

Effective date. This amendment is effective upon publication in the FEDERAL REGISTER (3-9-72).

Dated March 2, 1972.

ROD KREGER,
Acting Administrator
of General Services.

[FR Doc. 72-3613 Filed 3-8-72; 8:54 am]

Title 46—SHIPPING

Chapter I—Coast Guard, Department of Transportation

[CGFR 72-45]

DAVITS AND LAUNCHING DEVICES

The purpose of these amendments to the Coast Guard regulations is to (a) establish a service use life of 3 years for self-activating smoke signals; (b) require additional life preservers that are accessibly stored for personnel on watch in the engine room, pilothouse, and at the bow lookout station; and (c) provide that all vessels have lifeboat/liferaft emergency illumination.

These amendments were proposed in a notice of proposed rule making published in the FEDERAL REGISTER of February 24, 1971 (36 F.R. 3425), and in the Merchant Marine Council Public Hearing Agenda dated March 29, 1971 (CG-249). The proposed amendments in this document were identified as Item PH 7-71 (PH 7a-71 through PH 7c-71).

A public hearing was held on March 29, 1971, in Washington, D.C. Interested persons were given the opportunity to submit written comments both before and at the public hearing and to make oral comments concerning all the proposed amendments at the public hearing.

Item PH 7a-71 proposed amendments to §§ 33.40-1(c), 75.43-5(c), 94.43-5(c), and 192.43-10(c) and received two comments. One comment suggested that § 75.43-10(c) be amended by requiring the water light to be attached to a bracket. The Coast Guard determined that the suggestion was not responsive to the proposal and would require notice and public procedure thereon before any action could be taken; therefore, the Coast Guard determined not to act on the suggestion at this time.

The second comment requested that the service use of the self-activating smoke signal be extended from 3 years to 4 years. The specification for the smoke signal has always provided for a 3-year service use and the Coast Guard has not been apprised of a sufficient technical reason to extend this use upon its inclusion in the regulations. Accordingly, the Coast Guard has rejected this suggestion. Item PH 7a-71 has been adopted with no substantive change, but the form has been changed to facilitate reader understanding and reference.

Item PH 7b-71 proposed amendments to §§ 75.40-10 and 75.40-15 and received no comments. The Coast Guard adopted the proposed amendments with the following minor editorial changes: (a) The

phrase "that is stowed in accordance with § 75.40-15(c)" has been added to § 75.40-10(c) to provide a reference for the required stowage of life preservers; and (b) § 75.40-15(c) has been changed in form only to facilitate reader understanding and reference.

Item PH 7c-71 proposed amendments to §§ 33.20-1(c)(3), 75.50-10(a), 75.50-15(a), 94.50-10(a), 94.50-15(a), 112.15-1, and 112.15-5 and received two comments. One comment suggested that the proposed amendment of § 75.50-15(a) be changed to include a requirement for "over the side" illumination. The Coast Guard determined that the proposed regulation does provide for "over the side" illumination by requiring that the entire process of the launch, from the stowed position of the liferaft until it is waterborne, be illuminated. The other comment suggested that the words "on an international voyage" be eliminated from §§ 192.50-10 and 192.50-15. The Coast Guard found merit in this suggestion but determined that the change would require separate rule-making procedures since it was not included in the present proposal. The Coast Guard adopted the proposal designated Item PH 7c-71 with minor editorial changes.

In consideration of the foregoing, Chapter I of Title 46, Code of Federal Regulations is amended as follows:

SUBCHAPTER D—TANK VESSELS

PART 33—LIFESAVING DEVICES

1. By revising § 33.20-1(c)(3) to read as follows:

§ 33.20-1 Davits and launching devices—TB/ALL.

(c) * * *

(3) A tank vessel must have lights that illuminate the entire process of launching lifeboats and liferafts from their stowed position until they are waterborne. For detailed requirements of such illumination for tank vessels contracted for on or after November 19, 1955, see § 111.75-15(e) of this chapter.

2. By revising § 33.40-1(c) to read as follows:

§ 33.40-1 Ring life buoys and water lights, general requirements.—TB/ALL

(c) * * *

(c) A self-activating smoke signal—
(1) Must be approved in accordance with Subpart 160.057 of this chapter; and
(2) May not be more than 3 years older than the stamped date of manufacture.

SUBCHAPTER H—PASSENGER VESSELS

PART 75—LIFESAVING EQUIPMENT

3. By adding paragraph (c) to § 75.40-10 to read as follows:

§ 75.40-10 Number and type required.

(c) In addition to the life preservers required by paragraphs (a) and (b) of this section, each person on watch in the

engineroom, pilothouse, and at the bow lookout station must be provided with a Coast Guard approved life preserver that is stowed in accordance with § 75.40-15(c).

4. By amending § 75.40-15 by striking the words "one of which shall be stowed near the bow" in paragraph (b) and adding paragraph (c) to read as follows:

§ 75.40-15 Distribution.

(c) The additional number of life preservers required by § 75.40-10(c) must be stowed in locations that are accessible to each person on watch in the—

- (1) Engine room;
- (2) Pilothouse; and
- (3) Bow lookout station.

5. By revising § 75.43-5(c) to read as follows:

§ 75.43-5 General.

(c) A self-activating smoke signal—
(1) Must be approved in accordance with Subpart 160.057 of this chapter; and

(2) May not be more than 3 years older than the stamped date of manufacture.

6. By revising § 75.50-10 to read as follows:

§ 75.50-10 Illumination for lifeboat launching operations.

A passenger vessel must have lights for the continuous illumination of lifeboats that are being launched and lifeboats that are in the water in the immediate vicinity of the vessel. For detailed requirements of the illumination, see § 111.75-15(e) of this chapter.

7. By revising § 75.50-15 to read as follows:

§ 75.50-15 Illumination for inflatable liferaft launching operations.

A passenger vessel that is equipped with Coast Guard approved launching devices must have lights that illuminate the entire process of the launch from the stowed position of the liferaft until it is waterborne. Other passenger vessels must have lights that illuminate the stowage position of liferafts. For detailed requirements of the illumination, see § 111.75-15(e) of this chapter.

SUBCHAPTER I—CARGO AND MISCELLANEOUS VESSELS

PART 94—LIFESAVING EQUIPMENT

8. By revising § 94.43-5(c) to read as follows:

§ 94.43-5 General.

(c) A self-activating smoke signal—
(1) Must be approved in accordance with Subpart 160.057 of this chapter; and

(2) May not be more than 3 years older than the stamped date of manufacture.

9. By revising § 94.50-10 to read as follows:

§ 94.50-10 Illumination for lifeboat launching operations.

Each vessel subject to this subchapter must have lights for the continuous illumination of lifeboats that are being launched and lifeboats that are in the water in the immediate vicinity of the vessel. For detailed requirements of the illumination, see § 111.75-15(e) of this chapter.

10. By revising § 94.50-15 to read as follows:

§ 94.50-15 Illumination for liferaft stowage areas.

Each vessel subject to this subchapter must have lights for the continuous illumination of the stowage position of liferafts. For detailed requirements of the illumination system, see § 111.75-15(e) of this chapter.

SUBCHAPTER J—ELECTRICAL ENGINEERING

PART 112—EMERGENCY LIGHTING AND POWER SYSTEM

11. By amending § 112.15-1 by adding paragraph (n) to read as follows:

§ 112.15-1 Temporary emergency source loads.

(n) Lights must provide continuous illumination for—

- (1) The launching gear of a lifeboat or a liferaft; and
- (2) The entire process of launching a lifeboat or a liferaft from its stowed position until waterborne.

§ 112.15-5 [Amended]

12. By revoking paragraph (c) of § 112.15-5.

SUBCHAPTER U—OCEANOGRAPHIC VESSELS

PART 192—LIFESAVING EQUIPMENT

13. By revising § 192.43-5(c) to read as follows:

§ 192.43-5 General.

- (c) A self-activating smoke signal—
- (1) Must be approved in accordance with Subpart 160.057 of this chapter; and
- (2) May not be more than 3 years older than the stamped date of manufacture.

(R.S. 4405, as amended, R.S. 4462, as amended, R.S. 4488, as amended, R.S. 4491, as amended, sec. 6(b) (1), 80 Stat. 937; 46 U.S.C. 375, 416, 481, 489, 49 U.S.C. 1655(b) (1); 49 CFR 1.46(b))

Effective date. These amendments shall become effective on April 10, 1972.

Dated: March 2, 1972.

T. R. SARGENT,
Vice Admiral, U.S. Coast Guard,
Acting Commandant.

[FR Doc. 72-3594 Filed 3-8-72; 8:53 am]

Title 47—TELECOMMUNICATION

Chapter I—Federal Communications Commission

[FCC 72-193]

PART 87—AVIATION SERVICES

Detailed Operational Plan for Security Control of Non-Federal Air Navigation Aids

Order. In the matter of adoption of a revised detailed operational plan for the security control of non-Federal air navigation aids and amendment of Part 87, Subpart Q of the Commission's rules to reflect the changes therein.

1. The Commission has under consideration amendment of Part 87, Subpart Q of the rules and a revised detailed operational plan for the Security Control of Non-Federal Air Navigation Aids, heretofore adopted by the Commission on September 17, 1968. The plan prescribes detailed operational procedures for the security control of non-Federal air navigation aids to be taken under the Plan for the Security Control of Air Traffic and Air Navigation Aids (SCATANA). It was amended to conform to the changes made in the revised SCATANA plan of June 1971.

2. Executive Order 11490 and section 1 of the Communications Act of 1934, as amended, places upon the Commission various functions including the development of plans and procedures covering authorization, operation and use of safety and special radio services facilities and personnel in the national interest in an emergency.

3. We find that the notice and effective date provisions of the Administrative Procedure Act, 5 U.S.C. section 553, are inapplicable because this rule making involves a military function of the United States.

4. It is ordered, Pursuant to sections 1 and 4(i), of Communications Act of 1934, as amended, and Executive Order 11490, that the revised detailed operational plan for the Security Control of Non-Federal Air Navigation Aids, corrected to January 31, 1972, is approved, and

5. It is further ordered, That, effective March 14, 1972, Part 87 of the Commission's rules is amended as set forth below.

(Secs. 1, 4, 48 Stat., as amended, 1064, 1066; 47 U.S.C. 151, 154)

Adopted: March 1, 1972.

Released: March 6, 1972.

FEDERAL COMMUNICATIONS
COMMISSION,²

[SEAL] BEN F. WAPLE,
Secretary.

1. In § 87.601, paragraph (b) is amended to read as follows:

¹ 36 F.R. 22153, Nov. 20, 1971.

² Commissioners Bartley and H. Rex Lee absent.

§ 87.601 Scope and objective.

(b) Sections 87.606 and 87.607 are for the purpose of providing for continued radio service and operation of facilities to the extent necessary for the safety or control of friendly aircraft during periods of attack or imminent threat thereof or as otherwise specified in these sections. These sections also provide for the security control of selected non-Federal air navigation aids during specified conditions under the provisions of the approved plan for the Security Control of Air Traffic and Air Navigation Aids (SCATANA). In addition, it is the objective to provide for actions to be taken under a detailed operational plan for the Security Control of Non-Federal Air Navigation Aids (SCATANA), in the interest of national security, to effect control of selected accurate non-Federal air navigation stations (VOR, VORTAC and TACAN) by the Regional Commanders, North American Air Defense Command during periods of Defense Emergency/Air Defense Emergency, or when the NORAD Region is under attack which will provide most effective utilization of such aids by military and civil aircraft, while denying their use to an enemy.

2. In § 87.602, paragraphs (a), (b), (c), (d), (l), (n), (o), and (p) are amended to read as follows:

§ 87.602 Definition of terms.

(a) **Accurate Air Navigation Aids.** Radionavigation stations in the following categories: Very High Frequency Omnidirectional Range (VOR), Very High Frequency Omnidirectional Range and Tactical Air Navigation (VORTAC) and Tactical Air Navigation (TACAN).

(b) **Air Defense Emergency.** An emergency condition which exists when attack upon the continental United States, Alaska, Canada, or U.S. installations in Greenland by hostile aircraft or missiles is considered probable, is imminent, or is taking place and is declared by either CINCNORAD or CINCONAD.

(c) **Defense Emergency.** An emergency condition which exists when:

(1) A major attack is made upon U.S. forces overseas, or allied forces in any area, and is confirmed either by the commander of a unified or specified command or higher authority.

(2) An overt attack of any type is made upon the United States and is confirmed by the commander of a unified or specified command or higher authority.

(d) **Detailed operational plan for the Security Control of Non-Federal Air Navigation Aids.** A plan to establish the responsibilities, procedures, and general instructions for the security control of selected non-Federal air navigation aids (VOR, VORTAC and TACAN), under the provisions of the SCATANA Plan, during a Defense Emergency/Air Defense Emergency or imminence thereof.

(l) *Non-Federal Air Navigation Aids.* VOR, VORTAC and TACAN stations licensed by the Federal Communications Commission.

(n) *North American Air Defense Command (NORAD).* An integrated United States-Canadian Command. NORAD includes, as component commands, the U.S. Aerospace Defense Command, U.S. Army Air Defense Command, and the Canadian Forces Air Defence Command.

(o) *SCATANA.* The short title for the Joint Department of Defense/Department of Transportation/Federal Communications Commission plan for the Security Control of Air Traffic and Air Navigation Aids.

(p) *Tactical Air Traffic.* Military flights actually engaged in operational missions against the enemy, flights engaged in immediate deployment for a combat mission, and preplanned combat and logistical support flights contained in Emergency War Plans.

3. In § 87.607, paragraph (a) is amended to read as follows:

§ 87.607 Security Control of Air Traffic and Air Navigation Aids (SCATANA).

(a) Upon receipt of notification from a Federal Aviation Administration Air Route Traffic Control Center (ARTCC) that an air defense emergency exists, or is imminent, each licensee of a radio range (VOR, VORTAC, or TACAN) station shall comply with the direction of the ARTCC with regard to beginning or terminating transmissions by the station.

[FR Doc.72-3621 Filed 3-8-72;8:56 am]

Title 49—TRANSPORTATION

Chapter V—National Highway Traffic Safety Administration, Department of Transportation

PART 571—FEDERAL MOTOR VEHICLE SAFETY STANDARDS

Motorcycle Brake Systems

This notice amends Part 571 of Title 49, Code of Federal Regulations, to add a new Motor Vehicle Safety Standard No. 122 (49 CFR 571.122) that establishes performance requirements for motorcycle brake systems. A notice of proposed rule making on this subject was published on March 24, 1971 (36 F.R. 5516).

The safety afforded by a motorcycle's braking system is determined by several factors, including stopping distance, linear stability while stopping, fade resistance, and fade recovery. A safe system should have features that both guard against malfunction and stop the vehicle should a malfunction occur in the normal service system. Standard No. 122 covers each of these aspects of brake safety, establishing equipment and performance requirements appropriate for

two-wheeled and three-wheeled motorcycles. These requirements do not differ greatly from the proposals, and comments received in response to the notice have been considered in promulgating the rule.

I. *Equipment.* Each motorcycle is required to have either a split hydraulic service brake system or two independently actuated service brake systems. The latter system encompasses a hydraulic service brake system combined with a hand operated parking brake system. Although several objections were received to the split hydraulic service brake system proposal, the NHTSA has determined that partial failure braking features are necessary in the event of a hydraulic pressure loss in the normal service brake system. If a motorcycle has a hydraulic service brake system, it must also have a reservoir for each master cylinder, and a master cylinder reservoir label advising the proper grade of DOT brake fluid. If the service brake system is a split hydraulic type, a failure indicator lamp is required.

Additionally, three-wheeled motorcycles must be equipped with a friction type parking brake with a solely mechanical means to retain engagement. Some commenters felt that pin or pawl type brakes should be permitted. The Administration does not know of an impact test adequate to test the strength of a mechanical lock, and pin or pawl type brakes, prone to failure upon impact, have been found to be inadequate. The NHTSA concurs, however, with comments objecting to the proposed parking brake indicator lamp, and has determined that the safety benefits involved are negligible in comparison with the expense of providing it.

