5" G & L SAFETY GUIDELINES

The Horizontal Boring Mill is used for boring, drilling, face milling, tapping and similar operations. The principle hazards associated with the operation of Horizontal Boring Machines are:

- Tools or materials dropped on the feet and toes.
- Flying chips or scale from boring and facing operations and flying fragments from a broken tool.
- Contact with unguarded moving parts or with pinch points between a tool and the work.
- Work pieces thrown from the worktable if they are not secured properly.

1). Before starting the machine, the operator will make certain that conditions are such that conditions are such that neither he/she nor a fellow worker will be injured by the operation of the machine. Among the items to be checked are:

- All guards are in good condition and in place.
- Proper cutting tool, correctly sharpened, is used.
- Tool is securely fastened or wedged in place.
- Machine has been properly lubricated.
- Work has been properly secured in place, and bolts and other holding devices are such that they will not be caught or come into contact with moving parts of the machine.
- Table feeds, proper cutting speeds and all machine attachments are correctly set and in proper working order.
- Tools or other loose objects are not lying about where they may fall or be caught and thrown, with injury to the operator or others or with damage to the machine or to the work.

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

3). Do not wear neckties, wristwatches, rings, jewelry, gloves, 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 free 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 equipped 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). Keep machinery and area clean after every use.

14). Remove hand cranks before engaging rapid feed.

15). A safety harness is required when using ladder.

16). Do not stand on top step of ladder.

17). Be careful when climbing up and down table stairs.

18). Observe caution when climbing in and out of cage.

19). Be observant of overhead crane movement and positioning.

20). If a large workpiece must overhang table, use appropriate safety cones, markers or signs.

21). Machine should not be operated while other personnel are working on top of the worktable.

22). Use appropriate lifting devices for fixtures and workpiece.

23). Check setup for clearance between workpiece, fixturing and the machine parts.

24). Keep hands and feet inside protective cage when operating.

25). Use magnetic shields as required.

26). **Stop spindle and machine travel when removing chips, changing or measuring workpiece, fixturing or adjusting setups.**

27). In clamping the work in place on the table or bed, place the clamps and block them so they will have a full grip on the work and not spring it out of shape. When U-clamps are used, make sure that the fork end is on the work. Use adequately sized washers or plates to prevent spreading of the clamp forks.

28). Tighten bolts and nuts only with wrenches that fit properly; otherwise the wrench may slip off and the operator may be injured. Do not use pipe for wrench handle extension.

29). Before attempting to raise or lower the head, the operator is to make sure that the clamps on the column have been loosened.

30). When inserting the boring bar into the spindle head, make certain that the bar and the spindle hole are clean and free from nicks.

31). Before leaving the machine for any reason, the operator is to make sure the machine is stopped and the power shut off.

Do's and Don'ts

DO get thoroughly familiar with the STOP lever.

DO make sure that all tools and machine parts are clear of the cutter before starting the machine.

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

DO handle all cutters carefully to guard against injury to yourself and others.

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 attempt to remove chips from the machine with your bare hands or fingers. Use a brush or other suitable implement.

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.