

SAWOFF.com

THE ULTIMATE CHAINSAW MAINTENANCE CHECKLIST

A Simple Printable Guide to
Inspect, Maintain & Store Your Chainsaw



50+ Practical Checklists, Worksheets & Trackers

TABLE OF CONTENTS

PART 1 — Know Your Chainsaw

- How to Use This Toolkit
- Chainsaw Anatomy
- Gas vs Electric/Battery Chainsaws
- Understanding the Guide Bar
- Understanding the Chain
- Essential Controls & Safety Features
- Your Chainsaw Information Sheet

PART 2 — Safety Before Every Cut

- The 60-Second Pre-Start Checklist
- Kickback Awareness
- Safe Footing & Work-Area Preparation
- Carrying, Starting & Fueling
- When NOT to Use a Chainsaw

PART 3 — Chainsaw Maintenance System

- After-Use Checklist
- Weekly / Monthly / Seasonal Maintenance
- Maintenance Schedule Table

PART 4 — Chain & Guide Bar

- Signs of a Dull Chain
- Chain Tension & Guide Bar Care
- Chain Lubrication
- Inspection Checklists & Logs

PART 5 — Chain Sharpening Workbook

- Sharpening Fundamentals
- Filing Direction & Technique
- Sharpening Preparation & Worksheet
- Chain Sharpening Tracker

PART 6 — Troubleshooting

- Common Symptoms & Causes
- Troubleshooting Worksheet

PART 7 — Firewood Planner

- Firewood Cutting Planner
- Firewood Inventory Tracker
- Firewood Storage Guidelines

PART 8 — Tools & PPE

- Chainsaw PPE Checklist
- Maintenance Tool Checklist

PART 9 — Buying & Replacement

- Chainsaw Buying Checklist

Comparison Worksheet

PART 10 — Personal Records

Maintenance Log

Chain Replacement Log

Sharpening Log

Repair Log

Operating Hours Tracker

PART 11 — Quick Reference Pages

Before You Start

After You Finish

Chain Inspection

Maintenance Schedule

Storage Checklist

Troubleshooting Quick Guide

PPE Checklist

Firewood Planning Checklist

PART 12 — 30-Day Maintenance Challenge

Daily Tasks for Equipment Care

BONUS — Printable Resources

Emergency Information Card

12-Month Maintenance Calendar

Workshop Chainsaw Checklist

10-Minute Pre-Cutting Routine

Chainsaw Ownership Cost Tracker

Sharpening Angle Cheat-Sheet Poster

Cutter Anatomy Close-Up

Kickback Danger-Zone Poster

Field Inspection Reference Library

Field Laminated Card (4-Inch)

Chain Inventory & Asset Tracker

Winterization Roadmap

Pro-Tip Inserts

Visual Glossary — Figure Plates

Image Credits & License Log

Safety, Sources & Further Reading

Disclaimer

HOW TO USE THIS TOOLKIT

Welcome to **The Ultimate Chainsaw Maintenance Checklist**—a practical reference and workbook designed to help you own, maintain, and use your chainsaw more safely and effectively.

This is not a replacement for your chainsaw manufacturer's owner's manual, professional training, or qualified instruction. It is an organized system for record-keeping, maintenance tracking, safety checks, and planning. Always follow your manufacturer's specific instructions and recommendations.

How This Book Is Organized

- **Part 1** — Know Your Chainsaw: Understanding your equipment
- **Part 2** — Safety Before Every Cut: Pre-use safety systems
- **Part 3** — Maintenance System: Complete care schedules
- **Part 4** — Chain & Guide Bar: Inspection and care
- **Part 5** — Sharpening Workbook: Guided sharpening practice
- **Part 6** — Troubleshooting: Common problems and responses
- **Part 7** — Firewood Planner: Cutting and storage planning
- **Part 8** — Tools & PPE: Equipment checklists
- **Part 9** — Buying Guide: Purchase comparison tools
- **Part 10** — Personal Records: Logs and tracking sheets
- **Part 11** — Quick Reference: One-page printable guides
- **Part 12** — 30-Day Challenge: Build better habits
- **Bonus** — Emergency cards, calendars, and cost trackers

How to Use the Worksheets

Print the worksheets you need on US Letter paper. Use pencil for entries you may need to update. Keep completed worksheets in a binder or folder near your workshop or chainsaw storage area.

