

Production Machine Maintenance and Repair

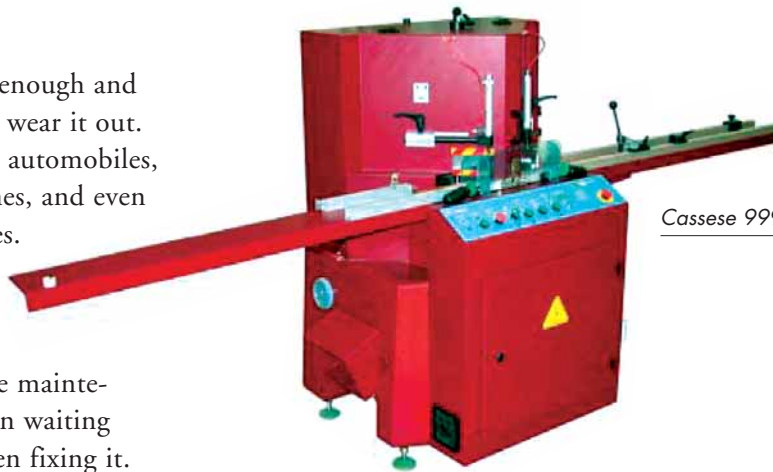
To keep your machines running better and longer, having the right maintenance and repair program is essential

By Jim Burke

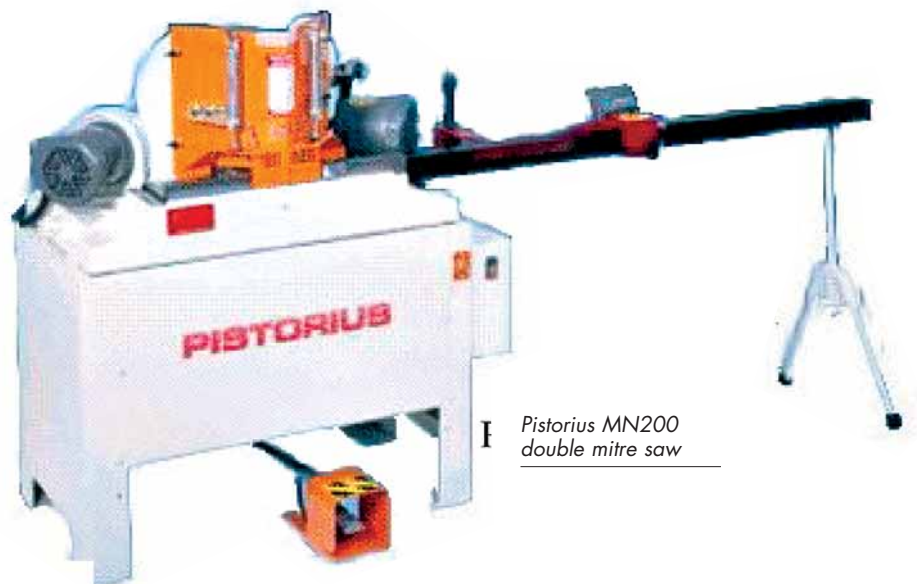
Use something long enough and you will eventually wear it out. This holds true for automobiles, production machines, and even the proverbial favorite shoes.

Production machines require some maintenance along the way to make them last longer. Preventive maintenance usually costs less than waiting until something breaks, then fixing it.

What is normal maintenance and who should do it? Normal maintenance is anything a machine manufacturer deems necessary on a weekly or monthly basis to keep a particular product running at its best. Who should do the maintenance depends a lot on the size of a frame manufacturing company and the people skills it has available. If a company has three employees and none of them have any mechanical skills, the repair work should probably be hired out. On the other hand, if a small company has a person with good mechanical skills, the basic maintenance and minor repairs could probably be handled in-house.



Casese 999 double miter saw



Pistorius MN200 double miter saw

Maintenance for Specific Machines

Weekly and monthly maintenance is more specific to product type or brand of machine. Below is a list of common production machines, and the oils or lubricants recommended by those manufacturers.

