

81-19-024 (Order 82-1), § 198-12-140, filed 9/9/81. Statutory Authority: RCW 34.04.940, 42.17.250, 42.30.070 and 43.21C.120. 79-12-025 (Order 79-1), § 198-12-140, filed 11/16/79.]

## Title 204 WAC EQUIPMENT, COMMISSION ON

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### Chapter 204-08 WAC PRACTICE AND PROCEDURE

#### WAC

204-08-100	Procedure for obtaining approval of automotive equipment within the scope of RCW 46.37.005 and 46.37.320.
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**WAC 204-08-100 Procedure for obtaining approval of automotive equipment within the scope of RCW 46.37.005 and 46.37.320.** (1) Method for obtaining approval.

(a) To obtain approval the petitioner must provide for submission of any lighting device, or other safety equipment, component, or assembly to any recognized organization or agency such as, but not limited to, the Vehicle Equipment Safety Commission, American National Standards Institute, Society of Automotive Engineers, and the American Association of Motor Vehicle Administrators, as the agent of the state commission on equipment, and for the issuance of an approved certificate by that recognized organization or agency to the state commission on equipment.

(b) If any lighting device, or other safety equipment, component, or assembly cannot be submitted to the organization or agency named in the above paragraph (a), then the petitioner must submit to the state commission on equipment the following:

(i) A copy of a test report from a nationally recognized testing laboratory certifying that the device meets

the current specifications for that device as prescribed by the commission in chapter 204-10 WAC.

(ii) A sample of the device as marketed when requested by the commission on equipment.

(iii) Correspondence, test reports and samples are to be submitted to: Secretary, State Commission on Equipment, Washington State Patrol, General Administration Building AX-12, Olympia, Washington 98504.

(2) Forms and files of the state commission on equipment. Certificates of approval shall be on forms provided by the secretary of the state commission on equipment and the files of the state commission on equipment shall be kept by the secretary of the state commission on equipment in the offices of the Washington State Patrol. [Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380. 81-18-008 (Order 81-08-02), § 204-08-100, filed 8/21/81. Statutory Authority: RCW 46.37.005. 78-08-078 (Order 7760), § 204-08-100, filed 7/27/78; Rule VI, filed 3/21/60.]

### Chapter 204-10 WAC EQUIPMENT STANDARDS

#### WAC

204-10-010	Promulgation.
204-10-020	Lighting devices.
204-10-030	Brake fluid.
204-10-040	Motorcycle helmets.
204-10-050	Seat belts.
204-10-060	Glazing material.
204-10-070	Air conditioning units.
204-10-080	Emergency reflex reflectors.
204-10-090	Slow moving vehicle emblems.
204-10-100	Tire chains.
204-10-110	Traction devices.
204-10-120	Sirens.
204-10-130	Trailer hitches.
204-10-140	Motorcycle goggles, glasses, and face shields.
204-10-150	Load fastening devices.

**WAC 204-10-010 Promulgation.** By authority of RCW 46.37.005 and 46.37.320, the state commission on equipment hereby adopts the following rules setting forth standards for motor vehicle equipment for which approval is required in chapter 46.37 RCW. [Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380. 81-18-008 (Order 81-08-02), § 204-10-010, filed 8/21/81.]

**WAC 204-10-020 Lighting devices.** (1) Federal Motor Vehicle Safety Standard 108 is hereby adopted by reference as the standard for the following lighting devices:

- (a) Headlamps
- (b) Taillamps
- (c) Stoplamps
- (d) License plate lamps
- (e) Turn signal lamps
- (f) Side marker lamps
- (g) Intermediate side marker lamps
- (h) Backup lamps
- (i) Identification lamps

- (j) Clearance lamps
  - (k) Parking lamps
  - (l) Reflex reflectors
  - (m) Intermediate reflex reflectors
  - (n) Intermediate side reflex reflectors
  - (o) Intermediate side marker reflectors
  - (p) Turn signal operating units
  - (q) Turn signal flashers
  - (r) Vehicular hazard warning signal operating units
  - (s) Vehicular hazard warning signal flashers
- (2) Canadian Standards Association standard D106.2 is hereby adopted by reference as the standard for the following lighting devices:

(a) Headlamps (quartz-halogen non-sealed beam).  
 (i) Motorcycle headlamps may comply with either Federal Motor Vehicle Safety Standard 108 or Canadian Standard D106.2.

(b) Fog lamps. Fog lamps may comply with either standard D106.2 or SAE Standard J583d as set forth in subsection (3)(a) of this section.

(3) Society of Automotive Engineers standards are hereby adopted by reference as the standard for the following lighting devices:

- (a) Fog lamps (SAE J583d)
- (b) Fog tail lamps (SAE J1319)
- (c) Auxiliary driving lamps (SAE J581a)
- (d) Auxiliary low beam lamps (or auxiliary passing lamps) (SAE J582a)
- (e) Spot lamps (SAE J591b)
- (f) Cornering lamps (SAE J582b)
- (g) Supplemental high-mounted stop and rear turn signal lamps (SAE J186a)
- (h) Side turn signal lamps (SAE J914b)
- (i) 360 degree emergency warning lamps (SAE J845)
- (j) Flashing warning lamps for agricultural equipment (SAE J974)
- (k) Flashing warning lamps for authorized emergency, maintenance, and service vehicles (SAE J595b).
- (l) Flashing warning lamp for industrial equipment (SAE J96)
- (m) Warning lamp alternating flashers (J1054)
- (n) Green lamp for use on volunteer fireman's private vehicle (SAE J595b - flashing warning lamps for authorized emergency, maintenance, and service vehicles.

(i) Color of the lens shall be green as that color is described in SAE Standard J578d (color specifications for electric signal lighting devices) rather than red or amber as specified in SAE J595b.

(o) Side cowl, fender, or running board courtesy lamps (SAE J575g)

(4) Standards promulgated by the commission on equipment for the following lighting devices shall be as set forth in the Washington Administrative Code chapters as indicated:

- (a) Deceleration alert lamp system (WAC 204-62)
- (b) Headlamp modulator (WAC 204-78)
- (c) Headlamp flashing system (WAC 204-80)
- (d) School bus warning lamps (WAC 204-74) [Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380. 81-18-008 (Order 81-08-02), § 204-10-020, filed 8/21/81.]

**WAC 204-10-030 Brake fluid.** Federal Motor Vehicle Safety Standard 116 is hereby adopted by reference as the standard for brake fluid. [Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380. 81-18-008 (Order 81-08-02), § 204-10-030, filed 8/21/81.]

**WAC 204-10-040 Motorcycle helmets.** Federal Motor Vehicle Safety Standard 218 is hereby adopted by reference as the standard for motorcycle helmets. [Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380. 81-18-008 (Order 81-08-02), § 204-10-040, filed 8/21/81.]

**WAC 204-10-050 Seat belts.** (1) Federal Motor Vehicle Safety Standard 209 is hereby adopted by reference as the standard for seat belt assemblies.

(2) Federal Motor Vehicle Safety Standard 210 is hereby adopted by reference as the standard for seat belt assembly anchorages. [Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380. 81-18-008 (Order 81-08-02), § 204-10-050, filed 8/21/81.]

**WAC 204-10-060 Glazing material.** Federal Motor Vehicle Safety Standard 205 is hereby adopted by reference as the standard for glazing materials. [Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380. 81-18-008 (Order 81-08-02), § 204-10-060, filed 8/21/81.]

**WAC 204-10-070 Air conditioning units.** (1) Society of Automotive Engineers Recommended Practice SAE J639 is hereby adopted by reference as the standard for automotive air conditioning units.

(2) Society of Automotive Engineers Standard SAE J51b is hereby adopted by reference as the standard for automotive air conditioning hose. [Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380. 81-18-008 (Order 81-08-02), § 204-10-070, filed 8/21/81.]

**WAC 204-10-080 Emergency reflex reflectors.** Federal Motor Vehicle Safety Standard 125, January 1, 1974, is hereby adopted by reference as the standard for emergency reflex reflector warning devices. [Statutory Authority: RCW 46.37.440. 82-16-049 (Order 82-07-03), § 204-10-080, filed 7/29/82. Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380. 81-18-008 (Order 81-08-02), § 204-10-080, filed 8/21/81.]

**WAC 204-10-090 Slow moving vehicle emblems.** Society of Automotive Engineers Standard SAE J943a is hereby adopted by reference as the standard for slow moving vehicle identification emblems. Mounting of the emblem shall be as set forth in chapter 204-28 WAC. [Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380. 81-18-008 (Order 81-08-02), § 204-10-090, filed 8/21/81.]

**WAC 204-10-100 Tire chains.** Standards for tire chains shall be as set forth in chapter 204-22 WAC. [Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380. 81-18-008 (Order 81-08-02), § 204-10-100, filed 8/21/81.]

**WAC 204-10-110 Traction devices.** Standards for traction devices (studs, winter traction tires) shall be as specified in chapter 204-24 WAC. [Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380. 81-18-008 (Order 81-08-02), § 204-10-110, filed 8/21/81.]

**WAC 204-10-120 Sirens.** Standards for sirens shall be as set forth in chapter 204-84 WAC. [Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380. 81-18-008 (Order 81-08-02), § 204-10-120, filed 8/21/81.]

**WAC 204-10-130 Trailer hitches.** Standards for trailer hitches shall be as set forth in chapter 204-70 WAC. [Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380. 81-18-008 (Order 81-08-02), § 204-10-130, filed 8/21/81.]

**WAC 204-10-140 Motorcycle goggles, glasses, and face shields.** Standards for motorcycle glasses, goggles, and face shields shall be as set forth in chapter 204-52 WAC. [Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380. 81-18-008 (Order 81-08-02), § 204-10-140, filed 8/21/81.]

**WAC 204-10-150 Load fastening devices.** Standards for load fastening devices shall be as specified in chapter 204-44 WAC. [Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380. 81-18-008 (Order 81-08-02), § 204-10-150, filed 8/21/81.]

**Chapter 204-12 WAC  
HYDRAULIC BRAKE FLUID**

WAC  
204-12-001 through 204-12-060 Repealed.

**DISPOSITION OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER**

- 204-12-001 Promulgation. [Regulation 6401 (part), filed 12/16/63.] Repealed by 81-18-008 (Order 81-08-02), filed 8/21/81. Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380.
- 204-12-010 Purpose. [Regulation 6401 (part), filed 12/16/63.] Repealed by 81-18-008 (Order 81-08-02), filed 8/21/81. Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380.
- 204-12-020 Standards. [Order 7304, § 204-12-020, filed 11/25/75; Regulation 6401 (part), filed 12/16/63.] Repealed by 81-18-008 (Order 81-08-02), filed

- 8/21/81. Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380.
- 204-12-030 Marking of containers. [Order 7304, § 204-12-030, filed 11/25/75; Regulation 6401 (part), filed 12/16/63.] Repealed by 81-18-008 (Order 81-08-02), filed 8/21/81. Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380.
- 204-12-040 Filling or reuse of containers. [Regulation 6401 (part), filed 12/16/63.] Repealed by 81-18-008 (Order 81-08-02), filed 8/21/81. Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380.
- 204-12-050 Approval procedure. [Order 7304, § 204-12-050, filed 11/25/75; Regulation 6401 (part), filed 12/16/63.] Repealed by 81-18-008 (Order 81-08-02), filed 8/21/81. Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380.
- 204-12-060 Effective date. [Regulation 6401 (part), filed 12/16/63.] Repealed by 81-18-008 (Order 81-08-02), filed 8/21/81. Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380.

**WAC 204-12-001 through 204-12-060 Repealed.**  
See Disposition Table at beginning of this chapter.

**Chapter 204-16 WAC  
SEAT BELTS**

WAC  
204-16-001 through 204-16-060 Repealed.

**DISPOSITION OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER**

- 204-16-001 Promulgation. [Regulation 6402 part, filed 12/16/63.] Repealed by 81-18-008 (Order 81-08-02), filed 8/21/81. Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380.
- 204-16-010 Previous regulation rescinded. [Regulation 6402 part, filed 12/16/63.] Repealed by 81-18-008 (Order 81-08-02), filed 8/21/81. Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380.
- 204-16-020 Purpose. [Regulation 6402 part, filed 12/16/63.] Repealed by 81-18-008 (Order 81-08-02), filed 8/21/81. Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380.
- 204-16-030 Standards. [Order 7601, § 204-16-040, filed 2/24/76; Regulation 6402 part, filed 12/16/63.] Repealed by 81-18-008 (Order 81-08-02), filed 8/21/81. Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380.
- 204-16-040 Installation. [Order 7601, § 204-16-040, filed 2/24/76; Regulation 6402 part, filed 12/16/63.] Repealed by 81-18-008 (Order 81-08-02), filed 8/21/81. Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380.
- 204-16-050 Approval procedure. [Regulation 6402 part, filed 12/16/63.] Repealed by 81-18-008 (Order 81-08-02), filed 8/21/81. Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380.
- 204-16-060 Effective date. [Regulation 6402 part, filed 12/16/63.] Repealed by 81-18-008 (Order 81-08-

02), filed 8/21/81. Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380.

**WAC 204-16-001 through 204-16-060 Repealed.**  
See Disposition Table at beginning of this chapter.

### Chapter 204-20 WAC MOTORCYCLE HELMETS

#### WAC

204-20-010 through 204-20-150 Repealed.

#### DISPOSITION OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER

- 204-20-010 Definitions. [Regulation 6701 (part), filed 5/31/67, effective 7/1/67.] Repealed by 81-18-008 (Order 81-08-02), filed 8/21/81. Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380.
- 204-20-020 Materials. [Regulation 6701 (part), filed 5/31/67, effective 7/1/67.] Repealed by 81-18-008 (Order 81-08-02), filed 8/21/81. Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380.
- 204-20-030 Required protection. [Regulation 6701 (part), filed 5/31/67, effective 7/1/67.] Repealed by 81-18-008 (Order 81-08-02), filed 8/21/81. Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380.
- 204-20-040 Test samples. [Regulation 6701 (part), filed 5/31/67, effective 7/1/67.] Repealed by 81-18-008 (Order 81-08-02), filed 8/21/81. Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380.
- 204-20-050 Test conditions. [Regulation 6701 (part), filed 5/31/67, effective 7/1/67.] Repealed by 81-18-008 (Order 81-08-02), filed 8/21/81. Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380.
- 204-20-060 Impact test. [Regulation 6701 (part), filed 5/31/67, effective 7/1/67.] Repealed by 81-18-008 (Order 81-08-02), filed 8/21/81. Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380.
- 204-20-070 Penetration test. [Regulation 6701 (part), filed 5/31/67, effective 7/1/67.] Repealed by 81-18-008 (Order 81-08-02), filed 8/21/81. Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380.
- 204-20-080 Retaining system test. [Regulation 6701 (part), filed 5/31/67, effective 7/1/67.] Repealed by 81-18-008 (Order 81-08-02), filed 8/21/81. Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380.
- 204-20-090 Test equipment. [Regulation 6701 (part), filed 5/31/67, effective 7/1/67.] Repealed by 81-18-008 (Order 81-08-02), filed 8/21/81. Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380.
- 204-20-100 Calibration of test equipment. [Regulation 6701 (part), filed 5/31/67, effective 7/1/67.] Repealed by 81-18-008 (Order 81-08-02), filed 8/21/81. Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380.
- 204-20-110 Reflector requirements. [Regulation 6701 (part), filed 5/31/67, effective 7/1/67.] Repealed by 81-18-008 (Order 81-08-02), filed 8/21/81. Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380.
- 204-20-120 Identification requirements. [Regulation 6701 (part), filed 5/31/67, effective 7/1/67.] Repealed by 81-18-

008 (Order 81-08-02), filed 8/21/81. Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380.

204-20-130 Approval procedure. [Regulation 6701 (part), filed 5/31/67, effective 7/1/67.] Repealed by 81-18-008 (Order 81-08-02), filed 8/21/81. Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380.

204-20-140 Alteration of helmets. [Regulation 6701 (part), filed 5/31/67, effective 7/1/67.] Repealed by 81-18-008 (Order 81-08-02), filed 8/21/81. Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380.

204-20-150 Effective date. [Regulation 6701 (part), filed 5/31/67, effective 7/1/67.] Repealed by 81-18-008 (Order 81-08-02), filed 8/21/81. Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380.

**WAC 204-20-010 through 204-20-150 Repealed.**  
See Disposition Table at beginning of this chapter.

### Chapter 204-22 WAC STANDARDS FOR TIRE CHAINS

#### WAC

- 204-22-010 Promulgation.  
204-22-020 Scope.  
204-22-030 Link tire chains.  
204-22-040 Cable tire chains.  
204-22-050 Other tire chain devices.