Quick Tip

Print the Quick Reference pages from [Part 11](#part-11-quick-reference-pages) and laminate them. Keep them in your workshop for fast access during routine maintenance.

A Note on Safety

Chainsaws are powerful tools that demand respect. This toolkit repeatedly emphasizes safety—not to discourage you, but because safe operation protects you, bystanders, and your equipment. When in doubt, stop. Consult your manual. Call a professional.

Important

Never attempt repairs or maintenance that you are not confident performing. Chainsaws contain sharp components under tension. Incorrect maintenance can lead to serious injury. When uncertain, seek qualified professional help.

PART 1

KNOW YOUR CHAINSAW

Understanding Your Equipment

1. CHAINSAW ANATOMY

Understanding the main components of your chainsaw helps you maintain it properly, identify problems early, and communicate with repair professionals when needed.

Major Components

Component	Location	Purpose
Engine/Motor	Rear body	Powers the chain rotation
Guide Bar	Front, extending outward	Supports and guides the cutting chain
Chain	Wraps around guide bar	Cuts wood with sharpened cutters
Chain Brake	Between handle and bar	Stops chain rotation in kickback events
Throttle Trigger	Rear handle	Controls engine speed and chain rotation
Throttle Lockout	Rear handle top	Prevents accidental throttle engagement
Top Handle	Top of saw body	Provides grip for guiding cuts
Rear Handle	Back of saw body	Houses throttle controls; primary grip
Chain Tensioner	Side of saw body	Adjusts chain tightness on the bar
Bar Oil Tank	Side or bottom	Holds lubricant for the guide bar and chain
Fuel Tank (gas)	Rear or side	Holds fuel mixture for gas engines
Air Filter	Under top cover	Filters intake air to protect the engine
Spark Plug (gas)	Under top cover	Ignites fuel mixture in the cylinder
Muffler	Front or side	Reduces engine exhaust noise
Sprocket/Clutch	Behind bar mount	Engages chain rotation when throttle applied

FIGURE 1A



Photo 1A — A complete saw, side view: Engine housing, front and rear handles, guide bar, and chain all visible. Compare with your model — control positions vary between manufacturers.

Quick Tip

Refer to your specific chainsaw owner's manual for a diagram of your model. Component locations vary between manufacturers and models.

2. GAS VS ELECTRIC/BATTERY CHAINSAWS

Chainsaws fall into three main power categories. Each has advantages and trade-offs depending on your intended use, frequency of operation, and working environment.

Feature	Gas-Powered	Corded Electric	Battery-Powered
Power	High to very high	Moderate	Low to moderate-high
Runtime	Limited by fuel tank	Unlimited (corded)	Limited by battery capacity
Weight	Heaviest	Lightest	Moderate
Noise Level	Loudest	Quiet	Quiet to moderate
Maintenance	Regular engine maintenance	Minimal	Battery care; minimal motor maintenance
Starting	Pull-start or electric start	Plug in and switch on	Insert battery and switch on
Best For	Heavy-duty, remote work	Light work near power outlet	Moderate tasks; convenience
Emissions	Exhaust emissions	None at point of use	None at point of use
Portability	Fully portable	Limited by cord length	Fully portable

Battery Consideration

Battery-powered chainsaws have improved significantly, but battery capacity limits runtime. For extended cutting sessions in remote locations without charging access, gas-powered saws remain the practical choice. Always match the tool to the task.

Your chainsaw's owner's manual contains model-specific information about power requirements, maintenance intervals, and recommended operating procedures. Keep it accessible.