II. *Performance.* Conformity with performance requirements will be determined by subjecting motorcycles to a series of road tests. Vehicles must demonstrate the effectiveness of their service brake systems by stopping within specified distances from 30 m.p.h., 60 m.p.h., 80 m.p.h., and from a speed divisible by 5 m.p.h. that is 4 m.p.h. to 8 m.p.h. less than the maximum vehicle speed.

Motorcycles will demonstrate fade resistance of their braking systems by making recovery stops subsequent to a series of fade stops from 60 m.p.h. The hand lever force for the final recovery stop must be within plus 20 pounds and minus 10 pounds of the baseline check average force. This is a modification of the proposed "plus 10 pounds or 20 percent, whichever is less, and minus 20 percent," based upon comments requesting the substitution of absolute values. The same modification is made in the final water recovery stop. The maximum speed fade and recovery proposal has not been adopted, as two-wheeled and three-wheeled motor vehicles do not have the inherent cooling problems that braking systems on four-wheeler vehicles experience. Retention of the 60 m.p.h. stops will insure that the system maintain adequate stopping ability despite the high temperatures created by prolonged use, and may reveal undesirable brake lining characteristics such as glazing.

The test sequence has been rearranged so that the parking brake system test for three-wheeled motorcycles occurs immediately before the water recovery test. At this point in the test sequence the brakes will have been fully bur-nished, and the test will therefore be more indicative of service performance. Parking brake application forces have been modified from the proposal, and specify a maximum applied force of not more than 90 pounds for a foot-operated system and 55 pounds for a hand-operated system. These forces are identical to those specified in S6.10, the test condition on brake actuation forces, and result in a uniformity of brake actuation forces throughout the standard.

Finally, a motorcycle must demonstrate acceptable stopping performance after its brake system has been exposed to water. Comments expressed dissatisfaction with the proposed test procedure, stating that complete immersion of the brakes is not indicative of the manner in which they become wet in actual service. NHTSA agrees that poor braking performance often is not attributable to complete immersion, but rather to prolonged exposure to a constant spray from the road surface. However, there is no basis on which to specify a test procedure reflecting these conditions, and the immersion procedure has, therefore, been retained.

At the end of the test procedure the brake system must pass a durability inspection.

All stops must be made without lockup of any wheel. Two-wheeled motorcycles must remain within an 8-foot-wide lane during stops (modified from the proposed 6-foot-wide lane), and three-wheeled ones within a lane equal to vehicle width plus 5 feet. Some commenters asked that tests be performed with the clutch engaged. However, the effectiveness of a brake system in bringing a vehicle to a stop within required distances is more accurately judged by requiring that stops be made with the clutch disengaged; there is less reliance on extraneous factors such as use of engine retardation as a braking assist and the varying skills of individual drivers when shifting downward through gears.

Regarding test conditions, comments were received that it is unnecessary for both braking systems of a two-wheeled motorcycle to be within the specified pedal and lever force range simultaneously. The Administration did not concur with these comments. The safety of cyclists requires not only that motorcycles be capable of stopping within specified distances, but also that this capability be demonstrated when reasonable forces are applied to the brake lever and pedal.

Several commenters also objected to the "impossibility" of the test condition that "the wind velocity is zero." The comment reveals misunderstanding of the significance of the test conditions. A manufacturer may test for compliance by running the tests under any wind conditions that are adverse to the vehicle; obviously if the vehicle meets the

requirements under adverse wind conditions, it will meet them under no-wind conditions. Similarly, the Government will prove noncompliance by orienting the test runs so that wind conditions are favorable to the vehicle. Thus, the condition uniquely allows testing under whatever wind conditions are present. It is retained as the most practicable and least burdensome test method for all parties.

Effective date: September 1, 1973. Because of the necessity to allow manufacturers sufficient production leadtime, it is found for good cause shown, that an effective date later than 1 year after issuance is in the public interest.

In consideration of the foregoing, Title 49, Code of Federal Regulations, is amended by adding § 571.122, Motor Vehicle Safety Standard No. 122, Motorcycle Brake Systems, as set forth below.

This notice is issued under the authority of sections 103 and 119 of the National Traffic and Motor Vehicle Safety Act of 1966 (15 U.S.C. 1392, 1407) and the delegation of authority from the Secretary of Transportation to the National Highway Traffic Safety Administrator, 49 CFR 1.51.

Issued on March 1, 1972.

CHARLES H. HARTMAN,
Acting Administrator.

§ 571.122 Standard No. 122; motorcycle brake systems. (Effective Sept. 1, 1973)

S1. Scope. This standard specifies performance requirements for motorcycle brake systems.

S2. Purpose. The purpose of the standard is to insure safe motorcycle braking performance under normal and emergency conditions.

S3. Application. This standard applies to motorcycles.

S4. Definitions.

"Braking interval" means the distance measured from the start of one brake application to the start of the next brake application.

"Initial brake temperature" means the temperature of the hottest service brake of the vehicle 0.2 mile before any brake application.

"Skid number" means the frictional resistance of a pavement measured in accordance with American Society for Testing and Materials Method E-274-65T at 40 m.p.h. omitting water delivery as specified in paragraph 7.1 of that method.

"Speed attainable in 1 mile" means the speed attainable by accelerating at maximum rate from a standing start for 1 mile, on a level surface.

"Stopping distance" means the distance traveled by a vehicle from the start of the brake application to the point where the vehicle stops.

"Split service brake system" means a brake system consisting of two or more subsystems actuated by a single control designed so that a leakage-type failure of a pressure component in a single subsystem (except structural failure of a housing that is common to all subsystems) shall not impair the operation of the other subsystem(s).

tems) shall not impair the operation of the other subsystem(s).

S5. Requirements. Each motorcycle shall meet the following requirements under the conditions specified in S6, when tested according to the procedures and in the sequence specified in S7. Corresponding test procedures of S7 are indicated in parentheses. If a motorcycle is incapable of attaining a specified speed, its service brakes shall be capable of stopping the vehicle from the multiple of 5 m.p.h. that is 4 m.p.h. to 8 m.p.h. less than the speed attainable in 1 mile, within stopping distances that do not exceed the stopping distances specified in Table 1.

S5.1 Required equipment—split service brake system. Each motorcycle shall have either a split service brake system or two independently actuated service brake systems.

S5.1.1 Mechanical service brake system. Failure of any component in a mechanical service brake system shall not result in a loss of braking ability in the other service brake system on the vehicle.

S5.1.2 Hydraulic service brake system. A leakage failure in a hydraulic service brake system shall not result in a loss of braking ability in the other service brake system on the vehicle. Each motorcycle equipped with a hydraulic brake system shall have the equipment specified in S5.1.2.1 and S5.1.2.2.

S5.1.2.1 Master cylinder reservoirs. Each master cylinder shall have a separate reservoir for each brake circuit, with each reservoir filler opening having its own cover, seal, and cover retention device. Each reservoir shall have a minimum capacity equivalent to one and one-half times the total fluid displacement resulting when all the wheel cylinders or caliper pistons serviced by the reservoir move from a new lining, fully retracted position to a fully worn, fully applied position. Where adjustment is a factor, the worst condition of adjustment shall be used for this measurement.

S5.1.2.2 Master cylinder label. Each motorcycle shall have the following information, located so as to be visible by direct view, permanently affixed, stamped, or embossed, either on or within 4 inches of the brake fluid master cylinder filler plug or cap, in lettering at least three thirty-seconds of an inch high on a contrasting background:

WARNING: Use only DOT [3] [4] brake fluid from a sealed container. Clean filler cap before removing.

S5.1.3 Split service brake system. In addition to the equipment required by S5.1.2 each motorcycle equipped with a split service brake system shall have a failure indicator lamp as specified in S5.1.3.1.

S5.1.3.1 Failure indicator lamp.

(a) One or more electrically operated service brake system failure indicator lamps that is mounted in front of and in clear view of the driver, and that is activated—

(1) In the event of pressure failure in any part of the service brake system,

other than a structural failure of either a brake master cylinder body in a split integral body type master cylinder system or a service brake system failure indicator body, before or upon application of not more than 20 pounds of pedal force upon the service brake.

