

Tree Trimming and Removal

Sample Activity Hazard Analysis

Scope

This procedure is to be used by the Company personnel who engage in tree trimming while performing maintenance and removal operations at various jobsites.

Critical
 Emergency
 Non-Routine
 Routine

Hazards and precautions

The table below lists job hazards and the precautions that should be taken for safety, environmental, quality, and Good Manufacturing Practices before beginning this procedure. Specific hazards may also be addressed in the procedure steps.

Hazard	Precaution
Electrocution	<p>Assume all power lines are energized, and take appropriate precautions to avoid all contact until you are certain they have been de-energized.</p> <p>Maintain an appropriate safe distance from the power line, depending on the voltage. The distance ranges from 2 to 15 feet.</p> <p>Use non-conductive tools, materials and PPE when there are power lines in the vicinity.</p> <p>When near power lines, trees shall not be worked on if wet due to increased electrocution hazard.</p> <p>Trees shall not be worked on during high winds, or when a lightning storm is approaching or in progress.</p> <p>Workers shall not stay beneath trees during lightning storms.</p>
Fire	<p>Do not refuel chain-saw while hot</p> <p>Do not smoke or refuel around ignition sources.</p> <p>Transport & store fuel only in approved containers.</p>
Environmental	<p>Use only self-closing fuel containers.</p> <p>Utilize a funnel and do not "top-off.</p> <p>Ensure correct fuel mixture.</p>

<p>Biological</p>	<p>Read Tick & Poison Oak "Fact Sheets" attached to the Site Specific Health and Safety Plan.</p> <p>Utilize insecticide with Deet to eliminate mosquito bites, West Nile Virus and Lyme Disease.</p>
<p>Sun</p>	<p>Wear a broad brimmed hat, shirt with sleeves and sun block.</p> <p>Drink plenty of water.</p>
<p>Slips, trips and falls</p>	<p>Trees shall not be worked on when wet due to slippery condition of bark.</p> <p>In general, only one worker shall work in a tree at one time.</p> <p>Before climbing any tree, employee must thoroughly inspect the tree and its surroundings to acquaint themselves with all possible hazards.</p> <p>They shall see that sufficient help, protective equipment, and tools are available, and that they are used to protect themselves, the public, equipment, or property.</p> <p>All tree workers shall use standard lifelines or belts and safety straps at all times when working off the ground.</p> <p>When safety slings and lifelines are used, every rope must be thoroughly inspected before each use. Discard any unsafe or questionable rope.</p>

Cuts, Lacerations	<p>Wear long trousers and steel toed boots.</p> <p>Wear ANSI Z87 approved eye wear.</p> <p>Clothing should be well-fitted and free of dangling or ragged edges that could become entangled in either the saw or brush.</p> <p>Protective chaps or leggings that cover the area from the groin to about 2 inches above the ankles can be worn. Many of these chaps wrap around the leg and protect the calf area as well. These chaps are made from synthetic fabrics that are designed to prevent the running saw chain from coming in contact with your legs. Remember, with some of the newer saws, the chain can be running at speeds of 4,000 to 5,000 feet per minute (45 to 55 miles per hour). Pants made from the same materials are also available.</p>
Burns	Allow chain-saw to cool before making repairs or adjustments to motor.
Kickback	<p>Kickback occurs when the upper tip of the guide bar touches an object or when the wood closes in and pinches the saw chain in the cut</p> <p>This contact may cause a lightning-fast reverse action of the guide bar back toward the operator. Results of kickback include severe upper body, neck, and facial lacerations or death. Safety chain (and other features) minimize the dangers of kickback but do not eliminate the hazard.</p>
Noise	Wear earplugs and/or muffs when using motorized tools.

Tools and equipment *The tools and equipment listed below are needed to do this job.*

Safety Glasses	Ear plugs/muffs	Safety fuel can
Sun screen	Bug spray	Potable water
Steel toed boots		Leather gloves

Before you begin

Before beginning this procedure ...

- Notify the customer that the tree trimming is going to take place.
- Survey area to be trimmed:
 - Check slope of land.
 - Clear area of any people before commencing trimming.
 - Identify potential hazards, eg- low power lines.

Operating limits

- Read and follow manufacturer operating instructions before using motorized equipment for the first time.
- Verify gas mixture before refueling..
- Ensure all safety devices are securely in place.
- Check chain-saw for damage and ensure all nuts/bolts are securely fastened.
- Do not start chain-saw while it sits above sand or gravel.
- Do not refuel chain-saw while it is hot.
- Never make adjustments or remove clogs while equipment is running.
- Immediately Red Tag and report any damage to appropriate personnel.

Consequences of deviation from this procedure

Possible bodily harm and/or death.

Overview of tasks

This procedure will involve 8 tasks

1. Survey
2. Prepare Chain-saw
3. Pre-Start Maintenance Checks
4. Commencing Trimming Operation
5. Refueling
6. Clean Up

Start Signature

This procedure / checklist was started by:

Name: _____ Time: _____ Date: _____.

Task #1

Survey

Step	Action	Initial
1	Check topography of the area to be trimmed.	
2	Clear area of hazards (twigs, stones, hoses, etc).	
3	Identify hazards (low power lines, etc).	
4	Remove non-essential personnel from area and communicate job to others that will be affected. Note: should other people enter area while trimming is being conducted- Stop immediately.	