3. UNDERSTANDING THE GUIDE BAR

The guide bar is the metal plate that supports and guides the cutting chain. It is a critical component that directly affects cutting performance, safety, and chain life.

Guide Bar Key Specifications

Your guide bar has specific measurements that must match your chain. These are typically stamped on the bar or listed in your owner's manual:

- **Bar Length** — The usable cutting length (not overall length).
- **Mounting Dimensions** — The slot size and hole pattern for your chainsaw model.
- **Chain Pitch** — The spacing between chain rivets; must match the bar's groove.
- **Chain Gauge** — The thickness of the chain drive links; must fit the bar groove.
- **Bar Groove** — The channel the chain rides in; worn grooves affect performance.
- **Tip Sprocket** — Some bars have a rotating sprocket at the tip to reduce friction.

Guide Bar Inspection Points

Inspection Point	What to Look For	Action Needed
Groove Wear	Uneven or widened groove	Professional assessment or replacement
Rail Wear	Uneven bar rails (one side lower)	Flip bar if designed for it; otherwise replace
Nose Sprocket	Rough rotation, damage, or play	Lubricate or replace if worn
Cracks or Damage	Any visible cracks near mounting	Replace immediately
Straightness	Bar should be straight; check by sighting	Replace if bent
Mounting Holes	Worn or elongated holes	Professional assessment needed
Cutting Edge	Burred or rough edges on rails	File smooth with a flat file

Safety Note

A damaged or worn guide bar can cause the chain to derail, increase kickback risk, or result in uneven cuts. Inspect the bar regularly and replace or have it professionally serviced when wear becomes evident.

4. UNDERSTANDING THE CHAIN

The chain is the cutting component of your chainsaw. Understanding its parts helps you maintain sharpness, identify wear, and know when replacement is needed.

Chain Components

Component	Description	Maintenance Note
Cutters	Sharpened teeth that slice wood	Sharpen regularly; replace when too short
Depth Gauges (Rakers)	Control how deep each cutter bites	File lower as cutters wear; maintain specification
Drive Links	Tabs that engage the sprocket and bar groove	Check for wear; must fit bar groove properly
Tie Straps	Connect cutters and drive links	Inspect for cracks or looseness
Rivets	Hold all chain components together	Worn rivets mean chain needs replacement
Chain Pitch	Distance between rivets (divided by 2)	Must match bar and sprocket
Chain Gauge	Drive link thickness	Must fit bar groove

Common Chain Types

Chains are designed for different cutting tasks:

- **Low-Kickback (Safety) Chain** — Designed to reduce kickback risk. Recommended for most homeowners.
- **Full-Chisel Chain** — Aggressive cutting with square-cornered cutters. Faster but higher kickback potential.
- **Semi-Chisel Chain** — Rounded cutter corners. More forgiving, stays sharp longer in dirty conditions.
- **Micro-Chisel Chain** — Smaller cutters for finer cuts. Lower kickback risk.

Important

Always use the chain type recommended by your chainsaw manufacturer. Using an incorrect chain can create dangerous conditions and may void your warranty.

5. ESSENTIAL CONTROLS & SAFETY FEATURES

Every chainsaw has safety features designed to protect you. Understanding and testing these features is essential before every use.

Control/Feature	Location	Function	Test Before Each Use
Chain Brake	Front hand guard	Stops chain rotation during kickback	Engage/disengage; should click firmly
Throttle Lockout	Rear handle	Prevents accidental throttle engagement	Should require deliberate press
Throttle Trigger	Rear handle	Controls engine speed	Should return to idle when released
Stop Switch	Near rear handle	Shuts off engine	Should stop engine immediately
Chain Catcher	Between bar and rear handle	Catches chain if it breaks/derails	Inspect for damage or obstruction
Anti-Vibration System	Between handles and body	Reduces vibration to hands	Check mounts for looseness
Bar Lock/Nut	Side of saw	Secures guide bar in position	Should be tight; check before each use

FIGURE 5A



Photo 5A — Throttle trigger and lockout: The lockout paddle must be deliberately pressed before the trigger can engage. Test both before every session.

