchise authority. If local transfer approval is not required by the terms of the franchise agreement, certification of compliance with the three-year holding requirement must be submitted to the franchise authority no later than 30 days in advance of the proposed closing dated of the transfer or assignment.

(1) Receipt by the local franchise authority of a certification containing a description of the transaction and indicating that the cable system has been owned for three or more years, or that the transferor has obtained or is seeking a waiver from the Commission, or that the transaction is otherwise exempt under this section, shall create a presumption that the proposed assignment or transfer of the cable system will comply with the three-year holding requirement.

(2) A franchise authority that questions the accuracy of a certification filed pursuant to this section must notify the cable operator within 30 days of the filing of such certification, or such certification shall be deemed accepted, unless the cable operator has failed to provide any additional information reasonable requested by the franchise authority within 10 days of such request.

(d) If an assignment or transfer of control involves multiple systems and the terms of the transaction require the buyer to subsequently transfer or assign one or more such systems to one or more third parties, such subsequent transfers shall be considered part of the original transaction for purposes of measuring the three-year holding period.

(1) In order to qualify as part of the original transaction, a request for approval of the subsequent transfer must be filed with the local franchise authority within 90 days of the closing date of the original transfer and the closing date of the subsequent transfer must be no later than 90 days following the grant of transfer approval by the local franchise authority.

(2) If local transfer approval is not required by the terms of the cable franchise agreement, then a subsequent transfer must be completed within 180 days of the date of the closing of the original transaction in order to qualify as part of the original transaction.

(3) If a subsequent transfer involves transfers of multiple systems to the same party, at least one of which requires local transfer approval and at least one of which does not require local transfer approval, the subsequent transfer must then be closed within 90 days of the date the last system involved in the subsequent transfer receives franchise authority approval of the transfer.

(e) Paragraph (a) of this section shall not apply to:

(1) Any assignment or transfer of control of a cable system that is not subject to Federal income tax liability under the Federal Income Tax Code;

(2) Any assignment or transfer of control of a cable system required by operation of law or by any act, order or decree of any Federal agency, any State or political subdivision thereof or any franchising authority;

(3) Any assignment or transfer of control to one or more purchasers, assignees or transferees controlled by, controlling, or under common control with, the seller, assignor or transferor.

(f) Paragraph (a) of this section shall not apply to any assignment or transfer of a cable system subject to paragraph (e) of this section.

(g) The Commission will consider requests for waivers from the three-year holding requirement and, consistent with the public interest, will grant waivers in appropriate cases of default, foreclosure and financial distress. Waiver requests under this section should be filed in accordance with the special relief procedures set forth in § 76.7. Waivers granted by the Commission will not become effective, however, unless local franchise authority approval of a transfer is obtained when such approval is required by the terms of the franchise agreement or state or local law.

(1) The Commission will look favorably upon waiver requests involving multiple system operators or transfers of multiple systems if at least two-thirds of the subscribers of the system being transferred are served by systems owned by the cable operator for three-years or more.

(2) Conditioned upon receipt of local franchise authority transfer approval, where such approval is required by the terms of the franchise agreement or applicable state or local law, transfers of cable systems serving 1,000 or fewer subscribers shall be subject to a blanket Commission waiver.

(h) A cable operator may seek Commission review of a franchise authority's decision regarding the application of the three-year holding period to a particular transaction pursuant to the special relief procedures set forth in § 76.7.

(i) A cable system operator seeking to assign or transfer a cable system it has held for three or more years must submit a completed copy of FCC Form 394 to the local franchise authority if franchise authority approval of the transfer is required by the terms of the franchise agreement.

(1) A franchise authority shall have 120 days from the date of submission of a completed FCC Form 394, together with all exhibits, and any additional information required by the terms of the franchise agreement or applicable state or local law to act upon such transfer request.

(2) If the franchise authority fails to act upon such transfer request within 120 days, such request shall be deemed granted unless the franchise authority and the requesting party otherwise agree to an extension of time.

[FR Doc. 95–17508 Filed 7–21–95; 8:45 am]

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DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

49 CFR Part 571

[Docket No. 93–02; Notice 10]

RIN 2127–AF47

Federal Motor Vehicle Safety Standards; Compressed Natural Gas Fuel Containers

AGENCY: National Highway Traffic Safety Administration (NHTSA), Department of Transportation (DOT).

ACTION: Final rule, petitions for reconsideration.

SUMMARY: This document responds to petitions for reconsideration of the final rule that established performance requirements for compressed natural gas (CNG) fuel containers. The final rule specified burst test safety factors of up to 3.33 for use in evaluating the strength of carbon fiber containers. In an initial notice responding to the petitions, a single, lower safety factor of 2.25 was adopted, subject to further consideration of that issue. This final rule reaffirms that decision. Today's document also responds to the other issues raised in the petitions.

DATES: *Effective Date:* August 23, 1995.

Petitions for Reconsideration: Any petition for reconsideration of this rule must be received by NHTSA no later than August 23, 1995.

ADDRESSES: Petitions for reconsideration of this rule should refer the Docket number referenced at the beginning of this document and should be submitted to: Administrator, National Highway Traffic Safety Administration, 400 Seventh Street, S.W., Washington, D.C. 20590.

FOR FURTHER INFORMATION CONTACT: Mr. Gary R. Woodford, NPS–01.01, Special Projects Staff, Office of Safety Performance Standards, National Highway Traffic Safety Administration, 400 Seventh Street SW., Washington, D.C. 20590 (Telephone 202–366–4931) (FAX 202–366–4329).

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I. Final Rule Establishing FMVSS No. 304

On September 26, 1994, NHTSA published a final rule addressing the safe performance of compressed natural gas (CNG) containers [1] (59 FR 49010). The final rule established a new Federal motor vehicle safety standard (FMVSS) FMVSS No. 304, *Compressed Natural Gas Fuel Container Integrity*, that specifies pressure cycling, burst, and bonfire tests for the purpose of ensuring the durability, initial strength, and venting of CNG containers. The pressure cycling test evaluates a container's durability by requiring a container to withstand, without any leakage, 18,000 cycles of pressurization and depressurization. This requirement helps to ensure that a CNG container is capable of sustaining the cycling loads imposed on the container during refuelings over its entire service life. The burst test evaluates a container's initial strength and resistance to degradation over time. This requirement helps to ensure that a container's design and material are appropriately strong over the container's life. The bonfire test evaluates a container's ability to relieve internal pressure, primarily pressure due to temperature rise. In addition, the final rule specifies labeling requirements for CNG fuel containers. FMVSS No. 304 took effect on March 27, 1995.

The new FMVSS is patterned after the American National Standards Institute's (ANSI's) voluntary industry standard known as ANSI/NGV2. ANSI/NGV2 and FMVSS No. 304 specify detailed material and other requirements for four different types of containers. A Type 1 container is a metallic noncomposite container. A Type 2 container is a metallic liner over which an overwrap such as carbon fiber or fiberglass is applied in a hoop wrapped pattern over the liner's cylinder sidewall. A Type 3 container is a metallic liner over which an overwrap such as carbon fiber or fiberglass is applied in a full wrapped pattern over the entire liner, including the domes. A Type 4 container is a non-metallic liner over which an overwrap such as carbon fiber or fiberglass is applied in a full wrapped pattern over the entire liner, including the domes.