**WAC 204-22-010 Promulgation.** By authority of RCW 46.37.005 and 46.37.420, the state commission on equipment hereby adopts the following standards for tire chains. [Statutory Authority: RCW 46.37.420, 46.37.190, 46.37.194 and 46.37.280. 82-16-047 (Order 82-07-01), § 204-22-010, filed 7/29/82.]

**WAC 204-22-020 Scope.** These standards shall apply to tire chains designed for and used upon a public roadway. [Statutory Authority: RCW 46.37.420, 46.37.190, 46.37.194 and 46.37.280. 82-16-047 (Order 82-07-01), § 204-22-020, filed 7/29/82.]

**WAC 204-22-030 Link tire chains.** (1) Link type tire chains consist of at least two chain loops, one on each side of the tire, connected by evenly-spaced metal cross chains across the tire tread.

(2) The National Association of Chain Manufacturers Tire Chain Specifications NACM-5179(TC) is hereby adopted by reference as the standard for link type tire chains. [Statutory Authority: RCW 46.37.420, 46.37.190, 46.37.194 and 46.37.280. 82-16-047 (Order 82-07-01), § 204-22-030, filed 7/29/82.]

**WAC 204-22-040 Cable tire chains.** This specification covers ladder-type cable tire chain assemblies designed for use on tires that have been manufactured in accordance with the standards of the Tire & Rim Association, Inc.; 3200 West Market Street; Akron, Ohio 44313. All cable tire chains shall be designed for use on tires mounted in accordance with specifications in SAE

Recommended Practice J1232, Class S, and SAE Informational Report J683a. Oversized tires, snow tires, special service, or special traction tires, etc., may require chains of a larger size.

(1) Classifications. Cable tire chains described in this specification shall be of the following types as specified for regular and restricted clearances:

- (a) Passenger car
- (b) Single light truck
- (c) Heavy truck
- (d) Special police and emergency vehicle

(2) Definitions. For purposes of the section, the following definitions shall apply:

(a) Cable laid rope. A compound laid rope consisting of several ropes or several layers of strands laid together into one rope.

(b) Side cable. Stranded cable to complete one full circumference along the tire sidewall.

(c) Fastener. Any suitable connecting device, secured to one end of a side cable so constructed that it can connect to the opposing end and be easily closed (engaged or fastened) and be readily opened (released) by hand.

(d) Reinforced cross cables. Stranded cable wrapped or covered to provide increased resistance to abrasive wear. This covering may be either a hard drawn spring wire, a high-carbon steel wire or nylon type 6 or 12. The wrapped or covered cable shall be enclosed by traction reinforcement sleeves covering said cable essentially from side connector to side connector. Cross cable shall be of specified length and shall provide proper drape over the tire tread.

(e) Cross cable fastener. Any suitable fastener used to attach each cross cable to the side cable. Fastener shall be constructed and assembled to prevent accidental detachment.

(f) Cross cable traction reinforcement sleeves. Shall be constructed of the manufacturer's specified material and of suitable length and width to maximize traction, braking, cornering and longevity.

(3) Requirements.

(a) Components. Cable tire chain assemblies shall consist of two side cables, or two outer and one inner side cable, with reinforced cross cables, cross cable fastener, and fasteners necessary to form a complete assembly.

(b) Material.

(i) Stranded side and stranded cross cable wire shall be constructed of pre-formed galvanized high-carbon steel with a minimum of 450 pounds breaking strength with seven wires per strand and seven strands per cable. The lay shall be a right hand lay.

(ii) Wire covering stranded cable shall be constructed of high-carbon plow steel wire with a minimum tensile strength of 230,000 pounds per square inch.

(iii) Spring wire covering stranded cable shall be constructed of harddrawn spring wire with a minimum tensile strength of 200,000 pounds per square inch.

(iv) Cables, spring, and plow wire must be manufactured in conformance to SAE recommended practice J113.

(v) Cross cable fasteners shall be constructed of open hearth, electric furnace, or basic oxygen process steel.

(vi) Metallic cross cable traction reinforcement sleeves shall be constructed of open hearth, electric furnace, or basic oxygen process steel and shall comply with the following American Society for Testing Materials (ASTM) standards: Standard E6 - Bend Test, Standard E8 - Tension Test, Standard E18 - Test Methods for Rockwell Hardness, and Standard A568 - Table of Chemical Content of Steel.

(vii) Nonmetallic cross cable traction reinforcement sleeves shall be constructed of "Zytel" ST-801 nylon or its equivalent.

(viii) All side cable fasteners are to be constructed of material that will allow easy installation and removal.

(c) Spacing of cross cable. The first cross cable shall be attached to that point of each side cable nearest the fastener that will permit the fastener to lie in the proper plane when the assembled cable tire chain is applied to the tire. On single cable tire chains, the remainder of the cross cables shall be attached to the side cable at intervals designed to provide for at least one cross cable in contact with the roadway at all times. On dual-triple tire chains, the remainder of the cross cable shall be attached to the outer side cables at like intervals and to the inner side chain with opposing cross cables staggered at the same intervals.

(d) Tolerances.

(i) Cross cable length. The inside length of all cross cable, including fasteners held in the same plane, shall be within a tolerance of minus 1/8 inch to plus 1/8 inch of the specified length indicated by the chain manufacturer's specifications. The length shall be measured by hanging the cross cable vertically on a horizontal pin and measuring the inside to inside length. The number of traction reinforcement sleeves in a cross cable may not vary from the number specified by the manufacturer.

(ii) Side cable length. The length of all side cables shall be within tolerance of minus 1/8 inch to plus 1/2 inch of the length indicated by the chain manufacturer's specifications.

(iii) Stranded cable size. Stranded cable size shall be subject to the following tolerances:

(A) Material up to and including .094 inch (2.4 mm) diameter shall not be less than the designated diameter and shall not exceed .010 inch (.25 mm) over the specified diameter.

(B) Material over .094 inch (2.4 mm) diameter shall not be less than the specified diameter and shall not exceed .014 inch (.36 mm) over the specified diameter.

(e) Component dimensions. The dimensions of manufactured components may vary, but the assembled cable chains must meet the tolerances specified in items (d)(i), (d)(ii) and (d)(iii).

(f) Finish. All cable tire chains shall have a rust-resistant finish for protection in transit and storage.

(g) Identification. Each half set of cable tire chains shall be permanently marked with the manufacturing company's name, initials or trademark in order that it

may be easily identified when not in the original container. [Statutory Authority: RCW 46.37.420, 46.37.190, 46.37.194 and 46.37.280. 82-16-047 (Order 82-07-01), § 204-22-040, filed 7/29/82.]

**WAC 204-22-050 Other tire chain devices.** From time to time, new technology or materials allow the invention or manufacture of devices having the same effect on a tire as tire chains but different in concept or design. Standards for such other tire chain devices shall be set by the commission upon petition by a party for approval of the device. [Statutory Authority: RCW 46.37.420, 46.37.190, 46.37.194 and 46.37.280. 82-16-047 (Order 82-07-01), § 204-22-050, filed 7/29/82.]

### Chapter 204-24 WAC TRACTION DEVICES

WAC	
204-24-020	Standards for tire chains.
204-24-040	Traction devices.
204-24-050	Use of tire chains or other traction devices.

**WAC 204-24-020 Standards for tire chains.** Standards for tire chains shall be as set forth in chapter 204-22 WAC. [Statutory Authority: RCW 46.37.420, 46.37.190, 46.37.194 and 46.37.280. 82-16-047 (Order 82-07-01), § 204-24-020, filed 7/29/82; Order 7607, § 204-24-020, filed 9/14/76; Order 6902, § 204-24-020, filed 12/19/73; Order 6902, § 204-24-020, filed 2/17/70.]

**WAC 204-24-040 Traction devices.** The following equipment items are approved by the commission on equipment for use as traction devices wherever traction devices are required by the transportation commission:

- (1) Tire chains meeting the standards in WAC 204-24-020.
- (2) Studded tires meeting the standards in WAC 204-24-030.
- (3) Garnet tires.
- (4) Snow tires. An approved snow tire shall have the following tread characteristics:
  - (a) A minimum of 4/32 inch tread, measured in the center portion of the tire at three locations equally spaced around the circumference of the tire.
  - (b) A relatively aggressive tread pattern designed primarily to provide additional starting, stopping, and driving traction on snow or ice. The tread shall have ribs, lugs, blocks or buttons the edges of which are at an angle greater than thirty degrees to the tire circumferential centerline.
  - (c) On at least one side of the tread design, the shoulder lugs protrude at least 1/2-inch in a direction generally perpendicular to the direction of travel.
  - (d) Tires manufactured to meet these specifications shall be permanently labeled on at least one sidewall with the words "Mud and Snow" or any contraction using the letters "M" and "S" (e.g. MS, M/S, M-S, M & S, etc.).

(5) Special tires specifically designed to improve stopping, traction, and cornering abilities of the tire on ice or snow may be approved by the commission on equipment as an approved traction device. [Statutory Authority: RCW 46.37.005. 82-11-045 (Order 82-05-01), § 204-24-040, filed 5/12/82; Order 7607, § 204-24-040, filed 9/14/76; Order 6902, § 204-24-040, filed 2/17/70.]

**WAC 204-24-050 Use of tire chains or other traction devices.** (1) Vehicles under 10,000 pounds gross vehicle weight.

(a) When traffic control signs marked "Snow Tires Required" are posted by the transportation commission it shall be unlawful for any vehicle to enter the controlled area without having mounted on its drive wheels at least one of the traction devices meeting the requirements of WAC 204-24-040.

(b) When traffic control signs marked "Chains Required" are posted by the transportation commission it shall be unlawful for any vehicle to enter the controlled area without having mounted on its drive wheels tire chains meeting the standards in WAC 204-24-020.

(i) Exception for all wheel drive vehicles. When "Chains Required" signs are posted, all-wheel drive vehicles shall be exempt from the chain requirement when all wheels are in gear and are equipped with approved traction devices as specified in WAC 204-24-040 provided that tire chains for at least one set of drive wheels are carried in the vehicle.

(2) Vehicles or combinations of vehicles over 10,000 pounds gross vehicle weight.

(a) When traffic control signs marked "Snow Tires Required" are posted by the transportation commission it shall be unlawful for any vehicle or combination of vehicles to enter the controlled area without having mounted on its wheels tire chains in conformance with subsection (2)(b) of this section.

(b) When traffic control signs marked "Chains Required" are posted by the transportation commission it shall be unlawful for any vehicle or combination of vehicles to enter the controlled area without having mounted on its wheels tire chains as follows:

(i) Single vehicles, including but not limited to trucks, truck-tractors, buses and school buses: A minimum of two drive tires chained, one on each side of the vehicle, both on the same axle.

(ii) Two vehicle combinations, including but not limited to truck and trailer, or truck tractor and semi-trailer: A minimum of two drive wheels chained, one on each side of the vehicle and both on the same axle, and one trailer wheel chained on the last axle of the trailer. If the trailer or semitrailer has tandem rear axles, the chained wheel may be on either of the last two axles.

(iii) Three-vehicle combinations, including but not limited to truck tractor, semi-trailer and full trailer: A minimum of four drive wheels chained and two trailer wheels chained. The trailer wheel chains shall be on the last trailer in the combination and at least one such chain shall be on a tire on the last axle, or if the trailer has tandem rear axles, the chained wheel may be on either of the last two axles.

(iv) Combinations of vehicles specially permitted to carry over 80,000 pounds gross vehicle weight: A minimum of four drive tires chained, all on the same axle and two trailer wheels chained, one on each side. The trailer wheel chains shall be on the last trailer in the combination and at least one such chain shall be on a tire on the last axle, or if the trailer has tandem rear axles, the chained tire may be on either of the last two axles.

(c) All vehicles over 10,000 pounds gross vehicle weight shall carry a minimum of two extra chains or adequate chain repair equipment for use in the event that road conditions require the use of more chains than the minimums stated in subsection (2)(b) of this section or in the event that chains in use are broken or otherwise made useless: *Provided*, That highway maintenance vehicles operated by the department of transportation for the purpose of snow removal and its ancillary functions are exempt from this requirement.

(d) Approved chains for vehicles over 10,000 pounds gross vehicle weight shall have at least two side chains to which are attached sufficient cross chains of hardened metal so that at least one cross chain is in contact with the road surface at all times. Plastic chains shall not be allowed. The commission on equipment may approve other devices as chains if the devices are equivalent to regular chains in performance.

(3) The Washington state transportation commission or Washington state patrol may prohibit any vehicle from entering a chain/snow tire control area when it is determined that the vehicle will experience difficulty in safely traveling the area. [Statutory Authority: RCW 46.37.005. 82-11-045 (Order 82-05-01), § 204-24-050, filed 5/12/82. Statutory Authority: RCW 46.37.005 and 46.37.420. 81-10-038 (Order 81-04-01), § 204-24-050, filed 4/30/81; 78-02-091 (Order 7607A), § 204-24-050, filed 1/30/78; Order 7607, § 204-24-050, filed 9/14/76; Order 6902, § 204-24-050, filed 2/17/70.]

#### Chapter 204-36 WAC

##### AUTHORIZED EMERGENCY VEHICLE PERMITS

WAC  
204-36-060 Procedure.

**WAC 204-36-060 Procedure.** (1) If the commission approves the application, it shall first issue a certificate of approval which shall be valid for thirty days, during which time the emergency equipment may be installed. After installation of the emergency equipment, the applicant shall bring the vehicle to a district or detachment office of the Washington state patrol to be examined to determine if it is of an approved type. A Washington state patrol officer shall certify the results of this examination on a form prescribed and provided by the commission and the applicant shall file the form with the State Commission on Equipment, General Administration Building AX-12, Olympia, Washington 98504.

Upon receipt of such certification, the commission shall issue a permit, which shall expire one year from the date of issuance thereof.

(2) The commission may refuse to approve the application, certificate or permit or in the case of an application which lists multiple operators may refuse to approve any single operator if the applicant/operator has been convicted of a felony during the last ten years preceding the date of the application and if the felony for which the applicant was convicted directly relates to the specific occupation, trade, vocation, or business for which the certificate or permit is sought.

(3) The certificate of approval and when issued, the permit, including all endorsements for change of conditions as provided in WAC 204-36-030, shall be carried in the authorized emergency vehicle at all times, and shall be displayed on request to any law enforcement officer. [Statutory Authority: RCW 46.37.005 and 46.37.194. 81-04-043 (Order 81-01-01), § 204-36-060, filed 2/3/81; 79-02-085 (Order 7501A), § 204-36-060, filed 2/7/79; Order 7301, § 204-36-060, filed 2/5/73.]

#### Chapter 204-38 WAC

##### FLASHING AMBER LAMPS

WAC  
204-38-030 Definitions.  
204-38-040 Mounting of lamps.  
204-38-050 Use of lamps.

**WAC 204-38-030 Definitions.** (1) "Flashing" lamps shall include those lamps which emit a beam of light which is broken intermittently and regularly by use of an electronic or electric switch, a rotating reflector, a rotating lamp, or a strobe lamp.

(2) "Other construction and maintenance vehicles" shall mean those vehicles owned or operated by a private company which is in the process of providing highway construction or maintenance services or is working in conjunction with any public utility.

(3) "Pilot cars" shall mean those vehicles which are used to provide escort for overlegal size loads upon the roadways of this state.

(4) "Public utilities vehicles" shall mean those vehicles used for construction, operations, and maintenance, and which are owned or operated by a public or private utility, including, but not limited to, companies providing water, electricity, natural gas, telephone, and television cable services, and railroads.

(5) "Tow trucks" shall mean those vehicle engaged in removing disabled or abandoned vehicles from the roadway and which are used primarily for that purpose.

(6) "Animal control vehicles" shall mean those vehicles, either publicly or privately owned, which are used primarily for transportation of animals to or from animal shelters, humane society facilities, or veterinary medicine facilities. [Statutory Authority: RCW 46.37.280. 81-10-038 (Order 81-04-01), § 204-38-030, filed 4/30/81; 80-06-083 (Order 80-05-2), § 204-38-030, filed 5/28/80.]



**WAC 204-38-040 Mounting of lamps.** One or more flashing amber lamps may be mounted on public utilities vehicles, other construction and maintenance vehicles, pilot cars, tow trucks, and animal control vehicles. The lamp(s) shall be mounted and shall be of sufficient intensity so as to be clearly visible to approaching traffic for at least five hundred feet in normal sunlight.

The provisions of WAC 204-72-030 and 204-72-040 shall be adhered to as they relate to the mounting of warning lamps. [Statutory Authority: RCW 46.37.280, 81-10-038 (Order 81-04-01), § 204-38-040, filed 4/30/81; 80-06-083 (Order 80-05-2), § 204-38-040, filed 5/28/80.]

