DATES: Send your written comments by July 2, 2001.

ADDRESSES: Send written comments to Carol Johnson, Mailcode 3WC21, RCRA State Programs Branch, U.S. EPA Region III, 1650 Arch Street, Philadelphia, PA 19103–2029, Phone number: (215) 814–3378. You can examine copies of the materials submitted by Maryland during normal business hours at the following locations: EPA Region III, Library, 2nd Floor, 1650 Arch Street, Philadelphia, PA 19103–2029, Phone number: (215) 814–5254; or Maryland Department of the Environment, Waste Management Administration, Hazardous Waste Program, 2500 Broening Highway, Baltimore, Maryland 21224, Phone number (410) 631–3345. If you are interested in examining copies at the Maryland Department of the Environment, please contact Mr. Edward Hammerberg.

FOR FURTHER INFORMATION CONTACT: Carol Johnson, Mailcode 3WC21, RCRA State Programs Branch, U.S. EPA Region III, 1650 Arch Street, Philadelphia, PA 19103, Phone number (215) 814–3378.

SUPPLEMENTARY INFORMATION: For additional information, please see the immediate final rule published in the ''Rules and Regulations'' section of this **Federal Register**.

Dated: January 17, 2001.

Bradley M. Campbell,

Regional Administrator, Region III.

[FR Doc. 01–13777 Filed 5–31–01; 8:45 am]

BILLING CODE 6560–50–U

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 73

[DA 01–1198; MM Docket No. 01–110, RM–9927]

Radio Broadcasting Services; Newberry and Simpsonville, SC

AGENCY: Federal Communications Commission.

ACTION: Proposed rule.

SUMMARY: The Commission requests comments on a petition filed by Upstate-Carolina Broadasting Company, LLC, proposing the downgrade of Channel 292C3 to Channel 292A at Newberry, the reallotment of Channel 292A from Newberry to Simpsonville, South Carolina, and the modification of Station WGVC(FM)'s construction permit accordingly. Channel 292A can be reallotted to Simpsonville in compliance with the Commission's minimum distance separation requirements at city reference coordinates. The coordinates for Channel 292A at Simpsonville are 34–44–13 North Latitude and 82–15–16 West Longitude. In accordance with Section 1.420(i) of the Commission's Rules, we will not accept competing expressions of interest for the use of Channel 292A at Simpsonville, South Carolina.

DATES: Comments must be filed on or before July 2, 2001, reply comments on or before July 17, 2001.

ADDRESSES: Federal Communications Commission, Washington, DC 20554. In addition to filing comments with the FCC, interested parties should serve the petitioner, or its counsel or consultant, as follows: Robert Lewis Thompson, Esq., Thiemann, Aitken, et al., L.C., 908 King Street, Suite 300, Alexandria, Virginia 22314 (Counsel for Petitioner).

FOR FURTHER INFORMATION CONTACT: Sharon P. McDonald, Mass Media Bureau, (202) 418–2180.

SUPPLEMENTARY INFORMATION: This is a synopsis of the Commission's Notice of Proposed Rule Making, MM Docket No. 01–110, adopted May 2, 2001, and released May 11, 2001. The full text of this Commission decision is available for inspection and copying during normal business hours in the FCC Reference Information Center (Room CY–A257), 445 12th Street, SW., Washington, DC. The complete text of this decision may also be purchased from the Commission's copy contractor, International Transcription Service, Inc., (202) 857–3800, 1231 20th Street, NW., Washington, DC 20036.

Provisions of the Regulatory Flexibility Act of 1980 do not apply to this proceeding.

Members of the public should note that from the time a Notice of Proposed Rule Making is issued until the matter is no longer subject to Commission consideration or court review, all *ex parte* contacts are prohibited in Commission proceedings, such as this one, which involve channel allotments. See 47 CFR 1.1204(b) for rules governing permissible *ex parte* contacts.

For information regarding proper filing procedures for comments, see 47 CFR 1.415 and 1.420.

List of Subjects in 47 CFR Part 73

Radio broadcasting.

For the reasons discussed in the preamble, the Federal Communications Commission proposes to amend 47 CFR Part 73 as follows:

PART 73—RADIO BROADCAST SERVICES

1. The authority citation for Part 73 continues to read as follows:

Authority: 47 U.S.C. 154, 303, 334 and 336.

§ 73.202 [Amended]

Section 73.202(b), the Table of FM Allotments under South Carolina is amended by removing Newberry, Channel 292C3, and adding Simpsonville, Channel 292A.

Federal Communications Commission.

John A. Karousos,

Chief, Allocations Branch, Policy and Rules Division, Mass Media Bureau.

[FR Doc. 01–13715 Filed 5–31–01; 8:45 am]

BILLING CODE 6712–01–U

DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

49 CFR Part 571

[DOT Docket No. NHTSA–01–9765]

RIN 2127–AE59

Federal Motor Vehicle Safety Standards; Radiator and Coolant Reservoir Caps, Venting of Motor Vehicle Coolant Systems

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

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: In this document, we (NHTSA) propose a new Federal motor vehicle safety standard regulating new radiator caps and coolant reservoir caps, and new passenger cars, multipurpose passenger vehicles and light trucks with such caps. We believe that this new standard, if implemented, would result in fewer scald injuries that occur when people attempt to remove caps from motor vehicle radiators or coolant reservoirs that are under high pressure and contain hot fluids. However, this rulemaking would not require that radiator caps or coolant reservoir caps be provided on any motor vehicle.

DATES: You should submit your comments early enough to ensure that Docket Management receives them not later than July 31, 2001.

ADDRESSES: You should mention the docket number of this document in your comments and submit your comments in writing to: Docket Management, Room PL–401, 400 Seventh Street, SW., Washington, DC 20590.

You may call the Docket at 202–366–9324. You may visit the Docket from 10 a.m. to 5 p.m., Monday through Friday.

FOR FURTHER INFORMATION CONTACT:

For non-legal issues, you may call Mr. Kenneth O. Hardie, Office of Crash

Avoidance Standards at (202) 366–6987. His FAX number is (202) 493–2739.

For legal issues, you may call Ms. Dorothy Nakama, Office of the Chief Counsel at (202) 366–2992. Her FAX number is (202) 366–3820.

You may send mail to both of these officials at National Highway Traffic Safety Administration, 400 Seventh St., S.W., Washington, DC 20590.

SUPPLEMENTARY INFORMATION:

I. Background—What Safety Need Does This Proposed Rule Address?
II. Has NHTSA Previously Addressed the Issue of Regulating Radiator Caps?
III. Why is NHTSA Proposing Rulemaking Now?
A. The Petition from Mr. John Giordano
B. Mr. Giordano's Radiator Cap Scald Incidence Data
C. NHTSA's Analysis of Injury Data from Mr. Giordano
IV. June 1993 Request for Comment and Public Comments in Response
V. July 1993 Agreement with Consumer Product Safety Commission for More Research
A. Using CPSC Data to Determine a Need for Safety
B. Results of the CPSC Data Collection Effort
VI. 1998 Hospitalization Data from Two Regional Burn Centers
VII. Notice of Proposed Rulemaking
A. CPSC and Other Data Show a Safety Need to Regulate Caps
B. Major Provisions of the Proposed Standard
1. The New Standard Would Apply to New Vehicles 4,536 Kg (10,000 Pounds) GVWR or Less
2. The New Standard Would Apply to Original Caps and Replacement Caps
3. Performance Requirements for Caps
4. Manually Operated Pressure Release Mechanism on the Vehicle
5. Manually Operated Pressure Release Mechanism on the Cap
C. Why We Propose Applying the Rule to Vehicles 4,536 Kg (10,000 Pounds GVWR) or Under Only
D. Why We Propose a Standard Based on Pressure, Not Temperature
E. Performance Requirements for Radiator Caps and Coolant Reservoir Caps
F. Compatibility Issues for New Caps/Old Vehicles and New Vehicles/Old Caps
G. Testing Procedures for the New Caps
H. Testing Procedures for the New Vehicles
I. ''DOT'' Symbol and Manufacturers'' Maximum Pressure Rating for Each Radiator Cap and Coolant Reservoir Cap
J. Why We are Not Proposing Warning Labels
K. Additional Issues
VIII. Leadtime
IX. Rulemaking Analyses and Notices
A. Executive Order 12866; DOT Regulatory Policies and Procedures
B. Executive Order 13132 (Federalism)
C. Executive Order 13045 (Economically Significant Rules Affecting Children)
D. Executive Order 12778 (Civil Justice Reform)
E. Regulatory Flexibility Act
F. National Environmental Policy Act
G. Paperwork Reduction Act
H. National Technology Transfer and Advancement Act
I. Unfunded Mandates Reform Act of 1995
J. Plain Language
K. Regulation Identifier Number (RIN)

Proposed Regulatory Text

I. Background—What Safety Need Does This Proposed Rule Address?

Until the late 1950's, the liquid-based cooling systems on passenger car engines did not operate under pressure. The low horsepower, low compression engines of these earlier cars did not develop the tremendous amount of heat of present day engines and the coolant generally stayed below the boiling point. If those older systems were kept clean and in good mechanical condition, they had an excess of cooling capacity. Under those conditions, cooling system troubles were rarely experienced.

As the result of the advent of engines with increased horsepower, smaller radiators, higher thermostat opening temperatures, and emissions controls, much more heat can accumulate in the engines of cars and the other types of light vehicles common today. These vehicles include trucks, vans, and sport utility vehicles with a Gross Vehicle Weight Rating (GVWR) of 4536 kg (10,000 pounds) or less. At the same time, today's engines have less engine surface to dissipate the heat into the atmosphere. To eliminate the heat build-up problem, the pressurized cooling system was developed. The radiator caps in these pressurized systems function to provide an opening so that liquid cooling fluid can be added to the cooling systems as needed and to maintain the design pressure in the systems.

