



















Safe Work Procedure

Tools, Machinery & Equipment

Program/Services All TRU departments including Trades, Facilities, Utilities, Fine Arts, Grounds, Warehouse Operations, and Support Services.		Document ID RSS 18.20.4	Department: Risk and Safety Services
Personal Protective Equipment or Devices Used CSA-approved safety glasses Work gloves appropriate to the task CSA-approved protective footwear Hearing protection where noise may exceed 85 dB Close-fitting clothing; tie back long hair Additional PPE as identified by hazard assessment or SDS	Training Requirements Equipment-specific training prior to use Instruction in hazard recognition and safe operation Verification of Understanding completed and documented Refresher training after incidents or changes in equipment	Applicable Documents Manufacturer operating manuals TRU Working Alone Procedure Relevant SDS (for chemicals, coatings, resins)	Creation Date: 04 MAR 2014
			Effective Date: 21 JAN 2026
			Next Review: JAN 2027
			Revision no.: 4 Reviewer: Safety Technician

HAZARD IDENTIFICATION — VISUAL SUMMARY

WORK AT HEIGHT	PINCH POINTS	HIGH SOUND LEVELS	FOOT INJURY
			
Maintain three-point contact when climbing or descending. Wear fall protection when required.	Isolate all energy sources before maintenance or clearing jams. Keep hands and body clear of moving or rotating components.	Wear hearing protection when noise may exceed 85 dB. Ensure hearing protection fits properly before starting work.	Wear CSA-approved protective footwear at all times in shop areas.
CUTS / PUNCTURES	IMPACT INJURIES	FLYING PARTICLES	STRAINS / MSI
			
Wear appropriate gloves for the task. Keep hands clear of sharp edges and cutting tools.	Wear appropriate PPE such as CSA-approved footwear and impact-rated eye or body protection. Maintain safe positioning and control of tools and materials to avoid being struck.	Wear CSA-approved safety glasses or a face shield. Use guards or barriers when needed during grinding or cutting.	Use proper lifting technique and ergonomics. Use mechanical aids for heavy or awkward loads.
ENTANGLEMENT HAZARD (CLOTHING/HAIR)	EXPOSURE Chemical / dust / fume	STORED ENERGY (GRAVITY / SPRINGS / HYDRAULIC / PNEUMATIC / ELECTRICAL)	ELECTRICAL HAZARD
			
Wear close-fitting clothing. Keep clear of rotating or moving components. Tie back or contain long hair.	Identify chemicals before use or transport. Review the SDS and use appropriate PPE and ventilation.	Release or isolate all forms of stored energy before servicing. Apply full lockout procedures and verify zero energy before beginning work.	Do not work on energized electrical equipment. Follow lockout/tagout procedures.
HOT SURFACES / THERMAL BURNS	SLIPS / TRIPS	PRESSURIZED SYSTEMS (HYDRAULIC / PNEUMATIC)	CRUSHING HAZARD (GENERAL)
			
Avoid contact with heated equipment or surfaces; wear heat-resistant gloves when needed.	Keep floors clean and dry; remove oil, grease, and debris.	Release stored pressure before servicing; inspect fittings and hoses.	Maintain a safe distance from moving equipment or falling objects.

PURPOSE

To establish safe practices for the use, inspection, storage, and maintenance of tools, machinery, and equipment across TRU operations. This SWP ensures hazards are identified, risks are controlled, and applicable WorkSafeBC Occupational Health and Safety Regulation (OHSR) requirements are followed.

PERSONAL PROTECTIVE EQUIPMENT

- CSA-approved safety glasses
- Work gloves suited to the task
- CSA-approved protective footwear
- Hearing protection where noise exceeds 85 dB
- Close-fitting clothing; tie back or secure long hair
- Additional PPE as required by SDS or hazard assessment
- Appropriate respiratory protection if exposed to air contaminants that exceed OHSR 8.32 limits

TRAINING REQUIREMENTS

Training is required prior to using any tool, machine, or equipment.

Training must include:

- Safe operation based on manufacturer instructions
- Hazard identification and control measures
- Proper PPE use
- Verification of Understanding

PRE-USE REQUIREMENTS

- Inspect tools, machinery, and equipment before each use.
- Confirm all guards, shields, and safety devices are in place and functional.
- Check cords, hoses, plugs, fittings, blades, bits, and attachments for damage.
- Remove defective equipment from service and tag "Out of Service."
- Ensure the work area is clean, dry, and well lit.
- Review SDS where chemicals, coatings, resins, or compressed gases are used.

OPERATING RULES

General

- Use tools and equipment only for their intended purpose.
- Follow manufacturer instructions at all times.
- Maintain stable footing and clear visibility.
- Keep hands and clothing away from moving or rotating components.
- Do not bypass guards or safety devices.

Powered Tools & Machinery

- Ensure control switches are reachable and protected against accidental activation.
- Secure workpieces where required.
- Use two-hand control systems when applicable.

Compressed Gas Equipment

- Secure cylinders upright and install caps when not in use.
- Store cylinders away from ignition or heat sources.

