

Tempe Fire Department Policies and Procedures
Chain Saw
405.07
Rev 10-1-10

PURPOSE

The function of the chain saw is to speed ventilation and provide greater efficiency in cutting operations at fires and emergencies. This saw is designed to cut wood and can be damaged severely if used on other materials or comes in contact with nails, asphalt shingles, or roofing.

PROCEDURE

Operational Safety

Always use eye protection! The best protection from personal injury that may result from kickback is to avoid kickback situations:

- Hold the chainsaw firmly with both hands and maintain a secure grip.
 - Be aware of the location of the guide bar nose at all times.
 - Don't overreach.
 - Don't cut above shoulder height.
 - Begin cutting and continue at full throttle.
 - Use extreme caution when re-entering a previous cut.
 - Do not attempt a plunge cut if you are not experienced with this cutting technique.
 - Be aware of the type of materials you are cutting, forces may cause the material to pinch and bind the chain.
 - Maintain the saw chain properly. Cut with a sharp and properly tensioned chain at all times.
 - Stand to the side of the cutting path of the chainsaw when possible.
 - Be aware of the reactions that occur when using the different sides of the bar and there inherent dangers i.e.;
- cutting with the bottom of bar may cause "pull in," cutting with the top of bar may cause "push out" and cutting with the nose may cause kick back.

General Information

Stihl MS 46 Magnum Rescue Saw

The 46 Magnum Rescue Saw is powered by a 2-cycle gasoline engine. Lubrication of the engine is accomplished by "premixing" the gasoline with lubricating oil. The Stihl 50:1 lubrication premix used by the Department is available from the warehouse and should be mixed with 1 gallon of gasoline prior to use.

The saw has a 20" Rollermatic bar that is equipped with an automatic chain oiler. To maintain correct chain lubrication, clean saw thoroughly after each use to maintain open oil ports.

The carbide chain used with the saw has 33 carbide tipped cutting teeth and 66 drive teeth. Chains must be replaced when two (2) consecutive, three (3) total teeth are damaged or missing or when cutting efficiency is reduced.

To check the chain tension, set the run switch to the off position. With a gloved hand, pull the chain along the bar, the chain should feel snug to the bar and will pull with minimal effort.

To adjust the chain tension, the mounting nuts on the guide bar should be finger tight. Hold the bar nose up and turn the guide bar adjuster screw to take out the slack. After making the adjustment, recheck the tension by the same method.

On the model 460, the adjuster is located on the side between the bar nuts.




Weekly check

(Wearing appropriate PPE –eye protection & gloves)

- a. Check fuel level.
- b. Check and fill bar oil reservoir.
- c. Inspect and clean air filter.
- d. Inspect and clean cooling fins.
- e. Inspect and clean drive gear.
- f. Inspect and clean guide bar and roller tip.
- g. Inspect and clean chain. (soak chain in 30 wt. oil prior to reinstallation).
- h. Check chain tension.

Starting Procedures

(In a clear outdoor area)

- a. Engage the chain brake.
- b. Set control lever to FULL CHOKE  for cold starts, or HALF CHOKE  for warm starts
- c. Set and lock the throttle trigger.
- d. Anchor the saw firmly and pull the starter cord.
- e. Once the engine fires move control lever up one position to half choke and continue to pull pull-cord until engine starts.
- f. Once engine is running immediately squeeze the throttle trigger. The control lever will move to run position 
- g. While the engine is running, disengage chain brake saw, check the function of the chain oiler by holding the tip of the guide bar close to the ground or a piece of cardboard. A thin line of oil should appear when operating the saw at full throttle.
- h. While the engine is running, check the function of the saw chain brake.
 1. Push the chain break forward and the chain should stop rotation.
 2. Pull the chain brake back towards the handle and the chain should rotate freely.
- i. If saw becomes flooded proceed as follows; Put control lever to the run position. Squeeze throttle trigger and secure saw while repeatedly pulling pull cord until saw fires up.

NOTE: Do not operate the saw at full throttle with the chain brake engaged as it is possible to damage the saw. Let the saw warm up on the daily check-off before using full throttle.

Stopping procedures

- a. Idle the saw to dissipate the heat.
- b. Switch the control switch to "off" or "stop".
- c. Place into ready state.