For each type of container, ANSI/NGV2 and FMVSS No. 304 specify a unique safety factor for determining the internal hydrostatic pressure that the container must withstand during the burst test. The safety factors range from 2.25 to 3.50, depending on the material and design involved. The higher the safety factor, the more material is needed to comply with the requirement. To satisfy this aspect of ANSI/NGV2 and FMVSS No. 304, a container must meet the applicable material and manufacturing requirements as well as the burst test.

While FMVSS No. 304 followed ANSI/NGV2 in most respects, it departed from ANSI/NGV2 in requiring that carbon fiber containers comply with the burst tests based on higher safety factors. Specifically, the final rule establishing FMVSS No. 304 specified a safety factor of 2.50 for Type 2 containers and 3.33 for Type 3 and Type 4 containers. In contrast, ANSI/NGV2 specifies a safety factor of 2.25 for all carbon fiber containers.

II. Petitions for Reconsideration

NHTSA received 133 petitions for reconsideration of the final rule that established FMVSS No. 304. The petitions were submitted by CNG container manufacturers, vehicle manufacturers, natural gas utilities, research and testing laboratories, and Canada and several of its provincial governments.

Most of the petitioners addressed the carbon fiber safety factors. Many of them stated that the levels specified by the agency in the final rule are higher

[1] When used as a motor fuel, natural gas is stored on-board a vehicle in cylindrical containers at a pressure of approximately 20,684 kPa (3,000 psi). Among the terms used to describe CNG fuel containers are tanks, containers, cylinders, and high pressure vessels. The agency will refer to them as ''containers'' throughout this document.

than warranted by safety considerations. They further stated that the higher safety factors will unduly increase the cost of carbon fiber containers and make them noncompetitive with other technologies. Some petitioners stated that NHTSA's safety factors are not harmonized with the Canadian Standards Association (CSA) standard (Canadian B51 Part II) or with the 1993 draft International Standards Organization (ISO) standard (ISO/TC 58/SC 3/WG 17), both of which specify a 2.25 safety factor for carbon fiber containers. On the other hand, only one commenter supported the 3.33 safety factor.

While the carbon fiber safety factors were the most controversial issue raised by petitioners, some petitioners requested changes to other aspects of the final rule. For example, some petitioners expressed concern that FMVSS No. 304 prohibits certain materials, such as new or different aluminum and steel alloys or other new materials. Some petitioners wanted FMVSS No. 304 to include additional safety requirements found in ANSI/NGV2. A number of petitioners requested the agency to delay or withdraw FMVSS No. 304 until the current revision of ANSI/NGV2 is completed. Petitioners also raised questions about the need for certain technical amendments to FMVSS No. 304.

NHTSA has responded to the petitions for reconsideration by issuing two different notices. The two-step approach to responding to the petitions was necessary to provide immediate regulatory relief by allowing the manufacture of carbon fiber containers, subject to a single safety factor of 2.25. This approach also provided NHTSA an opportunity to review and analyze all the information presented in the petitions for reconsideration.

III. December 1994 Final Rule Responding to Petitions for Reconsideration

In an initial notice responding to petitions for reconsideration published on December 28, 1994, the agency established a burst test safety factor of 2.25 for carbon fiber containers, and indicated that it would issue a final determination about the appropriate burst test safety factor pending completion of the reconsideration process. (59 FR 66773) That notice also responded to several other technical issues whose resolution did not necessitate extensive review or consideration. In today's notice, the agency sets forth a final determination about the safety factor for carbon fiber containers and responds to the balance of the issues in the petitions for reconsideration.

IV. Further Response to Petitions for Reconsideration

A. Carbon Fiber Safety Factors

In the September 1994 final rule, NHTSA departed from ANSI/NGV2 and established higher safety factors for carbon fiber containers. The agency made this determination because at that time the agency was not aware that these containers were being used extensively in motor vehicle applications. The agency stated that adopting more stringent safety factors is consistent with the longstanding approach taken by the Research and Special Programs Administration (RSPA)[2] to initially adopt conservative requirements in response to the uncertain level of risk posed by new technologies and subsequently modify the requirements if further real-world safety data become available supporting less stringent regulations. The agency indicated that it would consider reducing the safety factors for carbon fiber containers if data supporting a reduction ''are developed and become available on the use of carbon fiber containers in motor vehicle applications.''

In response to the final rule, CNG container manufacturers and other petitioners have submitted new test data and information indicating that carbon fiber containers at the lower 2.25 safety factor can provide a level of performance equal to that of other materials built to higher safety factors. This information also indicated that implementing higher safety factors for carbon fiber would make carbon fiber containers noncompetitive because of the higher costs associated with adding additional material to meet the higher safety factors. The data include information on tests and analyses of carbon fiber containers, the number of containers in use in motor vehicle applications, and cost and weight information.

Several petitioners, particularly Brunswick Technical Group and EDO Corp., submitted test data which indicate that carbon fiber containers that comply with ANSI/NGV2 are safe. Brunswick stated that it has qualified 26 different configurations of its carbon fiber containers under ANSI/NGV2 requirements and has destructively tested 500 carbon/fiberglass CNG containers.[3] That manufacturer further stated that there is no information indicating that carbon fiber containers that comply with ANSI/NGV2 requirements have failed in the field or that test data would indicate the likelihood of such failure. To illustrate its claim, Brunswick provided the results of tests recently performed by British Gas on its containers.

EDO also provided extensive testing information and analyses about its carbon fiber containers built to the 2.25 safety factor. EDO submitted an analysis showing how its container meets the requirements of a draft industry-wide guideline for the performance of CNG containers used in a motor vehicle environment. The guideline, which was developed by General Motors (GM) following failures of CNG containers on two GM pickup trucks in 1994, includes requirements for performance relative to contaminants, corrosives, crashworthiness, leak integrity, fire resistance, reliability, dependability, and accelerated aging. The results of the analysis indicate that EDO's carbon fiber containers built to the 2.25 safety factor comply with these requirements.

EDO also provided a detailed analysis, known as a Failure Modes and Effects Analysis (FMEA),[4] which it performed to determine the safety risks of its carbon fiber containers built to ANSI/NGV2 requirements. This analysis led EDO to conclude that no significant safety risk could be identified for the carbon fiber containers. Specifically, EDO cited the significantly long fatigue life and high resistance to stress rupture of carbon fiber, which are evaluated by the burst test. EDO also cited additional test data that it believes indicate that no further requirements are needed with respect to container strength.

Several petitioners supplied information favorably comparing the performance (under both real world and laboratory test conditions) of carbon fiber containers subject to the 2.25 safety factor with fiberglass containers. Based on an evaluation that Powertech conducted for Transport Canada, Powertech concluded that carbon fiber resists stress rupture, and

[2] RSPA is an administration within the United States Department of Transportation whose functions include regulating the transportation of hazardous materials.

[3] Brunswick's design uses carbon as the major load carrying fiber with a small layer of fiberglass outside.

