SOUTH PORTLAND FIRE DEPARTMENT
STANDARD OPERATING GUIDELINES

SOG #:	6.319	**Effective Date:**	1/6/2010
Title:	Safe Use of Gasoline Powered Saws	**# of pages:**	4
Category:	Safety	**Classification:**	Red

1. PURPOSE: To outline procedures to be followed when operating gasoline powered saws.

2. PROCEDURES: The inherent nature of firefighting and rescue operations increases the risk of accident and injury when operating power saws. Accident potential is high due to adverse conditions and extreme locations. A slight miscalculation or sudden unplanned move can result in a serious accident. Performance skill, coupled with the use of common sense and the strict adherence to safety procedures, can prevent accidents.

Personal Protective Equipment

Full and appropriate personal protective equipment shall be worn by members operating powers saws and those in close proximity to the operation of power saws. Under typical emergency conditions, full structural firefighting turnout gear will be the preferred safety ensemble. Care must be taken so that all personal protective equipment is worn appropriately and secured to avoid catching loose equipment in moving parts. Specific equipment may include the following:

- A full face shield, SCBA, or other appropriate safety shield shall be worn to provide eye and face protection.
- A helmet shall be worn.
- When appropriate, hearing protection shall be worn.
- Gloves shall be worn.
- At minimum, turnout pants and bunker boots shall be worn. If wearing chaps, steel toed safety shoes must also be worn.

Inspection and Maintenance

Equipment must be kept in clean, serviceable condition. Gasoline powered saws should be routinely examined for damage and defects. Equipment must especially be examined and serviced after use. Damaged or defective equipment shall be deemed unsafe and removed from service for repair. Before performing any maintenance, spark plugs should be removed to avoid accidental starting. Inspection and maintenance should include the following:

- Examine saws for leaking fuel and chain oil.
- Examine all safety features including trigger locks, chain brakes, and blade guards to ensure operability. At no time shall any manufacturer's safety features be intentionally dismantled or disabled.
- Examine cutting chains for damaged or missing teeth, appropriate tension, sharpness, and lubrication. Damaged chains should be removed from service; dull chains should be sharpened.

- Examine rotary blades for cracks, nicks, broken or dull teeth, and signs of excessive wear. Damaged blades should be removed from service; dull carbide tipped blades may be sent for sharpening.
- Rotary blades should be kept clean and should be installed with appropriate washers and blotters to compensate for any blade irregularities.

Note: Care must be taken to ensure that abrasive saw blades do not become contaminated with petroleum based products. Such contamination may dissolve the resin which is used to bond the blade. This may cause the blade to shatter when used.

Fueling

Fuel used for gasoline powered saws should be mixed to manufacturer's suggested ratios and stored in appropriate safety containers. When fueling the following procedures should be followed:

- The saw should never be fueled while the engine is running.
- Recently operated saws should be given adequate time to cool before fueling.
- If fuel is spilled while fueling, wipe off saw before starting.
- Do not restart the saw in a small enclosed space after fueling.

Saw Types and Appropriate Uses

The department maintains several types of gasoline powered saws equipped with a variety of blades and chains for different operations.

- *Standard chain saws* – Standard chainsaws are equipped with standard chains appropriate for cutting wood that is free from other materials. This would typically include tree limbs and the like.
- *Ventilation Chain saws* – Ventilation chainsaws include the "Cutters Edge Saws" and saws equipped with demolition-type chains. These saws are appropriate for ventilation work that primarily involves wood sheathing covered with asphalt, membranes, or tar, and for cutting construction wood that may contain foreign materials such as nails and screws.
- *Rotary saws with carbide blades*– Rotary saws equipped with carbide blades are appropriate for ventilation work that primarily involves wood sheathing covered with asphalt, membranes, or tar, and for cutting construction wood that may contain foreign materials such as nails and screws.
- *Rotary saws with abrasive blades*- Rotary saws equipped with abrasive blades are appropriate for forcible entry work involving metal doors, locks, security gates or security bars, and for ventilation work involving metal sheathing. Care must be taken since these blades deteriorate rapidly as they abrade through materials.
- *Rotary saws with multi-purpose blades* – Rotary saws equipped with multi-purpose blades are appropriate for forcible entry work involving metal doors, locks, security gates or security bars, and for ventilation work involving metal sheathing. Multipurpose blades may also be used for operations involving masonry material including brick and mortar, concrete, or stone. Though more suited to metal and masonry work, multi-purpose blades may also be used on wood.

Operation

Operations involving gasoline powered saws will be dictated by specific tactical objectives. Operations should comply as much as feasible with recommended practices found in manufacturer supplied owner's manuals. During emergency operations, the following general guidelines should be followed:

- Do not operate power saws in suspected flammable/explosive atmospheres.
- When operating close to highly combustible materials, use care to prevent ignition from sparks.
- Carry rotary saws with the engine stopped, the blade frontward, and the muffler away from your body.
- Carry chain saws with the engine stopped, the guide bar and saw chain to the rear, and the muffler away from your body.
- A carrying strap shall be used to carry saws while climbing ladders allowing hands to be free to grab the ladder rungs.
- Make sure of your footing before operating the saw.
- Keep both hands on the control handles when operating the saw. Use a firm grip with thumbs and fingers encircling the saw handles.
- Always shut down saws when unattended.
- Always place safety guards in the proper position before operating the saw.
- Side pressure or twisting of rotary blades should be avoided. Saws should never be forced as too much pressure applied to the blade may result in catastrophic blade failure.
- Power saw operations are safest when cutting on horizontal surfaces near ground level or on vertical surfaces near waist level. Operating a power saw above chest height is extremely hazardous and should not be attempted as a normal course of action. This type of operation shall be conducted only under the direct order and/or under the supervision of an officer. The officer ordering this operation shall weigh heavily the value gained against the extreme hazard to personnel.
- Operations should be planned prior to placing the saw into action to include:
    - Location and sequence of cuts and openings (being mindful to avoid structural members);
    - Wind direction (considering its effect on the saw, exposures and personnel);
    - At least two (2) means of egress if possible.
- Saw cuts should be only as deep as necessary. Operators must take care not to compromise the integrity of structural elements. Guards can be used to control the cutting depth of blades (rotary saw) and bars (bullet saws).
- Gravel and debris (often found on flat roofs) should be removed from the path to be cut in order to reduce the danger of injury from flying chips and loose materials.
- Whenever possible, a team of two firefighters shall perform cutting operations. The firefighter operating the saw will be assisted and/or guided by the second firefighter.
- Whenever possible, an officer should supervise cutting operations and ensure compliance with safety procedures. At all times however, the number of personnel should be limited to the minimum number required to sustain the operation. All other personnel shall be removed to a safe location until the operation is complete or assistance with the operation is needed.
- The use of power saws from ladders is not recommended if there are alternatives.

- When operating at elevation, care must be taken to provide appropriate fall protection. Safety harnesses shall be worn and attached to anchor points whenever possible. Tethers may be used increase operational range while ensuring fall protection.

3. REFERENCES:
   - None

By Order Of:

Kevin W Guimond

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