During operation, a motor vehicle engine becomes very hot. Motor vehicle engine cooling fluid (also known as coolant) can reach temperatures as high as 118 to 129 degrees Celsius (245 to 265 degrees Fahrenheit) and pressure levels as high as 110 to 117 kilopascals (kPa) (16–17 pounds of pressure per square inch). Under such high temperature and pressure conditions, a person's removal of a standard radiator cap will allow hot fluid and steam to rush out of the neck of the radiator. When the system is under pressure, especially high pressure, removing a radiator cap can cause it to ''explode;'' *i.e.,* the cap can be forcibly ejected or dislodged from the neck of the radiator in some way. A person close to the radiator may be sprayed with the hot fluid or steam that is ejected, and be scalded, possibly severely. We know that such incidents are not uncommon. Over the years, we have received letters from the public and from medical personnel at hospital burn-care facilities reporting of such incidents, encouraging us to establish a safety standard for radiator caps. Also, we have collected data documenting these events.

In order to prevent scald injuries[1] to persons resulting from opening radiator caps of engine systems that are hot and under pressure, NHTSA proposes to regulate radiator and coolant reservoir caps (if provided) on certain new vehicles, and to regulate new radiator and coolant reservoir caps themselves.

II. Has NHTSA Previously Addressed the Issue of Regulating Radiator Caps?

Today's rulemaking is not the first time we have sought comment on a safety standard for radiator caps. On October 14, 1967 (32 FR 14282), we issued an Advance Notice of Proposed Rulemaking, setting forth requirements we were considering proposing for radiator caps on passenger cars, multipurpose passenger vehicles, trucks and buses. One provision would have required a means for relieving radiator pressure, such as an intermediate step that must be taken before the cap could be disengaged from the radiator filler neck. We also considered requirements that would have prevented any replacement pressure cap from having a pressure relief rating higher than the relief rating of the cap initially supplied by the vehicle manufacturer, and would have required distinct and durable markings identifying the pressure rating of the cap. Commenters on the October 1967 notice stated that vehicle manufacturers worldwide had already designed their coolant reservoir systems so that an intermediate step must be taken before the cap can be disengaged.

Based on those comments, we concluded that the problems that could result from removing a radiator cap from a coolant reservoir system under pressure were being solved by the automotive industry. Among the steps being taken were the placement of a warning on the caps, designing the two-

[1] Scalds result from contact with hot liquids and vapors. Burns are caused by contact with hot dry objects. The effects of scalds and burns are similar. In first-degree burns, the damage is limited to the outer layer of the skin, resulting in redness, warmth, an occasional blister, and tenderness. Mild sunburn is an example of a first-degree burn. In second-degree burns, the injury goes through the outer layer and involves the deeper layers of skin, causing blisters. In third-degree burns, the full thickness of skin is destroyed and a charred layer of seared tissue is exposed. The seriousness of a burn depends on the amount of skin burned, the location of the burn, and the depth of the burn.

step operation into caps so that pressure is released prior to cap removal, and using other coolant system designs that minimized the likelihood of escaping steam and/or fluid coming in contact with a person. Accordingly, on January 25, 1972 (37 FR 1120), we suspended rulemaking, stating ''After consideration of the available information, it has been determined that sufficient justification for regulations of the nature proposed has not been shown at this time.''

Regarding its decision in January 1972 to suspend rulemaking, the agency commented in a **Federal Register** notice of June 10, 1993 (58 FR 32504) that:

> That decision was not further explained, but commenters to the ANPRM had stated that the intermediate step before the radiator cap was disengaged had already been designed into the cooling systems of virtually all vehicle manufacturers throughout the world. Thus, NHTSA may have been persuaded that any problems caused by removing radiator caps from overheated radiators had been solved by the automotive industry, therefore rulemaking on that issue was not necessary. (See 58 FR at 32506.)

III. Why Is NHTSA Proposing Rulemaking Now?

A. The Petition From Mr. John Giordano

In April 1992, we received a petition submitted by Mr. John Giordano, suggesting the establishment of a new safety standard that would result in the use of thermal locking safety radiator caps. Mr. Giordano brought to our attention the RadLock thermal locking radiator cap. The new safety standard that he suggested would prevent the accidental scalding of persons who hastily open the cap of a hot motor vehicle radiator. Mr. Giordano recommended that the standard state the following:

> Any new vehicle sold in the U.S. with a water-cooled engine shall be equipped with a radiator cap which can automatically lock when the coolant is at a temperature of 125 degrees F. or greater, thereby preventing it from being turned open. The cap shall unlock when the temperature of the coolant falls below 125 degrees F. to allow safe opening.

In support of his petition, Mr. Giordano asserted the following—

(1) Despite safety education and warning labels, radiator cap scald incidents are increasing, and will continue to increase as vehicle use rises.

(2) Every year, over 100,000 radiator cap scald incidents occur in the U.S., resulting in over 20,000 victims requiring treatment at hospital emergency rooms and burn care facilities.

(3) Issuing a radiator cap safety regulation would result in a significant economic benefit to society by:

(a) reducing medical costs in the amount of $1,000,000,000 annually to potential burn victims and to the general population if potential burn victims cannot afford to pay such costs;

(b) reducing costs to domestic industry by $84,000,000 annually due to lost time from employee burn victims seeking medical after care;

(c) reducing automakers' product liability insurance premiums by over $2,000,000 annually to settle radiator cap injury claims, thereby reducing costs to the consumer for the purchase of new vehicles; and

(d) reducing product liability of manufacturers of antifreeze, radiators, radiator caps and associated products.

Mr. Giordano stated that the new rule would be appropriate for any motor vehicle that uses a water-cooled engine and would be compatible with heat storage battery technology. Mr. Giordano also estimated that a new rule would not have an adverse economic impact on motor vehicle manufacturers, since it would cost less than 15 cents per vehicle for manufacturers to comply if his suggested rule were adopted.

B. Mr. Giordano's Radiator Cap Scald Incidence Data

In support of his assertion that there are over 100,000 scald incidents resulting from radiator cap removals each year in the United States and that these incidents are increasing, Mr. Giordano submitted four medical journal articles, and a letter from the Burn Special Projects Coordinator at the Washington Hospital Center Burn Center in Washington, DC. (The four articles and the letter may be reviewed in the DOT Docket cited in the heading of this notice of proposed rulemaking).

The most relevant and informative article was authored by Dr. C. G. Ward and Dr. J.S. Hammond of the University of Miami School of Medicine (Ward-Hammond article). The article stated that, during a three-year period from January 1979 through December 1981, a total of 86 patients (an average of 29 a year) with radiator-associated injuries required hospital admission to the University of Miami/Jackson Memorial Burn Center.[2] The article stated that twice that number of patients (an average of 58 per year) were treated, but not hospitalized, during that three-year period for radiator-associated injuries.

The Ward-Hammond article stated that of 146 treated injuries caused by radiators, 111 (76 percent) of the automobiles involved were manufactured by General Motors. Other automobiles associated with the radiator injuries were manufactured by Ford (15 percent), Chrysler (5 percent), and American Motors (3 percent). Radiator burns from imported and other automobiles resulted in one percent of the injuries. The Ward-Hammond article stated that, among the General Motors cars involved, the coolant system design included an overflow/reservoir into which liquid can be added. The article noted that on General Motors cars, there was also a cap on top of the radiator, and the injured person did not seem to recognize the overflow reservoir as the proper place to fill the system. Injury was often incurred when the person opened the wrong cap and was sprayed with super-heated liquid. The article further stated that, of the General Motors cars, the models most often involved were made between 1970 and 1975. The article did not suggest any design reasons for why GM cars were seemingly overrepresented, stating: ''It is not known if General Motors automobiles are more often involved because of the design of the cooling system caps, or if their cars are more prone to overheating during normal performance.'' The article stated that the percentage of General Motors cars among the total automobile population ''is not known'' and did not hypothesize why MY 1970–75 cars were most often involved in radiator-associated injuries involving General Motors cars.

Mr. Giordano also provided a May 20, 1992 letter from Mr. Mark S. Lewis, MS, RRT, Burn Special Projects Coordinator at the Washington Hospital Center Burn Center, in Washington, D.C. Mr. Lewis provided information on both the Washington D.C. Center and a center in Baltimore, Maryland. Mr. Lewis provided the following estimates:

2.5 million burn accidents occur each year in the United States.

70,000 burn-related injuries annually will require hospitalization.

21,000 burn-related injuries (30 percent of the 70,000) will require care that can be provided only by a burn center.

In 1987, scalds were 14 percent of all burn admissions to the Washington Burn Center, and 20 percent of all burn admissions to the Baltimore Center.

In 1988, scalds were 16 percent of all burn admissions to the Washington Burn Center, and 25 percent of all burn admissions to the Baltimore Center.

In 1989, scalds were 19 percent of all burn admissions to the Washington Burn Center; the percentage for the Baltimore Center was unknown.

[2] NHTSA believes that cap and filler neck designs are relatively unchanged from the time in which this and the other medical journal articles were written and injury data were collected. For this reason, we believe the data and conclusions in the articles are still relevant today.

In 1990, scalds were 18 percent of all burn admissions to the Washington Burn Center; the percentage for the Baltimore Center was unknown.

Approximately 10 percent of scald injuries in the District of Columbia can be attributed to removing automotive radiator caps.

Mr. Lewis did not indicate whether the scald and burn-related injuries, including those that would require care that can only be treated at a burn center, were second or third degree burns. He noted that the scald rates stated above are derived from actual numbers, representing the percentage of burn patient admissions and that the scald rate would be different if outpatient burns were tabulated. Mr. Lewis further noted that the Washington Hospital Center Burn Center receives a number of outpatients who were burned by hot liquid or steam from an exploding radiator cap, and that if these patients were added to the total scald numbers, the inclusion of these additional victims would probably raise the percentage of scalds attributable to radiator caps by a few percentage points.

