

## §213.127

rail shall be allowed between the base of the rail and the bearing surface of the tie plate. This paragraph (b) is applicable September 21, 1999.)

### §213.127 Rail fastening systems.

(a) Track shall be fastened by a system of components that effectively maintains gage within the limits prescribed in §213.53(b). Each component of each such system shall be evaluated to determine whether gage is effectively being maintained.

(b) If rail anchors are applied to concrete crossties, the combination of the crossties, fasteners, and rail anchors must provide effective longitudinal restraint.

(c) Where fastener placement impedes insulated joints from performing as intended, the fastener may be modified or removed, provided that the crosstie supports the rail.

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### §213.133 Turnouts and track crossings generally.

(a) In turnouts and track crossings, the fastenings shall be intact and maintained so as to keep the components securely in place. Also, each switch, frog, and guard rail shall be kept free of obstructions that may interfere with the passage of wheels.

(b) Classes 3 through 5 track shall be equipped with rail anchoring through and on each side of track crossings and turnouts, to restrain rail movement affecting the position of switch points and frogs. For Class 3 track, this paragraph (b) is applicable September 21, 1999.)

(c) Each flangeway at turnouts and track crossings shall be at least 1½ inches wide.

### §213.135 Switches.

(a) Each stock rail must be securely seated in switch plates, but care shall be used to avoid canting the rail by overtightening the rail braces.

(b) Each switch point shall fit its stock rail properly, with the switch stand in either of its closed positions to allow wheels to pass the switch point. Lateral and vertical movement of a stock rail in the switch plates or of a switch plate on a tie shall not adversely affect the fit of the switch

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point to the stock rail. Broken or cracked switch point rails will be subject to the requirements of §213.113, except that where remedial actions C, D, or E require the use of joint bars, and joint bars cannot be placed due to the physical configuration of the switch, remedial action B will govern, taking into account any added safety provided by the presence of reinforcing bars on the switch points.

(c) Each switch shall be maintained so that the outer edge of the wheel tread cannot contact the gage side of the stock rail.

(d) The heel of each switch rail shall be secure and the bolts in each heel shall be kept tight.

(e) Each switch stand and connecting rod shall be securely fastened and operable without excessive lost motion.

(f) Each throw lever shall be maintained so that it cannot be operated with the lock or keeper in place.

(g) Each switch position indicator shall be clearly visible at all times.

(h) Unusually chipped or worn switch points shall be repaired or replaced. Metal flow shall be removed to insure proper closure.

(i) Tongue & Plain Mate switches, which by design exceed Class 1 and excepted track maximum gage limits, are permitted in Class 1 and excepted track.

### §213.137 Frogs.

(a) The flangeway depth measured from a plane across the wheel-bearing area of a frog on Class 1 track shall not be less than 1¾ inches, or less than 1½ inches on Classes 2 through 5 track.

(b) If a frog point is chipped, broken, or worn more than five-eighths inch down and 6 inches back, operating speed over the frog shall not be more than 10 m.p.h.

(c) If the tread portion of a frog casting is worn down more than three-eighths inch below the original contour, operating speed over that frog shall not be more than 10 m.p.h.

(d) Where frogs are designed as flange-bearing, flangeway depth may be less than that shown for Class 1 if operated at Class 1 speeds.