SAFETY RULES

- Apply lockout before performing adjustments, maintenance, or clearing jams.
- Do not wear loose clothing or jewelry around moving parts.
- Keep clear of suspended loads and moving machinery.
- Use proper lifting techniques and mechanical aids to reduce strain.
- Ensure adequate ventilation when using paints, coatings, resins, or welding processes.
- Do not operate tools or equipment while impaired.

HOUSEKEEPING

- Maintain clean, dry floors free of oil, grease, and debris.
- Store tools properly after use.
- Keep cords and hoses organized to prevent trip hazards.
- Replace guards and access panels after servicing.

HANDLING PROCEDURES

Step 1 – Preparation

Review instructions, inspect the equipment, and wear required PPE.

Step 2 – Setup

Secure materials and confirm guards and attachments are correctly installed.

Step 3 – Operation

Maintain control, keep hands away from hazard zones, and stop use if unusual noise or vibration occurs.

Step 4 – Shutdown

Turn equipment off, wait for movement to stop, disconnect power if required, and store safely.

HAZARD CONTROLS — DETAILED TABLE

Hazard	Control Measure
Compressed Gases	Secure cylinders upright; cap when not in use; keep away from heat sources; do not drop cylinders.
Exposure (Chemical / Dust / Fume)	Review SDS; wear required PPE (respirator, gloves, goggles); use local or general ventilation where appropriate.
Crushing Hazards	Maintain a safe distance from moving equipment; avoid standing between fixed and moving objects; keep body clear of pinch points.
Cuts / Punctures	Wear appropriate gloves; use proper cutting technique; keep hands clear of sharp edges.
Electrical	Do not work on energized equipment; follow lockout/tagout procedures; use insulated tools where required.
Entanglement	Wear close-fitting clothing; tie back long hair; keep hands and body clear of rotating/moving parts.
Flying Particles	Wear safety glasses or face shields; use guards or barriers during cutting, grinding, or chiseling.
Foot Injury	Wear CSA-approved protective footwear appropriate to the task; avoid walking under suspended loads.
High Sound Levels	Wear hearing protection when noise exceeds 85 dB; use posted warnings; maintain distance from noise sources.
Impact Injuries	Wear CSA-approved footwear; maintain grip on tools; keep clear of moving materials/equipment.
Pinch Points	Keep hands clear of moving components; apply lockout before maintenance; identify pinch hazard zones.
Pressurized Systems	Release pressure prior to servicing; inspect hoses
Slips / Trips	Maintain clean work areas; remove oil, grease, and debris promptly; use appropriate footwear.
Stored Energy (Gravity / Springs / Hydraulic / Pneumatic / Electrical)	Release or isolate all forms of stored energy before servicing; apply full lockout and verify zero energy.
Strains / Musculoskeletal Injuries (MSI)	Use correct lifting technique; avoid overexertion; use mechanical aids when possible.

RECORDS/VERIFICATION OF UNDERSTANDING

- Training records, including Verification of Understanding, must be retained by the supervising department.
- Equipment inspection and maintenance records must be kept in accordance with TRU retention requirements.
- Records must be available to RSS upon request.

WORKING ALONE

Students are strictly prohibited from working alone in any lab or shop. If an employee anticipates isolation during work activities, a Working Alone assessment and check-in procedure must be implemented per TRU policy.

ANNUAL REVIEW

Risk and Safety Services (RSS) will complete a review of this Safe Work Procedure annually to ensure it remains current and effective. The Joint Occupational Health and Safety Committee (JOHSC) may be consulted during this review.

A review will also occur if:

- Regulatory requirements change.
- The procedure is reported to be ineffective.
- An incident occurs involving operation.

APPLICABLE OCCUPATIONAL HEALTH AND SAFETY REGULATION (OHSR)

SWP Section	Requirement Met	WorkSafeBC Regulation Reference
Training Requirements	Worker instruction, orientation, and supervision to ensure competency	OHSR 3.23–3.24
Records	Documentation and retention of training and instruction records	OHSR 3.24–3.25
Hazard Identification & Control	Identify hazards; eliminate or control risks; maintain safe workplace conditions	OHSR 4.1, 4.2–4.13
Pre-Operational Safety Checks	Equipment inspection; safe condition verification; correct tool selection; guards confirmed in place before use	OHSR 4.3–4.5; 12.26–12.28
Compressed Gases	Safe handling, securing, storage, and inspection of gas cylinders	OHSR 5.36–5.47
Hearing Protection / Noise Exposure	Noise exposure controls and hearing protection where levels exceed 85 dB	OHSR 7.2–7.6
Personal Protective Equipment (PPE)	PPE selection, fit, use, care, and maintenance; eye and face protection	OHSR 8.2; 8.3; 8.10–8.11; 8.14–8.17, OHSR 8.32-8.45
Operating Rules, Guarding & Machine Safety	Machine guarding; preventing access to moving parts; maintaining safeguards; safe operation	OHSR 12.1–12.11; 12.23–12.25

SUMMARY OF CHANGES

Rev#	Date	Change	Issued By
1	03 Apr 2014	NEW	OHS Officer
2	17 Apr 2019	Review, Revisions and New Format	Safety Officer
3	23 Aug 2024	RSS update	Safety Advisor
4	21 JAN 2026	Full rewrite to align with TRU SWP template; updated PPE, hazards, control measures, OHSR references, TRU-wide applicability, and section structure.	Safety Technician