

Machine Shop Practices

Introduction

The Machine shop contains multiple manual and automatic cutting, drilling, milling and bending machines. All have the potential to injure or cause death if used improperly. No machine should be used until you understand the basic operation and specific instructions for each machine.

General

Because each machine is unique you need to learn the basic functions and how to stop the machine in an emergency. Good practice is to keep the machine and area around it clean, remove unneeded tools and tooling that can fall into the process or cause a trip or otherwise interfere with safe operation. No distractions are important and use of portable electronics while using machine tools is prohibited, if you need to take a call, stop the machine and step away.

Precautions

For **all machines** avoid loose clothing and keep hair tied back. **Eye protection is required.** Understand the machine will cut, drill or mill yourself as it can the material you are working with, keep hands free until the machine stops. Many machines can pinch or trap you, be aware before you move parts or beds on machines. For automatic machines do not defeat interlocks.

For Lathe work, keep area near chuck clear, avoid tools or objects that can fall into the turning chuck. Always remove the chuck key after use, never leave it in the chuck and walk away. Use the chuck shield, portable or integrated. For automatic machines do not defeat interlocks.

For Mill work make certain your part is clamped down, think about milling paths and clamp interference. Make sure machine is off and stopped before any tool changes. For automatic machines do not defeat interlocks.

For Saws use good practice with feed and speed and clamp work well. For automatic machines do not defeat interlocks.

For Drilling work clamp parts well, think about where it will travel should it rotate if it slips. Wait for the chuck to stop to change bit. For automatic machines do not defeat interlocks.