SAN FRANCISCO FIRE DEPARTMENT

DIVISION OF TRAINING

TRAINING BULLETIN

TRAINING BULLETIN 93-2

SAFETY CONSIDERATIONS REGARDING THE XL-98 MULTIPURPOSE SAW

SAN FRANCISCO FIRE DEPARTMENT
TRAINING BULLETIN #93-2

SAFETY CONSIDERATIONS REGARDING THE XL- 98 MULITIPURPOSE SAW

I. Introduction:

The XL-98 Multipurpose Saw when equipped with composite/abrasive wheels poses increased risk to the operator and other personnel due to the comparatively fragile nature of the blades.

Greater caution should be exercised while using these blades due to their tendency to ***fracture explosively*** if improperly mounted or operated.

II. Safety Criteria

Prior to using the XL-98 saw, all members should be aware of and comply with the following criteria:

Department issue safety gloves shall be worn at all times while operating the XL-98 saw.

Goggles/eye protection are to in place prior to operating the XL-98. This requirement pertains to ***all personnel*** in the near vicinity of the cutting operation.

There shall be a minimum 25 foot clearance area to the sides of cutting operations at all times. No personnel shall be allowed to the rear of, or immediately in front of the cutting operation.

III. Inspection

Inspect all composite blades for cracks and nicks which may cause the wheel to fail.

Blades should be "sounded" prior to mounting on the saw. This is done by hanging the wheel vertically by the arbor hole and rapping lightly with a screwdriver. Thin organic bond wheels will produce a low drumming tone if it is physically sound. If the wheel produces a "dead" or "flat" sound, the wheel may be cracked, and must be removed from service, marked as defective, and replaced by the Bureau of Equipment.

All cutting wheels (composite, wood, carbide, diamond) must be mounted using "blotters" (paper gasket) on both sides of the wheel.

Do not tighten the mounting nut excessively.

Prior to cutting operations, run the saw for one minute. This will balance the cutting wheel prior to use.

Ensure the blade being used is appropriate for the material on which the cutting is being performed. Composite wheels should be marked appropriately with night visible markings as to the type of material the wheel is compatible with.

Prior to any cutting operation, remove the carrying strap from the saw and secure it.

Always operate the saw at full RPMs. If motor slows, pull back from cut, regain full speed and resume operations.

While approaching the site of operations, and when leaving, the blade must be stopped to ensure safety of surrounding personnel.

COMPOSITE BLADES USED ON THE XL-98 SAW MUST BE RATED AT A MINIMUM OF 6000 RPM - 2 PLY CONSTRUCTION - NEVER USE A WHEEL OF LESSER QUALITY OR RPM RATING. Blades will be issued only by the Bureau of Equipment for use with the XL-98 saw (RPM and Ply rating are found on the wheel).

While using the XL-98 saw with any blade, but especially the composite blades, care must be use to maintain a straight cut avoiding side pressure as much as possible.

Composite wheels can be stored on edge if the bottom and sides of the container are well padded, and free from moisture and oil. Insure the blades stored in this manner are stored securely so as to avoid leaning and possible warping due to temperature extremes.

When using the XL-98 on rooftops during ventilation operations, the following procedures are recommended:

⇒ The Multipurpose saw is brought to the roof of the fire building and started immediately (Run for one-minute prior to cut). Officer indicates location where ventilation is to be performed.

⇒ On tar and gravel roofs, clear loose gravel away exposing the top layer of tar. This will prevent unnecessary damage to the saw blade and minimize gravel projectile hazard ***(eye protection for all personnel in the vicinity of the cutting operation is mandatory)***.

⇒ Prior to cutting, establish hazard area. No personnel allowed with ***25 feet*** if possible, and no personnel to ***front*** or ***rear*** of the saw.

⇒ Make a 4 x 4 square cut in the tar roofing material by pulling the multipurpose saw towards the operator while he/she moves backwards carefully. Pulling the saw backwards helps to prevent the saw blade from digging into the tar and binding. The objective is to score the tar roofing material so that it can be pulled back exposing the wooden sheathing. Depending upon the thickness of the tar, this may take several cuts.

⇒ Do not attempt to cut through the wood sheathing while removing the tar roofing material. This will allow smoke and hot gases to escape making the cutting process more difficult. The heat from the fire may cause the tar to melt prior to removal, which may cause the blade to bind and cut less effectively. If the saw blade starts to bind, immediately remove it from the cut, bring the saw to full RPMs, and resume cutting operations making a shallower cut.

⇒ Upon exposing the roof sheathing, use the saw to cut through the wood on the inside of the two farthest rafters (inside nail lines). Remove roof sheathing using axes or ceiling hooks, one firefighter at each joist.

⇒ Punch through the ceiling with a ceiling hook to complete ventilation process.