

## Techniques and Procedures

Shop policy will determine if the truck operators or the loader operator keeps an accurate load count for inventory control. Unused salt is to be returned to where it was obtained for inventory accuracy.

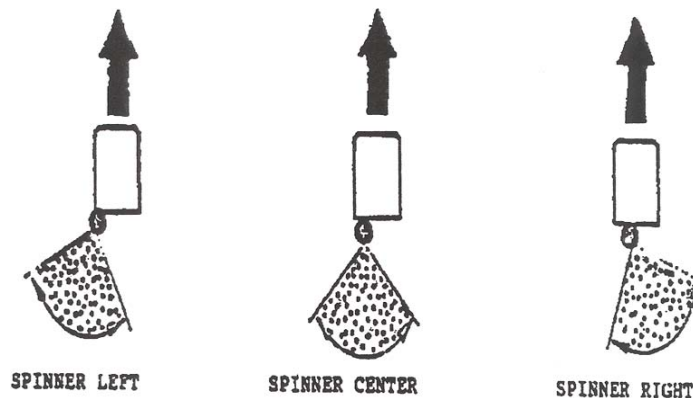
All personnel involved with material loading are to be advised as to who is authorized to obtain materials, particularly which hired trucks are actually working for SHA to prevent the loss of materials due to theft during the confusion of a storm.

When spreading any material, the main idea is to use no more than is necessary to correct conditions. The only reason for applying salt in a snow storm is to form a brine solution to either break the bond of the snow from the road, or to prevent one from forming. Snow that remains on the road and is compacted by traffic forms a condition called “snowpack”. This compacted snow is very difficult to remove by any method and may take many hours of repeated plowing to remove.

Salt spreading should NOT begin until at least ½ inch to 1 inch of snow has accumulated on the roadway. This will reduce the overall loss of salt due to bouncing, traffic, and wind. The operator must restrict the use of salt to the correct pounds per lane mile. This rate will vary from 300 to 500 pounds during the first application. If later applications are required, tests have shown that as little as 100 pounds is effective. It may take between ½ and 1 hour for a brine solution to form before the road should be plowed.

When spreading material on a two lane roadway, it is a good practice to salt the center portion of the road (crown) by using the “left” spinner setting. Most of the material should stay in the wheel path where it does the most good. Salting should be done on the high side of banked curves to allow the melting snow to run down hill to mix with the untreated snow.

The salting pattern (illustrated below) can be accomplished by loosening the set screw and moving the spinner right or left along the bar.



Salt loses much of its effect below 20 degrees and stops working altogether at -6 degrees. Salt does not really melt snow/ice but lowers the freezing point of water. Once the brine solution is formed (about 23% salt), it is at its lowest possible temperature. The addition of more salt could actually raise the freezing point, and the roadway “ice over”.

Calcium chloride will generate heat and melt snow/ice. This chemical, when mixed with water and placed on the road will continue working until a temperature of -67 degrees is reached.

Any type of abrasive does nothing to melt either snow or ice. Its sole purpose is to provide traction for vehicles.