Mr. Giordano also provided an April 13, 1992 letter from Mr. Peter A. Brigham, President of the Burn Foundation in Philadelphia, PA. Writing in support of standards for safety locking radiator caps, Mr. Brigham noted that the Burn Foundation maintains an injury cause registry. Five (unspecified) burn centers participate in this registry. Mr. Brigham noted that between one and a half and two percent of the patients admitted to a center that participates in the Burn Foundation's registry were injured when the ''cap is prematurely opened on a hot radiator.'' For patients injured by a cap prematurely opened on a hot radiator, Mr. Brigham stated that the ''average cost of hospital treatment for the original admission of these patients is over $30,000'' (in 1992 dollars). Mr. Brigham went on to state:

> If these figures are a reasonable representation of the national experience, there are close to 400 burn center admissions each year resulting from car radiator scalds, with total acute care costs exceeding $10 million. This figure of course does not include the costs of outpatient care, lost wages, pain and suffering, and long-term disfigurement suffered by these patients. Since burn centers admit only one-third of all severe burn patients, and several burns are treated in outpatient settings for every burn patient admitted, we project that thousands more patients with similar injuries are admitted to general hospitals or discharged from hospital emergency departments after suffering less severe injuries involving the same scenario.

Mr. Giordano also stated his belief that the adoption of a new safety standard resulting in the use of thermal locking safety radiator caps would reduce medical costs by one billion dollars annually, but provided no information in support of this belief. The Ward-Hammond article, however, stated that the average length of hospitalization for burn injuries was ten days. Mr. Giordano also provided no cost data to support his claim that the establishment of a new standard would reduce by $84 million the costs to domestic industry annually due to lost time from employee burn victims seeking medical care. Although the Ward-Hammond article stated that a work loss of two to four weeks was typical for their study group, the article did not convert this loss into dollar figures. Mr. Giordano also provided no data to support his claim that automakers' product liability insurance premiums would be reduced by $2 million annually to settle radiator cap injury claims.

C. NHTSA's Analysis of Injury Data From Mr. Giordano

After carefully reviewing the submitted information, we concluded that Mr. Giordano's data did not support his contentions that over 100,000 radiator cap-related scald injuries occur annually in the United States, and that radiator cap-related scald injuries were increasing. We also saw no information that supported Mr. Giordano's claims of significant economic benefits to society of more than a billion dollars in reduced medical costs.

We were concerned, however, that we could find no data that would either support or refute the allegation that each year 20,000 victims required treatment in hospital emergency rooms and burn care facilities and that radiator cap-related scald injuries were increasing. Our review of highway safety literature, including the National Safety Council's ''Accident Fact'' publication, did not provide useful information on the total annual number of radiator cap-related scald incidents. We could not obtain useful data from automotive product-related injury incidents tracked by the U.S. Consumer Product Safety Commission (CPSC) in the 1970's and 1980's.

In order to more fully examine the issues raised in his petition, we issued a letter on March 23, 1993, granting Mr. Giordano's petition for rulemaking.

IV. June 1993 Request for Comment and Public Comments in Response

In order to obtain information to assess the validity of the assertions in Mr. Giordano's petition, we published a ''Request for Comments'' document in the **Federal Register**, requesting comment on the feasibility of and necessity for rulemaking to prevent scald injuries by requiring thermal locking radiator caps or other devices on motor vehicles with water-cooled engines. (June 10, 1993; 58 FR 32504.) In the notice, NHTSA asked for data that would assist the agency in determining the validity of Mr. Giordano's claims. NHTSA specifically asked the public for comment on the following seven issues:

1. Is accidental scalding from sudden removal of the radiator cap from an overheated motor vehicle engine a significant national safety problem?
2. What information is available regarding the number and seriousness of accidental scaldings from overheated radiators?
3. Would thermal locking radiator caps that automatically lock when the coolant temperature reaches 125 degrees Fahrenheit and unlock when the coolant temperature falls below 125 degrees Fahrenheit significantly reduce the number of accidental scaldings that result from removing the radiator caps from overheated engines?
4. If 125 degrees Fahrenheit is either too high or too low as the proper temperature to lock/unlock the radiator cap, what would be the proper temperature?
5. Are there other technologies currently available or under development that would be helpful in reducing accidental radiator scaldings?
6. If NHTSA proposed a new FMVSS requiring thermal locking safety radiator caps or similar devices:
   a. Should such devices be required on all vehicles with water-cooled engines or just certain ones?
   b. Should such devices be required on all new motor vehicles?
   c. Would redesign of currently-designed cooling systems be necessary?
   d. What notices or warnings could or should be posted on new radiator caps cautioning people not to try to remove the cap when the engine is hot?
7. What actions, or products, such as two-step caps, overflow reservoirs, pressure relief valves, etc. are currently utilized by manufacturers to prevent radiator cap scald incidents? Are some products or designs more effective than others in that regard?

We received 18 comments in response. Ten of the comments were from automobile manufacturers and one of their trade associations. Five of the comments were from truck manufacturers and their trade association or the trucking industry. Two comments were from radiator cap

inventors or manufacturers. Finally, one comment was from a mechanical engineering firm.

The public comments did not provide information that established a safety need to commence a rulemaking to establish a safety standard for thermal locking radiator caps or other devices on motor vehicles with water-cooled engines to prevent scald injuries, nor did they show that there was not any safety problem.

In their comments, most of the automobile manufacturers did not support a radiator cap standard. Jaguar Cars Ltd. proposed as a possible solution, a radiator locking cap that would ''allow the release of pressure and coolant at a specified maximum rate to a safe position under the vehicle until the system reaches a safe state.'' Ford Motor Company commented that the relevant consideration is the coolant system pressure, not coolant system temperature, and stated: ''We firmly believe that controlling the cooling system pressure and proper relief of that pressure at cap removal is the key to providing our customers with a safe, efficient cooling system.'' The trade association then named the American Automobile Manufacturers Association (AAMA) (whose comments General Motors Corporation joined in drafting) stated that although it did not see an immediate need for regulation, it appeared that the venting of cooling system pressure prior to complete radiator cap removal is the most effective and practical means of reducing accidental spills. The AAMA also estimated that the cost of a thermal-locking radiator cap was close to $.50.

The commenters from truck manufacturers and the trucking industry did not see a significant problem of scalds and burns sustained in the removal of radiator caps. The American Trucking Associations suggested that any NHTSA-collected radiator cap injury data be used to separately document injuries attributed to trucks and buses from those resulting from passenger cars.

Two radiator cap manufacturers also commented. One inventor suggested that we require his company's radiator cap, which contains a heat resistant handle. Stant Manufacturing Inc., a manufacturer of radiator caps for vehicle manufacturers and for aftermarket use, also commented. Stant stated that after reviewing its customer complaint files and product litigation files, it found fewer than five reported radiator cap scald incidents per year. Stant discussed its safety radiator cap that uses the trademark ''LEV–R–VENT,'' which features a lever on the cap, providing a means of releasing system pressure through the overflow. Stant concluded by offering its opinion that rulemaking on new vehicles will produce no measurable safety effect for at least 10 years after implementation, based on typical overheating complaint patterns.

V. July 1993 Agreement With Consumer Product Safety Commission for More Research

A. Using CPSC Data To Determine a Need for Safety

In 1993, we changed the status of action on Mr. Giordano's petition from the ''rulemaking phase'' to the ''research phase.'' To gather more data on the extent of scalds and other injuries resulting from radiator cap incidents, we entered into an interagency agreement with the Consumer Product Safety Commission (CPSC) in July 1993 to collect radiator cap-related injury data by using the CPSC's National Electronic Injury Surveillance System (NEISS). NEISS is a CPSC-operated national probability survey of hospital emergency departments that monitors consumer products involved in injury-producing incidents. NEISS enables CPSC to make national estimates of the number, type and severity of injuries associated with specific consumer products. NEISS is a three-level system for collection of consumer product-related injury data from a current sample of 91 of the 6,127 hospitals nationwide with at least six beds that provide emergency care 24 hours a day. The three levels of NEISS data collection are: surveillance of emergency room injuries; follow-up telephone interviews with injured persons or witnesses; and more comprehensive, on-site investigations with injured persons and/or witnesses. One, two, or three levels of data collection are used by the CPSC as primary data collection tools.

Injury data were collected by CPSC from October 1, 1993 to September 30, 1994. The CPSC's data collection effort was completed and the resulting data were delivered to the NHTSA's National Center for Statistics and Analysis (NCSA) in early 1995.

B. Results of the CPSC Data Collection Effort

In November 1997, the NCSA published a technical report, DOT HS 808 598, titled ''Injuries Associated with Specific Motor Vehicle Hazards: Radiators, Batteries, Power Windows, and Power Roofs'' (available for review in the DOT Docket cited in the heading of this notice of proposed rulemaking) that compiled the data from the CPSC's injury data collection effort. The technical report includes estimates of the number of persons injured as a result of incidents involving motor vehicle radiators.

From October 1, 1993 through September 30, 1994 (the period of the study), an estimated 19,638 persons were injured nationwide as a result of incidents involving motor vehicle radiators. Of the 19,638 persons, about 77 percent (15,118 out of 19,638) were injured as a result of activities associated with the radiator cap. Almost 73 percent of the radiator cap injuries (11,024 out of 15,118) resulted from removing or attempting to remove the cap from the radiator. Twenty five percent of the radiator cap injuries (3,794 out of 15,118) were described as resulting from the radiator cap ''exploding,'' i.e., the cap being ejected or dislodged from the neck of the radiator in some way. These situations mainly involved stationary vehicles. However, when the vehicle was moving, vehicle movement, coupled with excessive radiator pressure, may have contributed to the incidence of radiator cap ejection. The remaining 2 percent of the radiator cap injuries (330 out of 15,118) occurred while persons were attempting to put the cap on the radiator, or because a loose, untightened or badly fitting cap allowed the radiator to boil over.

Regarding the types of vehicles in which the radiator cap injuries were incurred, passenger cars represented 91 percent of the cases, pickup trucks approximately 7 percent of the cases, and trucks and vans comprised the remaining cases. As for the model years of the vehicles involved, 65 percent of the motor vehicles were 1980–89 model years, with 52 percent of these being model years 1980–84. About 26 percent of the incidents involved 1975–79 models, about 8 percent involved models older than 1975, and less than 1 percent involved newer vehicles, i.e., model years 1990–94. The following table provides information (by vehicle model year) on persons injured by motor vehicle radiator caps.