FIGURE 5B



Photo 5B — Chain catcher and sprocket area: The catcher sits between bar and rear handle to snag a derailed chain. Keep this area clean and inspect the catcher for damage.

Critical Safety Rule

If any safety device does not function correctly, do not use the chainsaw. Have it repaired by a qualified professional before operating it again.

6. YOUR CHAINSAW INFORMATION SHEET

Complete this worksheet for each chainsaw you own. Keep this page in a convenient location for quick reference during maintenance, ordering parts, or in case of warranty service.

MY CHAINSAW PROFILE

Brand: _____

Model: _____

Serial Number: _____

Bar Length: _____

Chain Type: _____

Chain Pitch: _____

Chain Gauge: _____

Power Type (Gas/Battery/Electric): _____

Engine Size/Displacement (if applicable): _____

Battery Voltage/Capacity (if applicable): _____

Purchase Date: _____

Purchase Price: _____

Dealer/Store: _____

Warranty Expiration: _____

Owner's Manual Location: _____

NOTES

SPARE PARTS INFORMATION

Part	Part Number	Source	Cost	Notes
Chain				
Guide Bar				
Air Filter				
Spark Plug				
Bar Oil				
Fuel Filter				

PART 2

SAFETY BEFORE EVERY CUT

Build a Safety-First Routine

7. THE 60-SECOND PRE-START CHECKLIST

Perform this quick check every single time before starting your chainsaw. It takes about 60 seconds and could prevent an accident. Make it automatic—like buckling a seatbelt.

BEFORE YOU CUT — QUICK SAFETY CHECK

PPE (Personal Protective Equipment)

- ☐ Eye and face protection in place
- ☐ Hearing protection ready
- ☐ Hard hat or head protection (if applicable)
- ☐ Gloves on and in good condition
- ☐ Non-slip, sturdy footwear
- ☐ Leg protection/chainsaw chaps (if applicable)

Chain & Bar

- ☐ Chain is sharp and in good condition
- ☐ Chain tension is correct (check by pulling chain away from bar)
- ☐ Chain moves freely when bar brake is disengaged
- ☐ Guide bar is straight and groove is not excessively worn
- ☐ Bar oil tank is filled
- ☐ Bar oil is flowing (check by holding bar tip near ground and revving briefly)

Controls & Safety Devices

- ☐ Chain brake engages and disengages properly
- ☐ Throttle trigger operates smoothly and returns to idle
- ☐ Throttle lockout prevents accidental engagement
- ☐ Stop switch functions correctly
- ☐ All handles are secure and comfortable to grip
- ☐ Chain catcher is intact
- ☐ All guards and covers are secure
- ☐ All fasteners are tight

Fuel & Power

- ☐ Fuel tank filled with correct fuel mixture (gas models)
- ☐ Battery fully charged (battery models)
- ☐ No fuel leaks visible

Work Area

- ☐ Work area is clear of obstacles and tripping hazards
- ☐ No overhead hazards (dead branches, power lines)
- ☐ Clear escape/retreat path behind you
- ☐ Ground is stable and provides secure footing
- ☐ No bystanders within the danger zone (at least 2x bar length)
- ☐ Weather conditions are safe for cutting
- ☐ You are alert, rested, and not under the influence of substances

Non-Negotiable

If any item on this checklist fails, address it before starting the chainsaw. No cut is worth an injury.

8. KICKBACK AWARENESS

Kickback is the sudden upward and backward motion of the chainsaw bar. It is one of the most common causes of chainsaw injuries.