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Task #2

Prepare Chain-saw

Step	Action	Initial
1	<p>Properly sharpened chain. Make sure you are using a properly sharpened chain.</p> <ul style="list-style-type: none"> - If you notice that the saw is cutting crooked, or the cut shows fine sawdust instead of chips, or you find yourself pressing down hard to keep cutting, or smell burnt wood, your saw needs sharpening. - Remember, the chain is designed to cut wood! - Contact with dirt, rocks, or metal will quickly dull and nick the cutting teeth on the chain. - Follow the instructions outlined in your owner's manual when sharpening the chain. - If you do your own sharpening, use the proper tools. Wear gloves or place a rag over the chain to protect your hands from the sharpened cutters. - Chain manufacturers recommend that the depth gauge be lowered every third filing. - Ensure correct fuel mixture is used. 	
2	<p>Correct Chain Tension. To ensure good cutting action and a long chain life, check chain tension. If the chain is too loose, it will come off; if too tight, the chain will bind and overheat.</p> <p>All chains stretch with use. Most of the stretch occurs during the first half hour of operation. Follow the manufacturer's recommendation on chain tension. Soak a new chain in SAE 30 oil overnight before installing. Check the guide bar and sprocket before placing a new chain on the saw. A worn sprocket can ruin a chain quickly. Most manufacturers recommend that a cold chain be tightened to where the chain tie straps hang away from the bar about 1/32 inch at the center of the bar. A warm chain should be adjusted to a 1/8-inch gap. Chains should be somewhat tighter on a guide bar fitted with a sprocket nose tip. .</p>	
3	<p>Proper lubrication. Lubrication will prolong a chain's useful life. In the summer, either SAE 30 or bar and chain oil can be used; in the winter, use SAE 10 oil or bar and chain oil. Do not use crankcase or other reclaimed oil. Chain and saw manufacturers have found that waste oils can corrode the oil pump and have reduced lubricating properties.</p>	

4	<p>Functioning safety equipment.</p> <p>The guide bar can become damaged as a result of poor lubrication, improper chain tension, or prolonged cutting with a dull saw. Your owner's guide should be consulted for proper maintenance of the guide bar. Don't forget to check the drive sprocket as well. It can also become worn or damaged by improperly fitted chains.</p> <p>Many new chain saws are equipped with a "chain brake" that is designed to stop the chain almost instantaneously. It is either manually activated or triggered by the inertial forces of the kickback itself. Refer to your owner's manual for the proper way to check the chain brake on your saw. Maintenance on this feature is critical and repairs should be done by properly trained service technicians.</p>	
6	Immediately Red Tag and report any damage to appropriate personnel.	

Task #3

Pre-Start Maintenance Checks

Step	Action	Initial
1	<p>Check fuel level and "top-off" if necessary.</p> <ul style="list-style-type: none"> - Ensure area is free from ignition source. - Use a funnel. - Do not refuel in a confined space. - Ensure correct fuel mixture is used. - Clean sawdust and debris away from the fuel and oil caps before opening so that the debris does not fall into the fuel or the oil tank. - Each time you refuel the saw, refill the oil tank as well, check the chain tension, and make sure that all the nuts and bolts are tight. 	
2	Check oil levels and grease components as outlined in the Owner's Manual.	
3	Check cutting blade for damage.	
4	Remove any accumulated debris.	
5	Read all Caution, Warning and Danger signs on the machine.	
6	Immediately Red Tag and report any damage to appropriate personnel.	

Task #4

Commencing Trimming Operation

Step	Action	Initial

1	Put on protective gear. - Hard Hat - Steel toed boots - Long pants - Safety glasses - Sleeved shirt - Bug repellent	
2	Before starting the saw, make sure that you know what you are going to do. Do not walk around revving the motor while you figure out your next move. Prior planning prevents poor performance on the part of both the saw and the sawyer!	
3	Place the saw on level ground in a area free from rocks. Make sure that the bar and chain are up out of the dirt. .	
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5	With one foot placed in the hand guard at the rear of the saw, grip the top handle of the saw firmly with one hand and use the other hand to pull the starting rope. Some small saws may not have room in the rear hand guard for your boot, so make sure that the saw is held firmly on the ground. Never drop start the saw. If you do this, you can hold the saw with only one hand and have no control whatsoever over the swinging action that the bar will make.	
6	Small engines may kickback (see above). Do not hold pull rope tightly in hand	
7	Drink plenty of fluids	
8	Never make adjustments/ remove clogs while equipment is running.	
9	If you are limbing standing trees, do not cut above the level of your shoulders, you simply do not have good control over the saw in that situation.	
10	If you are felling a tree, figure out where the tree is going to fall before you start. What obstacles are in the way? Are there heavy branches in the crown? Is the wind blowing? Are there dead branches in the crown that might fall on you when you start to cut? (These are called widow makers for a good reason.)	

Task #5

Refueling Chain-saw During Trimming Operations

Step	Action	Initial
1	Ensure chain-saw is a cleared, flat and stable area.	
2	Switch off chain-saw and allow to cool before refueling.	
3	Ensure area is free from ignition sources (eg. Flame, cigarettes etc)	
4	Ensure correct fuel mixture is used	
5	Ensure a funnel or other pouring device is used	

Task #6

Clean up

Step	Action	Initial
1	Thoroughly check chain-saw for any damage.	
2	Report any damage to Project Manager.	
3	Place Safety Tag (Danger Do Not Operate) on equipment until repaired. Include fault on tag.	
4	Do Not Remove tag until verification of repair is made.	
5	After completion of all repairs, thoroughly clean chain-saw.	