[4] A FMEA sets out in writing each failure mode that is possible with a product along with the potential cause for the failure and the design control in place to counter the failure. RSPA sometimes requires a FMEA to be submitted when it evaluates a manufacturer's particular container design. NHTSA believes that FMEA is a valid technique for assessing the adequacy of a particular design, provided that other supporting information is presented.

environmental and fire effects better than fiberglass.

Several petitioners stated that carbon fiber containers subject to the 2.25 safety factor are being used safely in real world situations. Thomas Built Buses, Inc., reported that there have been several thousand carbon fiber CNG containers built to ANSI/NGV2 requirements, i.e., subject to a safety factor of 2.25. Brunswick and EDO stated that they have built over 5,000 carbon fiber containers to ANSI/NGV2 requirements (2,600 Brunswick and 2,500 EDO.) According to Brunswick, many of these containers have been in service for at least 18 months, including carbon fiber containers that have been used in buses in Sweden for over five years.

Petitioners further stated that the higher carbon fiber safety factors in FMVSS No. 304 are not harmonized with the standards being set by others. For instance, Canada's CSA standard for CNG vehicle fuel containers uses a 2.25 safety factor. Similarly, the draft ISO standard for CNG containers incorporates the 2.25 safety factor. Moreover, several organizations and States have incorporated ANSI/NGV2 into their standards for CNG vehicles, including the National Fire Protection Association, New York Department of Transportation, California Highway Patrol, Texas Railroad Commission, and the State of Nebraska.

Many petitioners contended that the higher safety factors for carbon fiber containers required by FMVSS No. 304 will make these containers noncompetitive by unnecessarily increasing their cost and weight, thereby inhibiting the growth of the natural gas vehicle market. They noted that for a CNG container of a given size, the increased safety factor not only increases the cost and weight, because of the increased carbon fiber needed, but also reduces container interior volume. The American Gas Association (AGA), the National Gas Vehicle Coalition (NGVC), Brunswick, EDO, and Thomas each indicated that these results have a significant impact on the motor vehicle applications, particularly for buses and small passenger vehicles, which are particularly weight sensitive.

These petitioners provided specific data on the cost and weight impacts. AGA and NGVC stated that the higher safety factors in FMVSS No. 304 will increase the cost of carbon fiber containers by 25 to 40 percent[5] and eliminate their weight advantage. EDO stated that the higher safety factor for one of its carbon fiber containers would result in a 38 percent (or $395) selling price increase and 32 percent weight increase (approximately 25 pounds) for the same container interior volume. EDO added that for a bus using 12 such containers, this would result in a price increase of $4,740 for the containers (excluding other costs such as OEM markup and changes to the mounting brackets). Similarly, Brunswick stated that the agency's Final Regulatory Evaluation (FRE) significantly understated the cost impact of the higher safety factors, particularly for buses. That manufacturer estimated that the incremental cost impact of the higher safety factors would be $5,461 per bus, not $1,240 to $2,483 as estimated by the agency. Thomas Built stated that the high strength, light-weight carbon fiber container has made its bus applications more practical by increasing passenger capacity by six persons over what is possible with steel/fiberglass containers, since a smaller carbon fiber CNG container has approximately the same internal capacity as a larger steel/fiberglass container.

Based on the information submitted in the petitions for reconsideration and other available information, NHTSA has determined that a 2.25 safety factor is more appropriate than the factors originally established in September 1994 for carbon fiber CNG containers. After analyzing this information, the agency believes that the lower safety factor adopted in December 1994 is adequate to ensure that carbon fiber CNG containers will have sufficient strength to perform in a motor vehicle environment. The test data and information on real-world experience supplied by the petitioners appear to support the agency's determination that a 2.25 safety factor is appropriate. During that time, there have been no known failures. NHTSA further notes that the 2.25 safety factor harmonizes with the value specified in ANSI/NGV2 and in the CSA standard. The agency also agrees with the petitioners that the higher safety factor adopted in the final rule would have significantly increased the cost and weight associated with carbon fiber containers, even though the 2.25 safety factor now appears adequate to ensure their safety. In conclusion, NHTSA has determined that adopting the 2.25 safety factor is sufficient to ensure safety. Thus, the safety factor or stress ratio, for each fiber material in a fuel container will be as defined in FMVSS No. 304 for that fiber, with the stress ratio for carbon fiber being 2.25.

B. Other Amendments

In the petitions for reconsideration, ten petitioners—Ford, Pressed Steel Tank (PST), Norris, Structural Composites Industries (SCI), Compressed Gas Association (CGA), NGV Systems, the Flxible Corp, Powertech Labs, Brunswick, and Chrysler—requested a variety of amendments to FMVSS No. 304. Each requested modification, along with the agency's analysis of the desirability of the requested modification, is discussed below.

1. Definitions for Burst Pressure

SCI recommended that the reference to temperature in the definition of burst pressure be in terms of ambient temperature, rather than 70 °F, since the current reference implies to the petitioner that the burst test must be performed at 70 °F. Section S4 defines burst pressure as ''* * * the highest internal pressure reached in a CNG fuel container during a burst test at a temperature of 21 °C (70 °F).''

NHTSA has decided not to adopt SCI's request to modify the definition for burst pressure. Neither NHTSA nor NGV2 specifies the temperature at which the burst test needs to be conducted. The agency further notes that SCI provided no other rationale to justify this modification, and no other petitioner commented that the definition was inappropriate. Further, the definition for burst pressure in S4 is consistent with that of ANSI/NGV2, which represents a consensus of the natural gas vehicle industry. Therefore, adopting the requested modification might cause confusion for manufacturers.

2. Container and Material Requirements

a. *NASA computer program*. NGV Systems, SCI, Powertech, and PST petitioned the agency to correct the name and statement about the availability of the National Aeronautics and Space Administration (NASA) computer program referenced in S5.5.1 and Part 571.5(b)(9).

NHTSA has adopted the requested amendments to S5.5.1 and Part 571.5(b)(9), since the agency, in the final rule, used an incorrect title and erroneously stated that it was available from NASA. The computer program's correct title is ''Computer Program for the Analysis of Filament-Reinforced Metal-Wound Pressure Vessels.'' The program is available from the National Technical Information Service,

[5] Assuming that each CNG carbon fiber container built to the 2.25 safety factor costs approximately $1,000, costs would increase between $250 and $400.

Springfield, Virginia as N67–12097 (NASA CR–72124).

b. *Autofrettage requirement.* Norris Cylinder Co. (Norris) petitioned the agency to amend FMVSS No. 304 to include an autofrettage[6] requirement. Norris stated that composite containers are usually produced by volumetric expansion (autofrettage) of the liner wrapped with continuous filament windings.

