BLANCHARD VERTICAL SURFACE GRINDER SAFETY GUIDELINES

The hazards associated with the Blanchard Rotary Grinder are:

a). Loss of magnetism
b). Piece parts being thrown off of magnetic chuck
c). Lack of holding power for small parts
d). Exploding wheel
e). Pinch points at wheel dresser

1). Always keep safety in mind.

2). Wear eye protection and safety shoes at all times.

3). Do not wear neckties, wristwatches, rings, jewelry, etc. when operating the machine. Long sleeve shirts will be rolled above the elbows.

4). **The area around the machine should be free of oil or coolant spills (avoid a slippery floor) and as free as possible from obstructions. Keep the area clean at all times.**

5). **Do not use compressed air to blow chips from the spindle/table machine surfaces, cabinets, controls, or the floor around the machine.**

6). For normal lifting, use leg, not back, muscles. For heavy lifting, use a hoist.

7). When work platforms are used around the machine, they should be extremely sturdy, safe, and with anti-slip surfaces.

8). Wrenches, tools, and other miscellaneous equipment should be kept off the machine table as well as off all moving units of the machine.

9). Be mentally alert on the job, always sober, and never dulled by the influence of drugs, prescribed or otherwise.

10). Use the proper hand tools for each job.

11). Only qualified personnel should perform maintenance repair work.

12). Report any unsafe conditions to your supervisor.

13). Clean machine and area after each use.

14). Make sure grinding wheel guard is adjusted no higher than 1 inch from face of wheel.

15). Make sure table is moved back to the loading position before dressing the wheel.

16). Make sure diamond dresser is backed off before starting the grinding wheel.

17). Make sure front rolling and swinging shield are in place before rotating chuck or starting grinding wheel.

18). Make sure coolant wash off hose is stored properly before starting or operating.

19). THE MAGNETIC CHUCK: All of the steel in the chuck face between and close to the brass rings is magnetic when the switch is closed. Pieces of work should span at least one brass ring to be held securely. Narrow or thin pieces will hold best if placed in a radial direction, thus crossing as many brass rings as possible. Stops of some sort must be used too prevent work from sliding. The magnetism holds pieces down but does not prevent them sliding, except by friction between the piece and chuck face. Except for fairly large and heavy pieces the friction is not sufficient for safe holding and even on large pieces stops are a good safety factor. Make sure magnetic chuck is holding (do not just look at

chuck on light, test part by attempting to pull it off chuck) before starting chuck or grinding wheel.

20). Non-magnetic metals such as brass, aluminum, and magnesium, can be held for grinding if the parts are blocked to prevent side movement and shimmed if necessary. Sometimes blocking pieces having sharp pins or serrations acting like spurs will hold the pieces down and prevent them from spinning.

21). Make sure the power panel is shut off before changing grinding wheel shoes or replacing diamond dressing nib.

22). To true a wheel is to remove material from the surface of the wheel so that at grinding speed the grinding face will "run true". To dress a wheel is to remove the dull abrasive grains from the cutting face or to strip off a loaded or glazed face so that unused and sharp grain edges may cut upon the work. Check grinding wheel segments for damage before using.

23). When the efficiency of a grain becomes too low, that is, when too much power is required to make it remove metal, the bonding substance breaks down and the grain is released. However, it is difficult always to obtain the ideal wheel and when a hard wheel is being used (one that retains the grains after they become dull) or too fine a wheel (one that fills and prevents grains from entering work) it is necessary to supply artificial means of creating wear. This means takes the form of the wheel dresser and must be used at the discretion of the operator.

A work surface that is highly polished and appears to be divided into irregular patches means that the wheel needs dressing. A wheel making a highly polished surface is probably a little too hard (or too fine a grit) and should be watched carefully; if deep scratches appear in the polished surface the wheel should be

dressed. When using coarse grit wheels on broad surfaces a wheel that if too hard will stall the motor repeatedly; if reducing the feed does not prevent stalling or creates a highly polished surface, a freer cutting or softer wheel should be used.

24). Replace grinding segments (add filler blocks when applicable) when grinding segments are within 1/4" of segment chuck.

25). Stop grinding wheel and check rotation when removing swarf, changing or measuring parts and/or adjusting setups.

26). Check setup for clearance between workpiece, fixturing, and the machine parts before starting chuck.

27). Make sure coolant level is adequate before grinding

28). Clean the work table and inside the guard housing upon completion of your job.

Do's and Don'ts

DO get thoroughly familiar with the STOP button.

DO make sure that the work is held securely before engaging the grinding wheel with it.

DO make sure work parts are clear of the grinding wheel before starting the machine.

DO keep your hands away from the revolving items (cutters, spindles, work pieces, etc.)

DO keep the shirt sleeves rolled up above the elbows and wear close fitting shop aprons or coats.

DON'T under any circumstances attempt to operate any machine unless you are thoroughly familiar with it.

DON'T Move any lever unless you know exactly what is going to happen when it is moved.

DON'T play around with the lever of any machine.

DON'T go away, even for a moment, and leave the machine running.

DON'T try to operate the machine and engage fellow workers in conversation at the same time. Keep your mind on your work and let the other fellow do the same.

DON'T attempt to oil the machine while it is in operation.