**WAC 204-38-050 Use of lamps.** Flashing amber lamps shall be used on the vehicles described in WAC 204-38-040 only when such vehicles are actually involved in construction, maintenance, or operations which require that warning be given to ensure the protection of the motoring public or the work crew. Warning lamps shall not be illuminated while traveling to or from the site of operations. For the purposes of tow truck operations, the site of operations shall be only that place where vehicles are attached to or detached from the tow truck. Lamps on pilot cars shall be illuminated only while the vehicle is actually providing escort service.

Nothing in this chapter shall relieve the operator of any vehicle from displaying any other light or warning device required by statute or regulation, and nothing herein shall permit any vehicle operator to disregard any traffic law. The lamps permitted by this chapter shall be of a type approved by the commission on equipment. [Statutory Authority: RCW 46.37.280, 81-10-038 (Order 81-04-01), § 204-38-050, filed 4/30/81; 80-06-083 (Order 80-05-2), § 204-38-050, filed 5/28/80.]

**Chapter 204-39 WAC  
TRAILER TONGUE LAMPS**

WAC	
204-39-010	Promulgation.
204-39-020	Purpose.
204-39-030	Use of lamps required.
204-39-040	Mounting of lamps.
204-39-050	Effective date.

**WAC 204-39-010 Promulgation.** By authority of RCW 46.37.005 and 46.37.280, the Washington state commission on equipment hereby adopts the following rule pertaining to lamps mounted on certain trailer tongues. [Statutory Authority: RCW 46.37.280 and 46.37.005, 81-18-007 (Order 81-08-01), § 204-39-010, filed 8/21/81.]

**WAC 204-39-020 Purpose.** The purpose of this rule is to ensure the safety and protection of the motoring public and those persons operating vehicle combinations where excessive distances exist between the separate vehicles in the combination. [Statutory Authority: RCW 46.37.280 and 46.37.005, 81-18-007 (Order 81-08-01), § 204-39-020, filed 8/21/81.]

**WAC 204-39-030 Use of lamps required.** (1) A steady burning or a flashing lamp, amber in color, shall be required on the tongue of any trailer where the distance between the front of the trailer body and the rear of the body of the towing vehicle is fifteen feet or greater, and where the tongue or any portion thereof is lower than 24 inches above the ground.

(2) The flashing lamp permitted by this section shall include only those lamps which flash by means of an electronic or electric flasher. Strobe lamps and rotating type lamps shall not be permitted.

(3) The amber lamps required by this chapter shall be in operation whenever the combination of vehicles is in motion, and shall be visible to each side of the combination.

(4) Minimum diameter of the lamp(s) shall be two and one-half inches. [Statutory Authority: RCW 46.37.280 and 46.37.005, 81-18-007 (Order 81-08-01), § 204-39-030, filed 8/21/81.]

**WAC 204-39-040 Mounting of lamps.** (1) The amber lamps required by this chapter shall be mounted as nearly as practicable in the center of the distance between the vehicle bodies. Lamps mounted on extendable tongues will necessarily vary in distance between the bodies in relation to the amount of extension used; however, in no case shall the lamp be over five feet from the center of the distance between vehicle bodies nor more than fifteen feet from either of the vehicle bodies.

(2) Minimum height of the lamps required shall be twenty-one inches above the roadway. Maximum height shall be forty-eight inches above the roadway. [Statutory Authority: RCW 46.37.280 and 46.37.005, 81-18-007 (Order 81-08-01), § 204-39-040, filed 8/21/81.]

**WAC 204-39-050 Effective date.** (1) All trailers manufactured after January 1, 1982, which are used under the conditions described in WAC 204-39-030(1) shall be equipped and operated as set forth in this chapter.

(2) All trailers manufactured prior to January 1, 1982, which are used under the conditions described in WAC 204-39-030(1) shall be equipped and operated as set forth in this chapter no later than July 1, 1982.

(3) Nothing herein shall be construed to prevent the installation of lamps and the operation thereof prior to the effective dates above. [Statutory Authority: RCW 46.37.280 and 46.37.005, 81-18-007 (Order 81-08-01), § 204-39-050, filed 8/21/81.]

**Chapter 204-56 WAC  
PROCEDURES FOR MEASURING MOTOR  
VEHICLE SOUND LEVELS**

WAC	
204-56-010	Repealed.
204-56-015	Introduction.
204-56-020	Repealed.
204-56-025	Definitions.
204-56-030	Repealed.
204-56-035	Personnel and equipment.
204-56-040	Repealed.



204-56-045	Ambient conditions and equipment preparation.
204-56-050	Repealed.
204-56-055	Procedure for measuring in-use, on highway motor vehicle sound levels.
204-56-065	Procedure for measuring stationary truck sound levels.
204-56-075	Procedure for measuring in-use motor vehicle exhaust system sound levels.
204-56-085	Procedures for measuring new motor vehicle sound levels.
204-56-99001	Microphone height for measurement of in-use vehicles on the highway.
204-56-99002	Patrol mounted microphone location.
204-56-99003	In-use vehicle—Standard measuring site—Nonpatrol car mounted microphone.
204-56-99004	In-use vehicle—Restricted measuring site.
204-56-99005	Correction factors for measuring distance.
204-56-99006	Narrow objects near the microphone.
204-56-99007	Basically parallel surfaces with projections.
204-56-99008	Basically parallel surfaces with perpendicular surfaces.
204-56-99009	Measurement of distance to reflecting surface (embankment).
204-56-99010	Distances "D" and "L".
204-56-99011	Nomogram for reflecting surfaces.
204-56-99012	Exhaust system measurement site.
204-56-99013	Microphone locations for exhaust system measurements.

#### DISPOSITION OF SECTIONS FORMERLY CODIFIED IN THIS CHAPTER

204-56-010	Introduction. [Order 7604, § 204-56-010, filed 2/24/76.] Repealed by 82-11-040 (Order 82-05-02), filed 5/12/82. Statutory Authority: RCW 70.107.070 and 46.37.005.
204-56-020	On-highway sound level measurements. [Order 7604, § 204-56-020, filed 2/24/76.] Repealed by 82-11-040 (Order 82-05-02), filed 5/12/82. Statutory Authority: RCW 70.107.070 and 46.37.005.
204-56-030	Stationary vehicle sound level measurement. [Order 7604, § 204-56-030, filed 2/24/76.] Repealed by 82-11-040 (Order 82-05-02), filed 5/12/82. Statutory Authority: RCW 70.107.070 and 46.37.005.
204-56-040	Static test site for vehicle sound level measurement. [Order 7604, § 204-56-040, filed 2/24/76.] Repealed by 82-11-040 (Order 82-05-02), filed 5/12/82. Statutory Authority: RCW 70.107.070 and 46.37.005.
204-56-050	New motor vehicle noise limits procedure. [Order 7604, § 204-56-050, filed 2/24/76.] Repealed by 82-11-040 (Order 82-05-02), filed 5/12/82. Statutory Authority: RCW 70.107.070 and 46.37.005.

**WAC 204-56-010 Repealed.** See Disposition Table at beginning of this chapter.

**WAC 204-56-015 Introduction.** (1) Authority. Statutory and administrative law governing authority for the guidance and direction contained in these procedures is authorized by RCW 70.107.070 and WAC 173-62-030.

(2) Scope. The commission on equipment has established a sound measurement program to implement the laws and regulations applying to motor vehicle related noise. The program includes sound level measurements of in-use motor vehicles, and testing of new motor vehicles.

(3) Responsibilities. Law enforcement authorities are responsible for the operation of the in-use motor vehicle

noise measurement program within their areas of jurisdiction. [Statutory Authority: RCW 70.107.070 and 46.37.005. 82-11-040 (Order 82-05-02), § 204-56-015, filed 5/12/82.]

**WAC 204-56-020 Repealed.** See Disposition Table at beginning of this chapter.

**WAC 204-56-025 Definitions.** As used in this chapter, unless the context clearly indicates otherwise:

(1) "dB(A)" means the sound level in decibels measured using the "A" weighting network on a sound level meter as specified in the American National Standard Specification for sound level meters S1.4-1971. A decibel is a unit of sound, based on a logarithmic scale, of the ratio of the magnitude of a particular sound pressure to a standard reference pressure of 20 micropascals;

(2) "Gross Vehicle Weight Rating (GVWR)" means the value specified by the manufacturer as the maximum loaded weight of a vehicle;

(3) "In-use" motor vehicle is any motor vehicle which is used on the public highway;

(4) "Maximum RPM" means the engine speed (RPM) specified by the manufacturer as either the engine speed at which rated engine horsepower occurs or the maximum speed of the engine, whichever is lower, in accordance with SAE Standard J1349 DEC 80 - "Engine Rating Code - Spark Ignition and Diesel;"

(5) "Microphone line" means an unmarked reference line running parallel to the vehicle path (roadway) and passing through the microphone;

(6) "Microphone point" means the unmarked location on the center of the lane of travel that is closest to the microphone;

(7) "Motorcycle" means any motor vehicle having a saddle for the use of the rider and designed to travel on not more than three wheels in contact with the ground, except farm tractors;

(8) "Motor vehicle" means any vehicle which is self-propelled, used primarily for transporting persons or property upon public highways and required to be licensed under RCW 46.16.010 (aircraft, water craft, and vehicles used exclusively on stationary rails or tracks are not motor vehicles as that term is used herein);

(9) "Muffler" means a device consisting of a series of chambers or other mechanical designs for the purpose of receiving exhaust gas from an internal combustion engine and effective in reducing noise to comply with the standards of chapter 173-62 WAC;

(10) "New motor vehicle" means a motor vehicle manufactured after December 31, 1975, for which the equitable or legal title has never been transferred to a person who, in good faith, purchases the new motor vehicle for purposes other than resale;

(11) "Off-highway vehicle" means any self-propelled vehicle not used primarily for transporting persons or property upon public highways nor required to be licensed under RCW 46.16.010;

(12) "Person" means any individual, corporation, partnership, association, governmental body, state agency, or other entity whatsoever;

(13) "Public highway" means the entire width between the boundary lines of every way publicly maintained by the department of highways or any county or city when any part thereof is generally open to the use of the public for purposes of vehicular travel as a matter of right;

(14) "Sound level" means a weighted sound pressure level measured by use of a sound level meter using an "A" weighting network and reported as dB(A);

(15) "Sound level meter" means a device which measures sound pressure levels and which satisfies the requirements of WAC 204-56-035(4). [Statutory Authority: RCW 70.107.070 and 46.37.005. 82-11-040 (Order 82-05-02), § 204-56-025, filed 5/12/82.]

**WAC 204-56-030 Repealed.** See Disposition Table at beginning of this chapter.

**WAC 204-56-035 Personnel and equipment.** (1) Training of personnel. Any person who measures sound levels for enforcement of the noise limits in chapter 173-62 WAC shall have received training in the use of equipment and measuring site selection as described in this chapter.

(2) Positioning of personnel. The enforcement officer making direct readings of the sound level meter shall be positioned in relation to the microphone in accordance with the microphone manufacturer's instructions. Where the instruction manual is vague or does not include adequate information, a specific recommendation shall be obtained from the manufacturer.

(3) Positioning of bystanders. During sound measurements bystanders shall not be within 10 feet (3 meters) of the microphone or the vehicle being measured, except for a witness or a trainee, who may be positioned directly behind the officer reading the sound level meter and on a line with the officer and the microphone.

(4) Equipment requirements. The following describes the minimum requirements which equipment must satisfy to be used for the measurement procedures of this chapter.

(a) Sound level meter. Measurements for enforcement purposes shall be made with a sound level meter which: For measuring new motor vehicles meets or exceeds the requirements for Types 1 or S1A meters, or for measuring in-use motor vehicles meets or exceeds the requirements for Types 2 or S2A meters, as described in the American National Standard Specification for Sound Level Meters S1.4-1971, or; which meets or exceeds the requirements of the International Electrotechnical Commission Publication 179, "Precision Sound Level Meters." As an alternative to a sound level meter, a sound measurement system using a microphone or a sound level meter, with a magnetic tape recorder, graphic level recorder, or other indicating instrument may be used provided the system meets the requirements of SAE J184a. Sound level meters which meet the requirements for Type 3 meters in ANSI S1.4-1971 may be used for initial inspection procedures, but not for enforcement purposes. Sound level meters shall be calibrated and

certified at least once every two years to meet American National Standards Institute Specification S1.4-1971.

(b) Sound level calibrator. An acoustically coupled calibrator shall be used periodically to assure the accuracy of the sound level meter and microphone. The calibrator shall be calibrated and certified at least once a year by the manufacturer or a certified laboratory.

(c) Tachometer. A tachometer shall be used to measure the RPM for motor vehicles tested under the procedures of WAC 204-56-075. Calibration accuracy for tachometers shall be at least  $\pm 3$  percent of full scale reading. Tachometers shall be calibrated at least once every two years in accordance with the manufacturer's calibration procedures. Vibrating reed tachometers shall be deemed to meet the accuracy requirement if not visibly damaged.

(d) Windscreen. A windscreen of open cell foam, or any other type as recommended by the manufacturer of the sound level meter, shall be placed over the microphone after calibration to protect it from moisture, exhaust gases, and wind effects.

(e) Anemometer. An anemometer with an accuracy of  $\pm 10$  percent of the reading for windspeeds of 12 to 20 mph (19 to 32 km/h) shall be used to measure the windspeed at the measurement site. [Statutory Authority: RCW 70.107.070 and 46.37.005. 82-11-040 (Order 82-05-02), § 204-56-035, filed 5/12/82.]

**WAC 204-56-040 Repealed.** See Disposition Table at beginning of this chapter.

**WAC 204-56-045 Ambient conditions and equipment preparation.** (1) Ambient conditions. The following ambient conditions shall be observed during measurements and shall determine whether testing is to occur or not:

(a) Wind. Sound level measurements shall not be made when the wind speed at the microphone position is in excess of:

(i) 20 mph (32 km/hr) for the exhaust system test, WAC 204-56-075;

(ii) 12 mph (19 km/hr) for all other tests;

(b) Precipitation. Sound level measurements shall not be made when precipitation is falling in such a way as to affect the equipment or the measurement reading. For tests other than the exhaust system measurement procedure (WAC 204-56-075), the ground surface shall not be wet, or covered with snow or ice;

(c) Background sound level. Sound level measurements shall not be made when the difference between the background sound level and the level of the measured sound source is less than 10 dB(A).

(2) Equipment preparation. For enforcement purposes the following procedures shall be used to prepare the sound level meter for the measurement of motor vehicle noise levels:

(a) Battery check. A battery check shall be conducted on all instruments before field calibration and measurement. Batteries which are in low-charge condition shall be replaced;

(b) Calibration. Sound level meters shall be field calibrated using procedures described in the manufacturer's instruction manual, at the beginning and end of each measurement period, and at intervals not exceeding two hours when the instrument is used for more than a two-hour period;

(c) Microphone orientation. The microphone shall be oriented with respect to the sound source as described in the manufacturer's instruction manual;

(d) Meter characteristics. For all measurement procedures in this chapter the sound level meter shall be set to the A-weighted scale. The response mode ("fast"/"slow") shall be set as specified in the particular procedure being used. [Statutory Authority: RCW 70.107.070 and 46.37.005. 82-11-040 (Order 82-05-02), § 204-56-045, filed 5/12/82.]

**WAC 204-56-050 Repealed.** See Disposition Table at beginning of this chapter.

**WAC 204-56-055 Procedure for measuring in-use, on highway motor vehicle sound levels.** (1) Scope. This section describes the procedure for selecting sites and for operating equipment to measure the sound levels of motor vehicles on the highway, for the purpose of enforcing the limits of WAC 173-62-030(1), Table I.

(2) Site selection. Generally, the measurement site should be an open, relatively flat area containing a minimum number of obstructions and reflective surfaces within 50 feet (15.2 meters) of the microphone or the microphone point. In addition, the measurement site shall be subject to the following restrictions:

(a) Road surface. Roadways shall be paved with relatively smooth asphalt or concrete, shall be dry, and shall be relatively free of holes, grooves, loose material, such as sand or gravel, or other surface irregularities;

(b) Tunnels and overpasses. Sound measurements shall not be made within 100 feet of a tunnel or overpass through which the roadway passes;

(c) Overhangs. The microphone and microphone point shall not be within 50 feet (15.2 meters) of any overhang exceeding 2 feet (.6 meter) measured perpendicular to the lane of travel (eaves, awnings, balconies, etc.);

(d) Reflecting surfaces close to microphone. Sound-reflecting surfaces shall be no closer than 10 feet (3 meters) from the microphone line, except for the patrol car or patrol motorcycle during patrol-mounted measurements;

(e) Reflecting surfaces close to lane of travel. Sound-reflecting surfaces within the measurement area shall be no closer than 10 feet (3 meters) from the center of the lane of travel;

(f) Highway ramps. Measurement sites shall not be located along highway entrance or exit ramps.