NHTSA has decided not to adopt Norris' request to include a requirement addressing autofrettage. The agency believes that the current requirements in FMVSS No. 304 such as the material designation requirements in S5.2 and the manufacturing processes for composite container requirements in S5.3 adequately ensure the safe performance of a CNG container. The agency further believes that this manufacturing process should be left to the discretion of the container manufacturer. Moreover, no other manufacturer raised this issue, and Norris offered no convincing rationale for amending FMVSS 304 to include such a requirement.

c. *Reference to S5.7.3.* SCI stated that S5.4.3 refers to a nonexistent S5.7.3, and therefore suggested that this reference be deleted or defined. NHTSA notes that SCI's statement is incorrect; there is a section S5.7.3, *Tensile Strength.*

d. *Container liner burst test.* SCI petitioned the agency to amend FMVSS No. 304 to add a new section S5.4.2.4 which would state that ''Wall thickness of a liner shall be such that the burst pressure of the liner without overwrap is at least 1.25 times the service pressure of the container.'' SCI stated compliance with this new requirement should be demonstrated by the addition of a liner burst test in S8. SCI further stated that these requirements are needed since the safety factors for Type 2 containers are based on the premise that the liner without the fiber overwrap will maintain service pressure without failure.

NHTSA has decided not to amend FMVSS No. 304 to add a wall thickness performance requirement. While SCI's assertion is true that the liner alone is to maintain service pressure, this fact is not relevant to its request for a new test. Moreover, SCI provided no compelling safety rationale as to why these new requirements should be added. Section S5.4.2 of the final rule currently specifies liner wall thickness based on liner stress requirements at various container pressures, which is consistent with ANSI/NGV2, the voluntary industry standard. The agency believes that there is no need to add these new requirements for the liner only, since the rule has burst, pressure cycling, and bonfire requirements which test the container as a whole after manufacturing.

e. *Check analysis tolerances for materials.* PST stated that the requirements for chemical analysis in S5.2, *Material designations*, are unreasonable unless the agency allows normal check analysis tolerances in addition to the stated chemical composition ranges. Normal check analysis tolerances are the slight variations found when verifying a metal's chemical composition. PST added that this is not seen as a problem with the rule, but only in the definition of NHTSA enforcement tests. According to the petitioner, since metal analysis is not absolutely precise, some allowance for non-repeatability in the analyses is necessary.

NHTSA has decided not to amend FMVSS No. 304 with respect to the chemical analysis of materials. The agency notes that the requirements specified in S5.2 already provide ranges for the chemical compositions of various elements. For example, copper is allowed to be between 0.15 to 0.60 percent in certain aluminum containers. Manufacturers seeking to ensure compliance could aim to hit the mid-point in each range. PST provided no data to support its claim that the specified ranges for chemical compositions, which are consistent with the ranges specified in NGV2, are inadequate. Moreover, no other manufacturer informed the agency that these chemical composition ranges posed a problem. NHTSA believes that absent a compelling reason to provide otherwise, FMVSS No. 304 should be consistent with ANSI/NGV2 since the manufacturers already comply with the industry standard. Moreover, the agency believes that it should not consider amending the requirement absent input from other manufacturers. Based on the above considerations, NHTSA has decided that it is not appropriate for the Standard to specify check analysis tolerances.

f. *Wall stress formula.* PST and Norris petitioned NHTSA to change the units which refer to pressure in the wall stress formula to make the units consistent. The petitioners state that the units are not consistent: on the left side of the equation, wall stress is in units of MPa (psi); while, on the right side of the equation, minimum hydrostatic test pressure is in Bar (psig). The equation is referenced in S5.4.1(b), Wall thickness, Type 1 containers. The petitioners state that this is also an error in ANSI/NGV2.

NHTSA has decided to amend FMVSS No. 304 to incorporate this change in the wall stress formula. The agency notes that the petitioners are correct that the minimum hydrostatic test pressure should be in units of MPa, and not in Bar (psig). This change will make the units in the formula consistent. The agency has docketed a memorandum describing a telephone conversation between agency personnel and a representative of the AGA in which AGA stated that this is a typographical error in ANSI/NGV2. AGA is serving as the secretariat for the Natural Gas Vehicle Fuel Cylinder Task Group, which is the industry group currently revising and updating ANSI/NGV2.

g. *Service pressure vs. Hydrostatic pressure in stress formula.* PST stated that the wall stress formula in S5.4.1(b) should be modified to refer to service pressure. The formula currently uses, as part of the equation, hydrostatic test pressure rather than service pressure to calculate wall stress. The petitioner also stated that the rule does not define test pressure.

NHTSA has decided not to adopt PST's request to amend the wall stress formula in S5.4.1(b). The agency notes that the petitioner provided no rationale as to why service pressure should be used in the formula rather than hydrostatic test pressure.[7] The agency notes that ANSI/NGV2, which represents the consensus of the natural gas vehicle industry, uses hydrostatic test pressure. Regarding the definition of hydrostatic pressure, the rule specifies the definition for hydrostatic pressure in S4, which is also consistent with the definition in ANSI/NGV2.

3. Performance Requirements

a. *Hydrostatic test.* CGA and Norris petitioned the agency to specify a hydrostatic test and test pressure. CGA stated that test pressure is commonly 1.5 times the service pressure, and that all similar containers worldwide are required to be tested to this level to establish that each one will withstand such pressure at the time of manufacture. CGA added that unsafe containers might enter the market if they are not tested at the time of manufacture.

[6] Autofrettage is a manufacturing process for composite containers in which the container is pressurized to the point where the metal liner begins to yield, thereby placing the liner in compression and the fiber overwrap in tension once pressure is released.

[7] The agency notes that the terms ''hydrostatic pressure,'' ''hydrostatic test pressure,'' and ''test pressure'' are all synonymous.

NHTSA has decided not to adopt the petitioner's request to include a hydrostatic test. While ANSI/NGV2 requires a hydrostatic pressure test be performed on each container, FMVSS No. 304 does not require such a test. Instead, the agency requires each manufacturer to certify that its containers comply with the burst test requirement. That test is based on the level of pressure reached at the safety factors, or stress ratios, specified in FMVSS No. 304. Further, since the burst test is more stringent than the hydrostatic test, the hydrostatic test would not provide any additional information about a container's strength, and therefore is not necessary.

b. *Burst pressure vs. Fiber stress ratio.* NGV Systems, Ford, PST, Brunswick, CGA, SCI and Chrysler petitioned the agency to amend FMVSS No. 304 to correct what they viewed as a conflict in the wording of S7.2.2. Specifically, the last sentence in S7.2.2 states that ''Burst pressure is calculated by multiplying the service pressure by the applicable fiber stress ratio set forth in Table Three.'' The petitioners claimed that this requirement is in error since burst pressure is not always directly proportional to fiber stress ratio, particularly for Type 2 and Type 3 containers where the liner carries some of the load. The petitioners further indicated that this statement is not in keeping with the intent of ANSI/NGV2 requirements or industry practice. Ford and PST suggested that the last sentence of S7.2.2 be deleted. SCI suggested other changes, such as changing the term ''stress ratio'' to ''pressure ratio'' in S7.2.2, and making other similar wording changes in the rule to reflect the last sentence in S7.2.2.