What Causes Kickback

Kickback occurs when the chain at the tip of the guide bar contacts an object or pinches during a cut:

- The upper quadrant of the bar tip contacts wood or another object
- The chain pinches or binds in the cut
- The wood closes on the bar during a cut
- The chain hits a nail, knot, or hard object unexpectedly
- The operator uses improper cutting technique

How to Reduce Kickback Risk

- Use chainsaws equipped with a properly functioning chain brake
- Use low-kickback chains as recommended by your manufacturer
- Maintain sharp chain—dull chains increase binding and kickback risk
- Avoid using the bar tip to initiate cuts
- Keep firm grip on both handles with thumbs wrapped around
- Maintain safe, balanced stance before and during cuts
- Do not cut above shoulder height
- Be aware of what is behind and around the workpiece
- Use the correct chain and bar combination for your saw

Critical

Kickback can happen to anyone, regardless of experience. The forces involved can exceed your ability to react. Proper equipment, technique, and awareness are your best protection.

9. SAFE FOOTING & WORK-AREA PREPARATION

A stable work area and secure footing are essential. Most chainsaw accidents happen when operators lose balance or work in unsafe conditions.

Footwear Requirements

- Wear sturdy, slip-resistant boots with ankle support
- Steel-toe or composite-toe boots provide additional protection
- Avoid working in sandals, sneakers, or loose footwear
- Keep boots clean of oil, mud, and debris for better traction

Work-Area Preparation

- Clear the area of tripping hazards: branches, rocks, debris
- Ensure stable, level ground for your stance
- Identify and mark obstacles: stumps, rocks, roots
- Check for overhead hazards: dead branches ("widow-makers"), power lines
- Establish at least two retreat paths behind your work position
- Keep all bystanders, pets, and vehicles at least twice the bar length away
- Ensure someone knows where you are working and when to expect you back

Weather & Ground Conditions

- Avoid using a chainsaw in strong winds, heavy rain, or poor visibility
- Be extra cautious on wet, muddy, or icy surfaces
- Frozen ground can be slippery; consider traction aids
- Extreme cold can affect battery performance and your dexterity
- Heat and humidity increase fatigue; take regular breaks

Practical Tip

Before starting any cutting project, walk the work area and identify potential hazards. This 2-minute walkaround is time well invested in your safety.

10. CARRYING, STARTING & FUELING

Carrying a Chainsaw

- Always carry the chainsaw with the engine off and chain brake engaged
- Hold the saw at your side with the rear handle pointing down
- Keep the bar and chain behind you, away from your body
- On slopes, carry the saw on the uphill side
- Never carry a running chainsaw
- Use a scabbard or bar cover when transporting

Starting Procedures

Follow your manufacturer's specific starting procedure. General guidelines:

- Place the saw on flat, stable ground
- Engage the chain brake
- Place your foot through the rear handle for stability (if applicable)
- Hold the front handle firmly with one hand
- Pull the starter cord with smooth, steady motions
- Never drop-start a chainsaw unless your manual specifically instructs this method
- Let the engine warm up briefly before cutting

FIGURE 10B



Photo 10B — Starter handle: Pull with smooth, steady motions with the saw on flat, stable ground. Never drop-start unless your manual instructs it.

Fueling Precautions (Gas Models)

- Allow the engine to cool before refueling (at least 5-10 minutes)
- Refuel in a well-ventilated area, away from ignition sources

- Wipe up any spilled fuel immediately
- Use approved fuel containers only
- Mix fuel and oil according to your manufacturer's exact specification
- Do not overfill the fuel tank; allow for expansion
- Do not smoke while fueling
- Secure the fuel cap tightly after filling