(3) Equipment set-up and operation.

(a) Microphone location. The microphone shall be located within 21 to 118 feet (6.4 to 36 meters) of the center of the lane of travel.

(b) Microphone height.

(i) Fixed procedure. The microphone shall be mounted on a tripod if an extension cable is used. If the

microphone is attached to the sound level meter, the meter may be mounted on a tripod or hand held. The microphone shall be stationary, at a height of not less than 2 feet (0.6 meter) nor more than 10 feet (3 meters) above the plane of the roadway surface and not less than 3.5 feet (1.1 meters) above the ground. (See WAC 204-56-99001.)

(ii) Patrol-mounted procedure. For patrol motorcycles, the sound level meter with microphone attached shall be hand-held, and shall be no closer than 16 inches (.4 meter) to any part of the motorcycle. For patrol cars, the microphone shall be located on a boom attached to the roof above the center of the rear door window, or to the light bar, on the side of the car closest to the measured lane of travel, and shall be no less than 16 inches (.4 meters) above the light bar, or roofline when window or gutter mounted, nor more than 2 feet (.6 meter) above the roof of the patrol car in either case. For all patrol-mounted measurements the microphone shall be at a height of no less than 2 feet (.6 meter) nor more than 10 feet (3 meters) above the level of the roadway. (See WAC 204-56-99002.)

(c) Meter response mode. The meter shall be set to the "fast" response mode.

(4) Types of sites. Two types of sites are established for measuring motor vehicles. The "Standard Measuring Site" requires a large clear open area with the microphone at 48 to 58 feet (14.6 to 17.7 meters) from the center of the lane of travel (see WAC 204-56-99003). The "Restricted Measuring Site" may contain sound-reflecting objects (including the patrol vehicle during patrol-mounted measurements) within the measurement area and/or the microphone may be located outside the distance range allowed for the standard site (see WAC 204-56-99004). When selecting a measuring site, the area shall be measured to determine if a correction factor must be applied.

(a) Standard measuring site. When making measurements of motor vehicle sound levels in standard measuring sites, the instrument readings shall be recorded with no correction factor applied for microphone distance. (See WAC 204-56-99003.)

(b) Restricted measuring site. When making measurements of motor vehicle sound levels in restricted measuring sites, the proper correction factors for distance, reflecting surfaces, and/or patrol vehicle effects shall be applied as described below.

(i) Correction for measuring distance. This factor will correct the reading to what it would be if the vehicle were measured at the standard distance of 50 feet (15.2 meters). The actual distance from the microphone to the microphone point in the restricted site may range from 21 to 118 feet (6.4 to 36 meters). The correction factor shall be obtained from WAC 204-56-99005.

(ii) Surfaces and objects not requiring correction. The following surfaces and objects within the measurement site do not require a correction factor:

(A) Any object, such as telephone booth, utility pole, mailbox, fire hydrant, or tree trunk, with width measured parallel to the motor vehicle path of less than 8 feet (2.4 meters), regardless of height. Such objects

must be either on the opposite side of the vehicle path from the microphone, or more than 10 feet (3 meters) from a line passing through the microphone and the microphone point (see WAC 204-56-99006);

(B) Any surface or object less than 1 foot (.3 meter) in height, regardless of length, such as curbs or guard rails;

(C) Any type of traffic railing, except solid barriers with the lower edge more than 2 feet (.6 meter) above the roadway;

(D) Any vertical surface, such as a billboard, with the lower edge more than 15 feet (4.6 meters) above the roadway;

(E) Any uniformly smooth surface slanting away from the roadway (such as a rise in grade alongside the road) with a slope less than 45 degrees from the horizontal;

(F) Any uniformly smooth surface slanting away from the roadway with a 45 to 90 degree slope from the horizontal if the surface slope begins to exceed 45 degrees at a point more than 15 feet (4.6 meters) above the roadway;

(G) Chain link fences, or any vegetation such as bushes, shrubs, small trees, hedges, and grass.

(iii) Sound reflecting surfaces and objects requiring correction. A sound reflecting surface is any building, billboard, hillside, or similar object within the measurement area that reflects sufficient sound to affect the sound level readings obtained from passing motor vehicles, and which does not satisfy the requirements of paragraph (ii) above. Sound level measurements may be made with appropriate corrections when sound reflecting surfaces are within the measurement site. Measurements may be made only when the sound reflecting surfaces are basically parallel to the vehicle path. (See WAC 204-56-99007.)

(A) A basically parallel surface may have irregularities or projections measured perpendicular to the lane of travel, with the distance to the microphone line or vehicle path measured from the closest point of the projection.

(B) Surfaces that are perpendicular to the lane of travel behind a parallel surface for which corrections are made, such as a fence or the side walls of a building do not need corrections computed. (See WAC 204-56-99008.)

(C) Distance measurements from embankments covered with vegetation, concrete, asphalt, dirt, or other relatively smooth cover shall be made from the point where the slope begins to exceed 45 degrees above horizontal. (See WAC 204-56-99009.) Measurements from nonsmooth embankments shall be made from the point where the irregularities begin.

(D) Measurement sites containing sound reflecting surfaces basically parallel to the vehicle path may be used by measuring the distances "D" and "L" shown in WAC 204-56-99010 and applying the correction factor obtained from the nomogram in WAC 204-56-99011. Measurement "D" is the shortest distance between the sound reflecting surface in front of the lane of travel and the centerline of the lane of travel. Measurement "L" is

the shortest distance between the sound reflecting surface behind the microphone line and the microphone line.

To use the nomogram, locate the points on the left and right scales of WAC 204-56-99011, corresponding to the distances "D" and "L" in WAC 204-56-99010. Place a straight edge across the nomogram so that it connects the two points. The point where the straight edge intersects the center axis indicates the correction factor to be applied.

(5) Additional effects to be considered during measurement. The following effects may or may not occur during sound level measurements of motor vehicles on the roadway. Enforcement personnel must be aware of these effects and must consider them accordingly when recording vehicle sound levels.

(a) A sound level shall not be recorded if the motor vehicle is operating with snow tires, studded tires, or snow chains, as these devices may cause the reading to be higher than the level the vehicle is actually emitting. However, if the vehicle exhaust or powertrain sound level appears to be the predominant source, the vehicle may be measured in accordance with procedures in WAC 204-56-075 to determine possible violation of WAC 173-62-030(4), Table II.

(b) Sound level readings shall not be recorded while a motor vehicle is undergoing safety or emergency related maneuvers.

(c) Sound level readings shall not be acceptable if the operator of the motor vehicle has sounded his vehicle's horn. Blowing of the horn for the purpose of interfering with measurement of the vehicle sound level is not a lawful use of the horn and shall be deemed a violation of RCW 46.37.380.

(d) Sound level readings for a vehicle may be obtained regardless of road grade, vehicle load, vehicle acceleration, or vehicle deceleration.

(e) Because of heavy traffic conditions, more than one motor vehicle at a time may be within the measurement area. To insure that an accurate reading is obtained, the sound level of the vehicle under scrutiny must rise at least 6 dB(A) before and fall at least 6 dB(A) after the maximum sound level occurs.

(f) During patrol-mounted measurements, sound emissions from a patrol vehicle's radio or idling engine shall be at least 10 dB(A) below the noise limits set by chapter 173-62 WAC together with any applied correction factor.

(6) Equipment variation allowances.

Due to instrument production and design tolerances, the following allowances shall be made for the respective sound level meters during enforcement:

- + 1 dBA for ANSI certified Type 1 sound level meters
- + 2 dBA for ANSI certified Type 2 sound level meters

This value shall be applied, either to the standard or the meter reading. (See WAC 204-56-055(8).)

(7) Corrections for patrol-vehicle mounted measurements.

(a) Patrol motorcycles. For patrol motorcycles a correction factor of + 2 dBA shall be applied, either to the standard or the meter reading. (See WAC 204-56-055(8).)

(b) Patrol cars. For patrol cars parallel to the roadway a correction factor of + 3 dBA shall be applied and patrol cars monitoring while perpendicular to the roadway a correction factor of + 2 dBA shall be applied, either to the standard or meter reading. (See WAC 204-56-055(8).)

(c) Corrections for patrol-mounted measurements shall be in addition to the corrections applied for the sound level meter, distances, and other reflecting surfaces.

(8) Calculating corrections to vehicle standards or meter readings. During enforcement monitoring, the officer may compare actual meter readings (AMR) to a corrected standard (CST) or compare a corrected meter reading (CMR) to the actual standards (AST). The method used is at the discretion of the enforcement officer. The corrections that must be considered when calculating a corrected standard (CST) or corrected meter reading (CMR) are: Equipment tolerances (ET) (see WAC 204-56-055(6)), patrol-vehicle mounted tolerances (PT) (see WAC 204-56-055(7)), and site tolerances (distance (DT) and reflection (RT)) (see WAC 204-56-055(4)(b)(iii) and 204-56-99010 and 204-56-99011).

(a) To derive the corrected standard (CST) (enforcement level) you must add the tolerances to the actual standard (AST). Positive (+) corrections are added to the actual standard while negative (-) corrections are subtracted from the actual standard.

$$\text{CST} = \text{AST} + \text{ET} + \text{PT} + \text{DT} + \text{RT}$$

(b) To derive the corrected meter reading (CMR) (that level reported as the level of the vehicle when comparing it to the actual standard (AST)) you must subtract the tolerances from the actual meter reading (AMR). Positive (+) corrections are *subtracted* from the meter reading while negative (-) corrections are *added* to the meter reading. Therefore if (DT) or (RT) are negative (-) values, they must be added to the meter reading.

$$\text{CMR} = \text{AMR} - \text{ET} - \text{PT} - \text{DT} - \text{RT}$$

**NOTE:** Do *NOT* compare a corrected meter reading (CMR) with a corrected standard (CST) as this may result in a false indication of violation. Only compare (CMR to AST) or (AMR to CST) to determine a violation.

(9) Interstate motor carriers with GVWR over 10,000 pounds. Trucks licensed as interstate motor carriers with GVWR over 10,000 pounds shall be measured in accordance with the latest procedures adopted in the department of transportation bureau of motor carrier safety regulations for enforcement of motor carrier noise emission standards. [Statutory Authority: RCW 70.107-.070 and 46.37.005. 82-11-040 (Order 82-05-02), § 204-56-055, filed 5/12/82.]

**WAC 204-56-065 Procedure for measuring stationary truck sound levels.** (1) Scope. This section specifies the procedure for measuring the sound level generated by a motor vehicle that has a GVWR of more than 10,000 pounds when the vehicle's engine is rapidly accelerated from idle to governed speed at wide open throttle with the vehicle stationary, its transmission in neutral, and its clutch engaged.

(2) Procedure. Measurements shall be made in accordance with the latest procedures established in the department of transportation bureau of motor carrier safety regulations for enforcement of motor carrier noise emission standards. [Statutory Authority: RCW 70.107-.070 and 46.37.005. 82-11-040 (Order 82-05-02), § 204-56-065, filed 5/12/82.]

**WAC 204-56-075 Procedure for measuring in-use motor vehicle exhaust system sound levels.** (1) Scope. The procedure described in this section is intended to measure noise emitted from exhaust systems of stationary motor vehicles at a minimum distance of 20 inches (.5 meter) from the exhaust outlet. The actual measurement distance may be greater than 20 inches (.5 meter) under circumstances where the exhaust outlet ends under the body of the motor vehicle. The procedure allows testing at sites limited in open space, and measures levels for enforcement of the limits in WAC 173-62-030(4), Table II.

(2) Initial inspection. An initial inspection of the motor vehicle may be performed to determine if the motor vehicle shall be submitted to a visual inspection of the exhaust system for defects, or if the motor vehicle shall be submitted to the procedure for measuring the exhaust system sound level.

(a) Evaluation of sound level. An evaluation of the exhaust system sound level shall be made by the enforcement officer, using the human ear as a sensing device. If under any operating conditions the vehicle exhaust noise is discernibly louder than the vehicle engine and/or tire noise, then the enforcement officer may require that the vehicle exhaust system be submitted to the visual inspection described in paragraph (b) below, and/or to the sound level measurement procedure described in this section. Sound level measurements of such vehicles may be performed at off-road sites for application of the in-use standards.

(b) Visual inspection. A visual inspection of the motor vehicle exhaust system may be performed to determine if the following defects or modifications exist:

- (i) The absence of a muffler;
- (ii) The presence of a muffler cut-out, bypass, or similar device;
- (iii) The presence of defects in the exhaust system including, but not limited to, holes in the muffler or pipes, (except holes specifically designed for water drainage) pinched outlets, or rusted through areas of the muffler or pipes;
- (iv) The presence of equipment designed to produce excessive or unusual noise from the exhaust system.

If these defects or modifications exist, the owner of the motor vehicle shall be in violation of RCW 46.37-.390 and/or WAC 173-62-030(2).

(3) Measurement site. The measurement site shall be a relatively flat, open area free of large, vertical sound reflecting surfaces (such as signboards, buildings, hillsides, or other motor vehicles) located within a radius of 16 feet (5 meters) from the test vehicle and the microphone. The test vehicle shall not be on a hoist, rack, or over a pit. Measurements shall not be made within a shop or building. No one shall be in the measurement area except the enforcement officer, a witness or trainee, and the motor vehicle operator. (See WAC 204-56-99012.)

(4) Equipment set-up and operation.

(a) The microphone may be mounted on a tripod or other support, or if the microphone is attached to the sound level meter the meter may be handheld or mounted on a tripod.

(b) The microphone shall be at the same height as the center of the exhaust outlet if possible, but not closer to any surface (such as the ground or the test vehicle) than 8 inches (.2 meter). The microphone shall be positioned with its longitudinal axis parallel to the ground, 20 inches (.5 meter) or more (as required to meet the angularity and 8-inch minimum surface distance requirements) from the edge of the exhaust outlet, and at an angle of  $45 \pm 10$  degrees from the axis of the exhaust outlet. For outlets inboard from the vehicle body, the microphone shall be located at the above specified angle and at least 8 inches (.2 meter) from any part of the vehicle. For cases where it is impossible to meet the distance and angularity requirements concurrently, the angle or the total distance of 20 inches may be varied to satisfy the distance requirements of 8 inches from the vehicle body. (See WAC 204-56-99013.)

For motor vehicles provided with two or more exhaust outlets spaced more than 1 foot (.3 meter) apart, measurements shall be made for each outlet and the highest sound level shall be recorded. If the exhaust outlets are 1 foot (.3 meter) or less apart, a single measurement shall be made for any one of the outlets. (See WAC 204-56-99013.)

(c) During measurement of the sound level, the engine cover (hood, etc., if one exists) shall be closed as much as possible to reduce engine noise.

(d) A measuring device may be attached to the microphone and/or exhaust outlet to maintain proper distance, but only in a manner such that no vibrations from the motor vehicle are transmitted to the microphone.

(e) The sound level meter shall be set for "slow" response.

(5) Motor vehicle operation. The test vehicle shall be operated as follows:

(a) Motor vehicles weighing 10,000 lbs. GVWR or less. The engine of the motor vehicle shall be operated at a normal operating temperature with transmission in park or neutral. Sound level measurements shall be made at  $3/4$  (75 percent)  $\pm 100$  RPM of the maximum RPM. Except for motor vehicles with diesel engines, any vehicle may be tested at  $3,000 \pm 100$  RPM in lieu of the

$3/4$  maximum RPM stipulation if the engine data (maximum RPM) is not readily available to the enforcing officer.

(b) Vehicles with motorcycle engines. The engine of the vehicle shall be operated at normal operating temperatures with the transmission in neutral. If no neutral is provided, the vehicle shall be operated either with the rear wheel or wheels 2 to 4 inches (5 to 10 centimeters) clear of the ground, or with the drive chain or belt removed. The sound level measurement shall be made with the engine speed stabilized at one of the following values:

(i) If the engine data is available, test the vehicle at  $1/2$  (50 percent)  $\pm 100$  RPM of the maximum RPM;

(ii) If the engine data is not available, and if the vehicle has a tachometer showing the manufacturer's recommended maximum engine speed ("Red Line"), test the vehicle at  $1/2$  (50 percent)  $\pm 100$  RPM of the "Red Line" RPM;

(iii) If the engine data and red line RPM are not available, test the vehicle at:

(A)  $3500 \pm 100$  RPM for engines with total cylinder displacement between 0 to 950 cc (0 to 58 in.<sup>3</sup>).

