Granular Salt & Liquid Calibration

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Equipment Needed for Granular Test

- *Warm Hyd. Prior to testing*
- *Large Tarp*
- *One Loader Bucket of Dry Salt Approx. 500 lbs.*
- *Stop Watch (For Non Computer Trucks & Liquid Calibration)*
- *Paint Pen or Marking Source*
- *Two People*
- *Five Gallon Bucket (Weigh Empty and Record Weight for Later Reference*
- *Portable Scale (Weighs Up to 100 lbs.)*

FIGURE A

Prep & Set Up

- Manual Systems - each truck must be done separate due to age of hydraulic system.
- Computer Units need to be in **CALIBRATION MODE**.
- Load hopper with enough salt to run calibration test
  - Approx. 500 lbs. of dry salt must be loaded on to get accurate RPM count
- Mark auger shaft/sprocket shaft **FIGURE A** (yellow marking)
- Rate section of 1-10 (set truck RPM @ 1500 during test)
- Turn spinner off
- Make sure to load the auger with salt when counting revolutions per minute on each counter setting
- Put down a tarp to run salt onto for the test. **FIGURE B**
  - Run at least 20 revolutions (rev) and clean off spinner

Run Granular Test

- Log weight of empty bucket
- collect salt from tarp into the bucket
- strike off top of bucket
- Log weight of full bucket (remember to deduct the weight of the empty bucket)
- Continue to fill full buckets
- keep count of how many full buckets
- Log weight of last bucket (this one might not be full)
- multiply weight of bucket full of salt by the number of total full buckets
- divide total weight by number of turns to get lbs. per revolution. (FIGURE C)

FIGURE B

FIGURE C

Example: Weigh salt in a 5 gal. buckets, divide Total weight by number of auger turns. That gives you pounds per rev

- Such as 200 lbs. by 10 turns gives value 20lbs. per auger rev
- *Use your chart for calibration based on RPM's and time Automatic Salters* (***See Page 7***)

- Computer Operated Salters need to be in calibration mode to run salt off
- Use same procedure except computer will provide select amount based upon speed of unit.

Equipment /Prep Needed for Liquid Test

EQUIPMENT

- Five Gallon Bucket marked in One Gal. Increments (can use five gallon salt bucket)
- Hoses to Fit over Spray Nozzles and Reach into Bucket
- Stop Watch
- Two People

PREP

- Things you will need to know prior to running test:
- Liquid sensor ounces per rev.
- The smaller spray nozzle size, the better the fan spray at lower gal. per ton.(gpt)
- Over time the spray nozzles wear out so it's best to have new nozzles at time of calibration.
- Types of spray nozzles: all brass, plastic w/stainless steel inserts; all stainless steel.

FIGURE D

1. Slide hoses over spray nozzles and run into bucket. FIGURE D and FIGURE E
2. Hoses collect fluid from nozzles into bucket marked in one gallon increments Must measure fluid amounts collected in bucket from nozzle sprayer

FIGURE E

Set Up

Run Liquid Test

Run system at setting you want, measure liquid in bucket at 1500 RPM using a stop watch, try to get 1 gallon per minute; will equal 10 gal. per ton of salt.

Liquid: 10 gal. per ton

Sensor size: oz. per rev

Example:

- *400 lbs. per mile at 30 MPH will take 2 min, so it will take me 10 minutes to go 5 miles. If putting 400 lbs. of salt down a mile it will take 5 miles to reach 2000 lbs. of salt. So if we reach 1 gallon a minute at 30 MPH we will have total of 10 gal. per ton*

Spreader Drop Test Calculations Sheet

Rev. 12/11/08

Perform all tests with engine@ 1200-1500 RPM. General Instructions

1. Determine pounds of material dropped In one minute at each feed rate setting and enter into "Lbs per Minute"column.
2. Determine auger rpm at each Feed Rate dial setting and enter into "Auger RPM" column.
3. Pounds per revolution should be fairly consistent downentire column.

				Pounds Per Lane Mile @ X MPH					
Feed Rate Dial Setting	Auger RPM	Lbs Per Revolution	Lbs per Minute	5 MPH	10 MPH	15 MPH	20 MPH	25 MPH	30 MPH
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									

EXAMPLE

								Pounds Per Lane Mile @ X MPH											
Feed Rate Dial Setting		Auger RPM		Lbs Per Revolution		Lbs per Minute		5 MPH		10 MPH		15 MPH		20 MPH		25 MPH		30 MPH
							M		M		M		M		M		M	
4		20	x	7	=	140	12	1680	6	840	4	560	3	420	2	336	2	280
5		26	x	7	=	182	12	2184	6	1092	4	728	3	546	2	437	2	364

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NOTES: