



PROLONG THE LIFE OF EQUIPMENT WITH PROPER CARE

Farm Machinery Fact Sheet FM-22

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Sprayer Maintenance

Many pumps on chemical application equipment are ruined more by improper maintenance than by wear. Pump wear and deterioration are caused by ordinary use, but they are hastened by misuse.

Here are some tips for minimizing problems and prolonging the useful life of sprayers and pumps.

1. Put clean chemicals and solutions into the sprayer. Use water that looks clean enough to drink. A small amount of silt or sand particles can rapidly wear pumps and other parts of the sprayer system.
2. Use chemicals the sprayer and pump are designed to use. For example, liquid fertilizers are corrosive to copper, bronze, ordinary steel and galvanized surfaces. If the pump is made from one of these materials, a single application of liquid fertilizer may completely ruin the pump. Liquid fertilizers do not adversely affect stainless steel. Use pumps made from corrosion-resistant materials when applying liquid fertilizers.
3. Before using a new sprayer, dismantle it and clean the screen, nozzles and other parts of all metal chips and other solid foreign materials.
4. Flush the spray system with clean water after each day of spraying.
5. Inspect all strainers, screen and nozzle tips after each day of spraying. If these items need cleaning, remove the accumulation by soaking and brushing. Never use a metal object for cleaning. Hard instruments scraping on a fine mesh screen can enlarge openings.
6. Clean the sprayer thoroughly after each use or when you change chemicals. Since many chemicals rapidly corrode metal in the sprayer, they should be removed immediately after use.
7. Strainer screens are included in sprayers to protect pumps and other vital parts. These

strainers also prevent clogging at the nozzles. To protect the sprayer and get a good application job, leave the screens in the sprayer.

8. Most PTO pumps should be anchored with a chain to prevent rotation. Blocking the pump solid with a metal bar can cause misalignment and rapid wear of the pump bearings—shortening the life of the pump.
9. Never operate the pump without liquid in it.
10. Operating the sprayer at road speeds over rough fields with a full tank of chemicals can bend and damage the main frame or boom of the sprayer. High speeds and rough fields can also whiplash a boom, resulting in very non-uniform coverage.

Fall is Best Time to Service Application Equipment

Cleaning, checking and protecting chemical application sprayers in the fall saves valuable time and helps avoid frustration next spring. This is also a good time to check and order replacement parts so that your dealer has sufficient time to secure them. Winterization of sprayers means:

1. Cleaning the sprayer to not only remove dirt and grime, but more importantly, to remove as much of the chemical residue as possible from the system.
2. Protecting all parts of the sprayer, especially the pump, from deterioration during the storage period. Deterioration during storage can consume more of the useful life of some sprayer parts than actual use.

Thoroughly clean applicator inside and out. If it has no rubber parts (such as gaskets, diaphragms, pump rollers), put 2 to 5 gallons of motor oil in the tank prior to the final flushing to help prevent corrosion. As water is pumped from the sprayer, the oil will leave a protective coating on the inside of the tank, pump and plumbing.

Remove nozzle tips, screens and no-drip valves (if used) and store them in a can of light oil to prevent corrosion. Close nozzle openings with masking tape to prevent dirt or insects from entering.

Protect the pump. If it contains rubber parts, disconnect the lines and put 1 tablespoon of radiator rust-inhibitor in the inlet and outlet ports. If the pump has no rubber parts engine oil is satisfactory. Rotate the pump four or five revolutions by hand to completely coat interior surfaces.

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