(2) Without the application of pedal force, when the level of brake fluid in a master cylinder reservoir drops to less than the recommended safe level specified by the manufacturer or to less than one-half the fluid reservoir capacity, whichever is the greater.

(b) All failure indicator lamps shall be activated when the ignition switch is turned from the "off" to the "on" or to the "start" position.

(c) Except for the momentary activation required by S5.1.3.1(b), each indicator lamp, once activated, shall remain activated as long as the condition exists, whenever the ignition switch is in the "on" position. An indicator lamp activated when the ignition is turned to the "start" position shall be deactivated upon return of the switch to the "on" position unless a failure exists in the service brake system.

(d) Each indicator lamp shall have a red lens with the legend "Brake Failure" on or adjacent to it in letters not less than three thirty-seconds of an inch high that shall be legible to the driver in daylight when lighted.

S5.1.4 Parking brake. Each three-wheeled motorcycle shall be equipped with a parking brake of a friction type with a solely mechanical means to retain engagement.

S5.1.5 Other requirements. The brake system shall be installed so that the lining thickness of drum brake shoes may be visually inspected, either directly or by use of a mirror without removing the drums, and so that disc brake friction lining thickness may be visually inspected without removing the pads.

S5.2 Service Brake System first (pre-burnish) effectiveness.

S5.2.1 Service brake system. The service brakes shall be capable of stopping the motorcycle from 30 m.p.h. and 60 m.p.h. within stopping distances which do not exceed the stopping distances specified in Column I of Table I (S7.3.1).

S5.2.2 Partial service brake system. Each independently actuated service brake system on each motorcycle shall be capable of stopping the motorcycle from 30 m.p.h. and 60 m.p.h. within stopping distances which do not exceed the stopping distances specified in Column II of Table I (S7.3.2).

S5.3 Service brake system—second effectiveness. The service brakes shall be capable of stopping the motorcycle from 30 m.p.h., 60 m.p.h., 80 m.p.h., and the multiple of 5 m.p.h. that is 4 m.p.h. to 8 m.p.h. less than the speed attainable in 1 mile if this speed is 95 m.p.h. or greater, within stopping distances that do not exceed the stopping distances specified in Column III of Table I (S7.5).

S5.4 Service brake system—fade and recovery.

S5.4.1 Baseline check—minimum and maximum pedal forces. The pedal and

lever forces used in establishing the fade baseline check average shall be within the limits specified in S6.10 (S7.6.1).

S5.4.2 Fade. Each motorcycle shall be capable of making 10 fade stops from 60 m.p.h. at not less than 15 f.p.s.p.s. for each stop (S7.6.2).

S5.4.3 Fade recovery. Each motorcycle shall be capable of making five recovery stops with a pedal force that does not exceed 90 pounds, and a hand lever force that does not exceed 55 pounds for any of the first four recovery stops and that for the fifth recovery stop is within plus 20 pounds and minus 10 pounds of the fade test baseline check average force (S7.6.3).

S5.5 Service brake system—final effectiveness.

S5.5.1 Service brake system. The service brakes shall be capable of stopping the motorcycle in a manner that complies with S5.3 (S7.8.1).

S5.5.2 Hydraulic service brake system—partial failure. In the event of a pressure component leakage failure, other than a structural failure of either a brake master cylinder body in a split integral body type master cylinder system or a service brake system failure indicator body, the remaining portion of the service brake system shall continue to operate and shall be capable of stopping the motorcycle from 30 m.p.h. and 60 m.p.h. within stopping distances that do not exceed the stopping distances specified in Column IV of Table I (S7.8.2).

S5.6 Parking brake system. The parking brake system shall be capable of holding the motorcycle, for 5 minutes, in both forward and reverse directions, on a 30 percent grade, with an applied force of not more than 90 pounds for a foot-operated system, and 55 pounds for a hand-operated system (S7.9).

S5.7 Service brake system—water recovery.

S5.7.1 Baseline check. The pedal and lever forces used in establishing the water recovery baseline check average shall be within the limits specified in S6.10 (S7.10.1).

S5.7.2 Water recovery test. Each motorcycle shall be capable of making five recovery stops with a pedal force that does not exceed 90 pounds, and a hand lever force that does not exceed 55 pounds, for any of the first four recovery stops, and that for the fifth recovery stop, is within plus 20 pounds and minus 10 pounds of the baseline check average force (S7.10.2).

S5.8 Service brake system design durability. Each motorcycle shall be capable of completing all braking requirements of S5 without detachment of brake linings from the shoes or pad, detachment or fracture of any brake system components, or leakage of fluid or lubricant at the wheel cylinder, and master cylinder reservoir cover, seal, or retention device (S7.11).

S6 Test conditions. The requirements of S5 shall be met under the following conditions. Where a range of conditions

is specified, the motorcycle shall be capable of meeting the requirements at all points within the range.

S6.1 Vehicle weight. Motorcycle weight is unloaded vehicle weight plus 200 pounds (including driver and instrumentation), with the added weight distributed in the saddle or carrier if so equipped.

S6.2 Tire inflation pressure. Tire inflation pressure is the pressure recommended by the manufacturer for the vehicle weight specified in paragraph S6.1.

S6.3 Transmission. Unless otherwise specified, all stops are made with the clutch disengaged.

S6.4 Engine. Engine idle speed and ignition timing settings are according to the manufacturer's recommendations. If the vehicle is equipped with an adjustable engine speed governor, it is adjusted according to the manufacturer's recommendation.

S6.5 Ambient temperature. The ambient temperature is between 32° F. and 100° F.

S6.6 Wind velocity. The wind velocity is zero.

S6.7 Road surface. Road tests are conducted on level roadway having a skid number of 75. The roadway is 8 feet wide for two-wheeled motorcycles, and overall vehicle width plus 5 feet for three-wheeled motorcycles.

S6.8 Vehicle position. The motorcycle is aligned in the center of the roadway at the start of each brake application. Stops are made without any part of the motorcycle leaving the roadway and without lockup of any wheel.

S6.9 Thermocouples. The brake temperature is measured by plug-type thermocouples installed in the approximate center of the facing length and width of the most heavily loaded shoe or disc pad, one per brake, as shown in Figure 1.

S6.10 Brake actuation forces. Except for the requirements of the fifth recovery stop in S5.4.3 and S5.7.2 (S7.6.3 and S7.10.2) the hand lever force is not less than five and not more than 55 pounds and the foot pedal force is not less than 10 and not more than 90 pounds. The point of initial application of the lever forces is 1.2 inches from the end of the brake lever grip. The direction of the force is perpendicular to the handle grip on the plane along which the brake lever rotates, and the point of application of the pedal force is the center of the foot contact pad of the brake pedal. The direction of the force is perpendicular to the foot contact pad on the plane along which the brake pedal rotates, as shown in Figure 2.

S7. Test procedures and sequence. Each motorcycle shall be capable of meeting all the requirements of this standard when tested according to the procedures and in the sequence set forth below without replacing any brake system part, or making any adjustments to the brake system other than as permitted in S7.4. A motorcycle shall be deemed to comply with S5.2, S5.3 and S5.5 if at least one

of the stops specified in S7.3, S7.5 and S7.8 is made within the stopping distances specified in Table I.

S7.1 Braking warming. If the initial brake temperature for the first stop in a test procedure (other than S7.10) has not been reached, heat the brakes to the initial brake temperature by making up to 10 stops from 30 m.p.h. at a deceleration of not more than 10 f.p.s.p.s. On independently operated brake systems, the coldest brake shall be within 10° F. of the hottest brake.

S7.2 Pretest instrumentation check. Conduct a general check of test instrumentation by making not more than 10 stops from a speed of not more than 30 m.p.h. at a deceleration of not more than 10 f.p.s.p.s. If test instrument repair, replacement, or adjustment is necessary, make not more than 10 additional stops after such repair, replacement or adjustment.

S7.3 Service brake system—first (pre-burnished) effectiveness test.

S7.3.1 Service brake system. Make six stops from 30 m.p.h. and then six stops from 60 m.p.h. with an initial brake temperature between 130° F. and 150° F.