RADIATOR CAP-RELATED INJURIES DURING FY 1994

[By Model Year (MY) of the Motor Vehicles Involved]

MY	Pre-1975	1975–1979	1980–1984	1985–1989	1990–1994	All MYs
Radiator Cap Injuries	1,228	3,893	5,143	4,728	126	15,118
Percent of Total	8	26	34	31	1	100

The small number of injuries (1 percent) for MY–1990–1994 vehicles appears anomalous. We are not certain how to account for the small number for MY 1990–1994. One possible explanation is that these newer vehicles experienced fewer mechanical failures overall, including fewer problems with engine and coolant reservoir overheating and fewer malfunctioning radiator caps. Also, not all MY 1994 vehicles were taken into account because the CPSC data collection period ended in September 1994, by which time not all MY 1994 vehicles were sold and on the road. We are not aware of any industry-wide coolant system design changes introduced around 1990 that would have significantly affected the number of radiator-related injuries.

Scalding from hot radiator fluid or steam released from the radiator injured almost 91 percent of those whose injuries involved radiator caps. The face, including eyes and nose, was the most severely injured body region for nearly 38 percent of the persons whose injuries involved radiator caps, followed by the lower arm (26 percent) and upper trunk (18 percent). Approximately 88 percent of the persons whose injuries involved radiator caps had moderately severe injuries, primarily first and/or second degree scalds that did not generally require hospitalization. Nearly 10 percent of the injured were so seriously injured that they required hospitalization. The remaining persons, about 3 percent, received minor injuries.

VI. 1998 Hospitalization Data From Two Regional Burn Centers

In 1998, NHTSA received updated data from the Johns Hopkins University Baltimore Regional Burn Center (Johns Hopkins) and the University of California San Diego Regional Burn Center (UCSD), reporting about persons scalded badly enough from interactions with motor vehicle radiator caps to require hospitalization. (Full details of the Johns Hopkins and UCSD data may be reviewed in NHTSA's Regulatory Analysis of ''FMVSS No. 107 Radiator and Reservoir Pressure Caps Motor Vehicle Coolant System Venting'', available in the DOT Docket cited in the heading of this notice.)

Johns Hopkins provided us with data about a total of 48 patients who were admitted with scald burns from radiator caps during the period July 1, 1987 to June 30, 1998, and who required an in-patient stay at its institution. The data included the following information about its patients: admission by year and month; age; gender; total body surface area (TBSA) burned, as a percentage of the entire body; severity of burn (i.e., first, second, or third degree); hospital length of stay (in days); total number of surgical procedures for skin grafting; total hospital room charges. There were roughly the same number of admissions per year (five to six) for the years 1988 through 1995. From 1996 through 1998, two or three patients per year were admitted. There were 40 male patients and 8 female patients ranging in age from less than one year old to 86 years. (The less than one year old infant was held by a person opening a radiator cap that ejected hot fluids. The 86 year old was a female.) Nearly half of the patients were between 16 and 35 years of age.

The UCSD provided us with data on 8 patients admitted with scald burn injuries from radiator incidents for the period January 1996 to August 1997. There were five males and three females, ranging in age from 29 to 56 years of age. The patients were hospitalized, on average, for 6 days.

We used the Johns Hopkins and UCSD data to project an estimated national average of burn center patients by calculating the estimated annual national average number of patients within the Baltimore primary metropolitan statistical area (PMSA) and San Diego metropolitan statistical area (MSA) and applying a factor to reach a national estimate. The number of patients (48) reported to be admitted by Johns Hopkins from July 1, 1987 to June 30, 1998 was applied to the 1998 estimated population of the Baltimore PMSA (from which most of the cases came) of 2,475,000, and the estimated national population for 1998 of 270,116,000 (based on data from the Statistical Abstract of the United States, 1998, U.S. Census Bureau, the Official Statistics, September 16, 1998.) Applying the burn incidence of the Baltimore PMSA to the national population resulted in an estimated 11-year total of 5,239 scald burns from radiator caps, or an estimated 476 radiator cap scald cases annually throughout the United States requiring burn center hospitalization.

We also examined UCSD data for the 20-month period from January 1996 to August 1997, and made another estimate of the national incidence of radiator cap scald injuries requiring hospitalization. We used UCSD's eight reported radiator scald injuries during this period requiring hospital stays and applied it to the estimated 1998 population for the San Diego MSA of 2,723,000. We then projected the scald burn hospitalization incidence from the San Diego MSA to the national population, and arrived at an estimated annual national incidence of radiator cap scald burn hospitalization of 476 cases, the same number derived from the Johns Hopkins data.

Therefore, based on the estimates from the Johns Hopkins University Baltimore Regional Burn Center and the University of California San Diego Regional Burn Center, we project a national annual average of 476 radiator scald cases requiring burn center in-patient hospitalization.

The Johns Hopkins and UCSD data, used to project an estimated 476 radiator scald hospitalizations per year, do not give a complete picture of the extent of injury to the American public resulting from opening a radiator cap or pressurized coolant reservoir cap on systems under high temperature and pressure. Since the Johns Hopkins and UCSD data are limited to injuries serious enough to require hospitalization, the data did not provide any estimates of how often people scalded by interactions with radiators were treated at hospital emergency rooms, doctors' offices or clinics, or had other medical treatment that did not involve hospitalization.

VII. Notice of Proposed Rulemaking

A. CPSC and Other Data Show a Safety Need To Regulate Caps

The CPSC's NEISS data showed that, in the United States from October 1, 1993 to September 30, 1994, an estimated 15,118 persons were injured (i.e., received scald burns extensive

enough to require treatment in hospital emergency rooms) as a result of activities relating to radiator caps. After reviewing Technical Report DOT HS 808 598 ''Injuries Associated With Specific Motor Vehicle Hazards: Radiators, Batteries, Power Windows and Power Roofs,'' and the 1998 updated data from Johns Hopkins University Baltimore Regional Burn Center and the University of California San Diego Regional Burn Center, we have tentatively concluded that the problem of removing a radiator cap from a hot radiator or a reservoir cap from a coolant reservoir system under pressure has not been solved by the automotive industry as the agency had hoped when it suspended radiator cap rulemaking in January 1972. NHTSA therefore tentatively concludes that there is a safety need to establish a new Federal motor vehicle safety standard to regulate radiator and coolant reservoir cap performance.

B. Major Provisions of the Proposed Standard

The following summarizes the major provisions of NHTSA's proposed standard on radiator caps and reservoir caps:

1. The New Standard Would Apply to New Motor Vehicles 4,536 Kg (10,000 Pounds) GVWR or Less

If made final, the standard would apply to new motor vehicles (except trailers and motorcycles) with a gross vehicle weight rating of 4536 kg (10,000 pounds) or less with liquid-based engine cooling systems and with reservoir caps on pressurized coolant reservoir tanks or with radiator caps. However, the new standard would not require vehicles to have reservoir caps or radiator caps.

If such new vehicles have either reservoir caps for pressurized coolant reservoir tanks or radiator caps, the vehicles must be designed to accommodate both original equipment and replacement radiator caps or reservoir caps that meet the new standard. Customers could tell whether a new vehicle meets the standard or not because vehicles that meet the new standard would have radiator or reservoir caps with ''DOT'' markings on them. Each radiator cap and each reservoir cap that meets the new standard would be marked with ''DOT'' and the manufacturer's maximum pressure rating for the cap.

2. The New Standard Would Apply to Original Equipment Caps and Replacement Caps

The new standard would apply to original caps on new vehicles manufactured after the effective date of the new standard and to replacement caps intended for use on those vehicles.

3. Performance Requirements for Caps

For the vehicles subject to the standard, we would require that when correctly fitted, the caps lock and remain locked when the radiator or cooling reservoir system is at and above 14 kilopascals (kPa) or 2 psi. Since the pressure would be the same throughout the system, we propose that the pressure be measured at the cap. We would further require that when the radiator or reservoir cooling system pressure drops below 14 kPa, and the cap unlocks, thereby becoming removable, the cap may be removable only if it is subjected to a particular motion or series of motions. The cap on a coolant reservoir system must be designed so that it is necessary to rotate them counterclockwise in order to remove them. In addition, we propose that, to be removed, the cap on a radiator must first be pushed down towards the radiator, and then rotated counterclockwise. Because most people are familiar with these motions from previous experience with child-proof caps on bottles, most radiator caps and many pressurized reservoir caps, we tentatively conclude that labels or instructions would not be necessary to inform people how to remove the radiator cap. Nevertheless, we request comments on this point.

4. Manually Operated Pressure Release Mechanism on the Vehicle

We further propose that, at the option of the vehicle manufacturer, a manually operated pressure release mechanism may be provided on the cooling system of a new motor vehicle subject to the standard. We do not propose to specify the location on the vehicle for the pressure release mechanism (e.g., lever), but would specify that the vehicle on which the venting would be provided must have a venting outlet that directs the venting of any liquid or gas downward and toward the center of the vehicle. Requiring that the venting be so directed would reduce the likelihood of the liquid or gas contacting the person operating the manual pressure release mechanism. This would not only prevent the venting liquid or steam from spraying toward a person's face, hands or upper body, but would also reduce the likelihood that a person's feet or legs would be sprayed.

5. Manually Operated Pressure Release Mechanism on the Cap

We also propose that cap manufacturers not be limited simply to manufacture caps that lock above 14 kPa, but may also manufacture replacement radiator or coolant reservoir caps (which would have to lock under any pressure above 14 kPa) with a manually-operated pressure release mechanism incorporated into the cap to reduce the cooling system pressure below 14 kPa. This manually operated pressure release mechanism would permit fluid to flow from the radiator or coolant reservoir system, thereby reducing the pressure in the system faster than would occur through normal cooling of the system. Thus, there would be no need to wait for an extended period of time before the radiator cap or the coolant reservoir cap could be removed. We propose to require that the fluids released by the operation of a pressure release mechanism be directed downward and toward the center of the vehicle. This requirement is intended to reduce the likelihood of hot liquids or gases contacting a person operating the mechanism and also limit their contact with individuals standing next to the vehicle. The mechanism (e.g., lever) to control venting may be located on the radiator cap or the reservoir cap. However, to prevent operation of the mechanism from venting the system in any manner or location that would injure the person actuating it, the vented fluids would not be permitted to vent or leak through the cap itself.

