



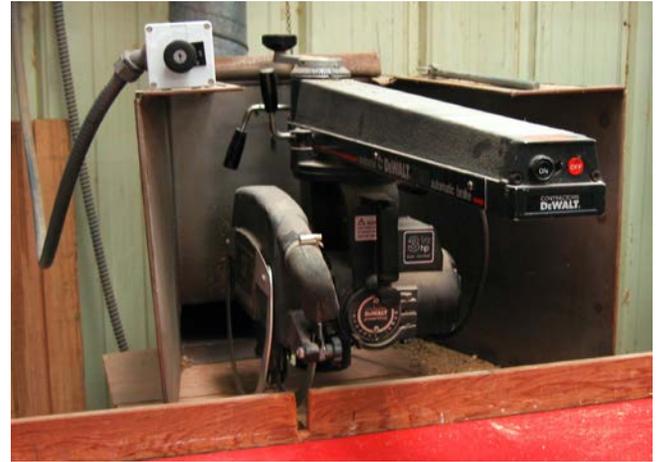
Naval Support Activity Monterey / Naval Postgraduate School



SAFETY GRAM RADIAL ARM SAW

Background: The radial arm saw consists of a motor drive and carriage that move along a mounting arm suspended over the cutting table. A circular saw blade, typically 10 inches in diameter, is secured to the shaft of the motor drive. In cross-cut operations the user pulls the carriage towards him/her, and the saw blade – extending from above the work is slightly below bench level – saws through the wood.

In machine operations, hazardous situations frequently result from improper or inadequate guarding at the point of operation. It is impossible to design totally safe machinery and its unreasonable to expect operators to be alert every moment of the working day. Operators rarely seek dangerous situations or try to commit hazardous acts. Mishaps occur, however, because of lack of judgment, inattention or recklessness.



The bottom line is that accidents result from a combination of a hazardous machine condition and a careless human action.

Purpose: The purpose of this Safety Gram is to promote radial arm saw mishap prevention efforts through the identification of key regulatory compliance points and established Standard Operating Procedures.

Scope & Applicability: Radial Arm Saw regulatory requirements and SOP's are applicable to all faculty, staff, and students, temporary/term, contract, and permanent employees as well as visitors who may be engaged in operating radial arm saws located within NSAM/NPS labs, machine shops and other facilities.

Radial Arm Saw Regulations (29 CFR 1910):

1. The upper hood shall completely enclose the upper portion of the blade down to a point that will include the end of the saw arbor. The upper hood shall be constructed in such a manner and of such material that it will protect the operator from flying splinters, broken saw teeth, etc., and will deflect saw dust away from the operator. The sides of the lower exposed portion of the blade shall be guarded to the full diameter of the blade as a device that will automatically adjust itself to the thickness of the stock and remain in contact with stock being cut to give maximum protection possible for the operation being performed.
2. Each radial saw used for ripping shall be provided with nonkick-back fingers or dogs located on both sides of the saw so as to oppose the thrust or tendency of the saw to pick up the material or to throw it back toward the operator. They shall be designed to provide adequate holding power for all the thicknesses of material being cut.



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3. An adjustable stop shall be provided to prevent the forward travel of the blade beyond the position necessary to complete the cut in repetitive operations.
4. Installation shall be in such a manner that the front end of the unit will be slightly higher than the rear, so as to cause the cutting head to return gently to the starting position when released by the operator.



5. Ripping and ploughing shall be against the direction in which the saw turns. The direction of the saw rotation shall be conspicuously marked on the hood. In addition, a permanent label not less than 1-1/2 inches by 3/4 inch shall be affixed to the rear of the guard at approximately the level of the arbor, reading as follows: **“Danger: Do Not Rip or Plough From This End”**.
6. On applications where injury to the operator might result if motors were to restart after power failures, provision shall be made to prevent

machines from automatically restarting upon restoration of power.

7. Machines designed for a fixed location shall be securely anchored to prevent walking or moving.

Standard Operating Procedures:

- a. Only authorized personnel shall operate radial arm saws.
- b. All areas around the radial arm saw shall be kept clean of obstructions and in a non-slippery condition.
- c. Do not place loose tools or parts on top of equipment.
- d. Appropriate personal protective equipment (hearing, face, eye protection) shall be worn when operating a radial arm saw.
- e. Do not wear loose clothing, glove or jewelry when operating a radial arm saw.
- f. Check guard and guides for tightness and proper operation.
- g. Check blade for sharpness, cracks & tightness.
- h. Do not adjust or remove material in the process of being cut. Turn power switch off and wait for blade to come to a complete stop.
- i. When cutting material the stock must always lie flat on the table and be held firmly against the guard fence.
- j. Keep hands and fingers clear of cutting blade.
- k. Do not stand directly behind material being ripped, stand to the left or right of the path of the saw.
- l. Make certain that all adjustment locks are securely tightened before starting the cut.
- m. Ensure the saw blade comes to a complete stop before leaving the machine.
- n. The work area and machine shall be cleaned after each use.