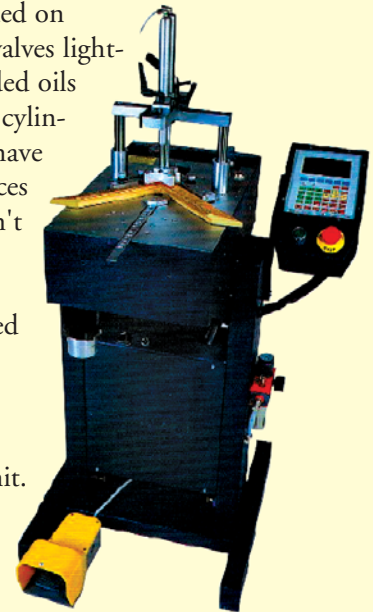
Oils and Oilers

Most European machine manufacturers use grease-lubricated air cylinders and valves. This would include ITW AMP, Cassese, Bravetti, Gunnar, etc. When an oiler is included on these machines, it will be set for low oil flow and is designed to keep only the air valves lightly lubricated and to help dissipate water in the air. For this reason, the recommended oils are different than oils used for American-made products that use oil-lubricated air cylinders and valves. Most notably, these include Pistorius and CTD machines. If you have combinations of these brands in your factory, you need to understand the differences between each product's requirements. The oil you use in an ITW AMP joiner won't necessarily serve you well if you put it in a Pistorius saw lubricator, and vice versa. None of these oils should be confused with the lubrication systems designed for saws cutting aluminum moulding, where the coolant or lubricant is actually sprayed onto the blades.

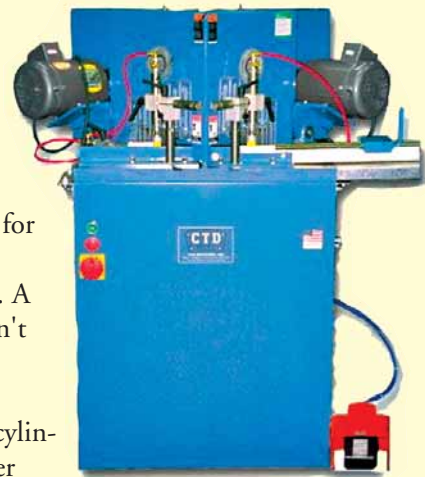
Specific Machines

Note: "FRL" in the following paragraphs refers to a Filter/Regulator/Lubricator unit.

- CTD saws: No lubrication is necessary on pivot or spindle bearings, since these are sealed units. Check the oil level in the FRL unit and add 10 weight light hydraulic oil if needed. Check monthly for excessive belt wear, and make sure the motor pulley set screws are tight.
- Pistorius saws: On saws with grease fittings for the spindle bearings, give one shot of high-speed bearing grease every 450 to 500 hours of operation. For saws that run eight hours a day, that is approximately every three months. For saws that run four to five hours a day, that's about every six months. A word of caution: it is better to under-grease these bearings than to over-grease them. One shot means one shot. Never try to fill a bearing with grease, because this will eventually ruin the bearing by overheating it. If grease is showing up on the back of your saw blade, you are greasing too much. Stop greasing it for at least six months. If a saw has a THK bearing option, no grease is needed, since these are sealed bearings. Check the oil level in the FRL unit and add "Pneumalube" or 10 weight light hydraulic oil as needed. The oiler is the unit with the little plastic dome on the top. Pneumalube is a Pistorius product available in gallon containers.
- Pistorius joiners: Add Pneumalube to the FRL as needed. Also lubricate the driver area once a week with the same oil or a general-purpose light grease. If a joiner doesn't have a lubricator and is used in high production, consider adding a lubricator to the machine to keep the cylinders and valves oiled.
- ITW AMP saws: Spindle bearings are sealed units. No grease is needed. Lubrication for the FRL unit should be ITW AMP part # T064 Lube & Cleaner ATC-855. (16 oz.)
- ITW AMP joiners: When FRL unit needs oil, use part #T064 Lube & Cleaner ATC-855 (16 oz.). It is also recommended that the driver blade for pushing the nails be lubricated every 200 hours or about once a month. When using glue, lubricate the driver more often (once or twice a week). A light grease on the L block will work here or a light oil will do if you don't have grease available.
- Cassese Joiners and Saws: Most Cassese machines do not have an oiler attached. The company doesn't recommend oiling the units because all cylinders and valves come with grease installed. For joiners, grease the hammer once a day for high volume or once a week for low volume. The hammer is the part that pushes the wedge into the moulding. The company also recommends cleaning the wedge block area on a regular basis.



ITW AMP VN4E-MP
computerized underpinner



CTD D45AX double miter saw

Most large production framing companies have full-time maintenance people in house who are trained to maintain and repair whatever machines there are in that production facility. Someone from each of the machine manufacturers usually has trained these mechanics.