As is the case for the manually operated pressure release mechanism for the vehicle, we propose that the standard specify that the venting outlet, connected to the radiator or its cap or coolant reservoir or its cap, direct the venting of the fluids downward and toward the center of the vehicle. This should have the effect of preventing venting liquid or steam from spraying toward a person's face, hands or upper body, and reducing the likelihood of venting onto the ground in such a way that a person's feet or legs would be sprayed.

Our reasons for proposing each of these provisions are described below.

C. Why We Propose Applying the Rule Only to Vehicles 4,536 Kg (10,000 Pounds) GVWR or Less

In the one-year period studied, fiscal year 1994, the CPSC's NEISS data files document only one hot radiator fluid scald injury from a motor vehicle with a GVWR over 4,536 kg (10,000 pounds). We have no information explaining why

such a low incidence rate was documented for vehicles over 4,536 kg (10,000 pounds) GVWR. However, since there does not appear to be a safety need to regulate them, we are not proposing to include vehicles over 4,536 kg GVWR in this rule.

We are also not proposing that motorcycles be included in this rule because we do not have any data showing that removing radiator caps on very hot motorcycle systems is a safety problem. As stated earlier, when the CPSC's injury data collection effort was reviewed to determine the types of vehicles in which the radiator cap injuries were incurred, we found that passenger cars represented 91 percent of the cases, pickup trucks, approximately 7 percent of the cases, and trucks and vans, the remaining cases.

We welcome any information or data that would show whether removing radiator caps on very hot motorcycle systems or very hot systems on vehicles that have a GVWR over 4,536 kg is a safety problem. If anyone has information showing that there is a potential for scald injuries with removing cooling system caps on motorcycle cooling systems or removing cooling system caps on vehicles over 4,536 kg GVWR, we request that that person also submit suggestions about requirements and test procedures for removing radiator caps and coolant reservoir caps from motorcycles or vehicles over 4,536 kg GVWR.

D. Why We Propose a Standard Based on Pressure, Not Temperature

Mr. Giordano had suggested requiring all new vehicles to be equipped with a radiator cap that automatically locks when the coolant is at a temperature of 125 degrees Fahrenheit (51.6 degrees Celsius) or greater. For the following reasons, we tentatively conclude that the locking requirement for caps should be based on pressure, instead of temperature. Although the temperature of fluid in the radiator is related to the safety problems addressed by this proposal, we believe the more important safety consideration in providing a solution to radiator-related scalds is the pressure in the coolant system. If there is little pressure to force liquid or steam up when the cap is removed, the risk of hot scalding fluid or steam being ejected from the radiator filler neck or coolant system reservoir would be essentially eliminated. Also, ambient temperature under the hood of a vehicle without the engine running could approach 125 degrees Fahrenheit (51.6 degrees Celsius) during the hot part of a summer day in many States in the southern tier of the United States. Thus, adopting Mr. Giordano's suggestion might result in persons' not being able to add radiator fluid (because of a locked cap) in circumstances in which there is no danger of hot liquid or steam being ejected from the coolant system during cap removal.

It should also be noted that a thermal locking cap could be defeated by placing cold material on the cap. This could cause localized cooling and allow the cap to be released while the cooling system remains hot and pressured.

In order to determine the pressure at (or above) which caps should lock in order to prevent motorists from being scalded, NHTSA's Vehicle Research and Test Center (VRTC) in East Liberty, Ohio conducted tests that measured various radiator pressures, and observed the amount of fluid that was released at each of these pressures when the caps were removed. VRTC performed 14 radiator pressure release tests using a 1988 Ford Mustang. The tests were performed by running the engine until it attained its full operating temperature and pressure. The engine was then turned off and the length of time required for the pressure in the cooling system to drop to specified pressure levels was recorded.

The highest pressure achieved during the tests was 15.3 psi. The time required for the pressure to drop from 15.3 psi to 3 psi was 22 minutes, 30 seconds. During these tests, the radiator cap was removed when the pressure was measured at 1, 2, 3, 4, 5 and 6 psi. The discharge of fluid from the radiator when the cap was removed at each of those pressure levels was documented by the use of a video camera. Nine tests were performed with a full radiator. Five tests were performed with 1500 milliliters of fluid removed from the radiator. The videotape showed that after radiator cap removal, the least amount of fluid was released when the radiator pressure was at 1 and 2 psi. Documentation of the VRTC testing has been placed in the DOT Docket cited in the heading of this notice.

While we believe the safest cap would be one that locks at the lowest pressure, data from a 1994 Stant Manufacturing, Inc., pressure cooling system tester manual indicate the manufacturing parameters of the compression spring used in some Stant radiator caps include a tolerance of plus or minus one pound. It therefore appears that any proposed cap locking pressure would be limited by the tolerance of the compression spring used in the cap. We believe that in order to reduce tolerance, a more costly spring would have to be used. Weighing the need for safety against a desire to minimize the costs of this rulemaking on manufacturers, we propose that the cap locking pressure be established at 14 kPa (2 psi) or more.

E. Performance Requirements for Radiator Caps and Reservoir Caps

We are seeking public comment on whether to establish two separate safety requirements governing the removal of radiator caps. The first requirement (which would be applicable to both radiator and coolant reservoir caps) would be that the cap lock and remain locked at or above a pressure of 14 kPa or 2 psi. The proposal would not preclude any cap or vehicle manufacturer from producing a cap that locks at pressures below 14 kPa. The second requirement (applicable only to radiator caps) would be that even when the pressure is at or below that pressure, the cap shall not be removable by rotation only. Radiators would be required to be designed so that removal of a cap would be possible only by simultaneously pressing down on the cap and rotating it counterclockwise. We are seeking comment on requiring this two-motion process because it might help to reduce injuries associated with cap removal when the radiator contents are not quite hot enough to create the pressure necessary for the cap to lock.

As a result of the 1967 Advance Notice of Proposed Rulemaking (32 FR 14282; October 14, 1967) on radiator caps, we learned that the industry standard for the method of removing a radiator cap was the two-motion process described in the immediately preceding paragraph. However, we have no information indicating that this two-motion process is used for caps on coolant reservoir systems also.

As indicated in the questions raised in Section K of this notice of proposed rulemaking, public comment is sought on whether the described motions are used by industry to open both radiator caps and coolant reservoir caps, and whether specifying the two-motion process would impose a new regulatory burden with no safety benefit. Comments on whether any motions should be specified are also sought.

F. Compatibility Issues for New Caps/Old Vehicles and New Vehicles/Old Caps

Although the use of pressure locking radiator and coolant reservoir caps on vehicles manufactured before the effective date of the proposed standard would, if sufficiently pervasive, reduce the incidence of scaldings involving those vehicles, we are not proposing to require that caps subject to the new standard be compatible with those older

vehicles. We realize that there will be a lag time during which pre-standard vehicles will be in existence. This lag time is of concern to the agency since, as noted earlier, radiator cap scald incidents are significantly greater for those model year vehicles that have been in use for at least five years, and peak for those vehicles in use from 10 to 15 years. If, however, there would be a cost-effective way to make a new standard-compliant replacement cap that fits pre-standard vehicles, the agency would encourage the development and sale of such a product.

We also are not proposing that new vehicles that meet the new standard be designed to be incompatible with old radiator or reservoir caps that do not meet the new standard. Although the use of pre-standard caps on post-standard vehicles would, to the extent it occurred, allow a continuation of the scald problem, we do not believe that there would be any incentive to replace compliant caps with non-compliant, pre-standard caps. If the owner of a new vehicle with a compliant cap needed to replace a lost cap, we believe that the owner would likely purchase a compliant replacement cap, given the safety advantages of such caps. Consumers can readily determine whether a radiator or reservoir cap meets the new standard by looking for the ''DOT'' certification on the cap. Further, after the new standard's effective date, all new and replacement radiator and reservoir caps intended for new vehicles will meet the new requirement, and thus, the supply of nonconforming caps should decrease over a period of time.

G. Testing Procedures for the New Caps

We are not proposing any elaborate test procedures to determine whether a cap meets the new safety standard. Compliance would be demonstrated by attaching the cap to a motor vehicle cooling system and pressurizing the system above the specified minimum locking pressure, but not exceeding the system pressure for which the cap was designed. We would then attempt to remove the cap. The cap must not be removable or vent pressure or fluids during an attempt to remove the cap.

Based on our presumption that the standardized two-motion process would be required to remove radiator caps, we propose a test procedure based on the two required motions. The first motion would be a force of not greater than 225 Newtons applied to the radiator cap, axially toward the radiator, and perpendicular to the top of the cap. While maintaining this downward force, we would apply a torque of not greater than 40 Newton-meters to the cap, in a counter-clockwise direction, to remove it.

In selecting a limit for the downward force applied in removing a cap, we noted that the filler pipe opening area of many standard radiator systems is about one square inch. The force of the pressure pushing up against this cap when the system is fully pressurized would depend on the cap's pressure setting. For a cap with a 1.7 kPa setting, the upward force is about 113 Newtons. We propose using a safety factor of two, resulting in our proposal of a downward test force of 225 Newtons.

Similarly for the rotational movement, we propose a torque limit of 40 Newton-meters. We selected this limit after taking into consideration the strength of the strongest motorists. The Wesley E. Woodson's Human Factors Handbook under the heading of ''Human Strength'' indicates that husky male operators can exert a torque up to 15 ft-lb in trying to rotate a knob or cap with a diameter between 2 and 3 inches (5.1 cm and 7.6 cm) or 3.25 inches (8.2 cm) maximum. That value is based on a full right-handed grip. To allow for those people with above average strength whose hand grip may be stronger than 15 ft-lb (and may be able to open a radiator cap of 15 ft-lb), NHTSA proposes to double the hand grip capability for husky male operators, and use a torque limit of 40 Newton-meters (30 ft-lb).