FIGURE 10A

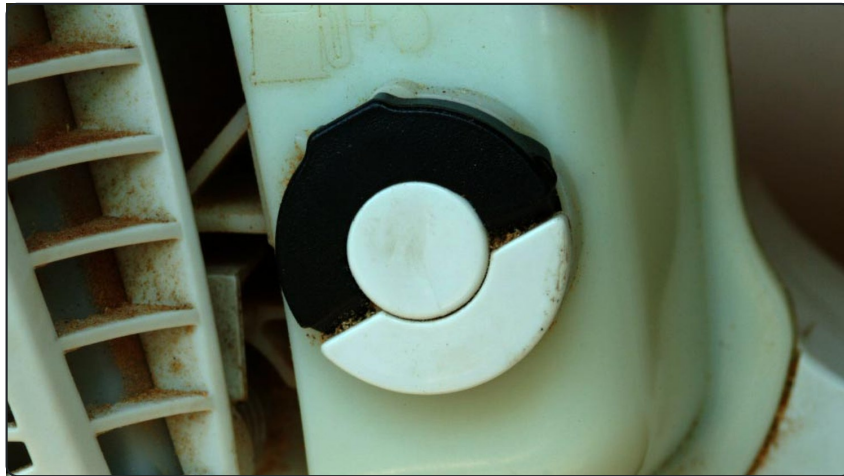


Photo 10A — Filler caps: Fuel and oil caps on a gas saw. Refuel only when cool, in a ventilated space, with your manual's exact mix — wipe spills immediately.

Fuel Safety

Spilled fuel is a fire and slip hazard. Never refuel a hot engine. Never use gasoline that has been stored for extended periods without stabilizer.

11. WHEN NOT TO USE A CHAINSAW

Knowing when **not** to use a chainsaw is as important as knowing how to use one.

Do NOT Use a Chainsaw When:

- You are feeling tired, ill, dizzy, or under the influence of medication, alcohol, or drugs
- Visibility is severely reduced (darkness, fog, heavy rain)
- You are working alone on a large or hazardous job without someone aware of your location
- The chainsaw has any malfunctioning safety device
- The chain is loose, damaged, or excessively dull
- You cannot maintain secure footing
- Wind conditions make control difficult
- The work requires skills or techniques you have not been trained for
- You have not read and understood the manufacturer's safety instructions

When to Stop and Call a Professional

- The chainsaw requires engine or motor repair beyond basic maintenance
- A safety device is damaged or not functioning
- You encounter a situation beyond your skill level (large trees, storm damage, trees near power lines)
- The guide bar is cracked, bent, or significantly worn
- You notice unusual vibrations, sounds, or behavior from the saw
- You are unsure about any aspect of the task

When in Doubt, Stop

There is no shame in calling a professional. Experienced operators know their limits. A professional tree service has the training, equipment, and insurance to handle dangerous situations safely.

PART 3

CHAINSAW MAINTENANCE SYSTEM

Complete Care for Your Equipment

12. AFTER-USE CHECKLIST

Perform these tasks every time you finish using your chainsaw. This 5-minute routine keeps your saw ready for the next use and helps identify developing problems early.

- ☐ Turn off the engine and wait for all moving parts to stop
- ☐ Engage the chain brake before setting the saw down
- ☐ Allow the engine to cool before storing
- ☐ Clean sawdust and debris from the saw body, bar, and chain
- ☐ Check chain tension—adjust if necessary
- ☐ Check chain condition—note any damage or dullness
- ☐ Refill bar oil if used during this session
- ☐ Inspect the guide bar for damage or wear
- ☐ Check all visible fasteners for tightness
- ☐ Inspect the air filter (clean or note need for cleaning)
- ☐ Wipe down the exterior of the saw
- ☐ Store in a clean, dry location
- ☐ Clean and store PPE properly
- ☐ Record operating hours if tracking usage

Good Habit

Keep a dedicated brush near your chainsaw storage area. A quick 3-minute cleanup after each use prevents buildup that can cause problems later.