Smaller companies rarely have anyone skilled enough to repair anything in the facility. These companies should look to a repair service for help. The picture framing industry has long been overdue for skilled people to repair the machines used in production. The overall number of skilled people has not kept up with the advancement of the computerized joiners, miter saws, and mat cutters.

Framing companies today are faced with a wide variety and scope of machines to be maintained. There might be two or more brands of computerized mat cutters, double miter saws, and/ or underpinners in a factory—not to mention air compressors, tab and staple guns, mounting equipment, and any other pneumatic machinery used in making and fitting frames.

For the last 20 years or more, I have been repairing machines like these. I didn't always want to do some of the repairs, but there was often no one else knowledgeable or available to do it. I generally enjoy fixing machines because I enjoy solving problems. Today 90 percent of all my automobile repairs are done by someone else, and 99 percent of any appliance repairs are done by someone else. I still do the routine maintenance, but when I was younger, I did most of these repairs myself. What has changed? The complexity of today's



*Pistorius
VNA-2 computerized
underpinner*



*ITW
AMP T350
double miter saw*



*Cassese
486XL
computerized
underpinner*

machines, and the amount of leisure time versus income available for home repairs. I have more money and less time, so I hire someone younger or more skilled to do the job.

The same can be true for many framing companies. As a company matures and has more business and equipment, there is less time spent on repairs by employees who know how to make them. Those people spend their time on production. And if a company doesn't have employees with the needed skills to do repairs, everything needs to be hired out. Repairs usually fall by the wayside as production is ramped up and a company grows.

Maintenance can still be an inside job if you know what is needed. Simple daily or weekly procedures can and should be

done by machine operators. They can drain water from water filters, clean sawdust and clutter from saws, and clean glue from joining machines.

Think of it this way: If all drivers were given tire pressure gauges and were taught to use them properly, would they be more likely to check their tire pressure once a week? Could they also learn how to check the oil level? Even when they are trained and understand the importance of such maintenance, they probably won't do it as often as it's needed unless they're required to do it or they really like to do it.

In a factory, the boss or supervisors can make sure every worker knows how to drain the water from their machines or how to perform any other simple maintenance procedures. That's part of the supervisors' job, and it reduces



Pistorius
EMN double miter saw

equipment downtime.

Daily maintenance is fairly uniform regardless of machine brand. If a machine has a water trap filter, it should be drained every evening after the shift is over. This includes saws and joiners. Most computerized mat cutters need this done only once a week or once a month, because there is less airflow in those machines. For double miter saws, clean all chips from the exhaust chutes (if applicable) and blow off the top of the saw around pivots and cylinders. For joiners, clean off any glue or residue before it can harden overnight. For computerized mat cutters, remove any scraps and mat-board dust from the tracks or belt areas.

It's not all that difficult to keep your machines maintained properly. Keep them clean, keep them oiled, and keep water out of the air. For repairs, consult the manufacturer, the distributor nearest you, or a private repair service. ■

Jim Burke owns Machines Etc., a sales and consulting company based in New Bedford, MA. He started in the picture framing industry with Arquati Moulding in Cleveland as general manager. For the past 25 years he has sold and serviced all types of machinery for cutting and joining frames and cutting mats. He has also sold web control machinery to paper mills, tire cord manufacturing, textiles, plastic film extrusion, and paper converting companies throughout the Midwest.

www.framewareinc.com
A manufacturer of quality hardware and wholesale supplier of equipment and supplies.

FRAMEWARE INC.

Covering all the angles...

Metal & Wood Screws

Backload Quickclips

Frameloc™ security hardware system®

quick...easy...and secure

Genuine AMP V-Nails

PlastiBond™ Glue

- environmentally safe
- user friendly
- solvent free
- dries clear
- low odor

MADE IN USA

Strap Hangers

all sizes available

Frameware Cleat Hangers

available in custom sizes 6 inch through 6 feet

Metal Frame Hardware

CUSTOMER SERVICE EXCELLENCE!

"No hidden charges for drums, pallets, steel or special packaging"

Potdevin Machine Company

Gluefast Adhesives & Mounting Equipment

OMG Every Day, Performance.

PRINT MOUNT

Hant-Bond

PISTORIUS MACHINE CO. INC.

3M

Linco Technology for Frame Assembly

TWAMP Technology for Frame Assembly

25 Sherwood Lane | Fairfield, NJ 07004 | Phone: 800-582-5608 | Fax: 973-808-0262 | www.framewareinc.com | E-mail: sales@framewareinc.com

PFMI PRODUCTION Fall 2008 29