TEAM 271 MACHINE MAINTENANCE

Precision Matthews PM-1130V Lathe

Lathe no. _____

Revised November 5, 2026

Before any maintenance, press the E-stop and switch off the power strip the lathe plugs into. Remove chips before lubricating. Eye protection on. No gloves near a turning spindle.

	Task	Notes	Date Last Serviced	Serviced By	Next Service Date
Each day used	Before power: wrench out of the chuck, feed levers neutral, locks off, speed knob down.		No date needed		
	Check the gearbox and apron sight glasses; top up if low.	75W80 gear oil, to the red dot (halfway), no higher.			
	Clear chips with a vacuum and brushes; empty the chip tray.	No compressed air: it forces debris into the ways.			
	Wipe the ways, leadscrew and feed shaft with a clean, lint-free cloth.	Keep oil and chips off any DRO scale.			
	Inspect the chuck and jaws for chips and damage; clean if needed.	Rag and light oil, spindle stopped.			
	Examine cutting tools for chips or dull cutting edges.				
	Brush way oil onto the bed ways, dovetails and leadscrew.	ISO 68 way oil (Mobil Vactra No. 2), short-bristle brush. Repeat every few hours of running.			
	Oil all ball oilers, including the 2 behind the gear cover. Check each ball is free first.	ISO 68 way oil (Mobil Vactra No. 2), pump can. Repeat every few hours of running.			
Weekly	Test the E-stop, chuck guard and gear cover: each must stop the motor.	Power on, slow speed, chuck clear. If one fails, tag the machine out and tell a mentor.			
	Check the three camlocks are tight; also at every chuck mount.	Markers between the two Vees.			
	Wipe down the exterior with a clean rag.				
Monthly	Clean dust from outside the electrical box and motor vents; check the belt, cord, plug and power strip.	Never open the box. Belt: 1/4 in. deflection. No extension cord.			
	Check the cross-slide, compound and saddle gibs (mentor).	Loosen one screw before tightening the other. Too tight wears the ways; too loose chatters.			
	Chuck off (mentor): clean and inspect the spindle nose, MT5 taper and chuck mount.	Bed board down, support the chuck. Son of ColletCare on a swab, spindle stopped.			
	Clean and oil the tailstock socket and quill, rests, tool post, spare chucks and collets.	LPS 3 on stored parts only. Not on ways, screws, tapers or seats.			
Semi-annually	Drain and refill the gearbox and apron oil (mentor).	75W80 gear oil. Warm it, then E-stop and power strip off. Add 1-2 oz, check leaks, fill to the red dot: about 14 oz, 2 oz.			
	Check and align the tailstock (mentor); also after any taper job.	Offset must be zero; do not trust the scale. Manual page 23.			
	Clean and lightly grease the chuck scroll (mentor).	Pull the jaws; refit them in number order.			
Annually	Grease the external change gears; also after every gear change.	Light general-purpose grease, NLGI No. 2.			
	Check bed level, cross-slide backlash and spindle end play (mentor).	Spindle bearings need no grease.			
	Summer shutdown: clean, oil all points, coat bare metal, relax the belt.	Turn it over by hand monthly.			

Problems found (dry-erase): tag the machine out and tell a mentor.

Procedures: PM-1130V manual V1.1. Only the before-use oil check and the every-few-hours oiling are manual intervals; the others are the team's. A new lathe gets its first drain and refill after 20 hours.