

SSOW 39: SAFE USE OF COLCHESTER LATHE

Issue Number: 01

Date of Issue: 29/06/2026

Based on: RA99

PURPOSE

To ensure the safe setup, operation, cleaning, and maintenance of the lathe machine, preventing entanglement, ejection, cuts, burns, dermatitis, slips, and fire risks.

PPE REQUIREMENTS

For this activity, the following PPE must be worn



High-vis Vest / Jacket
(EN ISO 20471)



Safety Boots (S3)
(EN ISO 20345:2011)



Safety Gloves – Nitrile (BS EN 374)



Safety Glasses or Goggles (EN 166)

or



Face Visor (EN 166)



Tight Fitting Protective Clothing (BS EN ISO 13688)

TRAINING REQUIREMENTS

- Only trained and authorised personnel may operate or maintain the lathe.
- Operators must be briefed on RA99 and this SSOW before use.

EQUIPMENT REQUIREMENTS

- Lathe machine fitted with functional guards and interlocks
- Correct chuck type for the workpiece
- Spill kit
- Coolant (Hysol MB 50)
- Designated swarf removal tools
- Fire extinguishers

SAFE SYSTEM OF WORK

Pre-Use Checks

- Complete pre-use visual inspection of guards, interlocks, chuck, belts, tool post, coolant system, and emergency stop.
- Ensure lighting is adequate and access to emergency stop is unobstructed.
- Confirm work area is clear of swarf, rags, tools, and offcuts.
- Report defects immediately and isolate the machine until repairs have been carried out.

Machine Setup & Securing Workpiece

- Only authorised operators may set up the machine.
- Clothing must be close-fitting; jewellery must be removed.
- Never wear gloves near rotating parts.
- Clamp workpieces securely with minimal protrusion.
- Remove chuck keys immediately after tightening.
- Stand clear of the rotational plane during startup.
- Use mechanical lifting aids for heavy chucks or components (hoist).

Cutting Operations (Turning, Facing, Threading, Boring)

- Follow manufacturer speed and feed charts.
- Do not adjust speed selectors while spindle is rotating.
- Keep hands clear of the tool post.
- Stop the machine fully before making adjustments.

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- Keep guards closed during operation.
- Ensure the emergency stop is always accessible.
- Maintain coolant flow to prevent sparks and overheating.
- Keep flammable materials away from the work area.

Use of Emery Cloth / Abrasive Tools

- Loose or hand-held emery cloth must NOT be used on rotating workpieces.
- Fixed abrasive tools or lathe-mounted holders should be used instead.
- If finishing cannot be done safely, stop the spindle and apply abrasive with the workpiece stationary.

Coolant / Metalworking Fluids

- COSHH assessment must be briefed and followed.
- Avoid direct skin contact; report early signs of dermatitis.
- Wear nitrile gloves when handling concentrate or contaminated materials.
- Maintain coolant concentration within specification.
- Maintain sump hygiene (skimming, biocide dosing, scheduled changes).
- Keep guards closed to reduce mist exposure.
- Clean spills promptly using spill kits provided.
- Dispose of oily rags in the designated hazardous waste containers.

Swarf Removal & Disposal

- Remove swarf only using designated tools - never by hand.
- Allow hot swarf to cool before handling.
- Break down long or stringy swarf using tools to reduce entanglement risk.
- Drain coolant-contaminated swarf before disposal.
- Place swarf in designated metal waste bins.
- Ensure bins are emptied regularly by approved waste contractors.

Housekeeping / Workshop Environment

- Keep floor area clear.
- Clean coolant spills immediately using absorbent materials.
- Position coolant hoses so that these do not create trip hazards.
- Maintain lighting levels suitable for safe operation.

Maintenance / Cleaning

- Always follow the manufacturer's instructions.
- Only competent and authorised personnel may carry out maintenance work.
- Fully isolate the lathe before cleaning, clearing jammed swarf, or adjusting belts.
- Use the emergency stop during cleaning if the machine starts unexpectedly.
- Never bypass interlocks.
- Ensure PAT and fixed-wire inspections are completed and recorded.

Prohibited Actions

- Wearing gloves near rotating parts
- Using loose emery cloth on rotating workpieces
- Bypassing guards or interlocks
- Adjusting speed while spindle is rotating
- Removing swarf by hand
- Leaving swarf or oily rags on floors or benches
- Operating with known defects

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SSOW 39: SAFE USE OF COLCHESTER LATHE

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Emergency Actions

- Activate the emergency stop immediately.
- Stand clear of rotating components.
- Use the workshop fire extinguishers in case of fire.
- Follow fire and evacuation procedures as instructed.
- Clean spills using spill kits and dispose of contaminated materials in accordance with the waste management procedure.
- Report injuries and incidents to line Manager/Supervisor and HSQE.

IDENTIFIED RISKS

The SSOW above has been compiled after identifying the following risks from this activity

- Entanglement with rotating chuck, jaws, spindle, or workpiece
- Ejection of workpiece due to incorrect clamping or speed selection
- Cuts, puncture wounds, burns, and tool breakage
- Noise exposure
- Fire risk when machining certain materials
- Dermatitis and mist inhalation from coolant
- Infection from cuts
- Slips from coolant spills
- Trips from swarf, tools, or offcuts
- Environmental contamination from incorrect swarf disposal
- Unexpected start-up and electric shock during maintenance

FOR MORE INFORMATION, PLEASE REFER TO RISK ASSESSMENTS RA99.

Owner: Head of HSQE	Version: 2	LF266
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