S7.3.2 Partial service brake system. For a motorcycle with two independently actuated service brake systems, repeat S7.3.1 using each service brake system individually.

S7.4 Service brake system—burnish procedure. Burnish the brakes by making 200 stops from 30 m.p.h. at 12 f.p.s.p.s. The braking interval shall be either the distance necessary to reduce the initial brake temperature to between 130° F. and 150° F. or 1 mile, whichever occurs first. Accelerate at maximum rate to 30 m.p.h. immediately after each stop and maintain that speed until making the next stop. After burnishing adjust the brakes in accordance with the manufacturer's recommendation.

S7.5 Service brake system—second effectiveness test. Repeat S7.3.1. Then, make four stops from 80 m.p.h. and four stops from the multiple of 5 m.p.h. that is 4 m.p.h. to 8 m.p.h. less than the speed attainable in 1 mile if that speed is 95 m.p.h. or greater.

S7.6 Service brake system—fade and recovery test.

S7.6.1 Baseline check stops. Make three stops from 30 m.p.h. at 10 to 11 f.p.s.p.s. for each stop. Compute the average of the maximum brake pedal forces and the maximum brake lever forces required for the three stops.

S7.6.2 Fade stops. Make 10 stops from 60 m.p.h. at not less than 15 f.p.s.p.s. for each stop. The initial brake temperature before the first brake application shall be between 130° F. and 150° F. Initial brake temperatures before brake applications for subsequent stops shall be those occurring at the distance intervals. Attain the required deceleration as quickly as possible and maintain at least this rate for not less than three-fourths of the total stopping distance for each stop. The interval between the starts of

service brake applications shall be 0.4 mile. Drive 1 mile at 30 m.p.h. after the last fade stop and immediately conduct the recovery test specified in S7.6.3.

S7.6.3 Recovery test. Make five stops from 30 m.p.h. at 10 to 11 f.p.s.p.s. for each stop. The braking interval shall not be more than 1 mile. Immediately after each stop accelerate at maximum rate to 30 m.p.h. and maintain that speed until making the next stop.

S7.7 Service brake system—reburnish. Repeat S7.4 except make 35 burnish stops instead of 200 stops. Brakes may be adjusted after reburnish if no tools are used.

S7.8 Service brake system—final effectiveness test.

S7.8.1 Service brake system. Repeat S7.6 including S7.3.1.

S7.8.2 Partial service brake system test. Alter the service brake system on three-wheeled motorcycles to induce a complete loss of braking in any one subsystem. Determine the line pressure or pedal force necessary to cause the brake system failure indicator to operate. Make six stops from 30 m.p.h. and then six stops from 60 m.p.h. with an initial brake temperature between 130° F. and 150° F. Repeat for each subsystem. Determine that the brake failure indicator is operating when the master cylinder fluid level is less than the level specified in S5.1.3.1(a)(2), and that it complies with S5.1.3.1(c). Check for proper operation with each reservoir in turn at a low level. Restore the service brake system to normal at completion of this test.

S7.9 Parking brake test. Starting with an initial brake temperature of not more than 150° F., drive the motorcycle downhill on the 30 percent grade with the longitudinal axis of the motorcycle in the direction of the grade. Apply the service brakes with a force not exceed-

ing 90 pounds to stop the motorcycle and place the transmission in neutral. Apply the parking brake by exerting a force not exceeding those specified in S5.6. Release the service brake and allow the motorcycle to remain at rest for 5 minutes. Repeat the test with the motorcycle parked in the reversed (uphill) position on the grade.

S7.10 Service brake system—water recovery test.

S7.10.1 Baseline check stops. Make three stops from 30 m.p.h. at 10 to 11 f.p.s.p.s. for each stop. Compute the average of the maximum brake pedal forces and of the maximum brake lever forces required for the three stops.

S7.10.2 Wet brake recovery stops. Completely immerse the brake assemblies of the motorcycle in water for 5 minutes with the brakes fully released. Immediately after removal from the water accelerate at a maximum rate to 30 m.p.h. without a brake application. Immediately upon reaching that speed make five stops each from 30 m.p.h. at 10 to 11 f.p.s.p.s. for each stop. After each stop (except the last) accelerate the vehicle immediately at a maximum rate to 30 m.p.h. and begin the next stop.

S7.11 Final inspection. Upon completion of all the tests inspect the brake system in an assembled condition, for compliance with the brake lining inspection requirements. Disassemble all brakes and inspect:

- The entire brake system for detachment or fracture of any component.
- Brake linings for detachment from the shoe or pad.
- Wheel cylinder, master cylinder, and axle seals for fluid or lubricant leakage.
- Master cylinder for reservoir capacity and retention device.
- Master cylinder label for compliance with S5.1.2.2.

TABLE I
STOPPING DISTANCES FOR EFFECTIVENESS, FADE AND
PARTIAL SYSTEM TESTS

Vehicle test speed, m.p.h.	Stopping distance, feet			
	Effectiveness tests			
	Preburnish effectiveness total system (S5.2.1)	Preburnish effectiveness partial mechanical systems (S5.2.2)	Effectiveness total system (S5.4)	Effectiveness partial hydraulic systems (S5.7.2)
	I	II	III	IV
30	54	121	43	97
35	74	165	58	132
40	96	216	75	173
45	121	273	95	218
50	150	337	128	264
55	181	407	155	326
60	216	484	185	388
65	—	—	217	455
70	—	—	264	527
75	—	—	303	606
80	—	—	345	689
85	—	—	389	778
90	—	—	484	872
95	—	—	540	971
100	—	—	598	1076
105	—	—	659	1188
110	—	—	723	1302
115	—	—	791	1423
120	—	—	861	1549

TABLE II
BRAKE TEST SEQUENCE AND REQUIREMENTS

Sequence L.C.	Test procedure	Requirements
1. Instrumentation check	S7.2	
2. First (Preburnish) effectiveness test:		
(a) Service brake system	S7.3.1	S5.2.1
(b) Partial service brake system	S7.3.2	S5.2.2
3. Burnish procedure	S7.4	
4. Second effectiveness test	S7.5	S5.3
5. First fade and recovery test	S7.6	S5.4
6. Reburnish	S7.7	
7. Final effectiveness test:		
(a) Service brake system	S7.8.1	S5.5.1
(b) Partial service brake system	S7.8.2	S5.5.2
8. Parking brake test (three-wheeled motorcycles only)	S7.9	S5.6
9. Water recovery test	S7.10	S5.7
10. Design durability	S7.11	S5.8