After reviewing the petitions, NHTSA has decided to amend FMVSS No. 304 by deleting the last sentence of S7.2.2. The agency agrees with the petitioners that the final rule did not reflect the fact that the liner carries some of the load. Today's modification recognizes the methods used to manufacture CNG containers and therefore makes the requirement more practicable than the requirement that was specified in the final rule. This modification corrects the wording conflict and makes FMVSS No. 304 consistent with ANSI/NGV2, which was the agency's intent. The agency has decided not to adopt SCI's suggested wording changes, which are not necessary given the agency's decision to delete the last sentence in S7.2.2. The agency further notes that SCI's requested modification would have made the final rule inconsistent with ANSI/NGV2.

c. *Fiberglass stress ratios: Type 2 containers.* Norris petitioned the agency to revise the safety factors for E-Glass and S-Glass Type 2 containers. Section S7.2.2 of Standard 304 specifies these at 2.65. Norris stated that considerable safe experience exists with the similar DOT FRP–2 cylinder design at a safety factor of 2.5, and that this should not be arbitrarily changed to 2.65. In addition, the CGA commented more generally that the stress ratios in Table 3 of S7.2.2 for some cylinder types are different from those used in industry practice, and suggested an open forum at NHTSA to discuss these points.

NHTSA has decided not to adopt Norris' request to lower the safety factor for E-Glass and S-Glass containers to 2.5. The agency believes that it would be inappropriate to make such a change based on DOT FRP–2, which is a RSPA requirement that regulates cylinders used in transport. In contrast, FMVSS No. 304 is a Federal motor vehicle safety standard that regulates the manufacture of CNG containers for use in motor vehicle applications. Although cylinders made to FRP–2 are similar in design to Type 2 containers, they are subject to a much different operating environment. For example, Type 2 containers, being in the automotive environment, are subject to many more pressurization cycles due to refueling. Based on these different applications, NHTSA believes the higher safety factor of 2.65 is justified. More generally, the fiber stress ratios which NHTSA has currently set in FMVSS No. 304 are the same as those of ANSI/NGV2, which represents a consensus of the CNG vehicle industry.

4. Labeling Requirements

a. *Letter height.* Ford, SCI, and Chrysler petitioned the agency to reduce the height of the required lettering on the container label specified in S7.4. Ford requested the lettering height be changed from 12.7 mm to 4 mm, stating that 4 mm is the same height required for VIN lettering. Ford stated that using letters 12.7 mm high will result in a label so large that, when it is applied to the container, not all parts of the label will be visible due to the label's wrapping around the container surface. SCI petitioned the agency to reduce the lettering height to 6.35 mm. SCI stated that if the lettering were 12.7 mm in height, the label might be so large that it could be impossible to read all the necessary information once the fuel container is installed. Chrysler stated that typical labeling uses a combination of 3 mm and 6 mm characters.

After reviewing these petitions for reconsideration, NHTSA has decided to amend FMVSS No. 304 to reduce the required lettering height since the lettering height in the final rule is too large to enable manufacturers to provide labels that fit appropriately on the CNG containers. Specifically, the agency has decided to amend S7.4 to specify that the lettering height be 6.35 mm (0.25 inch), which is consistent with the comments of Chrysler and SCI. The agency believes that Ford's request to reduce the lettering height still further, to 4 mm (0.157 inch), would be inappropriate since lettering of that height could be too small to be readily visible at various locations on CNG vehicles.

b. *Container label permanency.* SCI requested that NHTSA clarify how S7.4 should be interpreted, claiming that it is difficult for a container manufacturer to guarantee label permanency. That provision states that ''Each CNG fuel container shall be permanently labeled * * *.''

By ''permanent,'' NHTSA means that the label should remain in place and be legible for the manufacturer's recommended life of the container. For instance, a metal tag with embossed or raised letters riveted in place would be considered permanent. Similarly, a mylar label that is subsurface printed and is made of a material that is resistant to fade, heat, moisture and abrasion would typically be considered permanent (see Standard No. 129, section S5.4.3). To carry out this intent, NHTSA has modified section S7.4 to state that ''Any label affixed to the container in compliance with this section shall remain in place and be legible for the manufacturer's recommended life of the container.''

c. *Fill pressure.* Norris petitioned the agency to require that the container label indicate the maximum allowed fill pressure during refueling. Norris stated, without explanation, that information about fill pressure would be more useful than service pressure.

NHTSA has decided not to adopt Norris's request to include the fill pressure on the label. Section S7.4 of FMVSS No. 304 requires that the service pressure be specified on the container label. This is the pressure at which the container is designed to operate under normal conditions. At present, there are two basic service pressures for CNG containers: 3,000 psi and 3,600 psi. NHTSA did not propose and does not now believe there is a compelling reason to specify maximum fill pressure. The agency notes that Norris provided no safety rationale to justify such a requirement and that the current labeling requirement to specify service pressure is consistent with ANSI/NGV2,

which represents a consensus of the CNG fuel container industry.

d. *Service pressure.* SCI petitioned the agency to specify that ''Service pressure'' be on the container label, rather than ''Maximum service pressure'' as required by S7.4(c). Since ''Service pressure'' is defined in FMVSS No. 304, not ''Maximum service pressure,'' SCI stated that this revision to the label would retain consistent terminology.

NHTSA has decided to adopt SCI's request to specify ''service pressure'' on the container label. The agency notes that the term ''maximum service pressure,'' as required to be on the container label in FMVSS No. 304, was intended to mean the same as ''service pressure.'' Thus, the agency was using the two terms interchangeably, even though FMVSS No. 304 defines ''service pressure'' but not ''maximum service pressure.'' The agency believes that use of the two different terms in FMVSS No. 304 could be confusing. Specifically, the term ''maximum service pressure'' could be construed to mean a higher pressure than what was intended in FMVSS No. 304. Therefore, S7.4(c) has been revised to read:

''Service Pressure _____ kPa
(_____ psig).''

e. *Symbol ''DOT''.* Section S7.4(d) requires the symbol ''DOT'' to be placed on the container label as the manufacturer's certification that the container complies with all requirements of FMVSS No. 304. SCI stated that the container label symbol ''DOT'' is not meaningful and should be expanded to include the standard and effective date, ''DOT FMVSS–304–0395.''

NHTSA has decided not to adopt SCI's request to modify the labeling requirement related to the symbol ''DOT.'' The agency believes that the information requested by SCI would create additional confusion. The agency further notes that the use of the symbol ''DOT'' in FMVSS No. 304 is readily understood in the motor vehicle industry and is consistent with its use in other FMVSSs for items of motor vehicle equipment, such as FMVSS No. 106, *Brake Hoses,* and FMVSS No. 109, *New pneumatic tires.* The agency decided not to specify the version of the standard, since the agency typically does not reissue standards *en toto* every few years. Rather, at most, it periodically amends specific provisions in a standard. Therefore, the agency does not refer to its standards as the 1995 version of a particular standard.

f. *Service life.* SCI petitioned the agency to specify a 15 year service life for CNG containers since FMVSS No. 304's pressure cycling test of 18,000 cycles is based on 15 years (four refuelings per day, 300 days per year for 15 years).

