

PREVENTATIVE MAINTENANCE for Greenhouse Equipment

FOLLOW THESE GUIDELINES TO ENSURE EFFICIENT AND COST-EFFECTIVE PRODUCTION.

By Paul Whiting

Equipment maintenance has become a fundamental requirement for efficient cost-effective production in today's greenhouse. Bale processors, soil mixing, soil carrying conveyors, flat and pot fillers, water stations, transport conveyor and the list goes on. It's great to see production cranking through a myriad of machines and daily/weekly goals being met, that is until something breaks down and production grinds to a halt — happy zone over!

We all know equipment is going to break down at some point, and it only breaks down when its running. To help avoid the majority of these failures, you need to consider embarking on a preventative maintenance plan out of season. Thorough checks on all equipment can help identify worn or damaged parts such as sprockets, chains, drive shafts, bearing and, importantly, belts. You would be amazed at the number of calls we get within the first few days of start-up with chains and belts broken. These are typically severely worn chains and belts with damaged lacing, all of which could have been replaced long before the start of the season had time been taken to carry out a visual inspection.

Talk with your maintenance staff, look through equipment manuals and parts lists, or call the manufacturer to supply manuals if you lost them, and carry out a thorough inspection of all production equipment to assess any damaged or worn parts. Many manufacturers offer annual service plans

or check lists for a visual reference on inspections. Additionally, manuals will give a list of all lubrication points and any specific lubricants needed for hydraulics systems and gearboxes. Unchecked low levels are a countdown to failure.

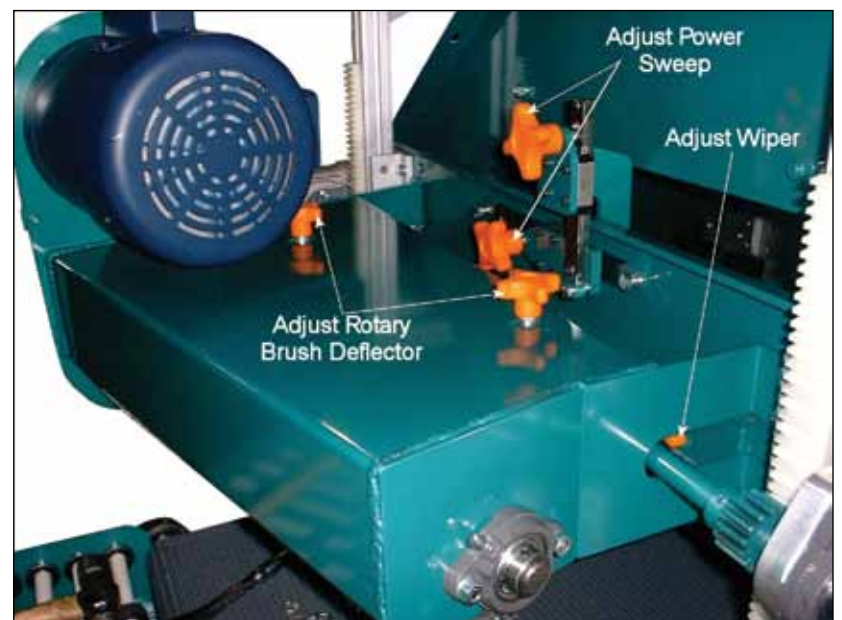
Clean your equipment out at the end of the season. Sound obvious? When the season is over most of us are ready for vacation or anything to get away from the greenhouse for a while. Problem is while you are away, fertilizer and chemicals left in, on and around machines are busy eating away at hoppers, chains, sprockets and bolts. This prematurely reduces the service life of these parts, and then the call comes in: "Can't believe these parts failed so soon."

It's worth dry running everything prior to the start of each season. A shakedown will find frozen belts, squeaky bearings, lose wire and connections, and clean out the crusted peat moss and plastic pots and even the odd dead rat (hopefully dead). Get out the airline and clean off everything and follow up with oil

can and grease gun — it's worth noting that this is not bad practice at the end of the season and can make life much easier when starting back up.

General Service Information and Precautions

- Always disconnect power source before working on or near a motor or its connected load.
- Be careful when touching the exterior of an



An image typically found in an operators manual. Be sure to check for correct operational setup.

operating motor — it may be hot.

- Protect power cable/s from coming in contact with sharp objects.
- Do not kink power cable and never allow the cable to come in contact with oil, grease or hot surfaces.
- Do not use extension cords if possible.
- Electrical must be properly grounded.
- All moving parts should be guarded, and always replace all guards after a service event.
- Gearboxes must be filled to level with correct lubricant.
- Chains and belts adjusted for correct tracking or tension.
- Bearings with damaged or missing seals should be replaced to stop dirt ingress.
- Replace lacing in belts if damaged.
- Clean out machine after use.
- Make sure equipment is correctly setup; refer to manuals.

I would strongly encourage proper training and education of all personnel operating the equipment you purchased. As part of training and education, I would also encourage owner/users to ensure each operator of the equipment is familiar with its operation, the safety precautions, and to provide adequate supervision of operators. While the last of these requests is not always practical during the course of a business day, it is worth supervising employees and workers not only from a production standpoint, but also to minimize the risk of injury or practices that may cause premature equipment failure.