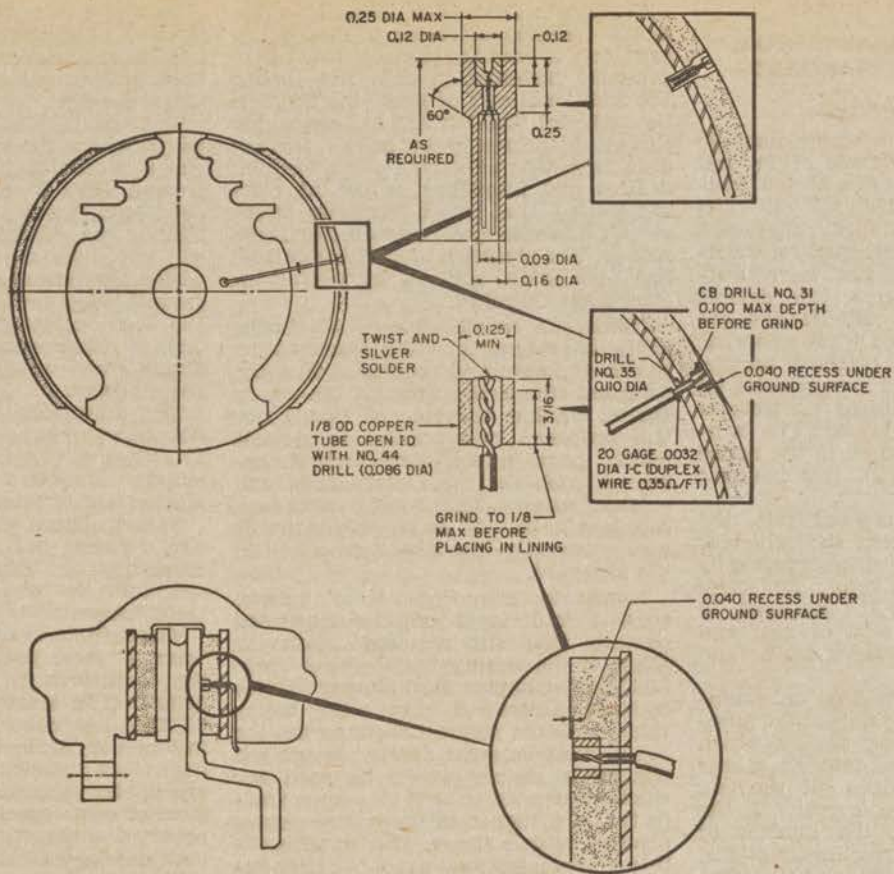
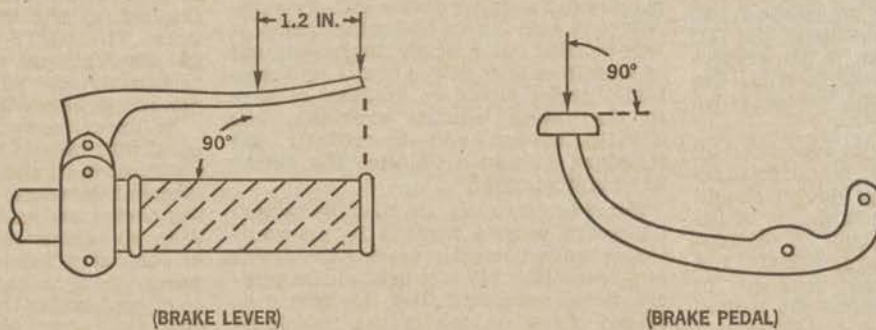


FIGURE 1 - TYPICAL PLUG TYPE THERMOCOUPLE INSTALLATIONS

FIG. 2 DIRECTION OF FORCE



(BRAKE LEVER)

(BRAKE PEDAL)

[FR Doc.72-3473 Filed 3-8-71; 8:45 am]

[Docket No. 4-2; Notice 4]

PART 571—FEDERAL MOTOR VEHICLE SAFETY STANDARDS

Warning Devices

The purpose of this amendment to Part 571 of Title 49, Code of Federal Regulations, is to add a new Motor Vehicle Safety Standard No. 125 (49 CFR 571.125) that would establish shape, size, and performance requirements for warning devices that do not have self-contained energy sources. The devices are carried in motor vehicles and are erected to alert approaching motorists to the presence of a disabled vehicle.

A notice of proposed rule making on this subject was published on November 11, 1970 (36 F.R. 17350). The comments received in response to the notice have been considered in this issuance of a final rule.

As noted in the proposed rule, the standard will supplement the vehicular hazard warning signal lamps required by F.M.V.S.S. No. 108, *Lamps, Reflective Devices, and Associated Equipment*, in minimizing the likelihood of rear end collisions between oncoming traffic and disabled vehicles.

The standard is issued as an equipment standard and establishes requirements only for warning devices which do not have self-contained energy sources. Because provision of warning devices in new vehicles is optional, the instructions regarding the number of devices to be used are recommendations, rather than requirements, and the storage location requirement is deleted.

The standard requires that the device be bidirectional, lowers the minimum length of the triangle legs, and increases the permissible deviation from a vertical plane for the triangle when the device is placed on the road. It reduces the required minimum candlepower of the red reflective material and raises the luminance requirement for the orange fluorescent material. It also adds definitions of "reflex reflective," deletes one of the two definitions of the colors "red" and "orange," and deletes one of the two reflectivity requirements. With respect to the conditioning requirements, the standard lowers the high temperature requirements.

Several of the comments submitted by foreign motor vehicle manufacturers stated that the warning device should conform to the recommendations of international advisory groups. The Economic Commission of Europe (E.C.E.), a United Nations-sponsored council of which 26 nations, including the United States, are members, is in the process of developing specifications for warning triangles to be ratified by national governments. The NHTSA has adopted most of the proposed E.C.E. requirements with the exception of the minimum candlepower requirement for wide angle positioning of the device. The NHTSA has determined that a lower minimum candlepower than that required by the E.C.E. provides adequate protection and is a more realistic reflection of the state of the art.

Comments from the domestic automobile industry objecting to mandatory provision of warning devices stated that available information does not justify the additional cost of supplying them in new vehicles. The NHTSA has concluded that it is necessary to collect further data regarding effectiveness of warning devices and frequency of use by consumers so that more accurate cost-benefit analyses may be made. For these reasons, the provision of warning devices has been made optional by issuing an equipment standard.

Numerous manufacturers of fuses submitted comments which described the merits of fuses and concluded that the proposed rule would prohibit the use of fuses. Neither the rule as issued nor the proposed rule applies to devices which have a self-contained energy source, such as fuses, flare pots, and electric lanterns. Thus these devices may continue to be used as an alternative or a supplement to the device described in the standard.

Numerous comments from private citizens and State officials expressed concern that the required triangular shape of the warning device would prohibit the triangular Slow Moving Vehicle emblem currently used on many motor vehicles. Other comments supported the use of the triangular device because the triangular shapes would be used for similar purposes, to alert oncoming traffic that a reduction of speed is necessary due to a vehicle ahead. The Administration supports the dual use of the triangular symbol and it is intended that the warning device and the Slow Moving Vehicle emblem be complementary. As discussed in the notice of proposed rule-making, State laws regarding slow moving vehicle emblems would be preempted by the standard only to the extent that they forbid the use of the triangular warning device intended by the standard.

Many comments recommended that the warning device be bidirectional in order to eliminate the possibility of placing the warning device with the non-reflective side facing oncoming traffic. It was pointed out that the increased cost of a bidirectional device over a unidirectional device would be minimal relative to the safety benefits provided. The NHTSA agrees, and accordingly the standard as issued requires the device to be bidirectional.

Some commenters felt that the motorist would subject himself to an additional safety hazard in placing the device approximately 100 feet behind the vehicle. Some suggested that the device be placed either on top of the vehicle or be capable of attaching to a window frame. While it is of course true that walking in a roadway can be hazardous, in the judgment of the NHTSA this risk is outweighed by the safety benefits of positioning the device at a distance behind the vehicle. Such positioning provides a greater distance over which oncoming traffic can recognize and respond to the warning and thus affords greater protection to the disabled vehicle.

Figures 3 through 9 indicating recommended positioning of warning devices have been consolidated into a single diagram indicating the suggested placement of the devices.

The permissible deviation from a vertical plane for the triangle when the device is placed on the road has been increased from 5° to 10° in response to comments from manufacturers. The NHTSA has determined that the change will not alter the effectiveness of the device. The required distance above the ground of the lower edge of the triangle has been increased from one-half to 1 inch to improve the effectiveness of the device when water or mud collects on the roadway.

The minimum length of the legs of the triangle has been lowered from 18 to 17 inches, to correspond to the range of lengths permitted by the Bureau of Motor Carrier Safety.

The minimum width of the red reflective material has been clarified at the request of two manufacturers of reflex reflectors to correspond to industry terminology.

The definitions of the colors "red" and "orange" have been clarified in light of the comments, by the deletion of the definition in terms of nanometers. The NHTSA has concluded that definitions in terms of chromaticity coordinates and purity are sufficient. In order to standardize the requirement with respect to current color specification practice, the required chromaticity coordinates have been changed slightly.

The reflectivity requirement has been clarified to state that the material must be reflex reflective, and a definition of "reflex reflective" has been added to the standard. The reflectivity requirement in terms of candlepower per square inch has been found to be superfluous, and accordingly has been deleted.

The Economic Commission of Europe requested that the required total minimum candlepower per incident foot candle for an observation angle of 0.2° be lowered from 120 candlepower to correspond to the international specifications. The NHTSA has concluded that 80 candlepower will provide sufficient protection and the minimum candlepower has been lowered accordingly.

