



**COMMITTEE G: Education & Training
Communication & Signal Division, AAR**

A-19 Winter Switch Protection Devices

Approved September 1986

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Symbol:



Switch Heater
O=Oil G=Gas
E=Electric

Purpose: The purpose of winter switch protection devices is to prevent snow and ice from interfering with the normal movement of switch points.

General: Problems with snow and ice removal vary with geographical locations. There are many switch heaters available which have been proven to be effective for removing the accumulation of snow and ice from track switches.

Types: Hot Air Blower Type- Air is heated in a central combustion unit mounted near the switch. This can be done with oil, gas or electricity. The heated air is then directed along the switch points by a system of air ducts. This heated air melts the snow and ice and evaporates the moisture.

Electric Cal-Rod Type- Heating rods are bolted directly to the stock rails. The heated stock rails radiate enough heat to melt any snow and ice between the switch points.

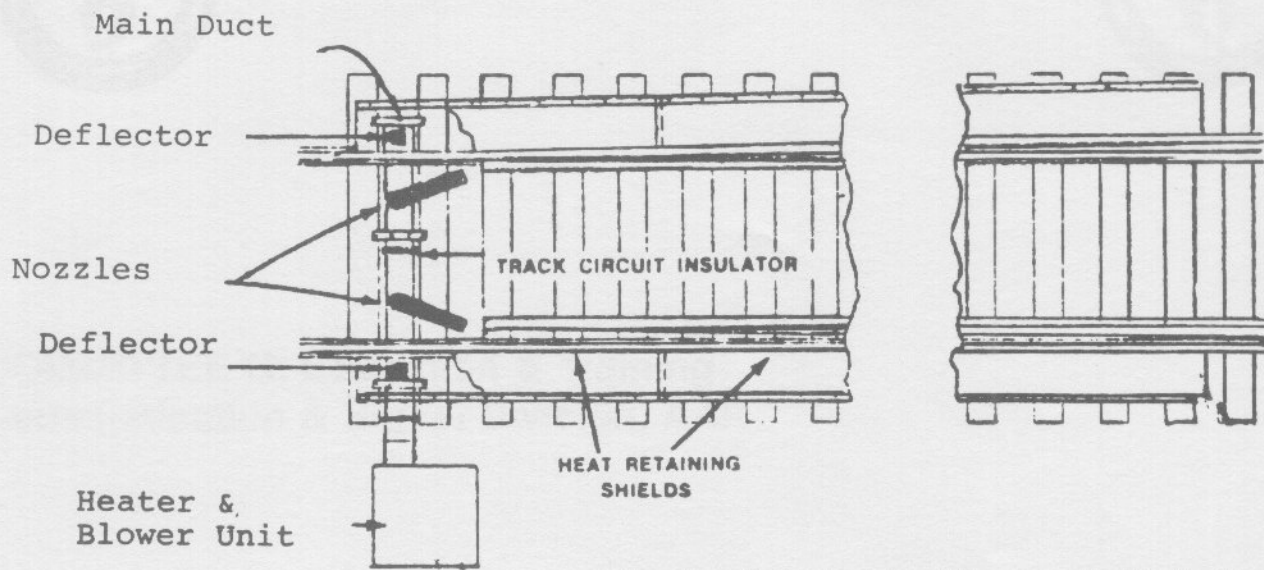
Direct Heating or Open Flame Type- Burners are mounted along the stock rails and under the switch rods. Sheet metal shielding directs the heat to the stock rails and prevents wind and drafts from blowing out the flames.

Compressed Air and High Velocity Snow Blowers- Snow blowers are used to prevent snow from accumulating in the switch points. This is accomplished by frequent blasts of air between the switch points and the stock rails.

Installation & Maintenance: Install devices outside of specified railroad clearances. These devices should not interfere excessively with normal switch inspection and maintenance. Heat from these devices should not be excessive so as to cause damage to the rail, switch points, switch insulation, switch ties and other track components.

Combustion burners shall be provided with suitable safety controls, including a combustion safety control (flame detector), high temperature limit safety control, and other safety controls that may be required to provide for safe operation of the device. Care must be taken to utilize proper fuel oil in the combustion burner types.

Control: When snow is detected or reported, the switch heaters can be activated automatically or from a remote location such as a train dispatcher's office.



Typical Hot Air-Blower Switch Heater

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

Notes:

