

EDITORIAL COMMENT

Signaling at Spring Switches

A DIVERGENCE of opinion exists concerning the automatic signal protection which should be provided in connection with spring switches, and, owing to the fact that these devices are being installed so extensively on many roads, consideration of the signaling to be used should be carefully analyzed.

Practically all roads are agreed that spring switches should not be used in main-line tracks unless signal protection is provided. With an ordinary hand-throw switch stand, the operating rules require that, after a train pulls out of a siding, a trainman must inspect the point to see that it is closed properly after he has returned the switch to its normal position. With a spring switch, it is impracticable for a trainman to make such an inspection. Therefore, in view of the fact that some object may fall in the switch while a train is trailing out of a siding, and cause the point to remain open, the conclusion is that signals must be provided to afford protection against such a contingency.

On several roads, where a signal protecting the facing point of a switch is already in service within about 100 ft. of the switch, as for example on a typical layout of signaling on single track, no additional signal is considered to be necessary on account of the installation of a spring switch. On the other hand, some roads contend that a signal which is so controlled as to be the equivalent of a color-light type switch lamp, should be installed at the switch, and the control of this signal should check the position of the switch but not include track circuit control. Some roads use special aspects for these signals; a lunar white aspect to indicate the location of a spring switch and also that the switch is in proper position, and a red aspect to indicate stop. Other roads use aspects that are the equivalent of the standard switch lamps, i.e., green for clear and red for stop.

At End of Passing Track

At a location where a spring switch is used at the departing end of a passing track, on either single or double track, one road contends that safe practice dictates that a signal should be located at the clearance point on the siding to indicate to the engineman of a train on the siding whether a train in the same direction is approaching on the main line. In other words, this signal is the equivalent of a switch indicator. Other roads, which do not use switch indicators, contend that no such signal is needed, because similar information is not afforded at switches at passing tracks handled by hand-throw stands, and that, where trains are operated by time tables and train orders, according to the usual practice, the engineman and conductor have the respon-

sibility of knowing whether it is safe for their train to pull out of the siding to the main line. Aside from the reasons just discussed, however, some roads do consider a signal at the clearance point on the siding a necessity at spring switches which are equipped with mechanical facing-point locks, the purpose of the signal in this case being to convey information to the effect that the lock plunger is so adjusted that it will be pulled by the connections as the pony trucks start to trail through the switch.

Regardless of whether a signal is provided as the equivalent of a switch indicator or as an indication as to the position of a lock plunger, the control circuits for such a signal can be extended to indicate occupancy of the next block ahead. However, on single track, a station-leaving high signal is ordinarily so located as to give the engineman complete information in this respect.

At End of Double Track

Some problems have arisen with respect to signaling at spring switch locations at the ends of double track connecting with single track which are equipped with absolute permissive block signaling, the signal at the clearance point on the right-hand normal running track being in this case the absolute head-block for the single track to the next station. One problem is to decide whether to use the switch circuit controller on the spring switch to shunt the track or to break the signal control circuits, or to use it for both purposes. If the track is shunted, with certain types of single-track control the absolute head-block station-leaving signal at the next station would be held at stop, whereas if the controller affects only the control of the signals in the vicinity of the switch, adequate protection is provided without the chance of unnecessary train delays at the absolute signal at the next town. Another consideration is that, under certain circumstances, the switch may be thrown by hand, and, therefore, the control of the signal leading off of the double track should be "made" with the switch full normal or full reverse.

Thus it is evident that various practices have been developed with reference to signal protection at spring switches. Now that spring switches are being applied so extensively at various types of track layouts, serious study should be given to the signaling to be used.

