




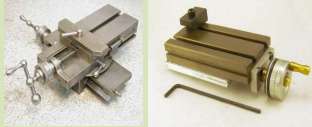


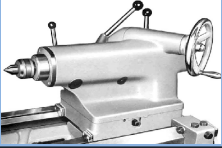

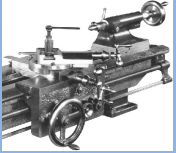





AUTONOMOUS MAINTENANCE PROCESS

Make		<div>DAILY</div>		<div>MONTHLY</div>	<div>ANNUALLY</div>
Model					
S/N					
Equip	Lathe Machine				
Sr. No.	Activity / Check List		Responsibility	Instructions	
1	Area of Operation		Operator	Machine and area around the machine is clean safety covers are in good condition	
2	Lubrication	Gear Box	Operator	Check the oil level in the Gear Box.	
3		Feed Box	Operator	Check the oil level in the Feed Box also check for any abnormalities	
4		Apron	Operator	Check the lubrication is working properly and also ensure the level of oil	
5	Jaw Chuck		Operator	Thoroughly clean the chucks	
6	Way Tool Post		Operator	Check the movement of tool post and clean the tool post area	
7	Tail stock Quill		Operator	Check the axial movement of the tail stock and clean the taper area	
8	Head stock		Operator	Check lubrication is working correctly. Check if any abnormal noises.	

9	Top Slide & Cross Slide		Operator	Check rapid transverse movement, check all switches/motors are working properly. Check for any backlash
10	Main Motor Drive		Operator	Check if the drive belts are not loose or broken. Run the motor and listen for any abnormal noises.
11	Air Unit		Operator	Check the pressure against the recommended pressure
12	Electrical Connections		Operator	Check all electrical connections and lightings.
13	Coolant & Coolant Tank		Operator	Change the coolant and clean the tank
14	Belt		Technician	Check the following : Belt tensioning, Health of the belt , Condition of the sheaves
15	Main Motor Drive		Technician	Condition of Spindle. Axial speed check. Condition of pulley grooves. Verify tension of drive belts. Run the spindle and check for any noises
16	Head stock		Technician	Check condition of gears. Shift forks, smoothness of the gear shifts. Check the condition of the clutches.
17	Lubrication		Technician	Check all lubrication points. Make sure all oil jets are positioned correctly
18	Tail stock		Technician	Check for any damage to the taper surfaces. Make sure that the center or sleeves are seating correctly.
19	Feed Box		Technician	Check condition of the gears and check shift mechanism. Check for any oil leaks. Verify if there is any backlash. Check oil metering valves
20	Saddle & Cross Slide		Technician	Check all wipers. Make sure they are functioning as required. Check for any excessive play between saddle and bed ways. Check the cross feed for smooth operation and excessive wear. Check lubrication is working correctly.

21	Apron		Technician	Check feed engagement levers. Check the condition of the half nuts. Check oil pump operation and fluid levels. Check feed shaft keys
22	Compound slide & Tool Post		Technician	Check top slide screw and nut. Check for excessive moment on Gibbs. Check for smooth operation. Make sure tool post is locking correctly.
23	General		Technician	Check all machined surfaces for excessive wear or damage. Check all electrical points and connectors. Check all safety guards are in positioned
24	Feed Drive		Maintenance	Check condition of gears and shift forks. Check for any oil leaks. Trail run the machine in all feed rates.
25	Hydraulic Unit		Maintenance	Check oil pump is functioning correctly. Clean the suction strainer, replace if required. Drain hydraulic reservoir and refill with new oil. Replace oil filter.
26	Apron and compound slide		Maintenance	Check feed engagement levers. Check the condition of lead screw nut. Verify free and smooth movement of saddle and cross slide. Check wipers are working correctly. Verify lubrication is working correctly.
27	Bed and Fittings		Maintenance	Visually inspect the bed ways for deep scours or mechanical damage. Check carriage and cross slide for wear and damage
28	Lead Screw and feed unit		Maintenance	Check for any damage to feed shaft, check keyway and key for any wear. Check for any axial movement on lead screw and half nuts. Verify lubrication is working correctly
29	Electrical cabinets		Maintenance	Check all terminals are tight. Check contactors and relays. Check for discolouration, this is a sign of future problems. Check machine lights and functioning correctly.
30	Foundation		Maintenance	Check machine is level and foundation bolts are all correctly tightenend.
31	General		Maintenance	Check all safety guards are fitted and function correctly. Check coolant pump works and that there are no coolant leaks in the line.