Basic Metal Lathe Class

This is the basic class on the operation of the metal cutting lathe. The class will provide instructions on how to setup the metal cutting lathe to be able to operate it safely. A reference booklet will be handed out in the class. This will assist in being able to review and understand the operation and procedures of the metal cutting lathe. The cost of the class is $25 for members and $35 for non-members. Class size is limited to 6 students. If you initially sign-up and cannot attend, please let someone know ASAP that you will not be attending as there are ALWAYS stand-bys for the class.

For your convince is attached is an outline of the topics to be covered in the class.

**Metal Working Lathe Class Outline**

**Safety**

Do’s

Wear Safety Glasses

Have a dimensioned drawing of what you are making

Turn off power if you are going to be more than 5 ft. from lathe

Don’ts

Wear long sleeve clothing

Wear “flip – flop” shoes

Wear hanging/dangling jewelry

Have long string ties on aprons

No long hair, braids, beards

“Day Dreaming” - Keep your wits about you

Gorillas

**Lathe Parts**

Power Switch

Belt Adjustment Lever

Head Stock

Speed Adjustment

Spindle and Belt

Back Gear

Leather Belt

Bed

Chuck

On/Off

3. 4 and 6 Jaw

Quick Change Gear Box

Slide Gear

Shift Lever

Reverse Lever

Tumbler Lever

Index Plate

Thread Pitch

Tool Advancement Rate

Saddle

Three Position Feed Change Lever

Up Position - Feed saddle in Longitudinal Direction

Center Position – Used for Threading Operations

Down Position - Feed saddle in Transverse Direction

Half-Nut Lever – Engage/disengage threading function

Feed Friction Clutch

Tail Stock

Centers – Dead, Live and Drill Chuck

Keep Tail Stock hole filled to prevent chjps from entering

No over tightening - Remove with twist

Tools

Cutting Tools

Right, left, center cutting

Carbide

High Speed Steel

Threading

Cut-off

Knurling

Boring Bars

Through Holes

Blind Holes

Quick Change Tool Post

Position Tool Post on Compound Saddle

Align Post to Chuck

Align tool to stock to be cut

Taper Attachment

Bolt Down

Set taper – angle or inches per foot

Total Measured Angle

Large Dia. minus small Dia. divided by length of taper times 12

Steady Rests

Steady Rest

Follower Rest

**Clean-Up and Preventive Maintenance**

Chip and Swarf removal

Oil surfaces