H. Testing Procedures for New Vehicles

For new vehicles that permit venting of fluids or steam, we propose to test the vehicles to determine where fluids would be directed when they are vented from the radiator or coolant reservoir systems. For those vehicle cooling systems that include a means of reducing the cooling system pressure by venting fluids or steam, we propose that testing be done by applying pressurized water to the cooling system via a drain cock or vent fitting in either the engine or radiator, with the cooling system filled with water. The venting mechanism on the vehicle would then be actuated. The personnel conducting the testing would observe where the escaping water (if any) is directed.

This test would be conducted at ambient temperature. Therefore, there could not be any release of steam. We request comments on whether this test is sufficient to ensure that steam would not contact an individual who was operating the mechanism on a hot vehicle. In other words, we would like to know whether steam would be vented in the same way as pressurized water at ambient temperatures. To the extent that the proposed procedure would not address the venting of steam, we request comments on alternative test procedures.

I. ''DOT'' Symbol and Manufacturers' Maximum Pressure Rating for Each Radiator Cap and Reservoir Cap

We propose that each radiator cap and coolant reservoir cap subject to the proposed new standard be permanently marked with the symbol ''DOT'' as certification that the cap meets the new standard. We are not proposing any specifications for the size or the font of the letters. Further, we are not proposing that only labels be used, or that contrasting colors must be used. We propose to let cap manufacturers use their discretion in determining the best way to meet the requirement to provide the ''DOT'' certification. The cap manufacturer may emboss or engrave ''DOT'' directly onto the cap, or may place a permanent label on the cap. We propose to construe the term ''permanent'' in the same way as that term has been used for purposes of the certification labeling requirements described in 49 CFR part 567, *Certification.*

We are also proposing that cap manufacturers permanently label each cap with its maximum pressure rating for the cap. This information will let consumers know the maximum pressure within the radiator or cooling reservoir system that the system is designed to withstand. We believe that when they seek a replacement cap for the systems on their motor vehicles, consumers need to know the maximum pressure capability of the old cap to ensure that they or service personnel select a replacement cap with equal or greater capability. Many radiator cap or reservoir caps appear to be physically identical to each other, but in fact have different pressure performances. We emphasize that the maximum pressure proposal is for labeling purposes only. We are not trying to specify the maximum pressure for any cap.

J. Why We Are Not Proposing Warning Labels

Most radiator cap and reservoir cap manufacturers already place some type of warning on the cap stating that the cap should not be opened when the system is hot and under pressure. We considered proposing to require that all caps be labeled with such a warning, but decided not to do so. As previously noted, in 1972, when we terminated a rulemaking on radiator caps, one of the rationales for the termination was that among the measures taken by the automotive industry to resolve the problem was to place a warning on the

caps. As earlier noted, the injury data show that the warning label, and other measures taken by industry, did not appear to have reduced injuries resulting from opening radiator caps and coolant reservoir caps under high heat and high pressure. Further, given that the cap manufacturers will likely continue to do so, and given our assumption below that the proposed requirement for the locking of caps could be 95 percent effective in reducing scaldings from the contents of radiators and coolant reservoirs, the marginal value of mandating warnings on all caps would be minimal.

Although we are not proposing any warning label requirements, we solicit comments on the need for warnings and on the sufficiency and appearance of existing warnings.

K. Additional Issues

We also ask for comments on the following issues relevant to this rulemaking:

(1) We have noted that radiator caps and coolant reservoir caps generally are removed by at least one motion—counterclockwise rotation, and that many radiator caps, while being removed, must be pushed down during that rotation. We believe that for consistency of use for people who must remove radiator caps, the movement, and perhaps the minimum forces, used to remove those caps should be standardized. We intend to minimize any need to redesign existing systems, by proposing to standardize the motions for cap removal. With this premise, please answer the following questions, for vehicles that have a gross vehicle weight rating of 4,536 kg (10,000 lb) or less. In answering questions regarding future plans for vehicle system performance, please assume that the rule proposed in this NPRM will not be in effect.

(a) For liquid-cooled engine systems, what are the maximum cap pressure(s) on vehicles being sold in the U.S. in MY 2001? What maximum cap pressure(s) does your company anticipate establishing for systems on liquid-cooled motor vehicles to be sold in the U.S. in the future? Please specify whether the maximum pressure is for a radiator cap or a coolant reservoir cap.

(b) What are the largest neck opening diameters on motor vehicles (with liquid-cooled systems) being sold in the U.S. in MY 2001? What neck-opening diameter(s) does your company anticipate specifying on motor vehicle liquid-cooled systems to be sold in the U.S. in the future? Please specify whether the neck openings are for radiators or for coolant reservoirs. Please provide diameters in millimeters.

(c) What force(s) does your company use as the minimum downward axial force and/or torque necessary to remove radiator caps or coolant reservoir caps on motor vehicles (with liquid-cooled systems) being sold in the U.S. in MY 2001?

(2) In this NPRM, we propose that a cap not be removable from a radiator or coolant reservoir system that is under a pressure of 14 kPa (2 psi) or greater. We selected this value in part because we believe specifying a more precise pressure (e.g., 2.5 psi) would result in extra costs to manufacturers. Is there a safety value in specifying the locking pressure to a more precise value? If so, can such a value be specified without unduly increasing the cost of the cap? Is a lower locking pressure possible? At 2 psi, the effluent would be approximately 51.6 degrees Celsius (125 degrees Fahrenheit). We believe that a lower pressure is desirable because the fluid temperature would also be lower and therefore would be less likely to scald.

(3) We propose that fluids vented through actuation of a manually operated pressure release mechanism vent ''downward and toward the center of the vehicle'' to reduce the likelihood that fluids would contact the person operating the venting mechanism. Is this a sufficiently objective and effective way of specifying this performance? Are there better ways of specifying the desired venting performance that would provide greater assurance that the vented fluids do not contact the operator or bystanders standing alongside a motor vehicle?

VIII. Leadtime

We propose that the new standard apply to applicable vehicles manufactured on or after the first September 1st that occurs two or more years after the publication of the final rule. We also propose the same effective date for replacement radiator caps and coolant reservoir caps for use on those vehicles. The agency notes that there would not be any requirements applicable to the manufacture and sale of caps (manufactured after the new standard's effective date) that are designed to or recommended to fit only on pre-standard vehicles. Public comment is sought on these proposed lead times. We believe that two years is sufficient lead time for industry. We do not believe that this proposed rule involves any new technology, or performance specifications that manufacturers cannot meet with existing design, tooling, or manufacturing capabilities. If this proposal were made final, we would encourage manufacturers to comply as soon as possible.

IX. Regulatory Analyses and Notices

A. Executive Order 12866 and DOT Regulatory Policies and Procedures

Executive Order 12866, ''Regulatory Planning and Review'' (58 FR 51735, October 4, 1993), provides for making determinations whether a regulatory action is ''significant'' and therefore subject to Office of Management and Budget (OMB) review and to the requirements of the Executive Order. The Order defines a ''significant regulatory action'' as one that is likely to result in a rule that may:

(1) Have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or Tribal governments or communities;

(2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

(4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

We have considered the impact of this rulemaking action under Executive Order 12866 and the Department of Transportation's regulatory policies and procedures. This rulemaking document was not reviewed by the Office of Management and Budget under E.O. 12866, ''Regulatory Planning and Review.'' The rulemaking action is also not considered to be significant under the Department's Regulatory Policies and Procedures (44 FR 11034; February 26, 1979).

The annual incremental cost of new and replacement radiator caps and coolant reservoir caps for the passenger car and light truck fleet would be $14 million. The estimated incremental cost increase associated with the requirements proposed in this NPRM would be $0.65 for a radiator cap and $0.43 for a coolant reservoir cap. The total medical cost savings and work loss savings would be an estimated $76 million. The estimated annual net monetary benefits would be $62 million. We assume the caps would be 95 percent effective, resulting in an annual reduction of 28,271 scald injuries. This estimate is based on visits to hospitals,

which have been adjusted to include less severe cases resulting in visits to clinics, and doctors' offices.

The complete regulatory evaluation of this rulemaking, ''FMVSS No. 402 Radiator and Coolant Reservoir Caps, Venting of Motor Vehicle Coolant Systems' is provided in the DOT Docket cited in the heading of this notice.

B. Executive Order 13132 (Federalism)

Executive Order 13132 requires us to develop an accountable process to ensure ''meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications.'' ''Policies that have federalism implications'' is defined in the Executive Order to include regulations that have ''substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.'' Under Executive Order 13132, we may not issue a regulation with Federalism implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by State and local governments, or unless we consult with State and local governments, or unless we consult with State and local officials early in the process of developing the proposed regulation. We also may not issue a regulation with Federalism implications and that preempts State law unless we consult with State and local officials early in the process of developing the proposed regulation.

This proposed rule would not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. The reason is that this proposed rule, if made final, would apply to motor vehicle manufacturers and manufacturers of radiator caps or reservoir caps, and not to the States or local governments. Thus, the requirements of Section 6 of the Executive Order do not apply to this proposed rule.

C. Executive Order 13045 (Economically Significant Rules Disproportionately Affecting Children)

Executive Order 13045 (62 FR 19885, April 23, 1997) applies to any rule that: (1) is determined to be ''economically significant'' as defined under E.O. 12866, and (2) concerns an environmental, health or safety risk that NHTSA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, we must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by us.

This proposed rule is not subject to the Executive Order because it is not economically significant as defined in E.O. 12866 and does not involve decisions based on environmental, health or safety risks that disproportionately affect children.

D. Executive Order 12778 (Civil Justice Reform)

Pursuant to Executive Order 12778, ''Civil Justice Reform,'' we have considered whether this proposed rule would have any retroactive effect. We conclude that it would not have such an 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.

E. Regulatory Flexibility Act

Pursuant to the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*, as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996) whenever an agency is required to publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effect of the rule on small entities (*i.e.,* small businesses, small organizations, and small governmental jurisdictions). However, no regulatory flexibility analysis is required if the head of an agency certifies the rule would not have a significant economic impact on a substantial number of small entities. SBREFA amended the Regulatory Flexibility Act to require Federal agencies to provide a statement of the factual basis for certifying that a rule would not have a significant economic impact on a substantial number of small entities.

The Head of the Agency has considered the effects of this rulemaking action under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) and certifies that this proposal would not have a significant economic impact on a substantial number of small entities. The statement of the factual basis for the certification is that we are not aware that any radiator cap or coolant reservoir cap manufacturer, or radiator manufacturer or coolant reservoir manufacturer is a small business. The U.S. Small Business Administration's size standard for Standard Industrial Classification Code 3714 ''Motor Vehicle Parts and Accessories'' manufacturers is 750 employees (13 CFR 121.201). NHTSA has no information that any radiator cap or coolant reservoir cap manufacturer is a small business that is not owned or otherwise affiliated with a large business. Accordingly, the agency believes that this proposal would not affect the costs of radiator cap and reservoir cap manufacturers considered to be small business entities.

F. National Environmental Policy Act

We have analyzed this proposal for the purposes of the National Environmental Policy Act and determined that it would not have any significant impact on the quality of the human environment.

G. Paperwork Reduction Act

NHTSA has determined that, if made final, this proposed rule would impose new collection of information burdens within the meaning of the Paperwork Reduction Act of 1995 (PRA). Under the PRA, before an agency submits a proposed collection of information to OMB for approval, it must publish a document in the **Federal Register** providing a 60-day comment period and otherwise consult with members of the public and affected agencies concerning each proposed collection of information. The OMB has promulgated regulations describing what must be included in such a document. Under OMB's regulations, (at 5 CFR 1320.8(d)), an agency must ask for public comment on the following:

(I) whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

(ii) the accuracy of the agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;

(iii) how to enhance the quality, utility, and clarity of the information to be collected; and;

(iv) how to minimize the burden of the collection of information on those who are to respond, including the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses.

In compliance with these requirements, NHTSA asks public comment on the collection of information proposed in this notice of proposed rulemaking.

Labeling for Radiator and Cooling Reservoir Caps

Type of Request—New.

OMB Clearance Number—None assigned.

Form Number—This proposed collection of information would not use any standard forms.

Requested Expiration Date of Approval—Three years from the date of approval of the collection.

Summary of the Collection of Information—NHTSA proposes that each radiator cap and coolant reservoir cap subject to the proposed new standard be marked with the symbol ''DOT'' as certification that the cap meets the new standard. We propose to let cap manufacturers use their discretion in determining the best way it can meet the requirement to provide the ''DOT'' certification. However, the ''DOT'' must be permanently marked.

We are also proposing that cap manufacturers permanently label each cap with its maximum pressure rating for the cap.

Description of the Need for the Information and Proposed Use of the Information—The statute under which this proposal is being issued requires manufacturers to certify the compliance of their motor vehicles and motor vehicle equipment with all applicable FMVSS. In addition, the ''DOT'' certification on each cap is necessary so that consumers would know whether a radiator or coolant reservoir cap meets the proposed performance requirements. The maximum pressure rating labeled on each cap would let consumers know that the maximum pressure capability of the cap. When they seek a replacement cap for the systems on their motor vehicles, consumers need to know maximum pressure information to ensure that they or service personnel get the cap that has equal or greater capability. Many radiator cap or reservoir caps appear to be physically identical to each other, but in fact have different pressure performance capabilities.

Description of the Likely Respondents (Including Estimated Number, and Proposed Frequency of Response to the Collection of Information—The new collection of information would apply to manufacturers of radiator caps and manufacturers of pressurized coolant reservoir tank caps. NHTSA has no estimate of the number of cap manufacturers that would be subject to the requirement, but does not believe any of these manufacturers is a small business.

Estimate of the Total Annual Reporting and Recordkeeping Burden Resulting from the Collection of Information—The total annual reporting burden is estimated as follows.

New Caps on New Motor Vehicles—Based on 1999 sales of vehicles in the United States, we estimate that each year, out of a total passenger car and light truck sales of approximately 16,890,000, there would be a total of approximately 12,667,901 radiator caps (75 percent of the fleet) and 4,222,634 coolant reservoir caps (25 percent of the fleet). Manufacturers are already aware of the maximum pressure rating for their radiator caps and coolant reservoir caps. We estimate that it would take one second per cap to label, print, or otherwise mark the ''DOT'' certification and maximum pressure rating on each cap. Therefore, the total burden hours on the public per year imposed by caps on new motor vehicles subject to this proposed rule would be 4,692 hours (16,890,535 caps, taking one second per cap to mark divided by 3600 seconds in an hour). In reality, the burden on the public should be less than 4,692 hours per year because many manufacturers already voluntarily label the maximum pressure rating information on the caps. If it costs one cent per cap to label the information on the caps, the total cost burden on the public would be $168,905.35.

New Replacement Caps for Use on Vehicles Subject to the Proposed Rule—In this NPRM, NHTSA does not propose that new replacement caps subject to this proposed rule be required to be compatible with pre-standard vehicles. This means that for a period of time, replacement caps for both vehicles that are subject to the new standard, and for older, pre-standard vehicles would be manufactured. The collection of information burden would be imposed only by new replacement caps that are designed for vehicles that are subject to the new standard.

As noted in the regulatory evaluation (provided in the DOT Docket cited in the heading of this notice), NHTSA assumes that radiator caps and coolant reservoir caps are replaced on average, once over a ten year period. NHTSA estimates that after a 10 year period (when the rule proposed in this NPRM has been in effect for 10 years), there would be 12.9 million new replacement caps manufactured per year that meet the proposed standard.

In the request for clearance at issue, NHTSA seeks OMB approval for a collection of information burden imposed by new replacement caps subject to the new rule for the first three years the rule is in effect. NHTSA does not believe the new vehicles subject to the standard would need many new replacement caps that meet the standard. The following figures take into account new replacement caps for vehicles that are subject to the standard, and also new replacement caps that may be compatible with pre-standard vehicles. For the first three years of the rule's existence, NHTSA estimates that for new replacement caps, in the first year, 100,000 new replacement caps that meet the new standard would be manufactured, in the second year 200,000 new replacement caps would be manufactured, and in the third year, 300,000 new replacement caps would be manufactured. This results in an average of 200,000 new replacement caps per year for three years.

We estimate that it would take one second per cap to label, print, or otherwise mark the ''DOT'' certification and maximum pressure rating on each cap. Therefore, total burden hours on the public per year would be 55.5 hours (200,000 caps, taking one second per cap to mark divided by 3600 seconds in an hour) from marking new replacement caps. In reality, the added burden on the public should be less than 55.5 hours per year because many manufacturers already voluntarily label the maximum pressure rating information on the caps. If it costs one cent per cap to label the information on the caps, the total cost burden on the public would be $2000 per year for labeling new replacement caps.

Total Burdens—Therefore, NHTSA estimates that the total burden hours imposed on the public from labeling new caps on new vehicles and labeling new replacement caps to be an average of 4,747 hours (4,692 hours (vehicle caps) plus 55 hours (replacement caps)) per year, and an average cost of $170,905.35 ($168,905.35 (vehicle caps) plus $2000 (replacement caps)) per year.

NHTSA recognizes that some manufacturers may choose to emboss the ''DOT'' certification and maximum pressure ratings on their caps. This proposed rule permits, but does not

require embossing. The proposed rule requires some type of labeling. Since we are estimating our burdens on the public based on minimum requirements, we are not taking into account additional costs that may result from embossing. However, NHTSA seeks comment on what (if any) additional costs may result from embossing, rather than labeling, caps.

Since nothing in this proposed rule would require radiator cap manufacturers or coolant reservoir cap manufacturers to keep records, recordkeeping costs imposed would be zero hours and zero dollars.

H. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA), Public Law 104–113, section 12(d) (15 U.S.C. 272) directs us to use voluntary consensus standards in our regulatory activities unless doing so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies, such as the Society of Automotive Engineers (SAE). The NTTAA directs us to provide Congress, through OMB, explanations when we decide not to use available and applicable voluntary consensus standards.

After conducting a search of available sources, we have determined that there are not any available and applicable voluntary consensus standards that we can use in this notice of proposed rulemaking. We have searched the SAE's Recommended Practices applicable to radiator caps. We found SAE J164 *Radiator Caps and Filler Necks* JUN91, which provides dimensions for the different pressure ratings of bayonet type radiator pressure caps and filler necks. There is also SAE J151 *Pressure Relief for Cooling System* JUN91, which specifies the requirements for pressure relief means and pressure relief rating identification for cooling systems of liquid cooled engines. Neither of these SAE Standards provides guidance on specifying how caps are to perform in a manner that prevents their removal when the cooling system is under dangerously high pressure and temperature. Since neither SAE Standard provides guidance on an issue material to this rulemaking, we have developed our own proposal.

I. Unfunded Mandates Reform Act

Section 202 of the Unfunded Mandates Reform Act of 1995 (UMRA) requires Federal agencies to prepare a written assessment of the costs, benefits and other effects of proposed or final rules that include a Federal mandate likely to result in the expenditure by State, local or tribal governments, in the aggregate, or by the private sector, of more than $100 million in any one year (adjusted for inflation with base year of 1995). Before promulgating a NHTSA rule for which a written statement is needed, section 205 of the UMRA generally requires us to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows us to adopt an alternative other than the least costly, most cost-effective or least burdensome alternative if we publish with the final rule an explanation why that alternative was not adopted.

This proposal would not result in costs of $100 million or more to either State, local, or tribal governments, in the aggregate, or to the private sector. Thus, this proposal is not subject to the requirements of sections 202 and 205 of the UMRA.

J. Plain Language

Executive Order 12866 requires each agency to write all rules in plain language. Application of the principles of plain language includes consideration of the following questions:

—Have we organized the material to suit the public's needs?
—Are the requirements in the rule clearly stated?
—Does the rule contain technical language or jargon that is not clear?
—Would a different format (grouping and order of sections, use of headings, paragraphing) make the rule easier to understand?
—Would more (but shorter) sections be better?
—Could we improve clarity by adding tables, lists, or diagrams?
—What else could we do to make this rulemaking easier to understand?

