## CALIBRATION CHART (US)

### Equipment needed:
1. Scale to weigh salt
2. Salt collection device
3. Marking device
4. Watch with second hand

### Calibration steps:
1. Remove, bypass or turn off spinner.
2. Warm truck’s hydraulic oil to normal operating temperature with spreader system running.
3. Put partial load of salt on truck.
4. Mark shaft end of auger or conveyor.
5. Dump salt on auger.
6. Rev truck engine to operating RPM.
7. Count number of shaft revolutions per minute at each spreader control setting, record.
8. Collect salt discharged for one revolution, weigh it and deduct the weight of the container. (For greater accuracy, collect salt for several revolutions and divide by that number of revolutions to get the weight for one revolution.)
9. Multiply Column A by Column B to get Column C; then multiply Column C by the number of minutes to travel one mile (\( \text{x} \)) at various travel speeds to get pounds discharged per mile.*

### Calibration of Automatic Controls

Automatic controls may be calibrated using the following steps:
1. Remove, by-pass or turn of spinner.
2. Set control on given number.
3. Tie sack or heavy canvas under spreader discharge area.
4. Mark specific distance on a highway or other paved area, such as 1000 ft.
5. Drive that distance with spreader operating.
6. Weigh salt collected.
7. Multiply weight of salt by 5.28 (in case of 1000 ft.).

*example: at Control Setting 2, w/a shaft RPM of 3, a discharge of 18 lbs. per revolution and a speed of 20 mi/hr, the computation is: 3 x 18 x 3.00 = 162 lb/mi.

### THE ACTUAL APPLICATION RATE (POUNDS PER LANE MILE) ON THE HIGHWAY

**IS THE DISCHARGE RATE DIVIDED BY THE NUMBER OF LANES BEING TREATED**

## SPREADER CALIBRATION PROCEDURE

Calibration is simply calculating the pounds per mile discharged for each control setting at various travel speeds by first counting the number of auger or conveyor shaft revolutions per minute, measuring the weight of salt discharged in one revolution, then multiply the two to obtain discharge per minute, and finally multiplying the discharge per minute by the time it takes to travel 1 mile. Most spreaders have multiple gate openings; so you must calibrate for specific gate openings.

### Calibration Chart

<table>
<thead>
<tr>
<th>Control Setting</th>
<th>Shaft RPM (Loaded)</th>
<th>Discharge per Revolution (pounds)</th>
<th>Discharge per Minute (lb) ( A \times B )</th>
<th>5 mph ( x 12.00 )</th>
<th>10 mph ( x 6.00 )</th>
<th>15 mph ( x 4.00 )</th>
<th>20 mph ( x 3.00 )</th>
<th>25 mph ( x 2.40 )</th>
<th>30 mph ( x 2.00 )</th>
<th>35 mph ( x 1.71 )</th>
<th>40 mph ( x 1.50 )</th>
<th>45 mph ( x 1.33 )</th>
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### Notes:
- *(A x B)* multiplies the discharge per revolution in pounds and the RPM to get the discharge per minute in pounds.
- The actual application rate (pounds per lane mile) on the highway is the discharge rate divided by the number of lanes being treated.