NHTSA does not have the authority to regulate the length of time that the public uses an item of motor vehicle equipment, such as a CNG container. The agency does have authority to specify labeling requirements that address a CNG container's service life. The agency is currently reviewing comments on this matter in response to a December 1994 supplemental notice of proposed rulemaking (SNPRM) that proposed a container label requirement specifying a container life of 15 years or a time period specified by the manufacturer. (59 FR 65299, December 19, 1994). If the agency determines that labeling CNG containers with a service life is appropriate, it will do so in the context of that rulemaking.

g. *Qualification/batch test requirements.* Norris requested that FMVSS No. 304 define ''design family.'' It also stated that neither qualification nor batch test requirements are spelled out. Such a requirement would be consistent with RSPA's method of regulating CNG containers.

Norris' request for FMVSS No. 304 to include information about ''design family'' and other manufacturing considerations would be inconsistent with how Federal motor vehicle safety standards are generally promulgated. The manufacturer typically must certify that *each* container it manufactures complies with the standard. Therefore, to comply with FMVSS No. 304, each container must be capable of meeting the applicable requirements, such as the burst test, and be certified to meet them. In rare situations such as the flasher requirements in FMVSS No. 108, *Lamps, reflective devices, and associated equipment,* establishing compliance to the standard through batch testing is permitted.

Given that a batch testing requirement is typically disfavored by the agency and that the consequences for a failed CNG container are likely much more dangerous than a failed flasher, NHTSA believes that it is necessary for a CNG container manufacturer to certify the compliance of each CNG container.

NHTSA notes that in contrast to NHTSA's framework, RSPA authorizes batch testing so that each container need not be certified as complying with its requirements. Terms such as design family, qualification testing, or batch are used in ANSI/NGV2, and RSPA requirements for DOT cylinders. For example, ANSI/NGV2 requires qualification tests, such as the burst test, only when certain design changes are made to a particular design of CNG containers. In addition, manufacturer tests are sometimes done on batches or lots of 200 cylinders. Based on the above considerations, it would be inappropriate to require the information requested by Norris.

5. Test Conditions

a. *Diesel fuel in bonfire test.* NHTSA received two petitions for reconsideration to amend S8.3.6, which addresses the bonfire test's use of diesel fuel. Flxible petitioned the agency to allow the use of a wood-fueled bonfire test rather than diesel fuel. It stated that fire marshals and other authorities have placed restrictions on the use of diesel fuel. SCI stated that the use of diesel fuel would adversely affect the environment, but offered no alternative.

NHTSA has decided not to amend FMVSS No. 304 with respect to the bonfire test's fuel in today's notice. Instead, the agency is currently reviewing comments on this matter in response to a SNPRM that included a proposal to amend the bonfire test to allow alternative types of fuel given the potential environmental problems with using diesel fuel. If the agency determines that the bonfire test's fuel needs to be changed, it will do so in the context of that rulemaking.

b. *More detail in bonfire test.* PST requested that NHTSA define the bonfire test in more detail. Paragraph S8.3.10 states that, during the bonfire test, ''[t]he average wind velocity at the container is not to exceed 2.24 meters per second (5 mph).'' The petitioner stated that in some conditions, a 2.24 meters per second wind might preclude the container from being totally engulfed in flames. This consideration led PST to recommend that this requirement should instead read ''* * * 5 mph or less if necessary to achieve full impingement and engulfment.'' PST indicated that it uses a system of wind shields during its testing to assure full impingement or engulfment.

NHTSA has decided not to amend the bonfire test in FMVSS No. 304. The agency notes that since S8.3.2 and S8.3.3 specify full flame impingement or engulfment of the container during testing, allowing a wind speed of up to 2.24 meters per second will not preclude total flame impingement or engulfment. The agency notes that a manufacturer is not precluded from using wind shields to assure that full flame impingement or engulfment is achieved.

c. *Venting of container during bonfire test.* Section S7.3 specifies that during the bonfire test, the CNG container shall

either completely vent its contents through a pressure relief device or shall not burst while retaining its entire contents. PST stated that this requirement is unreasonable because it is difficult to verify and unnecessary. PST offered no alternative language, but stated that under certain conditions a small amount of gas can escape through seals around the pressure relief devices and leak small quantities of gas during the test. According to PST, this leakage is not harmful and should be allowed. PST further stated that if the intent of S7.3 is that the container vent completely through the pressure relief device, incidental leaks should be of no concern.

NHTSA believes that it would be inappropriate to amend FMVSS No. 304 based on PST's unsupported claim that under certain conditions a small amount of gas can leak through seals around the pressure relief device. PST provided no information showing that the burst requirement is inappropriate or that leakage around the seal is a problem in a properly constructed CNG container. The agency further notes that no other petitioner believed that this requirement is inappropriate or raised practicability problems. If such additional information is provided, NHTSA would consider whether further rulemaking is appropriate. As an alternative to seeking an amendment to the standard, PST could file a petition requesting the agency determine that such a noncompliance with the standard is inconsequential as it relates to safety under Part 556, *Exemption for Inconsequential Defect or Noncompliance*.

d. *Burst and pressure cycling test procedures.* PST stated that the allowable range of pressurization rates for the burst test is unreasonable, and that NHTSA should draft and publish methods for compliance testing which set a minimum pressurization rate of 100 psi per second. S8.2.2 specifies that pressurization throughout the burst test shall not exceed 200 psi per second. PST indicated that test results are a function of pressurization rate, and that very low rates can make the test overly stringent. Similarly, PST stated that the absence of a minimum cycling rate or test duration in the pressure cycling test, S8.1.3, is unreasonable, since fatigue cycle life is known to be sensitive to the cycling rate and test duration. Section S8.1.3 specifies a maximum cycling rate of 10 cycles per minute. PST stated that a minimum cycling rate of 5 cycles per minute is reasonable, or alternatively, a test duration of 60 hours. PST stated that it had previously commented on these issues.

NHTSA has decided not to adopt PST's request to modify the pressurization rates in the burst test. While PST is correct that pressurization rates do affect the test's severity, the agency notes that it is appropriate to specify the range because CNG containers in the real world will experience a variety of pressurizations. Therefore, it is in the interest of safety to specify such rates. In addition, specifying maximum pressurization and cycling rates in FMVSS No. 304 without specifying minimums is consistent with the voluntary industry standard, ANSI/NGV2. The agency specifically asked CGA and the NGVC about minimum pressurization and cycling rates, but neither organization was able to provide adequate rationale to include them in the final rule. PST has offered no new data to support the inclusion of a minimum rate for pressurization or cycling. Based on the above considerations, the agency believes that the rule should remain the same as those in NGV2 with no minimum pressurization and cycling rates.

6. Miscellaneous

a. *Withdraw or delay the effective date of FMVSS 304.* Several petitioners asked that the final rule be withdrawn, or delayed for a year or more. A number of them stated the rule does not reflect all of the safety requirements contained in ANSI/NGV2, and therefore is not comprehensive from a safety standpoint. They also stated that ANSI/NGV2 is currently being revised and updated by the industry, and indicated that a delay would allow incorporation of these new revisions.

NHTSA has determined that it would be inappropriate to withdraw the effective date of the September 1994 final rule, which took effect March 27, 1995. Even though the rule does not contain all of the requirements of ANSI/NGV2, NHTSA believes that it is better to have some requirements in place rather than none at all. Further, the agency is moving toward adding more requirements through the SNPRM that was published in December 1994. That notice proposes additional performance requirements, consistent with those in ANSI/NGV2, to evaluate a CNG fuel container's internal and external resistance to corrosion and acidic chemicals, brittle fracture, fragmentation, and external damage caused by incidental contact with road debris or mechanical damage during the vehicle's operation.

