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Parts of Lathe Machine and there Functions

Previously I posted an article about the [different part of Lathe Machine](#). In this article I will try to discuss all the functions of the parts in details. Click on the picture for a better view of the picture. The parts are indicated in the picture. Find out the parts and read about the functionality.

Functions of Lathe Machine Parts

Head Stock Assembly: Head stock is generally installed on the left side of the lathe machine. It is a housing for the drive pulleys and gears. The chuck is attached in this part of lathe. With the help of chuck the rotary motion is transferred to the work piece.

Clutch: Clutch controls the speed of the drive motor and provides a smooth vibration free motion.

Cross Slide: Cross Slide Provides the cutting motion of the tool. Cross Slide can be operated by hand or by the cross feed equipment. The alignment of the cross slide is perpendicular to the center of the lathe.

Chip Pan: It is situated at the lower part of the lathe machine. Its function is to collect the chips while machining. Thus these chips can be collected easily and can be removed.

Feed Rod: Feed rod is a power transmission mechanism which provides precise longitudinal movement of the carriage. For turning operation movement of the feed rod is mandatory. In some lathes feed may not be available and lead screw serves the purpose of the feed rod.

Lead Screw: Lead screw is found just below the feed rod. It also provides precise longitudinal movement to the carriage. It is engaged in thread cutting operation.

Bed: Bed is the base where all the lathe parts are mounted. It is generally a single piece cast part made of cast iron. Cast iron is used because of its self-lubricating property.

Ways: Ways are the guide rails in through which different parts of the lathe machine moves. It is used for the precise movement of the carriage and other mounted parts. Ways may be inner ways and outer ways.

Carriage: carriage holds the tools and provides movement of the tool in both cross and longitudinal directions. For taper turning and facing cross feed is used for conventional turning carriage provides longitudinal feed. Carriage contains some other parts. It runs through the outer ways.

Tailstock: tailstock is used for centering the job when a long job is tied on the chuck. It provides a good support to damp the vibration. It is generally mounted on the inner ways.

Cross Slide: Cross Slide is mounted on the carriage. Its function is to provide cross feed of the tool and its movement is perpendicular to the center of the lathe machine.

Compound Rest: Compound rest is set up over the cross slide and it can move in a circular path.

Tool Post: It is situated at the top of the carriage. Its function is to hold the tool or the tool holder.

Spindle Speed Selector: It enables operator to control the spindle speed.

Emergency Stop Button: This button is used for turning off the machine if there is risk involved while operating the machine.

These are the most common parts of lathe machines which are generally needed to operate the machine.

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