(B)  $2800 \pm 100$  RPM for engines with total cylinder displacement greater than 950 cc (58 in.<sup>3</sup>).

(6) Reported sound level. The measured sound level shall be the highest value obtained at the specified engine speed, excluding peaks due to unrelated ambient noise, or extraneous impulse-type noise. When more than one exhaust outlet must be checked, the measured sound level shall be for the loudest outlet. For enforcement purposes, the reported sound level shall be the level determined after applying any required meter tolerance corrections to the measured sound level. [Statutory Authority: RCW 70.107.070 and 46.37.005. 82-11-040 (Order 82-05-02), § 204-56-075, filed 5/12/82.]

**WAC 204-56-085 Procedures for measuring new motor vehicle sound levels.** (1) Scope. This section specifies the procedures to be used for measuring the sound levels of new motor vehicles for the purpose of enforcing the new motor vehicle limits established in WAC 173-62-030(4), Table III.

(2) Motor vehicles with GVWR of 10,000 pounds or less. New motor vehicles with a GVWR of 10,000 pounds or less which have been manufactured after January 1, 1975 shall be measured according to Society of Automotive Engineers (SAE) standard J986 NOV 81.

(3) Motor vehicles with GVWR over 10,000 pounds. New motor vehicles with a GVWR greater than 10,000 pounds which have been manufactured after January 1, 1975 shall be measured according to the test procedures in Section 205.54 of Title 40, chapter I of the Code of Federal Regulations for new medium and heavy trucks.

(4) Motorcycles. New motorcycles manufactured after January 1, 1976 shall be measured according to SAE Recommended Practice J331a.

(5) Buses over 10,000 pounds GVWR. New buses with a GVWR greater than 10,000 pounds which have been manufactured after January 1, 1980 shall be measured according to Society of Automotive Engineers

(SAE) standard J366b. Buses with automatic transmissions that cannot be manually held in gear should be tested according to a modified SAE J366 test procedure as follows:

(a) Vehicles equipped with automatic transmissions which cannot be manually held in gear shall be operated at full throttle from a standing start so that the first transmission shift occurs with the vehicle reference point in the end zone.

(b) Place the transmission gear selector in the position normally used for typical driving.

(c) A starting point along the test path at which the vehicle shall begin the acceleration test shall be determined by the following procedure:

(i) The vehicle reference point, as specified in SAE J366b, Section 3.7, shall be placed at the midpoint ( $\pm 0.3m$ ,  $\pm 1ft.$ ) of the end zone with the front end of the vehicle facing back along the test path in the opposite direction of travel that is used for the sound measurement tests.

(ii) The vehicle shall than be accelerated as rapidly as possible by establishing wide open throttle, until the first transmission shift point is reached.

(iii) The location along the test path at which the reference point of the vehicle is passing when the first transmission shift point occurs during the wide open throttle acceleration shall be the designated stationary starting point.

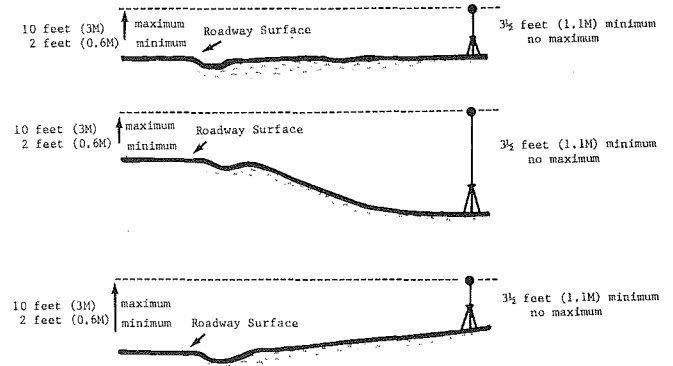
(iv) The vehicle's direction of travel shall then be reversed for sound testing.

(d) For the acceleration test, accelerate the vehicle from a standing position with the reference point of the vehicle at the selected stationary point, obtained by using subsection (5)(c) of this section, as rapidly as possible by establishing wide open throttle. The acceleration shall continue until the entire vehicle has vacated the end zone.

(e) Wheel slip which affects maximum sound level must be avoided. The modified procedure uses a standard SAE J366 test site.

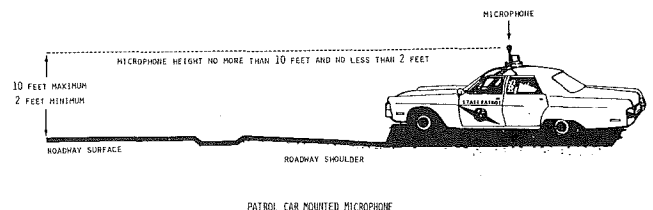
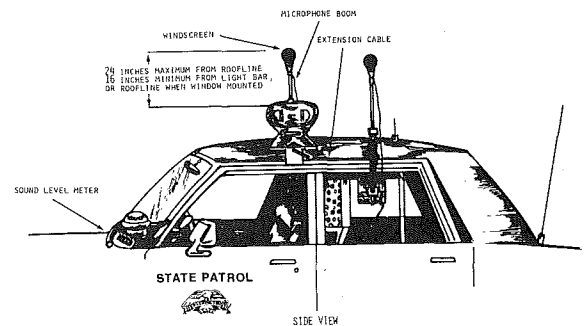
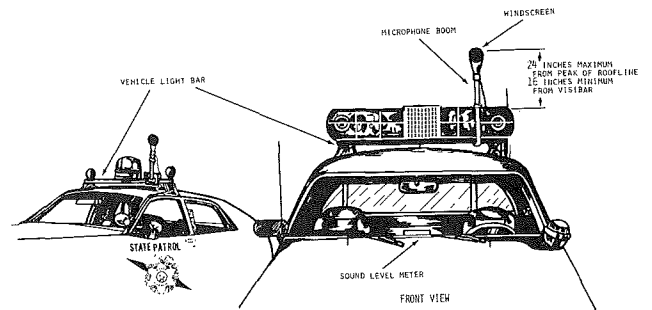
(6) Requests for copies of ANSI documents should be addressed to: Acoustical Society of America, American Institute of Physics, 335 East 45th Street, New York, N.Y., 10017. Requests for copies of SAE documents should be addressed to: Society of Automotive Engineers, Attn: Dept. 001, 400 Commonwealth Drive, Warrendale, PA. 15096. [Statutory Authority: RCW 70.107.070 and 46.37.005. 82-11-040 (Order 82-05-02), § 204-56-085, filed 5/12/82.]

**WAC 204-56-99001 Microphone height for measurement of in-use vehicles on the highway.**



[Statutory Authority: RCW 70.107.070 and 46.37.005. 82-11-040 (Order 82-05-02), § 204-56-99001, filed 5/12/82.]

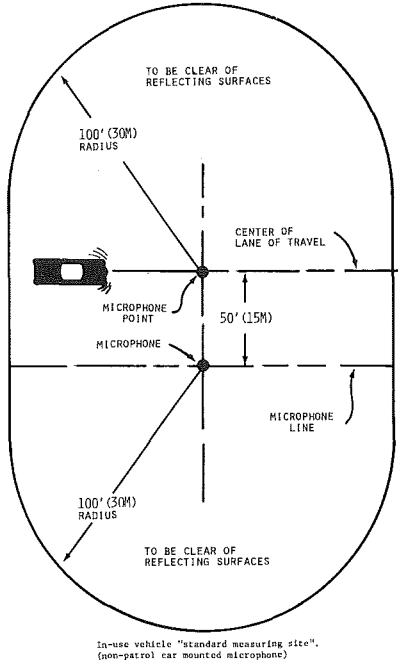
**WAC 204-56-99002 Patrol mounted microphone location.**





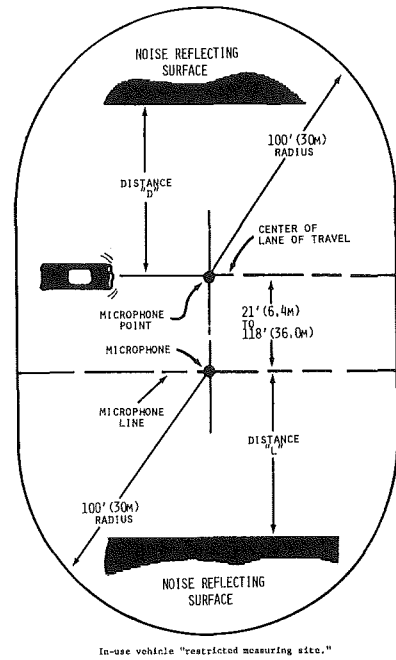
[Statutory Authority: RCW 70.107.070 and 46.37.005. 82-11-040 (Order 82-05-02), § 204-56-99002, filed 5/12/82.]

**WAC 204-56-99003 In-use vehicle--Standard measuring site--Nonpatrol car mounted microphone.**



[Statutory Authority: RCW 70.107.070 and 46.37.005. 82-11-040 (Order 82-05-02), § 204-56-99003, filed 5/12/82.]

**WAC 204-56-99004 In-use vehicle--Restricted measuring site.**



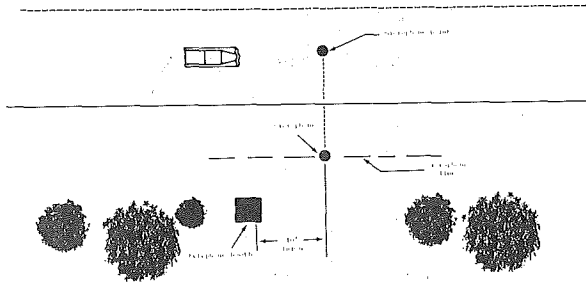
[Statutory Authority: RCW 70.107.070 and 46.37.005. 82-11-040 (Order 82-05-02), § 204-56-99004, filed 5/12/82.]

**WAC 204-56-99005 Correction factors for measuring distance.**

Distance from Microphone to Center of Lane of Travel	Sound Level Correction Factor, dB
21 feet (6.4m) or more but less than 29 feet (8.8m)	+ 7
29 feet (8.8m) or more but less than 32 feet (9.8m)	+ 6
32 feet (9.8m) or more but less than 35 feet (10.7m)	+ 5
35 feet (10.7m) or more but less than 39 feet (11.9m)	+ 3
39 feet (11.9m) or more but less than 43 feet (13.1m)	+ 2
43 feet (13.1m) or more but less than 48 feet (14.6m)	+ 1
48 feet (14.6m) or more but less than 58 feet (17.1m)	0
58 feet (17.1m) or more but less than 70 feet (21.3m)	- 1
70 feet (21.3m) or more but less than 83 feet (25.3m)	- 2
83 feet (25.3m) or more but less than 99 feet (30.2m)	- 3
99 feet (30.2m) or more but less than 118 feet (36 m)	- 4

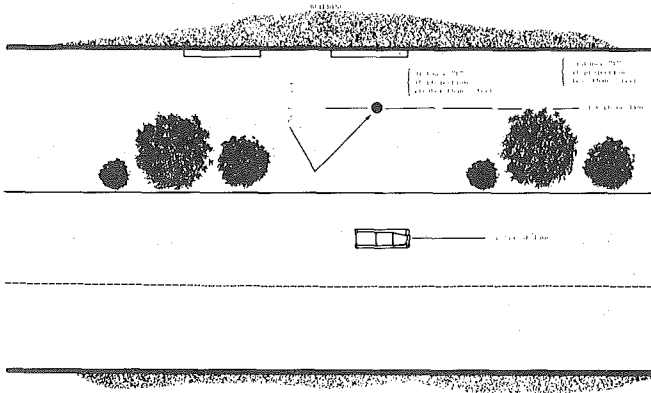
[Statutory Authority: RCW 70.107.070 and 46.37.005. 82-11-040 (Order 82-05-02), § 204-56-99005, filed 5/12/82.]

**WAC 204-56-99006** Narrow objects near the microphone.



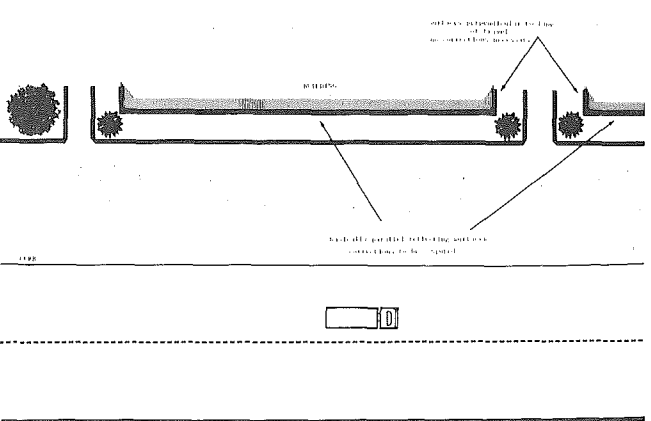
[Statutory Authority: RCW 70.107.070 and 46.37.005. 82-11-040 (Order 82-05-02), § 204-56-99006, filed 5/12/82.]

**WAC 204-56-99007** Basically parallel surfaces with projections.



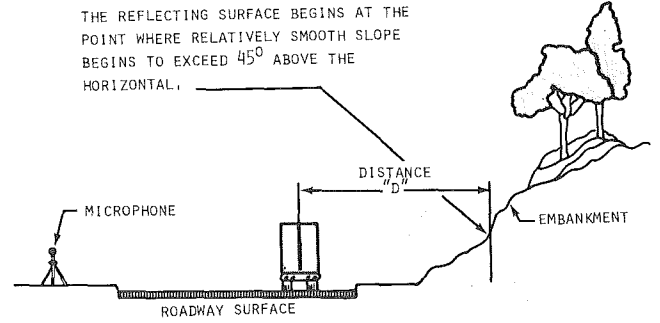
[Statutory Authority: RCW 70.107.070 and 46.37.005. 82-11-040 (Order 82-05-02), § 204-56-99007, filed 5/12/82.]

**WAC 204-56-99008** Basically parallel surfaces with perpendicular surfaces.



[Statutory Authority: RCW 70.107.070 and 46.37.005. 82-11-040 (Order 82-05-02), § 204-56-99008, filed 5/12/82.]

**WAC 204-56-99009** Measurement of distance to reflecting surface (embankment).

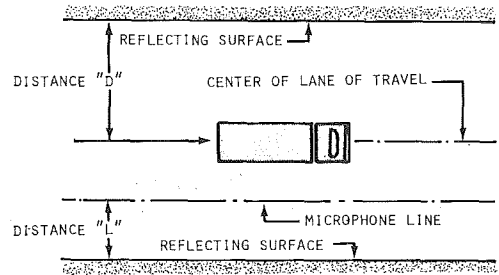


THE REFLECTING SURFACE BEGINS AT THE POINT WHERE RELATIVELY SMOOTH SLOPE BEGINS TO EXCEED 45° ABOVE THE HORIZONTAL.

Measurement of distance to reflecting surface (embankment).

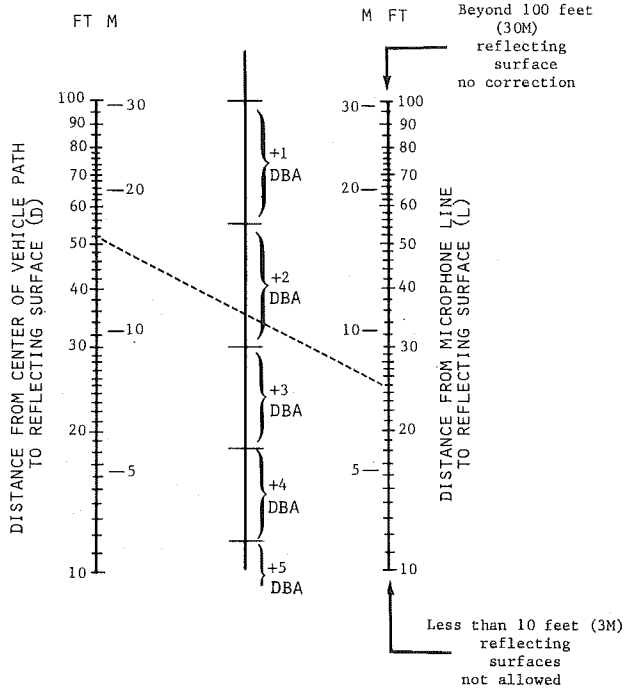
[Statutory Authority: RCW 70.107.070 and 46.37.005. 82-11-040 (Order 82-05-02), § 204-56-99009, filed 5/12/82.]