With regard to the revisions currently being made to ANSI/NGV2, NHTSA believes that it would be inappropriate for the same reason to delay the rule.

b. *Flexibility and adaptability of final rule.* Chrysler supported earlier comments submitted by the American Automobile Manufacturers Association (AAMA) which included the statement that the ANSI/NGV2 voluntary industry standard ''* * * lacks the flexibility and adaptability that should be part of a regulatory requirement * * *'' Those earlier comments were submitted by AAMA in response to the December 1993 SNPRM.

NHTSA notes that in the December 1993 SNPRM, the agency announced that it was considering the adoption of many of the requirements in ANSI/NGV2 for its final rule on CNG containers. The agency also laid out its rationale for this approach. After considering all of the comments, the agency based the rule on the voluntary industry standard, ANSI/NGV2. Chrysler offered no new arguments which the agency has not already considered and responded to in promulgating the rule.

c. *Chemical compositions.* NHTSA has decided to revise S5.2.2 to reflect new information provided by AGA in a telephone conversation with NHTSA staff members. The AGA advised the agency that there is a typographical error in S5.2.2 concerning the amount of magnesium in 6061 alloy aluminum. While FMVSS No. 304 specifies ''0.60 to 1.20 percent,'' AGA stated that the correct numbers are 0.80 to 1.20. The error is also present in the current version of ANSI/NGV2.

NGVSys submitted a letter dated February 16, 1995, requesting that the percent limits for lead and bismuth in aluminum alloy 6061 be revised. S5.2.2 of Standard 304 currently specifies these each at 0.003 percent maximum. NGVSys requested that the limits be revised to 0.01 percent maximum, indicating that the industry group currently revising ANSI/NGV2 has accepted this change for its 1995 revision. NGVSys enclosed with its request a copy of a letter from Alcoa, an aluminum supplier. The letter indicates that Alcoa's current limit for lead and bismuth in aluminum alloy 6061 is 0.010 percent each, and that further reductions in this limit would impact cost.

NHTSA has decided to deny NGV System's request. NGV Systems has provided no rationale to justify its request, nor has it provided any information on the safety implications of allowing the increased amounts of lead and bismuth. The agency notes that FMVSS No. 304's specifications for lead and bismuth are consistent with both

the current version of ANSI/NGV2 and the draft ISO standard for CNG containers.

IV. Rulemaking Analyses

A. Executive Order 12866 and DOT Regulatory Policies and Procedures

NHTSA has considered this rulemaking action in connection with Executive Order 12866 and the Department of Transportation's regulatory policies and procedures. This rulemaking document was not reviewed under E.O. 12866, ''Regulatory Planning and Review.'' This action has been determined to be ''nonsignificant'' under the Department of Transportation's regulatory policies and procedures. In conjunction with the September 1994 final rule, NHTSA prepared a Final Regulatory Evaluation (FRE) in which it estimated the rulemaking's costs. Today's rule simply reaffirms the December final rule in which the agency concluded that ''specify(ing) a 2.25 safety factor for carbon fiber containers would negate this cost increase to container manufacturers, as they currently manufacture containers to this value.'' As a result, manufacturers will not have to depart from current manufacturing practices and thus not incur additional costs. Most of the performance requirements in the standard are already being met by CNG fuel container manufacturers, who produce and test containers in accordance with ANSI/NGV2. The agency's reaffirmation of its December 1994 decision to specify a 2.25 safety factor for carbon fiber containers negates the cost increase faced by container manufacturers as a result of the higher factor in the September 1994 final rule. The manufacturers already manufacture containers to the lower factor. Since the agency has decided to adopt the same safety factor as that currently met by container manufacturers, there is no need to perform a new regulatory evaluation. The agency further notes that the various minor amendments being made in today's notice will collectively have only a negligible effect on costs.

B. Regulatory Flexibility Act

NHTSA has also considered the effects of this rulemaking action under the Regulatory Flexibility Act. Based upon the agency's evaluation, I certify that this rule will not have a significant economic impact on a substantial number of small entities. Information available to the agency indicates that businesses manufacturing CNG fuel containers are not small businesses. Further, as noted above, the amendments made in today's document will have a negligible effect on costs of compliance.

C. Executive Order 12612 (Federalism)

NHTSA has analyzed this rulemaking action in accordance with the principles and criteria contained in Executive Order 12612. NHTSA has determined that the rule will not have sufficient Federalism implications to warrant the preparation of a Federalism Assessment.

D. National Environmental Policy Act

In accordance with the National Environmental Policy Act of 1969, NHTSA has considered the environmental impacts of this rule. The agency has determined that this rule will have no adverse impact on the quality of the human environment. On the contrary, because NHTSA anticipates that ensuring the safety of CNG vehicles will encourage their use, NHTSA believes that the rule will have positive environmental impacts. CNG vehicles are expected to have near-zero evaporative emissions and the potential to produce very low exhaust emissions as well.

E. Civil Justice Reform

This final rule does not have any retroactive effect. Under 49 U.S.C. 30103, whenever a Federal motor vehicle safety standard is in effect, a State may not adopt or maintain a safety standard applicable to the same aspect of performance which is not identical to the Federal standard, except to the extent that the State requirement imposes a higher level of performance and applies only to vehicles procured for the State's use. 49 U.S.C. 30161 sets forth a procedure for judicial review of final rules establishing, amending or revoking Federal motor vehicle safety standards. That section does not require submission of a petition for reconsideration or other administrative proceedings before parties may file suit in court.

List of Subjects in 49 CFR Part 571

Imports, Incorporation by reference, Motor vehicle safety, Motor vehicles.

PART 571—[AMENDED]

In consideration of the foregoing, 49 CFR Part 571 is amended as follows:

1. The authority citation for Part 571 continues to read as follows:

Authority: 49 U.S.C. 322, 30111, 30115, 30117 and 30166; delegation of authority at 49 CFR 1.50.

§ 571.5 [Amended]

2. Section 571.5 is amended by removing paragraph (b)(9).

§ 571.304 [Amended]

3. Section 571.304 is amended by revising S5.2.2, S5.4.1(b), S5.5.1, S7.2.2, S7.4, S8.1.3, S8.2.2, and S8.3.10 to read as follows:

* * * * *

S5.2.2 *Aluminum containers and aluminum liners.* (Type 1, Type 2 and Type 3) shall be 6010 alloy, 6061 alloy, and T6 temper. The aluminum heat analysis shall be in conformance with one of the following grades:

TABLE TWO.—ALUMINUM HEAT ANALYSIS

Grade: Element	6010 alloy percent	6061 alloy percent
Magnesium	0.60 to 1.00	0.80 to 1.20.
Silicon	0.80 to 1.20	0.40 to 0.80.
Copper	0.15 to 0.60	0.15 to 0.40.
Chromium	0.05 to 0.10	0.04 to 0.35.
Iron	0.50 max	0.70 max.
Titanium	0.10 max	0.15 max.
Manganese	0.20 to 0.80	0.15 max.
Zinc	0.25 max	0.25 max.
Bismuth	0.003 max	0.003 max.
Lead	0.003 max	0.003 max.
Others, Each [1].	0.05 max	0.05 max.
Others, Total [1].	0.15 max	0.15 max.
Aluminum	Remainder	Remainder.