Warning Labels

Various hazard warning labels will have been strategically placed on the equipment before it was shipped from the factory.

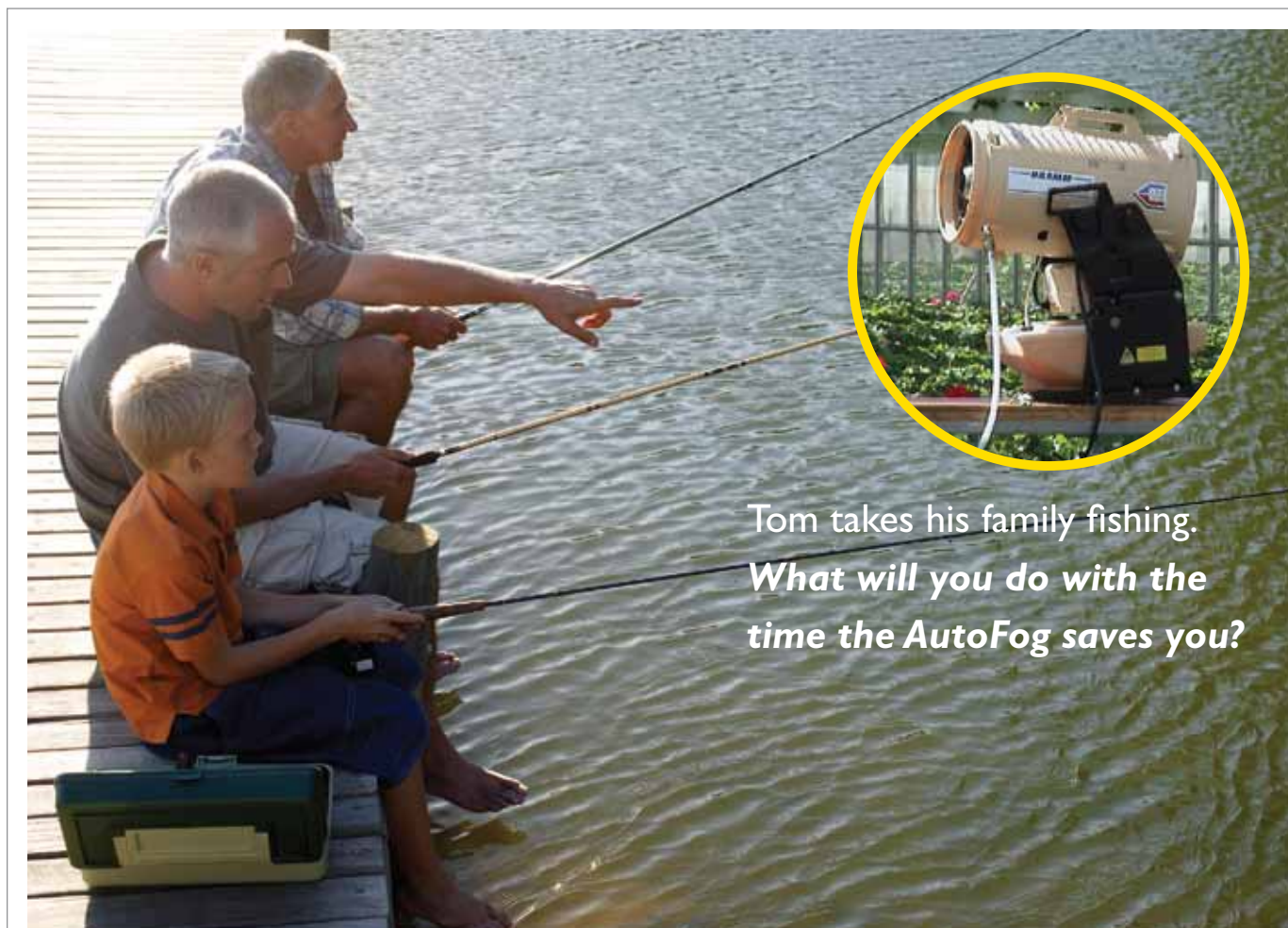
It is good practice to periodically inspect the machine to ensure the appropriate labels are attached. I would suggest whenever a machine is taken out of service for maintenance, or a repair event, the machine be examined to ensure all warning labels are present and visible.

As a final note, I believe it is worth mentioning maintaining a spare parts inventory. Keeping known high-wear items on the shelf can save time waiting for replacements

to be overnighed, not to mention the additional shipping cost associated with next-day air. These can be ordered prior to the start of the season when parts are plentiful. No one wants to hear, “We just sold the last of those and have a three-day lead time.” Melting down the supplier’s phone on

something you knew was going to fail is bad for your blood pressure as well as your production. ☒

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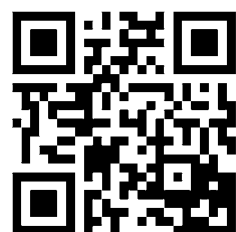
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