S-96-02
Federal Railroad Administration
Technical Bulletin

Date: May 14, 1996
Reply to the Attention of: S-96-02
Subject: 49 CFR §236.380
Testing Methods - Indication Locking
Revision of Interpretation and Application
From: E. R. English
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To: All Regional Administrators, Deputy Administrators,
S&TC Specialists and S&TC Inspectors

The S&TC technical resolution committee, meeting in Atlanta, GA, on March 4, 1996, acted on a request for clarification of the application of Section 236.380 of the RS&I. The matter before the committee was to clear up a misconception concerning the testing methods to be used to meet the requirements of this section.

The interpretation and application of this rule was edited to read as follows. Please note the bold sections have been edited or added to existing language.

236.380 Indication locking.

This rule requires that indication locking be tested when installed, modified, or disarranged and at least once every two years thereafter.

Application:

Applies to both interlocking and traffic control systems.

Indication locking for signals.

Home and approach signals shall be cleared by means of regular operation or by use of test panel. Where a separate relay repeating only the red and yellow indications of the approach signal is used, visual check shall be made to insure that the clearing of the approach signal causes such relay to become deenergized. Where such relay is not used, then a voltmeter shall be connected to the control wire for the indication lock at a point between the home and approach signals (line arresters) to insure that the clearing of the approach signal removes energy from such wire. Where two or more approach signals are involved, test must be made to insure that the clearing of each one of the approach signals accomplishes this result.

After this part of the test has been completed, the approach signal shall be set in its restrictive position by opening its control circuit and then with the home signal clear, a visual check shall be made to insure that the indication lock on the signal lever or lock

lever is properly deenergized, or in the case of all relay type locking, that the lock relay is deenergized.

Next, disconnect a coil wire of the home signal red repeater relay or lock relay or open the control wire of the indication lock where the meter reading was previously taken and then restore the home signal to stop indication. Visual check shall then again be made to insure that indication lock or lock relay is deenergized.

After above tests are made to insure that the clearing of either the home or approach signal deenergizes the indication lock or lock relay, test shall be made to insure that switches, derails, and movable point frogs in route cannot be changed and that conflicting signal cannot be obtained with indication lock or lock relay deenergized.

The test is then completed, where indication lock is used on a lever, by deenergizing the lock by opening its control circuit at the coil terminal and clearing the home signal. If the lock is on the home signal lever, it shall be tried to insure it cannot be latched full normal. If the indication lock is on a lock lever, the home signal lever shall be placed normal and the lock lever tried to insure that it cannot be unlatched from the reverse position.

Where all relay type locking is used, observe that the lock relay is deenergized when each signal is cleared.

At automatic interlocking, proceed as above except check stick locking circuits in lieu of indication locking circuits.

Where signals are of the semaphore type, visual inspection must also be made to insure that locking becomes effective with the signal blade not over five degrees above the 45 degree position on upper quadrant approach signals or five degrees below the 45 degree position on lower quadrant approach signal, and not over five degrees from horizontal on home signals.

Indication locking for switches:

Where indication lock is on control lever, with switch in full normal position, the reverse switch point shall be obstructed so that the switch cannot operate full throw. The lever shall then be operated so that the switch will operate against the obstruction and test made to insure lever cannot be latched reverse with the switch unlocked.

Where all relay type locking is used, the above method of obstruction and switch operation shall be followed and visual check made to insure indication light on control panel remains unlighted and trial made to insure signals governing movements over the switch cannot be cleared.

Above tests shall be made for both the normal and reverse positions of each switch.