

Subpart A, Rules and Instructions, All Systems

General

136.2 *Grounds*—Each circuit, the functioning of which affects the safety of train operation, shall be kept free of any ground or combination of grounds which will permit a flow of current equal to or in excess of 75% of the release value of any relay or other electromagnetic device in the circuit, except circuits which include any track rail and except the common return wires of single-wire, single-break, signal control circuits using a grounded common, and alternating current power distribution circuits which are grounded in the interest of safety.

136.6 *Hand-operated switch equipped with switch circuit controller*.—Hand-operated switch equipped with switch circuit controller connected to the point, or with facing-point lock and circuit controller, shall be so maintained that when point is open  $\frac{1}{4}$ " or more on facing-point switch and  $\frac{3}{8}$ " or more on trailing-point switch, track or control circuits will be open or shunted or both, and if equipped with facing-point lock with circuit controller, switch cannot be locked. Switch circuit controllers, facing-point locks and switch-and-lock movements and their connections on such hand-operated switch shall be securely fastened in place, and contacts maintained with an opening of not less than  $\frac{1}{16}$ " when open.

136.11 *Adjustment, repair, or replacement of apparatus*.—Any piece of apparatus or any part thereof which fails to perform its intended function shall be promptly adjusted, repaired, or replaced. [This rule is revised as follows:]

136.11 *Adjustment, repair or replacement of defective component*.—When any component of a system or interlocking, except track rails, the proper functioning of which is essential to the safety of train operation, is defective to such an extent that it fails to perform its intended function, it shall be adjusted, repaired or replaced without undue delay.

Track Circuits

136.51 *Track circuit requirements*.—Track relay shall be in deenergized position whenever any of the following conditions exists, and the track circuit of an automatic train-stop, train-control, or cab-signal system shall be deenergized in the rear of the point where any of the following conditions exists:

(a) When a rail is broken or a rail or switch-frog is removed except when a rail is broken or removed in the shunt fouling circuit of a turnout or crossover, provided, however, that shunt fouling circuit may not be used in a turnout through which permissible speed is greater than 45 mph. It shall not be a violation of this requirement if a track is energized: (1) When a break occurs between the end of rail and track circuit connector; within the limits of rail-joint bond, appliance or other protective device, which provides a bypath for the electric current, or (2) as result of leakage current or foreign current in the rear of a point where a break occurs or a rail is removed.

(b) When a train, locomotive, or car occupies any part of a track circuit, including fouling section of turnout

ICC  
PROPOSES  
RS&I  
CHANGES

Interstate Commerce Commission will hold an investigation for the purpose of revising its rules, standards and instructions for installation, inspection, maintenance and repair of signal systems (Ex Parte No. 171), prescribed by the Commission's order of June 29, 1950, as amended. Technological developments during the last 12 years that the present RS&I have been in effect necessitate their modernization says the ICC. Any interested person may, on or before August 1, 1962, file with the ICC Secretary at Washington, D.C., in original and six copies of verified statements containing views, arguments or suggestions to be considered in this connection and may request oral argument thereon. The proposed rules, standards and instructions as suggested by the ICC are printed below. Where changes have been made in a rule, the changes are indicated with bold face type. In a few instances, where a rule has been completely revised, the old rule is presented first, followed by the revised rule printed in bold face type.

except turnouts of hand-operated main track crossover. It shall not be a violation of this requirement where the presence of sand, rust, dirt, grease, or other foreign matter on the rail prevents effective shunting.

(c) Where switch shunting circuit is used:

1. Switch point is not closed in normal position.
2. A switch is not locked where facing-point lock with circuit controller is used.
3. An independently operated fouling-point derail equipped with switch circuit controller is not in derailing position.

## Subpart B, Automatic Block-Signal Systems

### Standards

136.201 *Track-circuit control of signals.*—Signals shall be controlled automatically by track circuits extending through the entire block. [This rule is revised as follows:]

136.201 *Track-circuit control of signals.*—The control circuits for signal aspects with indications more favorable than "proceed at restricted speed" shall be controlled automatically by track circuits extending through the entire block.

136.204 *Track signaled for movements in both directions, requirements.*—On track signaled for movements in both directions, a train shall cause one or more opposing signals immediately ahead of it to display the most restrictive aspect, the indication of which shall not be more favorable than "proceed at restricted speed." Signals shall be so arranged and controlled that if opposing trains can simultaneously pass signals displaying proceed aspects, and the next signal in advance of each such signal then displays an aspect requiring a stop, or its most restrictive aspect, the distance between opposing signals displaying such aspects shall be not less than the aggregate of the stopping distances for movements in each direction. Where such opposing signals are spaced stopping distance apart for movements in one direction only, signals arranged to display restrictive aspects shall be provided in approach to at least one of the signals. Where such opposing signals are spaced less than stopping distance apart for movements in one direction, signals arranged to display restrictive aspects shall be provided in approach to both such signals. In absolute permissive block signaling when a train enters the block between sidings the opposing head signal shall display an aspect requiring a stop.

## Subpart C, Interlockings

### Standards

136.301 *Where signals shall be provided.*—Signals shall be provided to govern the train movements into and through the interlocking, except that a signal shall not be required to govern movements over a hand-operated switch into the interlocking if the switch is provided with an electric lock and a derail at the clearance point, either pipe-connected to the switch or independently locked electrically.

Note: Relief from the requirements of this section will be granted upon an adequate showing by an individual carrier. Relief heretofore granted to any carrier by order of the Commission shall constitute relief to the same extent from the requirements of this part.

136.302 *Track circuits and route locking.*—Track circuits and route locking shall be provided throughout the interlocking. Route locking shall become effective when

the first pair of wheels of a locomotive or car passes a point not more than five feet in advance of the signal governing its movement.

Note: Relief from the requirements of this section will be granted upon an adequate showing by an individual carrier. Relief heretofore granted to any carrier by order of the Commission shall constitute relief to the same extent from the requirements of this part.

136.303 *Control circuits for signals, selection through circuit controller operated by switch points or by switch locking mechanism.*—The control circuit for each aspect with indication more favorable than "proceed at restricted speed" of power-operated signal governing movements over switches, movable-point frogs and derails shall be selected through circuit controller operated directly by switch points or by switch locking mechanism, or through relay controlled by such circuit controller, for each switch, movable-point frog, and derail in the routes governed by such signal. Circuits shall be arranged so that such signal can display an aspect more favorable than "proceed at restricted speed," only when each switch, movable-point frog, and derail in the route is in proper position.

Note: Relief from the requirements of this section will be granted upon an adequate showing by an individual carrier. Relief heretofore granted to any carrier by order of the Commission shall constitute relief to the same extent from the requirements of this part.

136.305 *Approach or time locking.*—Approach or time locking shall be provided in connection with signals displaying aspects with indications more favorable than "proceed at restricted speed."

136.311 *Signal control circuits, selection through track relays, and through signal mechanism contacts and time releases at automatic interlocking.*—The control circuit for aspects with indications more favorable than "proceed at restricted speed" shall be selected through track relays for all track circuits in the route governed or through repeating relays for such track relays. At automatic interlocking, signal control circuit shall be selected (1) through track relays for all track circuits in the route governed and in all conflicting routes within the interlocking [word "limits" deleted] or through repeating relays for such track relays; (2) through signal mechanism contacts or relay contacts closed when signals for such conflicting routes display stop aspects; and (3) through normal contacts of time releases for such conflicting routes or contacts of relays repeating the normal position of contacts of such time releases.

Note: Relief heretofore granted to any carrier by order of the Commission shall constitute relief to the same extent from the requirements of this part.

136.312 *Movable bridge, interlocking of signal appliances with bridge devices.*—When movable bridge is protected by interlocking the signal appliances shall be so interlocked with bridge devices that before a signal governing movements over the bridge can display an aspect to proceed the bridge must be locked and the track aligned, with the bridge locking members within one inch of their proper positions and with the track rail on the movable span within  $\frac{3}{8}$ " of correct surface and alignment with rail on bridge abutment or fixed span.

136.314 *Electric lock for hand-operated switch or derail.*—Electric lock shall be provided for each hand-operated switch or derail within the interlocking [word "limits" deleted], except where train movements are made at not exceeding 20 mph. At manually operated interlocking it shall be controlled by operator of the machine and shall be unlocked only after signals governing movements over such switch or derail display aspects indicating stop. Approach or time locking shall be provided.

Note: Relief from the requirements of this section will be granted upon an adequate showing by an individual

carrier. Relief heretofore granted to any carrier by order of the Commission shall constitute relief to the same extent from the requirements of this part.

### Rules and Instructions

136.328 *Plunger of facing-point lock.*—Plunger of facing-point lock shall have at least 8" stroke. When lever is in reverse position plunger shall pass through lock rod  $\frac{1}{2}$ " or more. [This rule is revised as follows:]

136.328 *Plunger of facing-point lock.*—Plunger of lever operated facing-point lock shall have at least 8" stroke. When lock lever is in unlocked position the end of the plunger shall clear the lock rod not more than one inch.

