CAFAC Kalamazoo 1220D Bandsaw

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Goal
Get the bandsaw running and document how to use and maintain it. Goal is to be “done” soon.

Tasks
- Write a basic user/advanced user/maintenance guide - Jaana wrote a basic use guide with pictures, ready to photograph for basic user manual
- Check and adjust down weight
- Check transmission, fill with right lube - tried to check, but failed, not sure how to do this, thinking, researching
- Put 1 more wheel on the machine so it can be moved around easily - buy 1 heavy duty steel caster (maybe Northern Tool) and install on end without casters.
- Replace bad bearings on blade guides - measurements complete, need to order, install

Log/Schedule
1/15 - Start, Jeff discussed with Ryan and Roger, Ryan got a good start on welding the belt cover and fixing the hinge, figured out we need to pull a pulley to get the cover back on
1/16 - Jeff got manual on eBay, link below
1/20 - Jeff spent a couple hours degreasing and inspecting - need to shim one of the blade guides it was welded and doesn’t line up anymore, 3 phase magnetic switch looks ok, nothing burned, it has overload protection but not sure right amount, sheathing for the power line from the motor to the box is broken, this needs to be fixed and the wire checked as it flexes for every cut, the spring for limiting the down force is not stock, but looks like an OK design, work clamp works really slick, the hydraulic lock needs a gentle touch, but it works well too, added some photos below
1/23 - Jeff out of town to Jan 30th, Roger got the power plug
2/2 - Got lucky fixing the damaged cable shroud, was able to reuse the fittings. Installed the new plug and powered on, got lucky again and it spun in the right direction the first time. Tensioned up the blade and was able to make some cuts! Ryan finished welding the cover, but I had problems with the puller, it wasn’t stiff enough. Going to try again Sat 2/5 with a modified design.
2/5 - Talked to Roger about my puller problem and he offered another solution to try. I tapped on the center shaft and he pulled on the pulley with his hands. In a few minutes it was off! Saved a bunch of work. I was able to install the cover over the belts. It fits pretty good. It rubs on the motor a bit so you have to be careful about belt tension. I also got the blade guide adjusted, I went back to the shim idea as it was way too slow trying to file the cast iron. I had some trouble with it making noise sounded like the blade was rubbing but I couldn’t see where. I found that tensioning while running made the problem go away. Also greased the fittings on the

pivot with Roger's grease gun.
2/9 - Worked with Jaana on beginning user guide.
2/16 - Did some adjustments on blade guides, found some of the bearings are in bad shape, need to measure bearings and try to get replacements. Tried to see inside the gearbox, but not successful. I took 4 screws from the small cover that was easily accessible, but couldn't get it off.
2/22 - Ordered replacement blade from bandsawblade.com 13'11"x1" 8/12 TPI bimetal Simonds $44.26 + 8.00 shipping
~3/2 - Installed new blade, nice upgrade, really helps with cutting
3/30 - Painted the basic controls to make easier for new users

Copy of original manual

Learning
The bandsaw makes a squealing sound sometimes. I think it is related to the bearings on the blade guide. I will replace and see if it gets better.

Substitute for Mobil FF gear oil is Mobil 600 Xp 150, local distributor is Lubrication Technologies, 900 Mendelssohn Ave N, Golden Valley, 763-417-1200. Need to listen to and check level in gearbox before buying it.

3 phase motors can't really be damaged by hooking up the phases in wrong order. It will just run backwards and then you need to swap any 2 phases to reverse it. (Think about it). We should check it without any belts attached (obviously). From motor book and other discussions.

Starter switch should have some kind of heat based overload protection, for example if the motor over got stalled it should magnetically open. Opened it 1/20, looks good, nothing obviously burned, photos below, can't tell what amount of overcurrent protection there is. Assume its OK or keep trying to figure out.

Found a discussion on Practical Machinist
http://www.practicalmachinist.com/vb/general/kalamazoo-bandsaw-information-8a-184656/

Someone recommends using springs or counter weights to set down force at about 8 lbs so the hydraulic cylinder isn't setting the cutting rate. Need to measure downforce. Anyone have a fish scale? The modified spring mechanism is pretty good I think and it would be easy to add some counter weight or adjust the spring. Would also be easier to lift and less risk of someone dropping it into the work or cutting too fast if set for lower weight.

Photos
Model Plate

Motor plate (note works for either 220 or 440). Model 1220D not sure when built. There is also a USN number plate, I think that is US Navy.

The switch is wired for 220 I'll assume motor is 220 also. Could check its not wired for 440 if

wanted.

Inside the switch box, the switch itself is chipped, but functions fine, I can't find the rating on the overcurrent. There is a table on the inside of the switch cover that converts some kind of part number to overcurrent, but I can't find the number anywhere.

This is the spring for limiting the downforce. Not stock, but stock one seemed problematic. This works pretty well I think. Could add something heavy from the open hole or move the spring out to reduce downforce.

From the back view of the left blade guide, note the repair weld, there needed to be a shim in the top here to line up the blade guide (and make the cuts straight).

The pulley that needs a puller. I have something in mind, I might draw it if I get a chance.

Top pulley needs to be pulled.

Here is the broken sheathing for the motor wire, needs to be fixed as it flexes for every cut