



Fire Protection Training

Procedures Handbook 4300

POWER TOOLS

TOPIC: How To Operate A Chain Saw

LEVEL OF INSTRUCTION: II

TIME FRAME: 1 Hour

BEHAVIORAL OBJECTIVE:

Condition: A chain saw, chain saw chaps, ear and eye protection, gloves, 4" X 4" X 8' post

Behavior: The student will demonstrate how to operate a chain saw while wearing proper safety clothing

Standard: With a minimum 70% accuracy, within 3 minutes, according to the job breakdown

MATERIALS NEEDED:

- Chain saw, 4" X 4" post or 6" to 8" diameter log
- Set of saw horses with braces to stop the 4" X 4" from rolling or a set of log cradles
- Helmet
- Ear and eye protection
- Gloves
- Chain saw chaps

REFERENCES:

- Wildfire Power Saw S-212 NWCG, Chain Saw Owners Guide

PREPARATION:

Chain saws in the fire service have become an integral part of the job today. They are used in line construction, ventilation and heavy rescue applications. The ability to safely and competently use a chain saw could make the difference between a successful operation, or an operation that fails and is prone to serious safety risks.

4311.4.0



Fire Protection Training

Procedures Handbook 4300

HOW TO USE A CHAIN SAW

OPERATIONS

KEY POINTS

1. Push chain brake lever forward
2. Prepare to start saw
3. Place a foot into handle
4. Grasp handle bar
5. Flip stop switch
6. Close choke
7. Set the throttle latch
8. Grasp starter rope handle
9. Pull up on starter rope
10. Pull up on starter rope
11. Open choke
12. Pull up on starter rope
13. Pull chain break lever back

- 1a. Engaging brake
- 2a. Placing saw on firm, level ground
 - b. Area clear near chain
 - c. Area clear of bystanders
- 3a. Toe of boot through handle opening
 - b. Holding chain saw in control
- 4a. Firmly
 - b. Thumb around bar
 - c. Non-working hand
- 5a. To "ON" position
 - b. With working hand
- 6a. Choking engine
- 7a. To "ON" position
- 8a. With working hand
- 9a. Slowly
 - b. Until starter mechanism is engaged
- 10a. Short, sharp pull
 - b. Holding the starter handle as the rope retracts
 - c. Until engine fires (bubbles)
 - d. Never drop start a saw
- 12a. Short - sharp pull
 - b. Until engine starts
- 13a. Releasing brake

4311.4.0

Page 2



Fire Protection Training

Procedures Handbook 4300

HOW TO USE A CHAIN SAW

OPERATIONS

KEY POINTS

- | | |
|---|--|
| 14. Keep a firm grip on the saw with both hands | 14a. .Thumbs and fingers encircling the handles
b. Never use the saw with only one hand
c. See Information Sheet #1 |
| 15. Throttle the engine briefly | 15a. Finger on throttle trigger
b. To release the throttle latch |
| 16. Release throttle trigger | 16a. Returning engine to idle |
| 17. Observe chain for movement | 17a. Should be no chain movement at idle |
| 18. Push chain brake lever forward | 18a. Engaging brake |
| 19. Check chain break | 19a. Revving engine-up
b. Checking chain for no movement |
| 20. Check throttle trigger lockout | 20a. For obstacles
b. For proper functioning
c. For free movement |
| 21. Allow saw to warm up | 21a. Check warmth of exhaust |
| 22. Stand-up while holding saw | 22a. Keep firm grip with both hands |
| 23. Pull chain brake lever back | 23a. Releasing chain brake
b. Maintain control |
| 24. Tip bar down | 24a. Pointing tip of bar towards ground |
| 25. Check oilers and chain movement | 25a. For operation
b. Rev-up engine half throttle maximum, and allow chain to rotate
c. Mist of oil should come off tip of bar
d. Check for chain running with minimal drag |
| 26. Push chain brake lever forward | 26a. Engaging chain brake |

4311.4.0

Page 3



Fire Protection Training

Procedures Handbook 4300

HOW TO USE A CHAIN SAW

OPERATIONS

KEY POINTS

27. Walk to cutting area

28. Address materials to be cut

29. Hand position (is the same for left-handed and right-handed people)

30. Body position

31. Pull chain brake lever back

32. Completely cut 4" X 4" post

33. Push chain brake lever forward

34. Flip stop switch

27a. Carrying saw with both hands

b. Bar tip pointed down

28a. Feet firmly planted

b. Wide balanced stance

c. Saw close to body

29a. Right hand on rear handle

b. Left hand on front handle bar

c. Firm grip with the thumb and fingers encircling the handles (see Information Sheet #1)

30a. All body parts (including head) will be to the left of the bar when cutting up or down (see Information Sheet #2)

31a. Releasing brake

32a. Maintain working position

b. Open throttle fully just before starting cut

c. Bar tip slightly up when you start cut

d. Cut should be made by the back third of the bottom of the bar

e. Set dogs in wood to help stabilize cut

33a. Engaging brake

34a. To "OFF" position

b. Shutting down engine

4311.4.0

Page 4



Fire Protection Training

Procedures Handbook 4300

HOW TO USE A CHAIN SAW

APPLICATION:

The student will practice chain saw operations while being supervised and coached by the Instructor.

EVALUATION:

Manipulative Performance Examination which requires a minimum of 70%, within 3 minutes, and completion of all critical operations noted with an asterisk on the score sheet.

ASSIGNMENT:

Practice skills until proficient within the allotted time standard.