



Maintain Your Nailing Machine to Keep it Running Smoothly



By Dustin Johnson

The key to keeping a nailing machine running well is proper maintenance. While that is not a new concept for most pallet companies, some things can get overlooked.

That is where the problems arise.

This is the first in a series of articles about proper maintenance for nailing machines. Much of the information in this article can also be applied to other types of pallet machinery.

Benefits of Regular Machine Maintenance

Properly maintaining machinery and equipment is important for many reasons, especially to avoid mechanical failures and downtime. Well-maintained machines are safer to operate for employees as well as the maintenance mechanic. Better maintenance helps keep worker morale up and causes less rework due to performance failures. Finally, pallet companies will experience fewer overall costs if they keep their machines maintained regularly.

Basic Tips

Keep machines clean. Nails and even sawdust can cause chains to jump. Keep rags, tools, and wood clear of the machinery; these items may get into areas that can cause a jam.

When getting ready to remove parts, pay attention to the orientation of the parts and fasteners. Use your cell phone to take pictures or make a rough sketch to ensure the items are put back together correctly and the job is done right. When



taking apart assemblies, put the parts down on the bench the same way they come out of assembly. For example, if an item was facing down in the assembly, put it face down on the bench. If components are stacked on top of each other, do the same on the bench.

Before changing the nailing machine over to a different pallet size, make sure to blow off the machine. Pay attention to any acme screws and allen bolt heads that are filled with sawdust. Keep acme screws clean. Use brake cleaner and a wire brush or a small flat head screwdriver to keep screws clean. When screws are full of dirt and debris, it causes machine components to bind. You don't want machine operators using a pipe wrench or other tool to start to force things to move; that will cause components to break. Time spent keeping these items clean will save time later.

If components will not move, look to see why. Do not force them. If bolt heads are starting to get stripped out, replace them as soon as possible

Spare Parts

Create labeled bins for all bolts and fasteners needed for the machine, and keep them in stock. Check the bins regularly to make sure you have enough. Being down for a half-hour because you are missing a bolt or a nut is avoidable.

Also, stock air fittings, airline, key stock, chain links and chains. These are inexpensive replacement parts. However, they can cost a business a lot in lost production time if you do not have them on hand when you need them.

With the right hardware on hand, you can keep the machine looking good, too, versus having a bolt 2-inches too long with 2-inches of nuts and washers added on to make it the right length.

Spare parts can be expensive to have on hand, but with less parts being stocked at original equipment manufacturers, it is worth the money. Calling in to buy a part only to find out there is a two-week lead time is not a good thing.

You can build up a good supply of spare parts gradually over time. Each

month add a couple of parts. Make sure that they are stored in bins and the part number is on the bin. Check the bins frequently and reorder when needed.

Saving old parts can be a chore, but it can also save your hide when you need something to get you through until a new part arrives. When you save old parts, make sure to mark each part to note what was wrong with it. An output card might be bad internally, but the case could be used for a card with good internals with a busted tab on the case. Hydraulic nail cylinder barrels, tie rods, ends or rod assemblies can be saved to replace broken parts on another cylinder.

Replacing Assemblies

When replacing parts, look at the whole assembly and decide what pieces to replace. For example, if you have two sprockets on a drive shaft and one is bad and the other is worn, should you replace both? Is it a good time to replace the bearings? What does the shaft look like?

If the whole assembly needs to be taken out or apart, maybe this is a good time to replace everything, saving time

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and money in the future. It is cheaper to plan a shutdown and replace everything than doing it during production. Any parts that are okay can be saved for spares. If a shaft is bad, it can be taken to a machine shop and fixed.

When something breaks and you do not have a spare part on the shelf, take a moment to stop and think. Can it be welded? Can my machine shop make me a new part quickly? Can they mill out and stud a shaft? Do I have something in the plant that uses the same thing?

Most of the time there is a way to get around a broken part until a new one arrives. Having good relationships with local machine shops and welding shops along with bearing and electrical shops

can save you when you do not have time to wait for a part to come from the manufacturer. The Internet is a very good source, too. Parts that you might think could never be found close by may be right around the corner.

If a key way gets wobbled out but the shaft is still good, you can always take the shaft to the local machine shop and have a key way milled in 180-degrees from the original to get you going again

Hopefully, these simple ideas will get you thinking about ways that you can improve your maintenance program and replacement part practices. More to come in a future article in this series. 

Editor's Note: *Dustin Johnson operates his own business, Johnson's Automated Machinery Repair. He also performs machinery maintenance for Viking Pallet in Maple Grove, Minnesota, and he provides sales and service for Corali-U.S.A. He was an employee of Viking Engineering from 1994-2006, building and later servicing Viking automated nailing systems. For questions or to contact Dustin, send him an email at jamrsvc@gmail.com.*



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