[1] Analysis is made only for the elements for which specific limits are shown, except for unalloyed aluminum. If, however, the presence of other elements is indicated to be in excess of specified limits, further analysis is made to determine that these other elements are not in excess of the amount specified. (Aluminum Association Standards and Data—Sixth Edition 1979).

* * * * *

S5.4.1 Type 1 Containers.

(a) * * *

(b) For minimum wall thickness calculations, the following formula is used:

$$S = \frac{P\left(1.3D^2 + 0.4d^2\right)}{\left(D^2 - d^2\right)}$$

Where:

S = Wall stress in MPa (psi).

P = Minimum hydrostatic test pressure in Mpa (psi).

D = Outside diameter in mm (inches).

d = Inside diameter in mm (inches).

* * * * *

S5.5.1 Compute stresses in the liner and composite reinforcement using National Aeronautics and Space Administration (NASA), *Computer Program for the Analysis of Filament Reinforced Metal-Wound Pressure*

Vessels, N67–12097 (NASA CR–72124) (May 1966), or its equivalent.

* * * * *

S7.2.2 Each Type 2, Type 3, or Type 4 CNG fuel container shall not leak when subjected to burst pressure and tested in accordance with S8.2. Burst pressure shall be no less than the value necessary to meet the stress ratio requirements of Table 3, when analyzed in accordance with the requirements of S5.5.1.

TABLE THREE.—STRESS RATIOS

Material	Type 2	Type 3	Type 4
E-Glass	2.65	3.5	3.5
S-Glass	2.65	3.5	3.5
Aramid	2.25	3.0	3.0
Carbon	2.25	2.25	2.25

* * * * *

S7.4. *Labeling.* Each CNG fuel container shall be permanently labeled with the information specified in paragraphs (a) through (d). Any label affixed to the container in compliance with this section shall remain in place and be legible for the manufacturer's recommended life of the container. The information specified in paragraphs (a) through (d) of this section shall be in English and in letters and numbers that are at least 6.35 mm (0.25 inch).

(a) The statement: ''If there is a question about the proper use, installation, or maintenance of this container, contact _____.'' inserting the *CNG fuel container manufacturer's name, address, and telephone number.*

(b) The statement: ''Manufactured in _____.'' inserting the month and year of manufacture of the CNG fuel container.

(c) Service Pressure _____ kPa (_____psig).

(d) The symbol DOT, constituting a certification by the CNG container manufacturer that the container complies with all requirements of this standard.

* * * * *

S8.1.3 The cycling rate for S8.1.1 and S8.1.2 shall be any value up to and including 10 cycles per minute.

* * * * *

S8.2.2 The pressurization rate throughout the test shall be any value up to and including 1,379 kPa (200 psi) per second.

* * * * *

S8.3.10 The average wind velocity at the container is any velocity up to and including 2.24 meters/second (5 mph).

* * * * *

Issued on July 18, 1995.

Ricardo Martinez,

Administrator.

[FR Doc. 95–18109 Filed 7–19–95; 2:09 pm]

BILLING CODE 4910–59–P

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49 CFR Part 571

[Docket No. 85–06; Notice 9]

RIN 2127–AF82

Federal Motor Vehicle Safety Standards, Passenger Car Brake Systems

AGENCY: National Highway Traffic Safety Administration (NHTSA), Department of Transportation (DOT).

ACTION: Final rule; Response to petitions for reconsideration.

SUMMARY: In February 1995, NHTSA published a new Federal Motor Vehicle Safety Standard No. 135, *Passenger Car Brake Systems*, which replaces the existing Standard No. 105, *Hydraulic Brake Systems*, as it applies to passenger cars. The agency's action was part of its efforts to harmonize its standards with international standards. The agency received three petitions for reconsideration, each of which supported the new standard, but recommended one or more changes. This document provides NHTSA's response to those petitions. As part of its response, the agency is making several minor changes in the standard's test conditions. NHTSA is also making a number of correcting amendments to the new standard.

DATES: *Effective date.* The amendments made by this rule are effective August 23, 1995.

Petitions for reconsideration. Petitions for reconsideration must be received not later than August 23, 1995.

ADDRESSES: Petitions for reconsideration should be submitted to: Administrator, National Highway Traffic Safety Administration, 400 Seventh Street SW., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Ms. Terri Droneburg, Office of Vehicle Safety Standards, National Highway Traffic Safety Administration, 400 Seventh Street SW., Room 5307, Washington, DC 20590. Phone: (202) 366–6617. Fax: (202) 366–4329.

SUPPLEMENTARY INFORMATION: On February 2, 1995, NHTSA published in the **Federal Register** (60 FR 6411) a final rule establishing Federal Motor Vehicle Safety Standard No. 135, *Passenger Car Brake Systems*. That standard will replace Standard No. 105, *Hydraulic Brake Systems*, as it applies to passenger cars.

NHTSA received petitions for reconsideration from General Motors (GM), the Japan Automobile Manufacturers Association (JAMA), and Mercedes-Benz. Each of the petitioners supported the establishment of the new standard, but identified one or more areas where they recommended changes. The issues raised by the petitioners are addressed below.

GM first identified several technical corrections to make in the text of Standard No. 135. NHTSA concurs with these corrections and has also identified several other corrections that need to be made. In this document, the agency is making those corrections.

GM next identified one substantive area of concern, involving the pedal force constraints for the hot and recovery performance tests (S7.14.3(c) and S7.16.3(c)). GM stated that NHTSA had explained in the final rule that Standard No. 135 is intended to ensure that faded brakes are capable of achieving both a minimum level of performance relative to cold effectiveness (i.e., at least 60 percent of cold effectiveness deceleration) and a minimum absolute level of performance (i.e., stopping distance less than or equal to 89 meters, from a speed of 100 km/h (62.1 mph)).

GM stated that, to make the relative performance a true comparison, it is necessary to constrain the hot stop pedal force to that which was used during the cold effectiveness stop. GM stated also that only by having similar pedal force profiles between the hot and cold stops is it possible to effectively compare hot and cold brake performance. That company cited the agency's statement in the final rule preamble that, ''(i)n order for that comparison to be meaningful, the test conditions for the two tests should be as close to identical as possible.''

GM argued, however, that the language adopted in the final rule does not facilitate test conditions for the cold and hot stops that are as close to identical as possible. GM said that the language instead precludes a legitimate comparison between hot and cold performance by forcing a significantly different pedal force on the hot stop. GM stated that a typical pedal force profile used during cold effectiveness testing shows an initial spike, followed by a lower, level force. That company stated that because the language of the final rule limits the peak hot stop pedal force to the *average* cold effectiveness pedal force, it precludes the use of an initial spike for the comparison hot stop. GM stated that this shortcoming can be easily corrected by amending the regulatory language to state that the