



Signal Training Bulletin

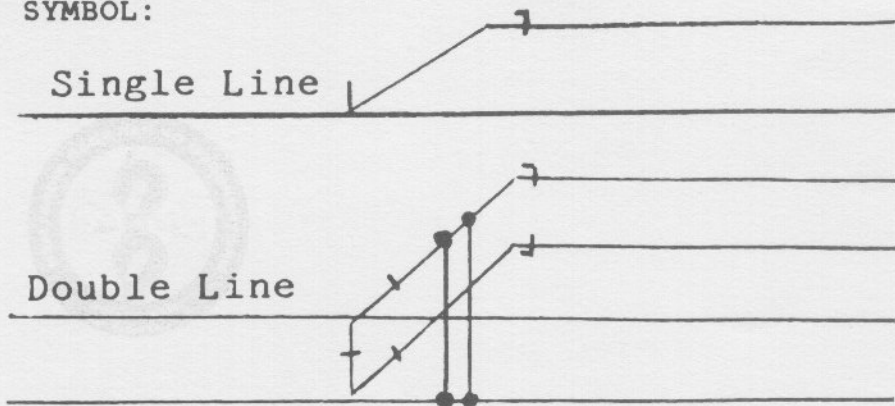
COMMITTEE G- Education & Training
Communication & Signal Division, AAR

D-10 Switch Fouling Circuits

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SYMBOL:



Purpose: The purpose of switch fouling circuits is to provide block signal protection for main line movements when trains and engines are not beyond clearance point on sidings or industrial tracks.

General: Foulings are simply extensions of main line track circuits that are "bridged" off the track circuit by bonding and jumpers. When they are shunted, they actually shunt the main line track circuit.

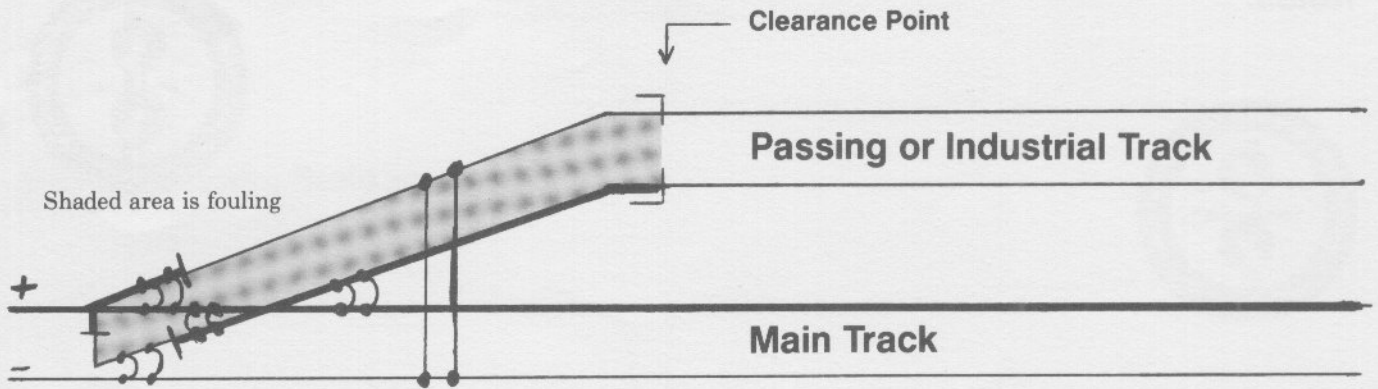
Types: Shunt—This type can best be described by study of the diagram on the next page.

The fouling is an extension of the main line track circuit by use of bonding and jumpers as indicated, and in addition the bolted sections of the frog are also tied together by jumpers. (This is not shown on the drawing.)

By following the heavy line, which in this instance represents positive track circuit energy, one can see how this energy is extended to clearance point insulated joints that block its further flow. The other side is, of course, the negative which can be readily followed. Engine or car trucks will, therefore, shunt the main line track circuit anytime they are between the point of switch and clearance point.

Installation & Maintenance: Bonding and insulated joints are to be installed in accordance with the specifications of the individual railroad. Generally clearance point is between 13 and 15 ft. between track centers. **It is most important that proper clearance be established and maintained.**

All bonding of joints, and including all jumpers, are to be doubled as required by Federal standards (FRA Signal RS&I Rule 236.57). Shunt type foulings are to be inspected and tested at least quarterly and record made of this activity. Inspection is to include visual inspection of all bonding and jumpers with replacement of any that are broken or frayed. Also, a 0.06 ohm shunt is to be placed at clearance point to determine if main track circuit is effectively shunted. If it does not do this, corrective action is to be taken at once.





Shaded area is fouling

Clearance Point

Passing or Industrial Track

Main Track

-  — Short jumper or bond used at heelblocks and frog as shown
-  — Long fouling jumper used to tie the outside rails together

Note: This Bulletin is for general information only. For specific applications consult the rules, standards and instructions published by your railroad.

Notes:

