

**WAC 204-24-020 Standards for tire chains.** (1) Link tire chains must meet the National Association of Chain Manufacturers Tire Chain Specifications NACM-5179(TC).

(2) Cable tire chains must be designed for use on tires mounted in accordance with specifications in Society of Automotive Engineers (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.

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

- (i) Passenger car;
- (ii) Single light truck;
- (iii) Heavy truck;
- (iv) Special police and emergency vehicle.

(b) Requirements:

(i) Components. Cable tire chain assemblies must 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.

(ii) Material.

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

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

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

(D) Cables, spring, and plow wire must be manufactured in conformance to SAE Recommended Practice J113.

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

(F) Metallic cross cable traction reinforcement sleeves must 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.

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

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

(iii) Spacing of cross cable. The first cross cable must 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 must 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.

(iv) Tolerances.

(A) Cross cable length. The inside length of all cross cable, including fasteners held in the same plane, must 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.

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

(C) Stranded cable size. Stranded cable size must be subject to the following tolerances:

(I) 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.

(II) 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.

(D) Component dimensions. The dimensions of manufactured components may vary, but the assembled cable chains must meet the tolerances specified in (b) (iv) (A), (B), and (C) of this subsection.

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

(F) Identification. Each half set of cable tire chains must 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.

(3) Automatic tire chain system must:

(a) Consist of:

(i) A switch or button located within reach of the driver in the vehicle cab;

(ii) An air valve; and

(iii) An air cylinder and chain wheel with units mounted on the rear suspension in order to apply the chain to make contact with the inside wheel.

(b) Be periodically inspected by the operator for proper mechanical conditions;

(c) Display a sign with letters at least one inch high indicating the vehicle is equipped with the automatic tire chain. The design of the sign must be approved by the manufacturer of the automatic tire chain.

[Statutory Authority: RCW 46.37.005 and 46.37.420. WSR 14-21-076, § 204-24-020, filed 10/13/14, effective 11/13/14; WSR 08-24-030, § 204-24-020, filed 11/24/08, effective 12/25/08. Statutory Authority: RCW 46.37.420, 46.37.190, 46.37.194 and 46.37.280. WSR 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.]