UNC CHARLOTTE
Department of Engineering Technology

LABORATORY SAFETY ANALYSIS

OPERATING A FINGER BRAKE

Location: Smith 128A/B

Required Training: Brakes are designed and intended for use by properly trained and experienced operators. If you are not familiar with the proper and safe operation of a brake, do not use until proper training and knowledge have been obtained

Required Personal Protective Equipment (PPE): Safety glasses, gloves (when handling material), closed toed shoes

Reference Materials: Manufacturer's safety rules and operating instructions

PHOTOS	TASK	HAZARDS	CONTROLS
	Wear clear safety glasses with side shields.	Flying debris	• Students are required to provide their own safety glasses. • See laboratory instructor or laboratory manager if you do not have safety glasses before proceeding to use equipment.
	Inspect safety glasses for cracks, scratches or other damage. Ensure the ANSI standard Z87.1 is stamped into the side of glasses. If necessary inspect dust mask or face mask.	Flying debris	• If defects are found report this to your lab instructor before using.
	Put on PPE	Flying debris and sharp materials	• Always wear safety glasses. • Always wear gloves when handling sheet metal as edges can be sharp
	Inspect work area, walk around shear looking for debris and ensure proper lighting.	Slips, trips & falls	• Keep the work area around the shear free from scraps, dust, oil and grease.
	Inspect brake, ensure the brake is stable (not rocking) on the floor.	Tip over, sliding, walking, struck by injuries	• Report any defect to your laboratory instructor or laboratory manager and ensure corrective action before operating. • Replace any warning labels that have become obscured or removed. • Insure that the hold down levers and bending arm are functional.

	Position material in brake.	Lacerations, struck by injuries, pinch points	• Wear gloves when handling stock. • Once positioned, insure that both hold down levers are engaged to hold the work piece firmly. • Keep hands away from the clamping fingers while actuating both levers. • Ask for assistance when handling large or heavy pieces of sheet metal. • Be aware of the presence of others in the area when moving larger pieces of stock
	Actuate brake arm	Slips, trips, struck by injuries, pinch points	• Do not exceed the capacity of the brake. • Insure that others are clear of the brake arm when lifting it to bend the material. • Keep hands away from brake arm pivot points to avoid pinches or potential cuts. • Maintain your balance when pulling up on the brake arm. • Lower the arm slowly after bending the material; do not allow it to fall under its own weight.
	Remove material	Lacerations, struck by injuries	• Insure that the hold down levers, are disengaged before removing work piece. • Be aware of others in the area before removing larger pieces of work from the brake. • Once work piece is removed, re-engage hold down fingers using levers to avoid injury to others.
	Clean work area and return all PPE to a clean storage area.	Injury	• Ensure adequate housekeeping measures to prevent accidents.

For more information about this LSA, contact the *Department of Engineering Technology* at UNC Charlotte (704) 687-2305
Please visit our website at: http://www.et.uncc.edu\

The development of Laboratory Safety Analyses is a very effective means of helping reduce incidents, accidents, and injuries in the workplace. It is an excellent tool to use for training purposes and can also be used to investigate "near misses" and accidents.