**WAC 204-56-99010** Distances "D" and "L".



[Statutory Authority: RCW 70.107.070 and 46.37.005. 82-11-040 (Order 82-05-02), § 204-56-99010, filed 5/12/82.]

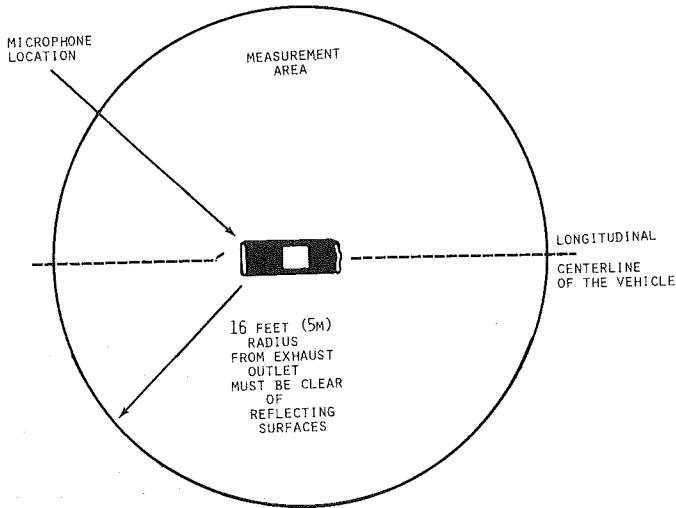
**WAC 204-56-99011 Nomogram for reflecting surfaces.**



Correction nomogram for reflecting surfaces "D" and "L".

[Statutory Authority: RCW 70.107.070 and 46.37.005. 82-11-040 (Order 82-05-02), § 204-56-99011, filed 5/12/82.]

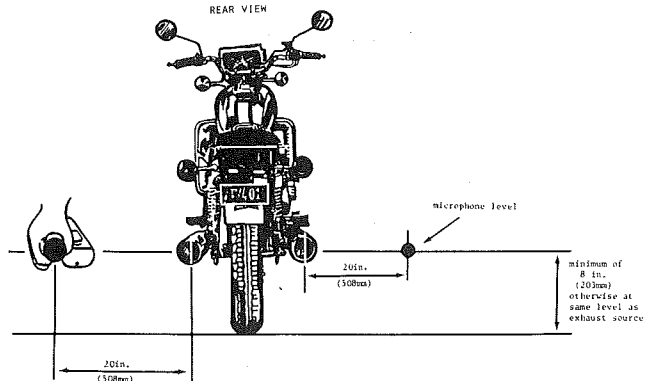
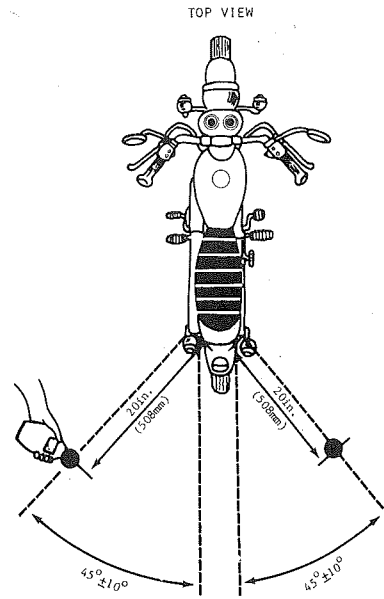
**WAC 204-56-99012 Exhaust system measurement site.**



[Statutory Authority: RCW 70.107.070 and 46.37.005. 82-11-040 (Order 82-05-02), § 204-56-99012, filed 5/12/82.]

**WAC 204-56-99013 Microphone locations for exhaust system measurements.**

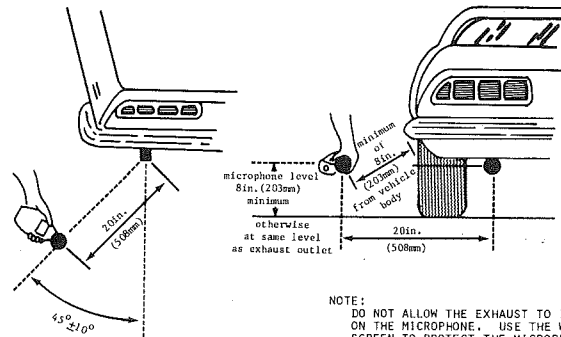
MICROPHONE PLACEMENT FOR MOTORCYCLES



FOR DUAL EXHAUSTS, MEASURE BOTH AND RECORD THE HIGHER OF THE TWO READINGS.

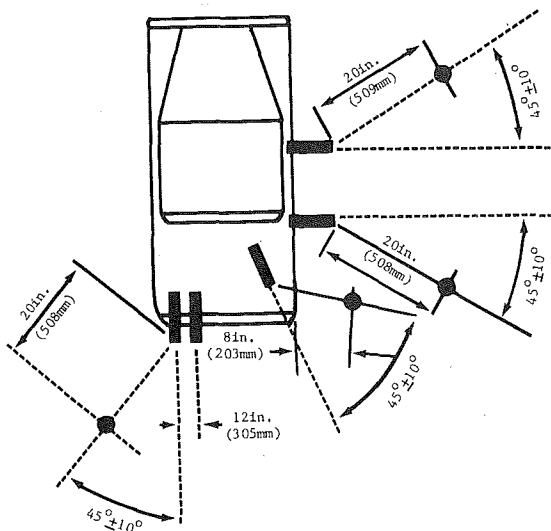
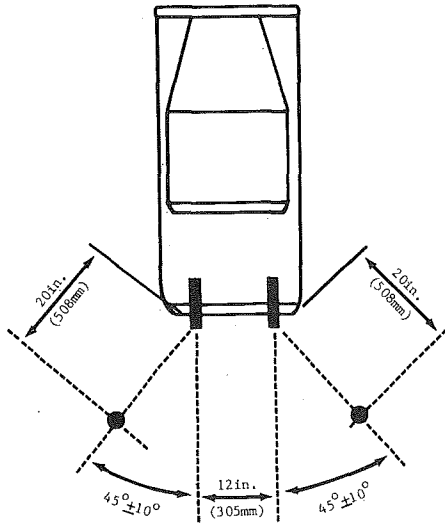
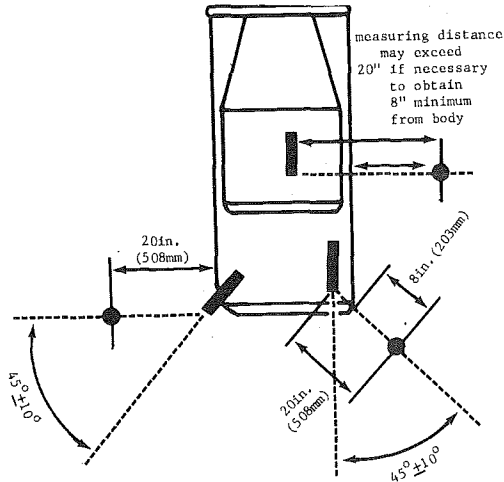
NOTE: DO NOT ALLOW THE EXHAUST TO IMPINGE ON THE MICROPHONE. USE THE WIND SCREEN TO PROTECT THE MICROPHONE.

MICROPHONE PLACEMENT FOR AUTOMOBILES AND LIGHT TRUCKS



NOTE: DO NOT ALLOW THE EXHAUST TO IMPINGE ON THE MICROPHONE. USE THE WIND SCREEN TO PROTECT THE MICROPHONE.

FOR DUAL EXHAUSTS, MEASURE BOTH AND RECORD THE HIGHER OF THE TWO READINGS



[Statutory Authority: RCW 70.107.070 and 46.37.005. 82-11-040 (Order 82-05-02), § 204-56-99013, filed 5/12/82.]

Chapter 204-62 WAC  
DECELERATION WARNING LIGHT

WAC

- 204-62-020 Definition.
- 204-62-040 Standards.
- 204-62-050 Requirements and test methods for a deceleration alert system, Type I.
- 204-62-060 Requirements and test methods for a deceleration alert system, Type II.

**WAC 204-62-020 Definition.** A deceleration warning light, excluding stop lamps, is a device that indicates to a following driver the deceleration of the vehicle ahead. [Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380. 81-18-008 (Order 81-08-02), § 204-62-020, filed 8/21/81; Order 7609, § 204-62-020, filed 10/4/76.]

**WAC 204-62-040 Standards.** Deceleration warning lamp systems may meet the specifications set forth in either WAC 204-62-050 or WAC 204-62-060, but shall meet at least one of those specifications. [Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380. 81-18-008 (Order 81-08-02), § 204-62-040, filed 8/21/81.]

**WAC 204-62-050 Requirements and test methods for a deceleration alert system, Type I.** (1) A deceleration alert lamp, Category I, is mounted on the rear of the vehicle and has three compartments. The center compartment emits a green light and is energized when the vehicle operator has the accelerator depressed. The two outer compartments emit an amber light and are energized when the operator releases the accelerator and prior to applying pressure to the foot brake pedal. When the amber lights are energized, the green light is deenergized. When pressure is applied to the foot brake pedal, the amber lights are deenergized and the vehicle's stop lamps operate in the normal manner.

(2) The deceleration alert lamp is a three-compartment lamp and only one is allowed on the rear of the vehicle mounted as close as possible to the vertical centerline of the vehicle. Center to center (optical axis) distance between two adjacent compartments should not exceed six inches.

(3) The following sections from SAE J575g standard shall apply: Section B, samples for test; Section C, lamp bulbs; Section D, laboratory facilities; Section E, vibration test; Section F, moisture test; Section G, dust test; Section H, corrosion test; and Section J, photometry.

(a) Plastic material - Any plastic material used in optical parts shall comply with the requirements set forth in SAE J576c.

(b) Color test - The color of the light from the center compartment shall be green and the color of the light from the two outer compartments shall be amber. See SAE Standard J578d for color chromaticity boundaries.

(4) Photometric requirements - All beam candlepower measurements shall be made with the H-V axis taken as paralleled to the longitudinal axis of the vehicle. The candlepower measurements for the center green

compartment shall be made with the incandescent filament of the lamp at least ten feet from the photometric screen.

Beam candlepower measurements of the two amber compartments shall be made by either of the following methods:

(a) The two compartments may be photometered together provided that a line from the optical axis (filament centers) of each compartment to the center of the photometer sensing device does not make an angle of more than 0.6° with the photometer (H-V) axis.

(b) Each compartment may be photometered separately by aligning its axis with the photometer and adding the value at each test point.

Table I lists the design candlepower requirements for the two outer amber lights, and Table 2 lists the design candlepower requirements for the center green light.

Table 1			Table 2		
Minimum Design Candlepower Requirements for Amber Light			Minimum Design Candlepower Requirements for Green Light		
Test Points	Candlepower		Test Points	Candlepower	
10 up 10L	25		10 up 10L	1	
and V	65		and V	1.5	
10 down 10R	25		10 down 10R	1	
	20L	25		20L	1
	10L	65		10L	2
5 up 5L	85		5 up 5L	4	
and V	125		and V	4	
5 down 5R	85		5 down 5R	4	
	10R	65		10R	2
	20R	25		20R	1
	20L	25		20L	2
	10L	75		10L	3
	5L	125		5L	5
	H-V	175		H-V	5
	5R	125		5R	5
	10R	75		10R	3
	20R	25		20R	2
Maximum	450		Maximum	45	

(5) Mounting. Deceleration lamps shall be mounted at a height of not more than 72 inches nor less than 15 inches. [Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380. 81-18-008 (Order 81-08-02), § 204-62-050, filed 8/21/81.]

**WAC 204-62-060 Requirements and test methods for a deceleration alert system, Type II.** (1) Operating requirements. Deceleration alert systems shall meet the following operating requirements:

(a) Function. The system shall operate so as to indicate a component of deceleration of the vehicle on which it is installed by varying the flashing rate of a yellow lamp when the service brakes are applied.

(b) Reduced nighttime brightness. The system shall incorporate an automatic means for reducing the intensity of the lamp during darkness. The system shall cause the voltage to the deceleration lamps to decrease to 5.0 V  $\pm$  10% at 0 g deceleration during darkness. The specified voltage shall be reached when the illumination on

the sensor is not more than 5 lm/sq. ft., nor less than 0.5 lm/sq. ft.

(2) Deceleration performance. The output voltage, duty cycle, and flash rate of the control unit as a temperature of 24°  $\pm$  5.5° C (75°  $\pm$  10° F), when 12.8 V dc is applied to the input terminal, shall be as shown in Table I when the control sensor is placed on a tilt table and slightly vibrated as the table is slowly rotated through the angles representing the specified vehicle deceleration rates.

TABLE I. Test Requirements for Deceleration Lamps

Deceleration (g)	Output (V)	Peak Relative Brightness	Flash Rate (Hz)	On Time (%)
0.0	7.0	1.0	1.0	50
0.1	—	1.0	1.5	48
0.2	—	1.0	2.3	46
0.3	—	1.2	3.4	44
0.4	—	1.4	5.0	42
0.5	—	1.7	7.6	40

(a) Deceleration. The deceleration at which the unit switches from a lower to a higher flash rate shall be within  $\pm$  0.05 g of the rate specified in Table I. If the unit operates at more steps than the required minimum, the additional values for each column shall lie on the smooth curve connecting the indicated values within the specified tolerances. The values specified in Table II apply to ramp-type inertial sensors for which the downward angles correspond to the deceleration and a tolerance of 3.0° applies to the tilt angle.

TABLE II. Test Requirements for Deceleration Sensors

Deceleration (g)	DEGREES		
	Forward Tilt Angle	Dip Correction	Corrected Tilt Angle
0.0	0.0	0.0	0.0
0.1	5.7	0.8	6.5
0.2	11.3	1.6	12.9
0.3	16.7	2.4	19.1
0.4	21.8	3.2	25.0
0.5	26.6	4.0	30.6

(b) Output voltage. The rms output voltage during the on portion of the flash cycle at the 1 HZ flash rate shall be within  $\pm$  5% of the specified value, measured at the lamp bulbs with daytime illumination on the automatic darkness sensor.

(c) Relative brightness. With the brightness of the lamp or its bulbs taken as 1.0 when measured with the rms output voltage specified for 0 g deceleration, the relative brightness of the lamp or bulbs at the other decelerations shall be within  $\pm$  25% of the specified values after the fifth flash.

(d) Flash rate and percent on time. The flash rate shall be within  $\pm 15\%$  of the specified value. The percent on time shall be within  $\pm 10\%$  of the specified value.

(e) Correction for front end dip. Control sensors for vehicles with substantial front end dip upon braking, such as passenger vehicles and pickup trucks, shall have linear dip corrections varying from  $4^\circ$  at 0.5 g or more deceleration to  $0^\circ$  at 0 g.

(3) Mechanical test requirements. Deceleration lamps shall comply with the following mechanical tests in SAE Standard J575g (tests for motor vehicle lighting devices and components): Corrosion, dust, moisture, vibration, and warpage (at a flashing rate of 1 Hz when a plastic lens or housing is used).

(4) Temperature test requirements. The control system shall meet the following requirements at both 11 V and 15 V.

(a) Low temperature test. The control system shall be placed in its normal operating position in a circulating air cabinet at  $-32^\circ \pm 3^\circ \text{ C}$  ( $-25^\circ \pm 5^\circ \text{ F}$ ) for 2 hours. At the end of that period and while still at that temperature, the unit shall meet the requirements in Table I at 0 g and 0.3 g.

(b) High temperature test. The control system shall be placed in its normal operating position in a circulating air cabinet at  $74^\circ + 0^\circ, -2.8^\circ \text{ C}$  ( $165^\circ + 0^\circ, -5^\circ \text{ F}$ ) for 2 hours. At the end of that period and while still at that temperature, the unit shall meet the requirements in Table I at 0 g and 0.3 g.

(5) Durability test. The control system shall be operated continuously at a supply voltage of 12.8 V dc for 200 hours with no failure (except bulb replacement), after which it shall meet the requirements in Table I at 0 g and 0.3 g.

(b) Photometric test requirements. The luminous intensity of a deceleration lamp with the bulbs operated at mean spherical candela shall meet the photometric requirements in Table III after the sample has been mechanically tested in the order shown in subsection (3) of this section.

