

CALIBRATING MANUAL SANDERS

DATA COLLECTION STEPS

(Field work)

It is critical to adhere to the spreader manufacturer's warnings and safety procedures. Always read the manufacturer's manual and consult with your agency's safety professional before performing any of the following steps

1. Move the spinner out of the way and set the spinner control to zero. In most situations it is not necessary to disconnect the hydraulic hose.
2. Set the auger control for a normal operating mode.
3. Clean the shaft end of the auger and place an index mark on it, so the number of auger revolutions may be counted.
4. Install an auger shield to gain the most accurate measurement.
5. Place enough sand and salt in the truck to put a load on the spreader. The material used for calibration should be of the same percentage mix as what is normally used on the road.
6. Rev the engine to normal operating speed of at least 1500 RPM.
7. Let the auger discharge for a few revolutions until there is a steady flow of sand and salt.
8. While the material is flowing steadily, the observer tells the collector to hold the pail under the discharge of the spreader.
9. The observer counts aloud the revolutions of the auger. When the pail is two-thirds full, the observer gives a verbal signal and the collector removes the pail.
10. The observer records the number of auger revolutions on the Calibration Worksheet Field Collection Chart. (see figure one)
11. Weigh the pail containing the sand and salt sample. Remember to deduct the weight of the pail. Record the pounds for this first sample on the Calibration Worksheet Field Collection Chart. (see figure one)
12. Perform steps number 9 through 12 two more times, collecting a total of three samples. Record this data on the Calibration Worksheet Field Collection Chart. (see figure one)
13. *This completes the steps to collect and weigh the three samples.*
14. The final step is to count the number of auger revolutions at each setting of the sander. One person counts the auger revolutions for fifteen (15) seconds at every setting while another person times this procedure. Record the results on the Calibration Worksheet, Calculation Chart Column A. (see figure one)

CALIBRATION WORKSHEET

Manual Sanders

SPREADER INFORMATION

Agency _____ Location _____
 Date _____ Calibrated by _____

FIELD COLLECTION CHART

	Pounds	÷	Auger Revolutions	=	Pounds per Revolution	
Sample #1	_____	÷	_____	=	_____	To determine the average: Total these 3 numbers (pounds per revolution) and divide by three.
Sample #2	_____	÷	_____	=	_____	
Sample #3	_____	÷	_____	=	_____	

This is the average pounds per revolution: _____

Average pounds per revolution

Record in Column C below.

CALCULATION CHART

POUNDS DISCHARGED PER MILE											
Minutes to Travel One Mile											
Control Setting	A		B		C	D	E				
	Auger Revs. 15 sec	X 4	Auger Revo- lutions Per Minute	X			Pounds Per Revo- lution	Pounds Per Minute	15 mph x 4.00	20 mph x 3.00	25 mph x 2.40
1		x 4		x							
2		x 4		x							
3		x 4		x							
4		x 4		x							
5		x 4		x							
6		x 4		x							
7		x 4		x							
8		x 4		x							
9		x 4		x							
10		x 4		x							
11		x 4		x							