



VIDO

VIDO INFECTIOUS DISEASE ORGANIZATION

SWINE TECHNICAL GROUP TIPS

PRESSURE WASHER CALIBRATION

This work sheet is presented to encourage you to re-evaluate how to meet your washing objectives.

It is important to calibrate pressure washers accurately so that disinfectants are applied at the proper dilution rate. Too diluted and the disinfectant is not effective, too concentrated and money is wasted.

Adjusting the disinfectant delivery rate of the pressure washer is difficult and accurate setting changes may not be easy. It is often easier to just leave the machine settings alone and change the solution concentration. Measure the actual washer output and add water to the disinfectant concentrate to produce an "adjusted solution" for your sprayer and your conditions. Here's how to do it.

1. Use a measuring cup to pour 500 ml of disinfectant into the concentrate reservoir.
2. Point the washer wand into a 20 litre (1 litre is 1,000 ml) pail, and spray using your normal pressure until the pail is full. Carefully transfer the disinfectant remaining in the concentrate reservoir back into the measuring cup. Write down the volume left in the cup (for example 300 ml).
3. Subtract to get the volume used (for example 200 ml).
4. Check the directions on the disinfectant for the correct dilution factor (for example 1:128) and divide to get the amount of concentrate needed for 20 litres (20 litres is 20,000 ml).
5. Subtract the amount of concentrate needed from the amount delivered from the reservoir to get the amount of water to add to make an adjusted solution for your conditions.

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Use the chart below to help with your pressure washer calculations.

| Delivered From Reservoir: | 20 L Example | 4 L Example |
|--|--------------|-------------|
| 1. Starting volume in reservoir _____ ml | 500 ml | 100 ml |
| 2. Ending volume in reservoir _____ ml | 300 ml | 60 ml |
| 3. Delivered from reservoir (1 minus 2) _____ ml | 200 ml | 40 ml |

Concentrate Needed:

| | | |
|--|-----------------------------|---------------------------|
| 4. Volume in Pail ÷ Dilution Factor _____ ml ÷ _____ = _____ ml | 20,000 ml ÷ 128 = 156 ml | 4,000 ml ÷ 128 = 31 ml |
|--|-----------------------------|---------------------------|

Check the directions for use on the container of concentrate.
In this example, the label on the disinfectant concentrate says to use at 1:128, therefore you need 156 ml of concentrate for 20 litres.

Adjusted Concentrate:

| | | |
|--------------------------------------|-------|------|
| 5. Water to add (3 minus 4) _____ ml | 44 ml | 9 ml |
|--------------------------------------|-------|------|

The amount of water to add to the disinfectant concentrate is easily determined this way. Subtract the amount you need (156 ml) from the volume used during the test (200 ml). This shows that you need to add 44 ml (200 ml - 156 ml) of water to 156 ml of concentrate since your pressure washer will deliver 200 ml.

You can make enough of this "adjusted solution" to do the whole job by increasing both disinfectant concentrate and water by the same factor. For example 440 ml of water and 1,560 ml of concentrate.

If the machine delivers less disinfectant than required, adjust it for a higher disinfectant delivery rate and repeat the procedure.

WHAT IS THE VIDO SWINE TECHNICAL GROUP?

The VIDO Swine Technical Group is a unique group of people directly involved in the swine industry who voluntarily donate their time to meet and discuss the needs of the swine industry. The members cover a variety of specialty disciplines and have included hog producers, veterinarians, agricultural economists, agricultural engineers, nutritionists, farm extension workers and VIDO research scientists.

VIDO is fulfilling its mandate to serve both the livestock producers and consumers by developing safe and effective animal health and performance products, preventive medicine programs, improved livestock management techniques, and information materials to help producers achieve their goals of increased productivity.