If you have any responses to these questions, please include them in your comments on this NPRM.

K. Regulation Identifier Number (RIN)

The Department of Transportation assigns a regulation identifier number (RIN) to each regulatory action listed in the Unified Agenda of Federal Regulations. The Regulatory Information Service Center publishes the Unified Agenda in April and October of each year. You may use the RIN contained in the heading at the beginning of this document to find this action in the Unified Agenda.

Comments

How Do I Prepare and Submit Comments?

Your comments must be written and in English. To ensure that your comments are correctly filed in the Docket, please include the docket number of this document in your comments.

Your comments must not be more than 15 pages long. (49 CFR 553.21). We established this limit to encourage you to write your primary comments in a concise fashion. However, you may attach necessary additional documents to your comments. There is no limit on the length of the attachments.

Please submit two copies of your comments, including the attachments, to Docket Management at the address given above under **ADDRESS.**

You may also submit your comments to the docket electronically by logging onto the Dockets Management System website at *http://dms.dot.gov.* Click on ''Help & Information'' or ''Help/Info'' to obtain instructions for filing the document electronically.

How Can I Be Sure That My Comments Were Received?

If you wish Docket Management to notify you upon its receipt of your comments, enclose a self-addressed, stamped postcard in the envelope containing your comments. Upon receiving your comments, Docket Management will return the postcard by mail.

How Do I Submit Confidential Business Information?

If you wish to submit any information under a claim of confidentiality, you should submit three copies of your complete submission, including the information you claim to be confidential business information, to the Chief Counsel, NHTSA, at the address given above under **FOR FURTHER INFORMATION CONTACT.** In addition, you should submit two copies, from which you have deleted the claimed confidential business information, to Docket Management at the address given above under **ADDRESS.** When you send a comment containing information claimed to be confidential business information, you should include a cover

letter setting forth the information specified in our confidential business information regulation. (49 CFR Part 512.)

Will the Agency Consider Late Comments?

We will consider all comments that Docket Management receives before the close of business on the comment closing date indicated above under **DATES**. To the extent possible, we will also consider comments that Docket Management receives after that date. If Docket Management receives a comment too late for us to consider it in developing a final rule (assuming that one is issued), we will consider that comment as an informal suggestion for future rulemaking action.

How Can I Read the Comments Submitted by Other People?

You may read the comments received by Docket Management at the address given above under **ADDRESSES.** The hours of the Docket are indicated above in the same location.

You may also see the comments on the Internet. To read the comments on the Internet, take the following steps:

8. Go to the Docket Management System (DMS) Web page of the Department of Transportation (*http://dms.dot.gov/*).

9. On that page, click on ''search.''

10. On the next page (http://dms.dot.gov/search/), type in the four-digit docket number shown at the beginning of this document. Example: If the docket number were ''NHTSA–1998–1234,'' you would type ''1234.'' After typing the docket number, click on ''search.''

11. On the next page, which contains docket summary information for the docket you selected, click on the desired comments. You may download the comments. Although the comments are imaged documents, instead of word processing documents, the ''pdf'' versions of the documents are word searchable.

Please note that even after the comment closing date, we will continue to file relevant information in the Docket as it becomes available. Further, some people may submit late comments. Accordingly, we recommend that you periodically check the Docket for new material.

List of Subjects in 49 CFR Part 571

Imports, Motor vehicle safety, Motor vehicles, Rubber and rubber products, Tires.

In consideration of the foregoing, it is proposed that the Federal Motor Vehicle Safety Standards (49 CFR Part 571), be amended as set forth below.

PART 571—FEDERAL MOTOR VEHICLE SAFETY STANDARDS

1. The authority citation for part 571 would continue to read as follows:

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

2. Section 571.402 would be added to read as follows:

§ 571.402 Standard No. 402; Radiator and coolant reservoir caps, venting of motor vehicle cooling systems.

S1. *Scope.* This standard specifies performance requirements for radiator caps and coolant reservoir caps on liquid-based cooling systems for motor vehicle engines. This standard also specifies performance requirements for the venting of those cooling systems.

S2. *Purpose.* The purpose of this standard is:

(a) To reduce the number of scald injuries that occur when people remove radiator caps or coolant reservoir caps of liquid-based cooling systems for motor vehicle engines when the contents of those systems are hot and under high pressure; and

(b) To reduce the likelihood that the discharge of hot fluids from a manually operated pressure release mechanism for one of those cooling systems will contact the person actuating the mechanism.

S3. *Application.* This standard applies to—-

(a) Motor vehicles (except motorcycles and trailers) that have a gross vehicle weight rating of 4,536 kg (10,000 lb) or less and a liquid-based cooling system for their engines; and

(b) Radiator caps and coolant reservoir caps recommended for use on the engine cooling systems in the motor vehicles subject to this standard.

S4. *Definitions.*

Cap means a radiator cap or a coolant reservoir cap recommended for use in a motor vehicle subject to this standard.

Coolant reservoir cap means any removable device that is used to close the filler neck opening of a pressurized reservoir tank of a liquid-based cooling system for a motor vehicle engine.

Fluids means substances, such as liquids or gases, that are capable of flowing and that change shape at a steady rate when acted upon by any force tending to change their shape.

Manually operated pressure release mechanism means any mechanism intended to be operated or actuated for the purpose of reducing the cooling system pressure, and whose operation does not involve removal of a cap from a cooling system filler neck.

Radiator cap means any removable device that is used to close the filler neck opening of a pressurized radiator of a liquid-based cooling system for a motor vehicle engine.

S5. *Requirements.*

S5.1 *Radiator Caps and Coolant Reservoir Caps.*

(a) Caps must be removable without the use of any tools.

(b) Each cap, when installed in the fully-closed position on a motor vehicle cooling system for which it is recommended, and when tested in accordance with S6.1(a), must not be manually removable when the pressure in the system is at or above 14kPa. In addition, such a cap must not vent any internal cooling system pressure or fluids during that test.

(c) In the case of each cap that has a manually operated pressure release mechanism, when the cap is installed in the fully-closed position, and tested in accordance with S6.1(b), actuation of the mechanism must not result in the venting of any fluids through the cap or the seal at the cap-to-filler neck interface.

(d) Each cap must have a label permanently affixed to it with the following information:

(1) The symbol ''DOT'' constituting certification by the cap manufacturer that the cap complies with this standard, and (2) The manufacturer's maximum pressure rating for the cap.

S5.2 *Motor vehicles.*

(a) Each cap on a motor vehicle subject to this standard must comply with the applicable requirements of S5.1.

(b) Each radiator cap, when installed in the fully-closed position on a motor vehicle cooling system for which it is recommended, must not be manually removable unless it is first pushed axially toward the radiator, and then, while still being pushed, is rotated in a counter-clockwise direction.

(c) Each coolant reservoir cap, when installed in the fully-closed position on a motor vehicle cooling system for which it is recommended, must not be manually removable unless it is rotated in a counter-clockwise direction.

(d) In the case of motor vehicles equipped with a cap or caps that include a manually operated pressure release mechanism, each such cap must comply with the requirements of S5.1(c).

(e) In the case of motor vehicles equipped with an engine cooling system that includes a cap with a manually operated pressure release mechanism or has a manually operated pressure

release mechanism in a location other than its cap, testing each such mechanism in accordance with S6.2 must not result in the venting of any fluids through the cap or the seal at the cap-to-filler neck interface, and either must not permit the venting of any fluids outside of the pressurized part of the system, or must direct any fluids vented from any part of the system downward and toward the center of the vehicle.

S6. *Test procedures.*

S6.1 *Radiator caps and reservoir caps.* Each cap is tested as specified in paragraphs (a) and (b) of S6.1.

(a) *Removal.*

(1) Using water, fill the radiator or coolant reservoir system, as applicable, of any vehicle for which the cap is recommended. Attach the cap to the radiator or coolant reservoir, as applicable, of that vehicle in accordance with the manufacturer's installation procedure. Rotate the cap to the fully closed position. Purge air from the system.

(2) Pressurize the radiator or coolant reservoir to any pressure not less than 14 kPa and not more than the maximum pressure rating of the cap as specified by the manufacturer.

(3)(i) *Radiator caps.* While a force of not greater than 225 Newtons is being applied to the cap axially toward the radiator, perpendicular to the top surface of the cap, and a torque of not greater than 40 Newton-meters is being applied to the cap in a counter-clockwise direction, attempt to remove the cap.

(ii) *Coolant reservoir caps.* While a torque of up to 40 Newton-meters is being applied to the cap in a counter-clockwise direction, attempt to remove the cap.

(b) *Venting.*

(1) Using water, fill the radiator or coolant reservoir system, as applicable, of any vehicle for which the cap is recommended. Attach the cap to the radiator or coolant reservoir, as applicable, of that vehicle in accordance with the manufacturer's installation procedure. Rotate the cap to the fully closed position. Purge air from the system.

(2) Pressurize the radiator or coolant reservoir system to any pressure not less than 14kPa and not more than the maximum pressure rating of the cap.

(3) Actuate the manually operated pressure release mechanism in accordance with the manufacturer's instructions.

S6.2 *Motor vehicles-venting.* Each motor vehicle cooling system that includes a means of reducing the system pressure by venting fluids is tested as specified in paragraphs (a) through (d) of S6.2.

(a) Place the motor vehicle on a level surface.

(b) Fill the vehicle's cooling system with water. Attach the vehicle's cap to the radiator or coolant reservoir for which it is intended and rotate the cap to the fully closed position. Purge air from the radiator system or the reservoir system.

(c) Pressurize the system to any pressure at or above 14 kPa and below the maximum pressure rating of the cap as specified by the manufacturer.

(d) Actuate each manually operated pressure release mechanism in accordance with the vehicle manufacturer's instructions.

Issued on: May 25, 2001.

Stephen R. Kratzke,

Associate Administrator for Safety Performance Standards.

[FR Doc. 01–13800 Filed 5–31–01; 8:45 am]

BILLING CODE 4910–59–P