Table III. Photometric Requirements for Deceleration Signal Lamps

Test Point	Coordinates		Max		Cd	Min	
	Vertical	Horizontal	Amber	Red		Amber	Red
10U		10L	70	35		25	12.5
		V	200	100		60	30
		10R	70	35		25	12.5
5U		20L	40	20		15	7.5
		10L	200	100		60	30
		5L	600	300		200	100
		V	800	400		350	175
		5R	600	300		200	100
		10R	200	100		60	30
		20R	40	20		15	7.5
H		20L	40	20		15	7.5
		10L	200	100		60	30
		5L	800	400		350	175
		V	1,300	650		600	300

Table III. Photometric Requirements for Deceleration Signal Lamps

Test Point	Coordinates		Max		Cd	Min	
	Vertical	Horizontal	Amber	Red		Amber	Red
		5R	800	400		350	175
		10R	200	100		60	30
		20R	40	20		15	7.5
5D		20L	40	20		15	7.5
		10L	200	200		60	30
		5L	600	300		200	100
		V	800	400		350	175
		5R	600	300		200	100
		10R	200	100		60	30
		20R	40	20		15	7.5
10D		10L	70	35		25	12.5
		V	200	100		60	30
		10R	70	35		25	12.5

[Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380. 81-18-008 (Order 81-08-02), § 204-62-060, filed 8/21/81.]

**Chapter 204-66 WAC  
TOWING BUSINESSES**

WAC  
204-66-180 Vehicle towing operator qualifications.

**WAC 204-66-180 Vehicle towing operator qualifications.** In addition to WAC 204-66-160, tow truck operators appointed to perform towing services pursuant to this regulation shall observe the following practices and procedures:

(1) When called by the patrol, the tow truck operator will dispatch a tow truck within five minutes during normal business hours.

(2) Tow trucks dispatched at the request of the patrol after normal business hours, will be on the move within the assigned zone within ten minutes after receiving the call.

(3) The tow truck that is dispatched will arrive at the stated location within a reasonable time considering distance and traffic conditions.

(4) If for any reason a tow operator is unable to dispatch a tow truck within the stated time, the tow truck operator shall so advise the patrol. In the event the tow truck does not arrive at the scene within a reasonable time, the patrol will contact another tow business to perform the necessary services.

(5) A tow operator on rotation who is unable to dispatch within the time stated in WAC 204-66-180(1), (2), (3), and (4), will forfeit his turn and be placed at the bottom of the rotation list as if he had responded.

(6) Consistent refusal or failure of the appointee to respond to calls from the patrol for towing services may result in the suspension or revocation of the tow operator's letter of appointment.

(7) The tow operator will advise the patrol when he receives a private call for a tow and the circumstances

indicate that the tow is for a vehicle which has been involved in an accident or other such incident on the public roadway. The tow operator also will advise the patrol of all traffic accidents on private property resulting in bodily injury or death when the operator has received a private call for a tow at such an accident.

(8) The tow operator will notify the patrol before moving any vehicle involved in an accident on a public highway under the jurisdiction of the patrol as defined in the motor vehicle code, Title 46 RCW or where it appears that the driver of the vehicle to be moved is under the influence of intoxicants or drugs, or is otherwise incapacitated.

(9) When the patrol is in charge of an accident scene or other such incident, a tow operator shall not respond to such scene unless his services have been specifically requested by the patrol or the driver/owner or his agent.

(10) The tow operator shall be available twenty-four hours a day for the purpose of receiving calls or arranging for the release of vehicles. Business hours will be posted conspicuously at the operator's place of business so they can be seen during business hours and non-business hours. A copy will also be sent to the secretary of the commission and patrol district commander of the district in which the tow operator does business. Changes of business hours will be sent to the secretary of the commission and district commander ten days before their effective date.

(11) The tow operator shall have a secure storage area for the vehicles stored by the operator at the request of the patrol. Such storage area shall comply with department of licensing requirements for registered disposers (WAC 308-61-110).

(12) Tow operators will notify the appropriate patrol office of the release of stored vehicles within five work days after the release of such vehicle. Notification to the patrol will be made in such a manner prescribed by the district commander of the area concerned.

(13) Tow operators will post current towing service rates in a conspicuous place at the company's place of business and shall list such rates on a form approved by the commission. A copy of the current rates will be sent to the secretary of the commission and patrol district commander of the district in which the tow operator has applied for a letter of appointment. Any change(s) in service rates will be forwarded to the district commander of the area and to the secretary of the commission ten days prior to the proposed change(s). All charges made for towing services arising from calls issued by the patrol shall be consistent with current posted towing rates and shall be based only upon services listed on the prescribed form.

(14) If the commission receives written complaints from towing customers or the patrol concerning commission appointed tow business alleging "price gouging," "over-charging," charging for services not received, and other such pricing abuses and/or any improprieties, it will cause such allegations to be investigated by the patrol; and, if such abuses are established, the letter of appointment of any such business may result in the

suspension, revocation, or denial of the letter of appointment by the commission.

(15) Tow operators will maintain, for one year, records on towed and released vehicles which were towed at the request of the patrol. This record will include but not be limited to:

(a) An itemized receipt of charges to the claimant of the vehicle.

(b) An inventory sheet or copy thereof made out by the trooper at the scene of the tow and signed by the tow truck driver.

Such records will be available for inspection by the patrol during normal business hours at the appointee's place of business for which the letter of appointment has been issued.

(16) The tow truck driver will sign an inventory sheet made out by the trooper at the scene of the tow and receive a copy.

(17) Tow operators will obtain and maintain current registration as a disposer by the department of licensing pursuant to chapter 308-61 WAC and chapter 178, Laws of 1979 1st ex.sess.

(18) Each towing operator shall carry at least five thousand dollars of insurance to protect against vehicle damage from, including but not limited to, fire and theft incurred from the time a vehicle comes into his custody pursuant to this regulation, until he releases or otherwise disposes of it. Each towing operator shall also carry at least fifty thousand dollars of liability insurance for property or bodily injury. Insurance must be sufficient to compensate for any loss of or damage to property entrusted to the towing firm.

The commission shall be notified within ten days of any change which leaves the tow operator without the necessary minimum coverage. A copy of the insurance policy or certificate of coverage shall be filed with the secretary of the commission. The insurer shall notify the commission within five days if the policy is canceled.

(19) Tow operators shall perform towing tasks competently. The standard of competence shall be that quality of work which is accepted as efficient and effective within the towing industry.

(20) No tow operator or his employee or agent shall misappropriate, wrongfully convert to his own use or abuse any property entrusted to his care or storage as a result of performing towing services or for the benefit of a towing service customer. [Statutory Authority: RCW 46.37.005 and 46.61.567. 81-10-038 (Order 81-04-01), § 204-66-180, filed 4/30/81. Statutory Authority: RCW 46.37.005. 79-09-093 (Order 7720H), § 204-66-180, filed 8/31/79. Statutory Authority: RCW 46.61-.562 through 46.61.567. 79-01-077 (Order 7720D), § 204-66-180, filed 1/2/79; 78-08-079 (Order 7720B), § 204-66-180, filed 7/27/78; Order 7720A, § 204-66-180, filed 11/18/77, effective 12/21/77; Order 7720, § 204-66-180, filed 10/14/77.]



**Chapter 204-78 WAC**  
**STANDARDS FOR MOTORCYCLE HEADLAMP**  
**MODULATOR**

WAC	
204-78-010	Promulgation.
204-78-020	Scope.
204-78-030	Definitions.
204-78-040	Location of light modulator.
204-78-050	Parameter specifications for light modulators.

**WAC 204-78-010 Promulgation.** By authority of RCW 46.37.005 and RCW 46.37.005, 46.37.320, the state commission on equipment hereby adopts the following standards for motorcycle electronic headlamp modulators. [Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380. 81-18-008 (Order 81-08-02), § 204-78-010, filed 8/21/81.]

**WAC 204-78-020 Scope.** This standard shall apply only to electronic headlamp modulators for use on motorcycles and motor-driven cycles. [Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380. 81-18-008 (Order 81-08-02), § 204-78-020, filed 8/21/81.]

**WAC 204-78-030 Definitions.** (1) "Electronic light modulation" means the periodic change in intensity of light, controlled by an all electric modulating device in the electrical circuit of the lighting system.

(2) "Percent modulation" equals time-weighted power input with modulation to headlamp divided by time weighted power input without modulation to headlamp times one hundred.

(3) "Electronic modulation" means using one hundred percent electronic circuitry instead of mechanical metallic switches. [Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380. 81-18-008 (Order 81-08-02), § 204-78-030, filed 8/21/81.]

**WAC 204-78-040 Location of light modulator.** (1) Electrical. The modulator shall be inserted in the high beam headlight circuit on motorcycles between the high beam hand switch and high beam filament in the lamp.

(2) Physical. The modulator shall be located on a frame bar or other substantial structure number, easily accessible to the operator for quick access to a by-pass switch. The device should be air cooled, if necessary.

(3) Safety redundancy. The low beam headlight circuit should be unaltered and used as backup in case of modulator malfunction. [Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380. 81-18-008 (Order 81-08-02), § 204-78-040, filed 8/21/81.]

**WAC 204-78-050 Parameter specifications for light modulators.** (1) The modulator shall be designed to continuously operate 60 watt headlamps.

(2) The modulator shall have an electrical bypass switch rated at 6 amps, 12.8 volts.

(3) Provisions shall be made to change modulation amplitude:

(a) Daytime - modulation depth should be at least 50% but not more than 80%.

(b) Nighttime - not more than 20% modulation.

(c) At no time while the light modulator is being used should the percent modulation become 100. This condition switches off the light intermittently and leads to premature filament failure.

(4) All innerconnecting wire should be No. 16 AWG stranded copper.

(5) The light modulator should be capable of operating over a voltage range of from 8 to 14 volts with no discernible change in its operating characteristics other than in headlamp brightness.

(6) Potentially dangerous voltages, i.e., above 50 volts should not be used in the light modulator.

(7) The modulator should operate within a frequency band of one cycle every two seconds to not more than four times per second.

(8) The units should be sealed to prevent water intrusion.

(9) The modulator should be designed to withstand intense vibration at 130° F.

(10) No changes shall be made to render ineffective Motor Vehicle Safety Standard 108. [Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380. 81-18-008 (Order 81-08-02), § 204-78-050, filed 8/21/81.]

**Chapter 204-80 WAC**  
**STANDARDS FOR HEADLAMP FLASHING**  
**SYSTEMS**

WAC	
204-80-010	Promulgation.
204-80-020	Scope.
204-80-030	Definitions.
204-80-040	Operating unit.
204-80-050	Indicator lamp.

**WAC 204-80-010 Promulgation.** By authority of RCW 46.37.005, 46.37.280, and 46.37.310, the state commission on equipment hereby adopts the following standards for headlamp flashing systems. [Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380. 81-18-008 (Order 81-08-02), § 204-80-010, filed 8/21/81.]

**WAC 204-80-020 Scope.** This standard applies to headlamp flashing systems for authorized emergency vehicles owned and operated by law enforcement agencies and fire departments. [Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380. 81-18-008 (Order 81-08-02), § 204-80-020, filed 8/21/81.]

**WAC 204-80-030 Definitions.** (1) "Headlamp flashing system" is an automatic means for controlling the high beams from the headlamps so that they can be alternately flashed in sequence on opposite sides of the

front of the vehicle as a warning signal. [Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380. 81-18-008 (Order 81-08-02), § 204-80-030, filed 8/21/81.]

**WAC 204-80-040 Operating unit.** The operating unit shall have a circuit that alternately flashes only the high beams from the headlamps at a rate of 60 to 120 flashes per minute per side. The device shall be so designed that any failure to flash the lamps will not result in failure of the headlamp system to operate normally. The design of the device shall also incorporate an override feature which shall stop the flashing and provide full illumination from both high beam headlamps when the dimmer switch is in the high-beam mode. [Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380. 81-18-008 (Order 81-08-02), § 204-80-040, filed 8/21/81.]

**WAC 204-80-050 Indicator lamp.** An indicator lamp shall be included in the circuit to give a visible and unmistakable indication to the driver that the system is turned on. [Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380. 81-18-008 (Order 81-08-02), § 204-80-050, filed 8/21/81.]

### Chapter 204-84 WAC STANDARDS FOR SIRENS

#### WAC

204-84-010	Promulgation.
204-84-020	Scope.
204-84-030	Definitions.
204-84-040	Identification markings.
204-84-050	Instrumentation for testing.
204-84-060	Testing sites.
204-84-070	Microphone and personnel stations.
204-84-080	Siren test procedures.
204-84-090	Siren requirements.
204-84-100	Mounting requirements.

**WAC 204-84-010 Promulgation.** By authority of RCW 46.37.194 and 46.37.380, the state commission on equipment hereby adopts the following standards for sirens. [Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380. 81-18-008 (Order 81-08-02), § 204-84-010, filed 8/21/81.]

**WAC 204-84-020 Scope.** This chapter shall apply to sirens or other emergency vehicle sound warning devices required to be approved by RCW 46.37.194 and 46.37.380. [Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380. 81-18-008 (Order 81-08-02), § 204-84-020, filed 8/21/81.]

**WAC 204-84-030 Definitions.** The following definitions shall apply wherever the terms are used in this article:

(1) Siren. A "siren" is a device that produces the readily recognizable warning sound identified with emergency vehicles.

(2) Electromechanical siren. An "electromechanical siren" is an audible warning device incorporating a stator and rotor driven by an electric motor.

(3) Electronic siren. An "electronic siren" is an audible warning device incorporating an oscillator, amplifier, and speaker.

(4) Mechanical siren. A "mechanical siren" is an audible warning device incorporating a stator and rotor driven by a mechanical connection to a moving part of the vehicle or engine.

(5) Manual. "Manual" means a siren control that allows the operator to produce a wailing sound by alternately applying and releasing a momentary contact switch.

(6) Wail. "Wail" means a siren control that, when manually activated, causes the device to produce a slow, continuous automatic cycling of increasing and decreasing frequencies.

(7) Yelp. "Yelp" means a siren control that, when manually activated, causes the device to produce a rapid, continuous automatic cycling of increasing and decreasing frequencies.

(8) "Hi-Lo" means a siren control that, when manually activated, causes the device to produce a sound that automatically alternates between a fixed high and a fixed low frequency.

(9) ANSI. "ANSI" means a standard adopted by the American National Standards Institute, Inc.

(10) SAE. "SAE" means a standard or recommended practice of the Society of Automotive Engineers. [Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380. 81-18-008 (Order 81-08-02), § 204-84-030, filed 8/21/81.]

**WAC 204-84-040 Identification markings.** Sirens and components shall be marked as follows:

(1) Siren markings. Each siren shall be permanently marked with the manufacturer's or vendor's name, initials, or lettered trademark and the model designation in letters and numerals at least 3mm (0.12 inches) in height.

(2) Component markings. Each major component of an electronic siren, including the speaker, speaker driver, amplifier, and control panel (if separate from the amplifier), and each mechanical and electromechanical siren shall contain the required markings.

(3) Driver markings. Speaker drivers for electronic sirens shall be marked to include the rms wattage in addition to those required in subsection (1) above.

(4) Visibility of markings. Required siren markings, except those on the speaker driver and on speakers mounted within approved warning lamp housings, shall be clearly visible when the siren is installed on a vehicle. Amplifier markings may be on the front, top, sides, or bottom of the case provided they are in a location where they are legible to a person inspecting the component without using mirrors or removing the component when it is installed in a vehicle.

(5) Permanence of markings. Required identification markings shall be molded, etched, embossed, stamped, engraved, or printed with epoxy paint or screening ink on the device or on a metal label of substantial thickness permanently affixed to the device by welding or metal fasteners. Speaker driver markings may be of indelible ink or nonepoxy paint when protected by coverings or they may be stamped on a metal plate attached by a screw. [Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380. 81-18-008 (Order 81-08-02), § 204-84-040, filed 8/21/81.]

**WAC 204-84-050 Instrumentation for testing.** Equipment used to test sirens shall meet the following requirements:

(1) Sound measuring system. The sound measuring system shall meet the requirements of SAE J184, July 1972.

(2) Octave band analyzer. The octave band analyzer shall meet the requirements of ANSI S1.11-1966.

(3) Turntable. The turntable shall have a diameter of at least 300 mm (12 inches) and shall operate at a constant speed.

(4) Test fixture. The fixture used for electromechanical and electronic siren tests shall be a rigid tripod 1.20 m  $\pm$  50 mm (4 feet  $\pm$  2 inches) in height, constructed of 13mm (0.5 inches) tubular material, mounted on a turntable, and fitted with a 300mm (12-inch) square platform.

(5) Wattmeter. The wattmeter for measuring amplifier output shall be a Weston Model 310 Form 3, or equal, with a frequency range from dc to 1600 Hz, field ratings of 10 A and 62.5 V, a scale range of 250 W, and 1% accuracy.

