ENGINE LATHE SAFETY GUIDELINES

Engine Lathes are used to shape metal pieces by rotating the metal piece against a cutting tool. They have a variety of uses, which include turning, boring, drilling, and thread cutting. The major hazards in the operation of an engine lathe are:

- Eye injuries from flying pieces of metal.
- Hand or foot injuries from dropping heavy objects such as chucks or stock.
- Catching clothing, shop rags, gloves, hands, or arms in the lathe parts or in the work.
- Cutting hands on chips or sharp edges of the work.
- Injuries from being struck by flying work or chips.
- Back injuries from failure to use work handling equipment for heavy chucks and stock.
- Skin disease from coolant or cutting oils.
- Reaching over or under rotating parts.

1). Always keep safety in mind. Do not wear neckties, wristwatches, rings, jewelry, etc., when operating the machine. Long sleeve shirts will be rolled above the elbows.

2). 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.

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

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

5). Illuminating lamps should be adjusted so light is not directed into operator's eyes.

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

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

8). Be mentally alert on the job, avoid performing hand operations in such a manner that inertia would propel hands or other body parts into chuck or tool bit.

9). Only qualified personnel should perform maintenance/repair work, using the proper hand tools for each job.

10). Report any unsafe conditions to your supervisor immediately.

11). Keep machinery clean.

12). Clean machine and area after each use.

13). Before starting motor make sure the clutch control levers are in their neutral position.

14). Make sure that the chuck, collet holder or faceplate is securely attached to the spindle.

15). Make sure that rotating parts clear all obstructions.

16). Make sure chuck wrench is removed from chuck before starting lathe. Never operate any motion of the machine with the wrench in the chuck. The chuck wrench should be removed from the chuck immediately after using it or a spring loaded chuck wrench should be used.

17). Make sure chuck shields are in place. Use additional chip shields as required. Never tamper with, alter, remove, or disable any component or safeguard on this machine.

18). Never operate this machine unless you are sure the safeguarding is adjusted properly and working correctly. If you are not sure call your supervisor.

19). Always use hand tools for retrieving material from the point of operation or any other hazardous part of the machine. Never reach through or into a danger area for any reason.

20). Use the proper PPE for the job.

21). <u>Stop to shift</u> - Speed changes should not be attempted with clutch engaged if gears don't engage, rock spindle by hand to align gear teeth.

22). Stop spindle before reversing feed rod.

23). Use a suitable lifting device to install work-holding device.

24). Keep work area and lathe free of excess debris.

25). Do not operate under restrictive medication and/or use of alcohol and/or drugs.

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 take precaution and keep your hands away from the revolving items (cutters, spindles and holding devices) when polishing use proper technique to avoid being pulled into work piece or being struck by the chuck or work holding device.

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

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.