and the circuits affected, be tested.

Inspecting Switch Circuit Controllers

"On main-line automatic-block signal territory, how frequently should switch circuit controllers, connections, and the circuits affected, be tested and inspected?"

Monthly Report Made

E. G. Wesson
Assistant Signal Engineer, C.B. & Q.

On the Burlington, switch boxes are inspected thoroughly and all necessary adjustments made during the last week of each month. At the end of the month a report is rendered to the effect that "all switch boxes have been inspected and adjustments are correct." The fact that "all fouling sections have been tested and are o.k." is reported at the same time.

Maintenance men make inspections of operating rods, fittings, etc., each time they are around a switch between these detailed monthly inspection periods.

Inspect Every 30 Days

P. A. Starck
Assistant Signal Supervisor, C. & N.W. Sioux City, Iowa

Assuming that the track in the immediate vicinity of a switch is reasonably well maintained, it is my opinion that a switch circuit controller in automatic signal territory should be inspected and readjusted, if necessary, at least once every 30 days. Of course, proper track maintenance includes consideration of alignment, surfacing, gage, rail creepage, condition of switch points, braces and plates, etc.

The performance of switch circuit controllers and circuits in continuous train-control territory, where the circuits are so installed that the opening of a contact will remove train-control energy from the track section in which the switch is located, clearly demonstrates that not infrequently switch points will open under a train sufficiently to cause a circuit interruption. However, it is essential that the throw rod be forged from one piece of metal, i.e., the rod should be one continuous piece without a weld.

How to Avoid Switch Troubles

Carl T. Smith
Assistant Signal Supervisor, B. & M., Concord, N. H.

The best way to avoid troubles resulting from switch circuit controllers being out of adjustment is to make weekly inspections of all switches. The inspection should include operation of the switch several times so as to detect lost motion in the fittings, examination of the electrical connections, and the maintenance of a 3/16-in. switch-point adjustment of the contacts. At every inspection the fouling circuit at the siding should be tested by shunting at the clearance point. A voltmeter connected across the interlocking relay in a parallel circuit, a simplified circuit arrangement being the standby primary battery for standby power. The rectifier is adjusted to the operated load, the output circuit being run through two pairs of back contacts in the interlocking relay in a parallel

Output Circuits Normally Open

J. Birchall
Signal Inspector, Pere Marquette Detroit, Mich.

The accompanying sketch illustrates a simplified circuit arrangement for a flashing-light signal using primary battery for standby power. The rectifier is adjusted to the operated load, the output circuit being run through two pairs of back contacts in the interlocking relay in a parallel-series arrangement. The primary battery is connected between the two pairs of relay contacts making the rectifier and the battery operate in parallel, only while the signal is in operation, both being normally open circuit.

The dotted lines refer to a second...

Note: For another answer on this subject see page 395 of the July issue.