

Applicator Technology & Maintenance

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Applicator Technologies- 3 Basic Applicator Types:

- Granular
- Conventional – Liquid Application
- Low Volume/Concentrate Liquid

Granular

- Used for applying Granular Product
- Product is moved by a paddle wheel or auger
- Hoppers typically need refilling often (due to high capacity of harvest equipment)
- Product must have good flow characteristics to avoid plugging/bridging



Conventional - Liquid Application

- Small version of a field sprayer
- “High Volume” pumps (typically diaphragm), filters, nozzles
- Typical application rate per ton 16-32 fl. oz/ton
 - Maximum recommended concentration of 8 fl. oz/ton
 - Minimum application rate of 16 fl. oz/ton **per nozzle** (minimize risk of nozzle plugging)



Low Volume/Concentrate Liquid

- Specific to application of concentrated water soluble inoculants
- Unique system components (most contain peristaltic pumps)
- Lower solution application per ton (0.33 – 1.28 fl. oz/ton) = LESS WATER; REFILL LESS
- Due to compact size some units optimize coolers as tanks
- Orifices/Nozzles is used require stringent maintenance



Latest Technology:

- Harvester Yield Monitoring Systems
- Digital Control Consoles for Application Systems
- Combined the Yield Monitor can “communicate” to control the Application system
 - Adjusts the application rate to changes in field/harvest conditions
 - Applies inoculant only when needed (puts unit in “hold” when forage is not present)
 - Allows the operator to worry about one less thing

Applicator Maintenance

“Water is your friend;



more is better”

Rinse & Clean System

- Pumps, filter(s), hoses, nozzles...don't forget the tank – Between Cuttings
 - Inoculants produce acid:
 - *Neutralize the acid with a baking soda/water mix – run through system
 - Remove filter(s): Clean & REINSTALL
 - Thoroughly flush with clean H₂O
- To winterize, drain H₂O from system and pump RV Antifreeze



Spring Start Up



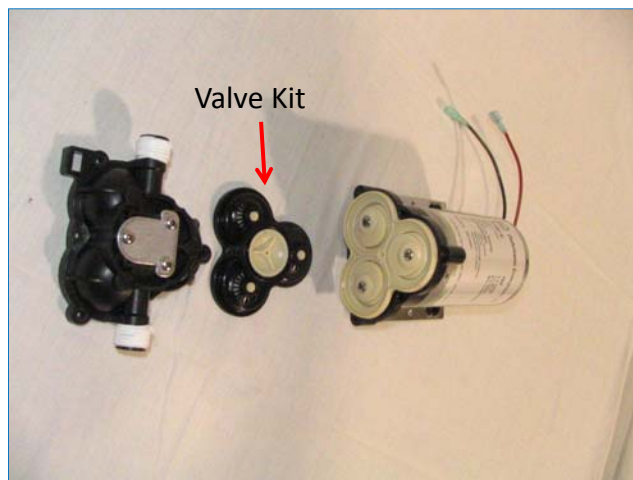
- Verify that the pump motor runs
- Inspect ALL gaskets in the system (filter, swivel connections, nozzles)
 - *Pumps draw the easiest – air is lighter than water
- Clean filter screen(s)
 - *REINSTALL



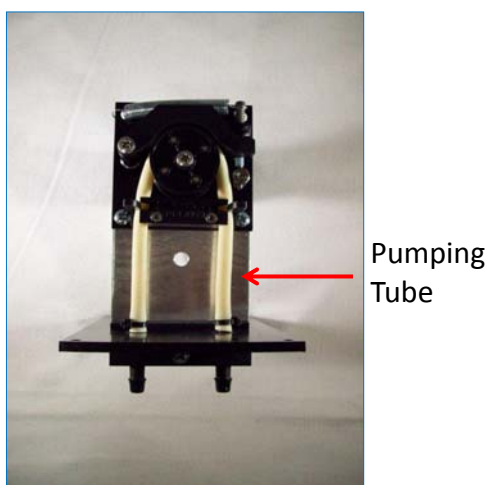
Check List

- Motor runs ✓
- Gaskets in place, no cracks or kinks ✓
- Hose Clamps and Fittings Tight ✓
- Valve Kit may need replacement – Conventional Liquid Applicator
- Pumping Tube may need replacement – Low Volume Liquid Applicator

Valve Kit Replacement – Conventional Liquid Applicator



Pumping Tube Replacement – Low Volume Liquid Applicator



Thank You!

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