136.339 *Mechanical locking, maintenance requirements.*—Locking and connections shall be maintained so that, when a lever or latch is mechanically locked, the following will be prevented:

(a) *Mechanical machine.*

(1) Latch-operated locking. Raising lever latch block so that bottom thereof is within  $\frac{3}{8}$ " of top of quadrant.

(2) Lever-operated locking. Moving lever latch block more than  $\frac{3}{8}$ " on top of quadrant.

(b) *Electromechanical machine.*

(1) Lever moving in horizontal plane. Moving lever more than five-sixteenths inch when in normal position or more than nine-sixteenths inch when in reverse position.

(2) Lever moving in arc. Moving lever more than 5°.

(c) *Power machine.*

(1) Latch-operated locking. Raising lever latch block so that bottom thereof is within  $\frac{1}{32}$ " of top of quadrant.

(2) Lever moving in horizontal plane. Moving lever more than  $\frac{1}{16}$ " when in normal position or more than  $\frac{1}{16}$ " when in reverse position.

(3) Lever moving in arc. Moving lever more than 5°.

### Subpart D, Traffic Control Systems

#### Standards

136.402 *Signal control, track circuit and control operator.*—Signal governing movement at higher than restricted speed shall be controlled by continuous track circuits. Also, in addition, at controlled point they shall be controlled by control operator, and, at manually operated interlocking, manually in cooperation with control operator. [This rule is revised as follows:]

136.402 *Signals controlled by track circuits and control operator.*—The control circuits for signal aspects with indications more favorable than "proceed at restricted speed" shall be controlled by track circuits extending through entire block. Also in addition, at controlled point they shall be controlled by control operator, and, at manually operated interlocking, manually in cooperation with control operator.

136.404 *Signals at adjacent controlled points.*—Signals at adjacent controlled points shall be so interconnected that aspects with indications more favorable than "proceed at restricted speed" cannot be displayed simultaneously for conflicting movements.

136.405 *Track signaled for movements in both directions, change of direction of traffic.*—On track signaled for movements in both directions, occupancy of the track between opposing signals at adjacent controlled points shall prevent changing the direction of traffic from that which obtained at the time the track became occupied, except that when a train having left one controlled point reaches a section of track immediately adjacent to the control point at which switching is performed, an aspect permitting an opposing movement at not exceeding re-

stricted speed may be displayed into the occupied block.

136.407 *Approach or time locking, where required.*—Approach or time locking shall be provided for all controlled signals [words "and for all electric locks on hand operated switches" deleted.]

### Subpart E, Automatic Train-Stop, Train-Control and Cab-Signal Systems

#### Standards

136.502 *Automatic brake application, initiation by restrictive block conditions stopping distance in advance.*—An automatic train-stop or train-control system shall operate to initiate an automatic brake application at least stopping distance from the entrance to a block, wherein any condition described in 136.205 obtains, and at each main track signal requiring a reduction in speed.

136.504 *Operation interconnected with automatic block-signal system.*—An automatic train-stop or train-control system shall operate in connection with an automatic block-signal system and shall be so interconnected with the signal system as to perform its intended function in event of failure of the engineman to obey a main track signal requiring a reduction in speed.

#### Rules and Instructions, Locomotives

136.553 *Seal or lock, where required.*—Seal shall be maintained on any device, other than double heading cock, by means of which the operation of the pneumatic portion of automatic train-stop or train-control apparatus can be cut out.

136.564 *Acknowledging time.*—Acknowledging time of intermittent automatic train-stop device shall be not more than 30 seconds.

#### Inspection and Tests, Roadway

136.576 *Roadway element.*—Roadway elements, except track circuits, including those for test purposes, shall be gaged monthly for height and alinement, and shall be tested at least [word "once" deleted] every six months.

#### Inspection and Tests, Locomotives

136.587 *Departure test.*—A test of the automatic train-stop, train-control or cab-signal apparatus on each locomotive, except locomotives and multiple-unit cars equipped with mechanical trip stop only, shall be made over track elements or test circuits or with portable test equipment, either on departure of locomotive from its initial terminal, or if locomotive apparatus is cut out between initial terminal and equipped territory prior to entering equipped territory, to determine if such apparatus is in service and is functioning properly. If a locomotive makes more than one trip in any 24-hour period only one departure test shall be required in such 24-hour period. If departure test is made by an employee other than engineman, the engineman shall be informed of the results of such test and a record kept thereof.

### Subpart F, Dragging Equipment and Slide Detectors and Other Similar Protective Devices

136.602 *Operation in conjunction with automatic block-signal system.* Where these devices are in use in automatic block-signal territory they shall be arranged to operate in conjunction with the automatic block-signal system.

[This rule to be deleted.]

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