

MAINTENANCE

A well maintained sprayer is a reliable sprayer

Accuracy is the key word in modern turf protection. To ensure consistency in this aim makes heavy demands on the function and reliability of the spraying equipment and is a major focus when thoughts turn to the new season.

The first thought that might occur to many when looking back to the previous year may be... was the sprayer stored a little too quickly when the spraying season was over?

If the answer is yes or even a maybe, now is the time to go thoroughly over the sprayer during the quiet winter months. The following is a check list of things of importance to the sprayer's reliability of operation and ability to distribute turf protection chemicals as precisely as possible.

Cleaning

To keep the sprayer in top form, the most important thing is to clean thoroughly, immediately after every use, both internally and externally. A thorough cleaning ensures that everything functions correctly, and at the same time prevents spray damage due to unintended mixture of chemicals.

Together with cleaning, the sprayer should be tested with clean water and all functions and operating valves activated to reveal potential problems and leakage's, which should be immediately rectified.

Filters

Many turf protection chemicals leave residues that can adhere to the filters. Disassemble the suction filter, self-cleaning filters, operation unit filter, line filters and nozzle filters and clean them with a brush and soapy water.

Check the filter inserts and change any damaged ones.

Pump

Check the valves for failure and wear. If wear is found, change all valves at the same time. Always use new sealing rings when the valves are reassembled.



Check the diaphragms for cracks. Should just one diaphragm have a crack, change all diaphragms at the same time, as those not changed will be functioning on borrowed time, and are likely to fail in the near future.

Finally grease the pump.

Control unit

Check the function of the control unit during the test with clean water. The main valve must close completely. If the nozzles drip when the main valve is closed, it is likely that the valve ball and the ball seat are worn. Check and change if necessary.

The boom section valves must also close completely. Open the main valve and all section valves with the pump working. When the return hose from the constant pressure valves is removed and the housing drained, no water must appear on the valves. If the section valves are not completely sealed, the valve cone should be replaced.

Finally all movable parts of the control unit operating handles

should be lubricated with oil.

Pressure gauge

A simple way of controlling the pressure gauge is to mount a completely new set of nozzles that are known to match the valves of the nozzle table. At a fixed working pressure e.g. 3 bar – the nozzle flow rate is calibrated with a measuring jug. If the flow rate of the nozzles matches the table value at this pressure, the pressure is ok.

Nozzles

The condition of the nozzles is of critical importance in achieving an even spray distribution across the boom, and consequently a good deposit of the turf protection chemical. Carry out a visual check of the spray pattern of all nozzles when spraying clean water at normal working pressure. The spray pattern must be regular fan-shaped for normal flat fan spray nozzles. Irregularities are a sign of damage and wear.

Calibrate the flow rate of the nozzles with a measuring jug. The precision of the nozzles and dis-

tribution are acceptable with flow rates of up to 10% above the table values. If the flow rate is above 10% in excess of standard, the nozzles are worn and should be replaced.

Remove the turn plate of the TRIPLET nozzle holder and lubricate with a little oil or grease on the plate. This will ensure the TRIPLET is always easy to turn when changing to another nozzle.

The boom

In order for the spray boom to operate as evenly and quietly as possible, it is important that it has been adjusted and lubricated correctly. The instruction manual indicates adjustment and lubrication of the various boom types.

PTO

Check that the guard of the PTO shaft is in good condition and lubricate the shaft. It is also important that the profile tubes are well lubricated so that the shaft can move backwards and forwards without hindrance during operation.

Boom tubes and hoses

Check all tubes and hoses for damage and security. Change damaged hoses and tighten hoses that may have become loose.

Rust prevention

Some turf protection chemicals are very aggressive, discolour paint, and can be extremely difficult to wash off when dry.

It is recommended to apply to all metal parts of the sprayer a thin layer of penetrating, water-repellent rust prevention oil before putting the sprayer into service. Suitable products are available on the market, which after application leave a protective oil film. The sprayer can then be washed completely clean.

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