(6) Weather measuring instruments. In the open field, instruments for measuring wind direction and speed, relative humidity, and temperature shall be used and shall be mounted behind and at approximately the same height as the siren. [Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380. 81-18-008 (Order 81-08-02), § 204-84-050, filed 8/21/81.]

**WAC 204-84-060 Testing sites.** Sites for laboratory or field tests of sirens shall comply with the following requirements:

(1) Laboratory tests. A laboratory test site shall consist of an anechoic chamber that meets the requirements of ANS S1.13-1971.

(2) Open field tests. An open field test site for mechanical siren testing shall consist of a flat paved area at least 15m (49 feet) in diameter and free of large vertical sound-reflecting surfaces within 15m (49 feet) of the microphone and siren except for the test vehicle. [Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380. 81-18-008 (Order 81-08-02), § 204-84-060, filed 8/21/81.]

**WAC 204-84-070 Microphone and personnel stations.** Sound level meter microphones and technicians shall be stationed as follows:

(1) Microphone location. The microphone used for testing an electromechanical or electronic siren shall be located 3.00m  $\pm$  6mm (9.8 feet  $\pm$  0.24 inches) from the edge of the siren horn or projector, in line with the siren axis, and at the same height as the siren. The microphone used for testing a mechanical siren shall be located 1.20m  $\pm$  50mm (4 feet  $\pm$  2 inches) above the test surface and 3.00m  $\pm$  6mm (9.8 feet  $\pm$  0.24 inches) from the nearest part of the siren.

(2) Microphone orientation. The microphone shall be oriented in relation to the sound source in accordance with the instrument manufacturer's instructions. If the instruction manual does not include adequate information, a specific recommendation shall be obtained from the manufacturer.

(3) Personnel location. During laboratory tests, technicians and observers shall remain outside the anechoic chamber. During field tests, persons other than the operator of the vehicle shall be positioned no closer than 3m (10 feet) from the microphone or the siren. [Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380. 81-18-008 (Order 81-08-02), § 204-84-070, filed 8/21/81.]

**WAC 204-84-080 Siren test procedures.** The following procedures shall be followed while testing sirens for approval:

(1) Mounting of test sample. Mechanical sirens shall be mounted on a vehicle for open field testing. An electromechanical siren or electronic siren speaker assembly shall be mounted on the test fixture secured to a turntable, as follows:

(a) Height above turntable. The height of the electromechanical siren or electronic siren speaker measured from the lower edge of the siren stator housing or from the lower edge of the speaker bell to the face of the turntable shall be 1.2m  $\pm$  76mm (4 feet  $\pm$  3 inches).

(b) Distance from surface of test area. Sirens shall be located as far from the walls of the anechoic chamber as practicable.

(2) Power supply. The electrical power supply for testing electromechanical and electronic sirens shall be as follows:

(a) Electromechanical sirens. The power supply for the electromechanical siren under test shall be a battery of the correct rated voltage with a cold cranking performance rating at  $-18^{\circ}$  C ( $0^{\circ}$  F) of from 550 A 50 620 A and a rated minimum reserve capacity at  $26.7^{\circ}$  C ( $80^{\circ}$  F) of 140 min. The battery shall be at full charge and in good condition at the start of the test.

(b) Electronic sirens. The power supply for electronic sirens shall be a well-filtered, voltage-regulated power source meeting at least the requirements of SAE J823c, January 1975. The voltage measured at the power supply output terminals with the siren operating shall be as follows:

Rated Voltage	Test Voltage For Sound Level	Test Voltage For Wattage
6	6.5	7.2
12	13.6	15.0

(3) Sound level meter operation. The sound level meter shall be operated in accordance with the instrument manufacturer's instructions and as follows:

(a) Sound level meter setting. The sound level meter shall be set for the A-weighted network and fast response.

(b) Octave band analyzer. The octave band analyzer shall be operated to determine the octave band containing the maximum sound output in each siren mode.

(c) Calibration check. An external calibration check shall be made before and after each period of use and at intervals not exceeding 2 hours when the sound measuring instrument is used for a period longer than 2 hours.

(d) Ambient sound. Measurements shall be made only when the A-weighted ambient sound level, including wind effects and all other sound sources, is at least 10 dB(A) lower than the sound level of the siren.

(4) Siren operation. The mounted siren shall be operated to determine the sound level output under each function at the established test points as follows:

(a) Electromechanical and electronic siren speakers shall be rotated from at least 50 degrees left to 50 degrees right of the center of the siren axis at a constant speed during the siren operation.

(b) Mechanical sirens shall be tested when mounted on a stationary vehicle and operated at speeds equivalent to a road speed of 30 to 80 km/hour (19-50 mph) to determine maximum noise output straight ahead of the vehicle (the vehicle may be mounted on rollers). The speed at which maximum sound level occurs shall be continued while the microphone is moved from 50 degrees left to 50 degrees right of the center of the vehicle axis. [Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380. 81-18-008 (Order 81-08-02), § 204-84-080, filed 8/21/81.]

**WAC 204-84-090 Siren requirements.** Sirens shall be approved only when they comply with the following requirements:

(1) Sound level output. Two classes of sirens, A and B, are established based on the recorded A-weighted sound level output of the test sample measured at 0 degrees on the siren or speaker axis, and at 10-degree increments from 50 degrees left to 50 degrees right of the center of the siren axis. The sound level output from the siren shall not be less than the value shown at each test point in Table I for the class of siren. The sound level of electronic sirens shall be measured after the siren is operated for one minute.

TABLE I. Minimum A-Weighted Sound Level at 3.0m (10.0 feet)

Rotation Degree	Class A Siren	Class B Siren
0	120	115
10	119	114
20	118	113
30	117	112
40	115	110
50	113	108

(2) Sound level determination. Sound level shall be recorded as the steady state level reached under manual control and the average level reached by the major peaks for wail and yelp. The lowest of the recorded sound levels of the manual, wail, or yelp function shall determine the siren class.

(3) Frequency requirements. The maximum sound level in the axis of the siren shall occur in either the 1000 or 2000 Hz octave bands.

(4) Electronic siren wattage. The wattage delivered to speakers of electronic sirens, shall not exceed the following requirements when tested at the voltages specified in WAC 204-84-080(2).

(a) At the voltage specified for sound level tests, the wattage shall not exceed the rating of the driver after one minute and before three minutes of operation. The meter shall be inserted in the line between the amplifier and the speaker at the amplifier terminals.

(b) At the voltage specified for wattage tests, the wattage shall not exceed 105% of the rating of the driver when measured after ten minutes of operation. Measurements shall be taken using the following sequence: manual, wail, and yelp.

(c) The wattage recorded for wail and yelp shall be the mathematical average of the high and low readings as the signal varies.

(5) Siren functions. Electronic sirens approved by the department shall have a wail function and may also have manual, yelp, and Hi-Lo functions. No other function is permitted, except for voice communication, on sirens approved or reapproved after January 1, 1978. The sound produced by the siren shall meet the following requirements:

(a) The wail function shall have an automatic undulating pitch rate of not less than ten nor more than 30.0 oscillations per minute. The wail sound level, measured on the center of the siren axis, shall drop no more than 10 dB (A) per cycle below the required values in Table I.

(b) Electronic sirens approved or reapproved after January 1, 1978, which include a manual function shall incorporate a manual momentary contact switch which allows the vehicle operator to momentarily override the descending sound pattern of the automatic cycle when the control is set to "wail" and which can be used to produce a manually-cycled wail when the control is set at "manual."

(c) The yelp function shall have an automatic undulating pitch rate of not less than 150 nor more than 250 oscillations per minute, except for sirens approved prior to July 1, 1975.

(6) Siren control markings. Electronic siren controls shall be marked to indicate each siren function by the words "Manual," "Wail," "Yelp," and "Hi-Lo," spelled out or abbreviated. [Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380. 81-18-008 (Order 81-08-02), § 204-84-090, filed 8/21/81.]

**WAC 204-84-100 Mounting requirements.** Unless the test report includes justification for alternate mounting methods, sirens and speakers installed on authorized emergency vehicles shall be mounted as follows:

(1) Electromechanical and mechanical sirens.

(a) Class A sirens. Class A electromechanical and mechanical sirens shall be mounted outside, behind the grille, or under the hood.

(b) Class B sirens. Class B electromechanical and mechanical sirens shall be mounted outside or between the grille and the radiator.

(2) Electronic sirens.

(a) Class A and Class B electronic sirens installed after January 1, 1976, shall be mounted outside or with the horn opening facing forward ahead of the radiator with a relative open path for the sound to project forward. The horn axis shall be parallel to the road and vehicle centerline.

(b) Dual speakers. Dual speakers for electronic sirens shall be connected in phase and mounted so that the speaker axis is parallel to the vehicle centerline or angled outward not more than ten degrees to each side. [Statutory Authority: RCW 46.37.005, 46.37.194, 46.37.280, 46.37.310, 46.37.320 and 46.37.380. 81-18-008 (Order 81-08-02), § 204-84-100, filed 8/21/81.]

## Chapter 204-88 WAC EMERGENCY VEHICLE LIGHTING

### WAC

204-88-010	Promulgation.
204-88-020	Purpose.
204-88-030	Definitions.
204-88-040	Lighting for authorized emergency vehicles.
204-88-050	Lighting for law enforcement vehicles.
204-88-060	Lighting prohibited.
204-88-070	Approved lighting devices required.

**WAC 204-88-010 Promulgation.** By authority of RCW 46.37.190, 46.37.194 and 46.37.280 the state commission on equipment hereby adopts the following rules relating to emergency vehicle lighting. [Statutory Authority: RCW 46.37.420, 46.37.190, 46.37.194 and 46.37.280. 82-16-047 (Order 82-07-01), § 204-88-010, filed 7/29/82.]

**WAC 204-88-020 Purpose.** The purpose of this chapter is to provide the authority for law enforcement agencies and other emergency vehicle users to equip their vehicles with emergency lighting devices of a type

and color necessary to perform their duties, to distinguish law enforcement vehicles from other emergency vehicles, and to provide a uniform meaning to the motoring public as to the message conveyed by such lighting. [Statutory Authority: RCW 46.37.420, 46.37.190, 46.37.194 and 46.37.280. 82-16-047 (Order 82-07-01), § 204-88-020, filed 7/29/82.]

**WAC 204-88-030 Definitions.** (1) "Authorized emergency vehicle" shall mean any vehicle of any fire department, police department, sheriff's office, coroner, prosecuting attorney, Washington state patrol, ambulance service public or private licensed by the department of social and health services or operated by any of the agencies named above, or any other vehicle authorized in writing by the commission on equipment.

(2) "Law enforcement vehicle" shall mean a publicly owned or leased vehicle operated by a law enforcement agency and which is used for the law enforcement functions of the agency.

(3) "Law enforcement agency" shall mean any municipal, port district or tribal police department, county police department or sheriff's office, the Washington state patrol, or any other state or federal agency which is publicly authorized to carry out law enforcement duties which include the authority to stop and detain motor vehicles on the public highways of this state.

(4) "Flashing" lamps shall mean those lamps which emit a beam of light which is broken intermittently and regularly by use of an electronic or electric switch, or a lamp which emits a steady beam of light which is intermittently and regularly directed away from any viewer by means of a rotating or oscillating reflector or lamp assembly. Flashing lamps are not to be confused with modulated lamps which intermittently and regularly decrease the power to the lamp filament so as to dim the light output but do not cause a total break in the light beam.

(5) "Emergency tow truck" shall mean a motor vehicle specially designed and constructed principally for the purpose of recovery and towing of disabled, abandoned or damaged vehicles and not otherwise generally used in transporting goods or persons. [Statutory Authority: RCW 46.37.420, 46.37.190, 46.37.194 and 46.37.280. 82-16-047 (Order 82-07-01), § 204-88-030, filed 7/29/82.]

**WAC 204-88-040 Lighting for authorized emergency vehicles.** Every authorized emergency vehicle except law enforcement vehicles as defined in WAC 204-88-030(2) shall be equipped with at least one lamp capable of displaying a red light visible from a distance of five hundred feet in normal sunlight as required in RCW 46.37.190. A flashing lamp or lamps may be utilized to fulfill this requirement. Every authorized emergency vehicle may also be equipped with flashing amber lamps and/or flashing white lamps which may be used in conjunction with the red lamp(s). [Statutory Authority: RCW 46.37.420, 46.37.190, 46.37.194 and 46.37.280. 82-16-047 (Order 82-07-01), § 204-88-040, filed 7/29/82.]

**WAC 204-88-050 Lighting for law enforcement vehicles.** Every law enforcement vehicle may be equipped with at least one lamp capable of displaying a red and/or blue light visible from a distance of five hundred feet in normal sunlight. A flashing lamp or lamps may be utilized to comply with this requirement. Every law enforcement vehicle may also be equipped with flashing amber lamps and/or flashing white lamps which may be used in conjunction with the red and/or blue lamp(s). [Statutory Authority: RCW 46.37.420, 46.37.190, 46.37.194 and 46.37.280. 82-16-047 (Order 82-07-01), § 204-88-050, filed 7/29/82.]

**WAC 204-88-060 Lighting prohibited.** (1) Red emergency vehicle lights shall be prohibited on any vehicle other than an authorized emergency vehicle, a law enforcement vehicle or an emergency tow truck as defined in WAC 204-88-030(1), (2) and (5), school buses and private carrier buses.

(2) Blue lights shall be prohibited on any vehicle other than a law enforcement vehicle as defined in WAC 204-88-030(2).

(3) Flashing white lights shall be prohibited on any vehicle other than authorized emergency vehicles, law enforcement vehicles and emergency tow trucks as defined in WAC 204-88-030(1), (2) and (5), and school buses. [Statutory Authority: RCW 46.37.420, 46.37.190, 46.37.194 and 46.37.280. 82-16-047 (Order 82-07-01), § 204-88-060, filed 7/29/82.]

**WAC 204-88-070 Approved lighting devices required.** In conformance with RCW 46.37.320 and 46.37.194 all emergency lamps used on emergency or law enforcement vehicles shall be approved by the commission on equipment. [Statutory Authority: RCW 46.37.420, 46.37.190, 46.37.194 and 46.37.280. 82-16-047 (Order 82-07-01), § 204-88-070, filed 7/29/82.]

## Title 212 WAC STATE FIRE MARSHAL

### Chapters

- 212-10 Smoke detection devices in dwelling units.
- 212-16 Fireworks.
- 212-17 Fireworks.
- 212-26 Hospice care centers--Standards for fire protection.
- 212-32 Nursing homes, standards for fire protection.
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- 212-56 Group home in family abode, standards for fire protection.
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- 212-61 Day care center in family abode, standards for fire protection.
- 212-62 Day care center and day treatment program other than in family abode, standards for fire protection.
- 212-63 Child care institutions, standards for fire protection.
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### Chapter 212-10 WAC

#### SMOKE DETECTION DEVICES IN DWELLING UNITS

#### WAC

- 212-10-010 Administration, authority.
- 212-10-015 Application and scope.
- 212-10-020 Definitions.
- 212-10-025 Conformance with nationally accepted standards.
- 212-10-030 Primary power supply.
- 212-10-035 Number of smoke detection devices.
- 212-10-040 Location of smoke detection devices.
- 212-10-045 Installation.
- 212-10-050 Maintenance.
- 212-10-055 Penalties.
- 212-10-060 Severability.

**WAC 212-10-010 Administration, authority.** These rules are adopted pursuant to chapter 50, Laws of 1980, entitled smoke detection devices in dwelling units, and to RCW 48.48.140 to provide for the installation and maintenance of smoke detection devices inside all dwelling units (1) occupied by persons other than the owner, or (2) built or manufactured in this state. [Statutory Authority: RCW 48.48.140. 81-04-058 (Order FM 81-2), § 212-10-010, filed 2/4/81.]

**WAC 212-10-015 Application and scope.** (1) The provisions of these rules shall apply to (a) all dwelling units occupied by persons other than the owner after December 31, 1981, and (b) all dwelling units built or manufactured in this state after December 31, 1980.

(2) Notwithstanding the provisions of chapter 19.27 RCW, RCW 43.22.340 through 43.22.434 and 43.22.450 through 43.22.490, the provisions of these rules shall also apply to all buildings or structures, mobile homes and factory built housing used as dwelling units. [Statutory Authority: RCW 48.48.140. 81-04-058 (Order FM 81-2), § 212-10-015, filed 2/4/81.]

**WAC 212-10-020 Definitions.** (1) **Smoke detection device.** A self-contained alarm for detecting visible or invisible particles of combustion, which consists of an assembly of electrical components including a smoke