

State Commission Formulates Requirements of Automatic Interlockers

Technical specifications and proposed operating rules for automatic interlocking plants in California

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IN order to unify the requirements under which automatic interlocking plants should be installed and operated, the Safety Division of the California Railroad Commission has formulated certain specifications and proposed operating rules relating to such installations authorized to be installed under provisions of Section 21 of General Order 33-A. A conference was held, which was participated in by representatives of the Safety Division and signal and operating officers of those carriers which have any considerable number of interlocking plants, in this state, and the proposed set of requirements have been agreed to unanimously.

The following items are to be included in the installation of all automatic interlocking plants:

1. A push-button or clockwork time release, with a red indicator light, to be located at the crossing.
2. A repeater red indicator light shall be located at the home signal.
3. Repeater red indicator light located at the home signal to function only after the predetermined time of — min. has elapsed when home signals has failed to change from "Stop" to "Proceed with Caution."

A complete copy of the specifications for automatic interlocking plants and for the use of certain signal appliances in connection therewith follows:

(1) Normal Indication of Interlocking Home Signals To Be "Stop"—When a train approaches the crossing and enters the approach circuit, the home and distant signals should change to "Proceed". When the home signal indicates "Proceed" or "Proceed with Caution" the speed of the engine must not exceed 20 m. p. h. between the home signal and the crossing.

(2) Push Button or Clockwork Time Release—If no cause is seen for the signals being at Stop, or if there is a train on the intersecting tracks standing outside of the home signals, with no indication that it is to proceed immediately, a flagman must be sent ahead to operate a release located in a box at the crossing, the box being provided with a standard switch lock. Instructions for the operation of the release will be posted inside the box. The instructions follow:

To Operate Push-Button Release

(a) The release must not be operated when trains or engines are between the home signals or seen to be approaching on intersecting tracks.

(b) When the button is pressed, a small red indicator light located near the push-button should light up immediately to indicate that the home signals on the intersecting line are in the Stop position. In the meantime, the time-element relay will allow the release mechanism to run down, which will require — min. The home signal should then change from Stop to Proceed with Caution.

Note: Where home signals are involved in automatic block signal territory, the flagman, upon receiving a red indicator light, must lock the box and proceed in accordance with automatic block signal rules, and where no automatic block signals are involved, the flagman will remain at the crossing until the train arrives. In case the pilot light fails to appear, the movement must be protected in each direction on the intersecting line.

(c) In case the operation of the release does not change the home signal indication from "Stop" to "Proceed with Caution" after the predetermined time has elapsed, a repeater red indicator light at the home signal should light up, indicating that the home signals on the intersecting line are in the "Stop" position.

Where the home signals are involved in automatic block signal territory, the train, after receiving the repeater red indicator light at the home signal, must proceed in accordance with automatic block system rules.

Where clockwork time release is used in preference to push button release, the following instructions should govern.

To Operate the Clockwork Time Release

(a) The release must not be operated when trains or engines are between the home signals or seen to be approaching on the intersecting tracks.

(b) To operate the clockwork time release, turn the knob to the extreme right position, about one-quarter turn, then let go of knob and allow automatic release mechanism to run down, which will require — min. When the knob is turned to the extreme position and the release mechanism starts to operate, a red pilot light located near this clock release should light up immediately, indicating that the home signals on the intersecting line are in the "Stop" position. In the meantime, the clockwork time release will run down and the home signal should then change from "Stop" to "Proceed with Caution".

Note: Where home signals are involved in automatic block signal territory, the flagman, upon receiving a red indicator light, must lock the box and proceed in accordance with automatic block system rules, and where no automatic block signals are involved, the flagman will remain at the crossing until the train arrives.

In case the pilot light fails to appear, the movement must be protected in each direction on the intersecting line.

(c) In case the operation of the release does not change the home signal indication from "Stop" to "Proceed with Caution" after the predetermined time has elapsed, a repeater red indicator light, located at the home signal, should light up, indicating that the home signals on the intersecting line are in the "Stop" position.

Where home signals are involved in automatic block signal territory, the train, after receiving the repeater red indicator light at the home signal must proceed in accordance with automatic block system rules.



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