In order to standardize the requirement with respect to current photometric practice, the luminance requirement for orange fluorescent material in the warning device has been raised from not less than 30 percent to not less than 35 percent of that of a flat magnesium oxide surface. The luminance criterion, "when compared under the light from an overcast sky," has been changed to read "when subjected to a 150-watt high pressure xenon compact arc lamp."

Many equipment manufacturers stated that the 200° F. requirement for the high temperature conditioning is not justified by evidence showing that the device must withstand temperatures at that level when in use. This contention has been found to have merit, and the temperature requirement has been lowered to 150°.

Effective date: January 1, 1974. Because the standard is issued later than

anticipated, the effective date has been extended from January 1, 1972 to January 1, 1974. The NHTSA has concluded that this date will permit manufacturers of warning devices which do not have self-contained energy sources and which do not meet the specifications of the standard to retool for manufacture of complying devices. It is therefore found, for good cause shown, that an effective date more than 1 year from the date of issuance is in the public interest.

In consideration of the above, a new § 571.125, Standard No. 125, Warning Devices, is added to Title 49, Code of Federal Regulations, as set forth below.

This rule is issued under the authority of sections 103, 112, and 119 of the National Traffic and Motor Vehicle Safety Act (15 U.S.C. 1392, 1401, 1407) and the delegation of authority at 49 CFR 1.51.

Issued on March 1, 1972.

CHARLES H. HARTMAN,
Acting Administrator.

§ 571.125 Standard No. 125; Warning Devices. (Effective Jan. 1, 1974)

S1. Scope. This standard establishes requirements for devices, without self-contained energy sources, that are designed to be carried in motor vehicles and used to warn approaching traffic of the presence of a stopped vehicle, except for devices designed to be permanently affixed to the vehicle.

S2. Purpose. The purpose of this standard is to reduce deaths and injuries due to rear end collisions between oncoming traffic and disabled vehicles.

S3. Application. This standard applies to devices, without self-contained energy sources, that are designed to be carried in motor vehicles and used to warn approaching traffic of the presence of a stopped vehicle, except for devices designed to be permanently affixed to the vehicle.

S4. Definitions. "Entrance angle" means the angle having as its sides the line through the center, and normal to the face, of the object to be tested, and the line from the center of the object to the center of the source of illumination (Figure 2).

"Fluorescent" means the property of emitting visible light due to the absorption of radiation of a wave-length which may be outside the visible spectrum.

"Observation angle" means the angle having as its sides the line from the observation point to the center of the object to be tested and the line from the center of that object to the center of the source of illumination (Figure 2).

"Reflex reflective" means reflective of light in directions close to the direction of incident light, over a wide range of variations in the direction of incident light.

S5. Requirements.

S5.1 Equipment.

S5.1.1 Reflex reflective material and fluorescent material that meet the requirements of this standard shall be affixed to both faces of the warning device.

S5.1.2 Each warning device shall be enclosed in an opaque protective reusable container, except that two or three warn-

ing devices intended to be sold for use as a set with a single vehicle may be enclosed in a single container.

S5.1.3 The warning device shall be designed to be erected, and replaced in its container, without the use of tools.

S5.1.4 The warning device shall be permanently and legibly marked with:

(a) Name of manufacturer;

(b) Month and year of manufacture, which may be expressed numerically, as "6/72"; and

(c) The symbol DOT, or the statement that the warning device complies with all applicable Federal motor vehicle safety standards.

S5.1.5 Each warning device shall have instructions for its erection and display.

(a) The instructions shall be either indelibly printed on the warning device or attached in such a manner that they cannot be easily removed.

(b) Instructions for each warning device shall include a recommendation that the driver activate the vehicular hazard warning signal lamps before leaving the vehicle to erect the warning device.

(c) Instructions shall include an illustration similar to Figure 3 indicating recommended positioning.

S5.2 Configuration.

S5.2.1 When the warning device is erected on level ground:

(a) Part of the warning device shall form an equilateral triangle that stands in a plane not more than 10° from the vertical, with the lower edge of the base of the triangle horizontal and not less than 1 inch above the ground.

(b) None of the required portion of the reflective material and fluorescent material shall be obscured by any other part of the warning device except for any portion of the material over which it is necessary to provide fasteners, pivoting beads or other means to allow collapsibility or support of the device. In any event, sufficient reflective and fluorescent material shall be used on the triangle to meet the requirements of S5.4 and S5.5.

S5.2.2 Each of the three sides of the triangular portion of the warning device shall not be less than 17 and not more than 22 inches long, and not less than 2 and not more than 3 inches wide (Figure 1).

S5.2.3 Each face of the triangular portion of the warning device shall have an outer border of red reflex reflective material of uniform width not less than 0.75 and not more than 1.75 inches wide, and an inner border of orange fluorescent material of uniform width and not less than 1.25 and not more than 1.30 inches wide (Figure 1).

S5.2.4 Each vertex of the triangular portion of the warning device shall have a radius of not less than 0.25 inch and not more than 0.50 inch.

S5.2.5 All edges shall be rounded or chamfered, as necessary, to reduce the possibility of cutting or harm to the user.

S5.3 Color.

S5.3.1 The color of the red reflective material on the warning device shall have

the following characteristics both before and after the warning device has been conditioned in accordance with S6.1:

(a) A chromaticity coordinate y of not more than 0.33.

(b) Chromaticity coordinates x and y whose sum is not less than 0.992.

(c) Purity of not less than 98 percent.

S5.3.2 The color of the orange fluorescent material on the warning device shall have the following characteristics both before and after the warning device has been conditioned in accordance with S6.1:

(a) A chromaticity coordinate y of not less than 0.351 and not more than 0.424.

(b) Chromaticity coordinates x and y whose sum is not less than 0.943.

(c) Purity of not less than 85 percent.

S5.4 Reflectivity. When the red reflective material on the warning device is tested in accordance with S6.2, both before and after the warning device has been conditioned in accordance with S6.1, its total candlepower per incident foot candle shall be not less than the values specified in Table I for each of the listed entrance angles.

S5.5 Luminance. Both before and after the warning device has been conditioned in accordance with S6.1, the orange fluorescent material on the warning device shall have a luminance not less than 35 percent of that of a flat magnesium oxide surface when subjected to a 150-watt high-pressure xenon compact arc lamp, in a manner that prevents the red reflective material from affecting the photometric measurement of the luminance of the orange fluorescent material.

S5.6 Stability. When the warning device is erected on a horizontal brushed concrete surface both with and against the brush marks and subjected to a horizontal wind of 40 miles per hour in any direction for 3 minutes—

(a) No part of it shall slide more than 3 inches from its initial position;

(b) Its triangular portion shall not tilt to a position that is more than 10° from the vertical; and

(c) Its triangular position shall not turn through a horizontal angle of more than 10° in either direction from the initial position.

S5.7 Durability. When the warning device is conditioned in accordance with S6.1, no part of the warning device shall become warped or separated from the rest of the warning device.

S6. Test procedures.

S6.1 Conditioning.

S6.1.1 Submit the warning device to the following conditioning sequence, returning the device after each step in the sequence to ambient air at 68° F. for 2 hours.

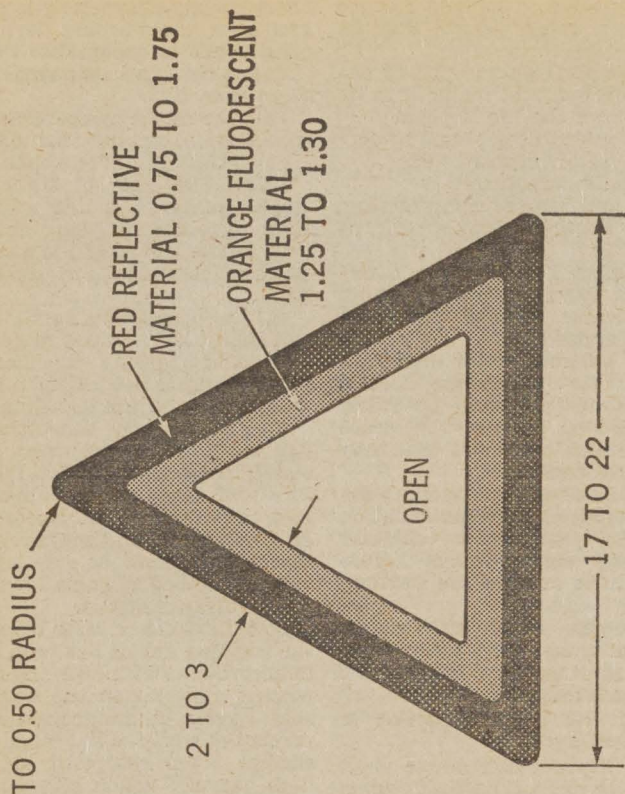
(a) Minus 40° F. for 16 hours in a circulating air chamber using ambient air which would have not less than 30 percent and not more than 70 percent relative humidity at 70° F.;

(b) 150° F. for 16 hours in a circulating air oven using ambient air which would have not less than 30 percent and not more than 70 percent relative humidity at 70° F.;

(c) 100° F. and 90 percent relative humidity for 16 hours;

WARNING DEVICE

0.25



DIMENSIONS OF WARNING DEVICE (Inches)

Figure 1

- (b) Use a lamp with a filament operating at 2,854° Kelvin color temperature as the source of illumination.
- (c) Place the source of illumination 100 feet from the red reflective material (Figure 2).
- (d) Place the observation point directly above the source of illumination (Figure 2).
- (e) Calculate the total candlepower per incident foot-candle of the red reflective material at each of the entrance and observation angles specified in Table 1.

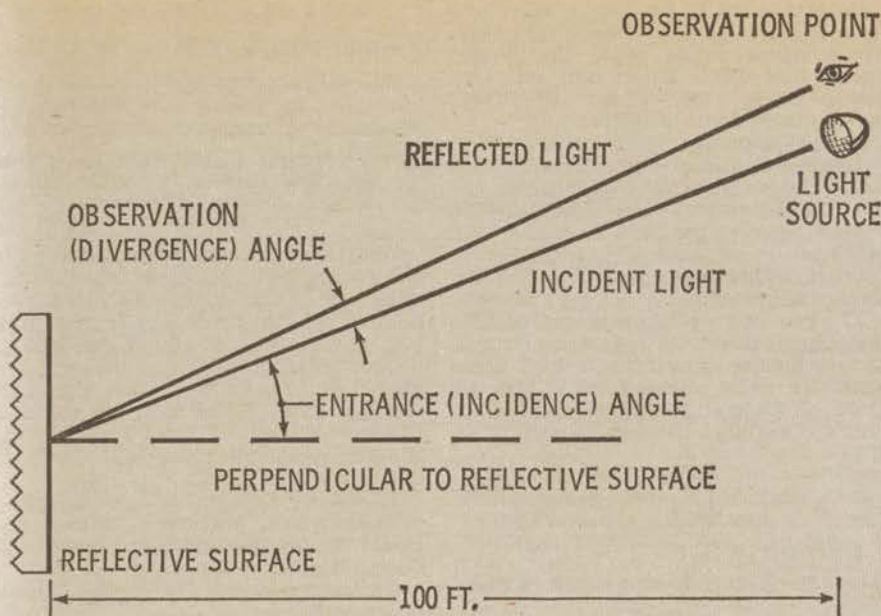
TOTAL MINIMUM CANDLEPOWER PER INCIDENT FOOT CANDLE

Entrance Angles - Degrees

Observation Angles - Degrees	Entrance Angles - Degrees					
	0	10 up	10 down	20 left	20 right	30 left
0.2	80	80	80	40	40	8.0
1.5	0.8	0.8	0.8	0.4	0.4	0.08

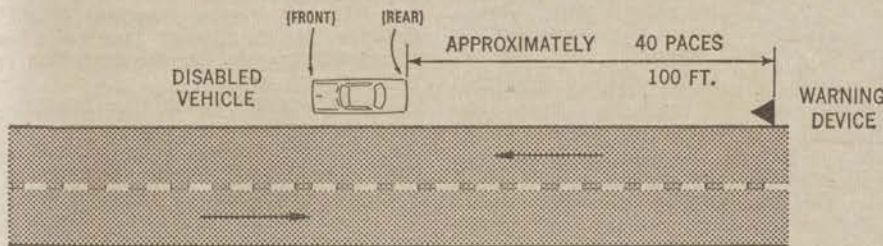
TABLE 1

- (d) Salt spray (fog) test in accordance with American Society of Testing and Materials Standard B-117, Standard Method of Salt Spray (Fog) Testing, August 1964, except that the test shall be for 4 hours rather than 40 hours; and
 - (e) Immersion for 2 hours in water at a temperature of 100° F.
- S6.2 Reflectivity test. Test the red reflective material as follows:
- (a) Prevent the orange fluorescent material from affecting the photometric measurement of the reflectivity of the red reflective material, either by separation or masking.



REFLECTIVITY TEST DIAGRAM

Figure 2



RECOMMENDED WARNING DEVICE POSITIONING

Figure 3

[FR Doc.72-3472 Filed 3-3-72; 12:02 pm]

Title 50—WILDLIFE AND FISHERIES

Chapter I—Bureau of Sport Fisheries and Wildlife, Fish and Wildlife Service, Department of the Interior

PART 33—SPORT FISHING

Certain National Wildlife Refuges in California

The following special regulations are issued and are effective on date of publication in the FEDERAL REGISTER (3-9-72).

§ 33.5 Special regulations; sport fishing; for individual wildlife refuge areas.

CALIFORNIA

General conditions. Fishing shall be in accordance with applicable State regulations. Portions of refuges which are open to fishing are designated by signs and/or delineated on maps. The maps are available at the respective refuge headquarters and from the office of the Regional Director, Bureau of Sport Fisheries and Wildlife, Post Office Box 3737, Portland, OR 97208.

1. *Colusa National Wildlife Refuge*—(Headquarters: Sacramento National

Wildlife Refuge, Route 1, Box 311, Willows, CA 95988).

Special conditions:

(1) The taking of frogs is permitted except that the refuge is closed to sport fishing and the taking of frogs during the migratory waterfowl hunting season.

(2) The use of boats without motors is permitted for fishing and the taking of frogs.

2. *Delevan National Wildlife Refuge*—(Headquarters: Sacramento National Wildlife Refuge, Route 1, Box 311, Willows, CA 95988).

Special conditions:

(1) The taking of frogs is permitted except that the refuge is closed to sport fishing and the taking of frogs during the migratory waterfowl hunting season.

(2) The use of boats without motors is permitted for fishing and the taking of frogs.

3. *Modoc National Wildlife Refuge*—(Headquarters: Sheldon - Hart - Modoc NWR, Post Office Box 111, Lakeview, OR 97630).

Special conditions:

(1) Fishing will not be permitted during the migratory waterfowl hunting season.

(2) The taking of frogs on refuge lands is prohibited except by special permit obtainable at refuge headquarters, Modoc, Calif.

4. *Sacramento National Wildlife Refuge*—Route 1, Box 311, Willows, CA 95988.

Special conditions:

(1) The taking of frogs is permitted except that the refuge is closed to sport fishing and the taking of frogs during the migratory waterfowl hunting season.

(2) The use of boats without motors is permitted for fishing and the taking of frogs.

5. *San Luis National Wildlife Refuge*—Post Office Box 2176, Los Banos, CA 93635.

Special conditions:

(1) Fishing permitted from sunrise to one hour after sunset.

(2) The refuge is closed to sport fishing during the migratory waterfowl hunting season.

6. *Salton Sea National Wildlife Refuge*—Post Office Box 247, Calipatria, CA 92233.

Special conditions:

(1) Fishing is permitted in that portion of the refuge which is inundated by the Salton Sea.

The provisions of these special regulations supplement the regulations which govern fishing on wildlife refuge areas generally, which are set forth in Title 50, Code of Federal Regulations, Part 33, and are effective through December 31, 1972.

JOHN D. FINDLAY,
Regional Director, Bureau of
Sport Fisheries & Wildlife.

FEBRUARY 28, 1972.

[FR Doc.72-3584 Filed 3-8-72; 8:52 am]