13. WEEKLY / MONTHLY / SEASONAL MAINTENANCE

Weekly Inspection (for regular users)

- ☐ Thoroughly clean the entire chainsaw
- ☐ Inspect chain for damage, dullness, and proper tension
- ☐ Inspect guide bar rails and groove
- ☐ Check bar oil flow and delivery
- ☐ Clean or inspect the air filter
- ☐ Check all fasteners with appropriate wrench
- ☐ Inspect the chain brake function
- ☐ Inspect the spark plug (gas models)
- ☐ Check fuel filter and fuel line condition (gas models)
- ☐ Inspect anti-vibration mounts

Monthly Maintenance

- ☐ Clean or replace the air filter
- ☐ Inspect and clean the cooling fins and cylinder area
- ☐ Check the muffler for damage or loose connections
- ☐ Inspect the clutch and sprocket for wear
- ☐ Lubricate the bar tip sprocket
- ☐ Check the chain catcher for damage
- ☐ Inspect all controls for smooth operation
- ☐ Check fuel line condition (gas models)
- ☐ Verify bar oil tank and filter condition
- ☐ Review maintenance records for upcoming needs

Seasonal Maintenance

- ☐ Replace spark plug if due (gas models)
- ☐ Replace fuel filter (gas models)
- ☐ Have the carburetor checked or cleaned if performance is reduced
- ☐ Inspect the entire saw for wear, corrosion, or damage
- ☐ Replace the chain if worn beyond serviceability
- ☐ Have the guide bar professionally assessed if wear is evident
- ☐ Update your chainsaw information sheet with any changes

Long-Term Storage Preparation

If you will not use the chainsaw for 30 days or more:

- ☐ Clean the chainsaw thoroughly
- ☐ Run the fuel tank dry or add fuel stabilizer and run engine to circulate (gas models)
- ☐ Remove the spark plug and add a small amount of oil to the cylinder; pull starter slowly to distribute
- ☐ Drain bar oil tank (oil can become gummy over time)
- ☐ Loosen the chain slightly to relieve tension on the bar
- ☐ Clean or replace the air filter
- ☐ Store in a dry, secure location away from children
- ☐ For battery saws: store battery at 40-60% charge in a cool, dry location

Always Follow Your Manual

The maintenance tasks above are general guidelines. Your chainsaw manufacturer's manual specifies the exact maintenance schedule, procedures, and products for your specific model. Always follow the manufacturer's recommendations first.

14. MAINTENANCE SCHEDULE TABLE

Use this table as a quick reference. Always verify against your manufacturer's specific schedule.

Task	Before Each Use	After Each Use	Weekly	Monthly	Seasonal	Notes
Visual inspection	X					Check overall condition
Chain tension check	X	X				Adjust as needed
Chain sharpness check	X	X				Sharpen or replace
Chain lubrication	X	X				Refill bar oil
Guide bar inspection		X	X			Check rails and groove
Bar oil flow check	X					Verify oil reaching bar
Air filter inspection			X			Clean or replace
Air filter cleaning				X		More often in dusty conditions
Air filter replacement					X	Or as needed
Cooling system cleaning				X		Clear fins and screens
Spark plug inspection				X		Gas models only
Spark plug replacement					X	Follow manual
Fuel filter check				X		Replace annually (gas)
Fastener tightening			X			All accessible fasteners
Safety device check	X		X			Brake, lockout, stop switch
Anti-vibration check				X		Inspect mounts
Clutch/sprocket inspection				X		Check for wear
Bar maintenance				X		Clean groove; flip if applicable
Storage preparation					X	For off-season storage

PART 4

CHAIN & GUIDE BAR

Inspection, Care & Replacement

15. SIGNS OF A DULL CHAIN

A sharp chain cuts efficiently and produces clean wood chips. A dull chain is harder to control, cuts slower, and increases the risk of kickback.

Signs Your Chain Needs Sharpening

- The saw requires more force to push through the cut
- The saw produces fine dust or powder instead of wood chips
- The cut is uneven or wandering
- The engine bogs down or struggles during cuts
- You notice burning or smoking during cutting
- The chain pulls to one side during a cut
- Rough or torn wood surfaces instead of smooth cuts
- You are spending significantly more time on cuts that used to be quick

Why Cutting Performance Decreases

Dull cutters lose their sharp edge through normal use. Wood containing dirt, sand, or gravel accelerates dulling. Hitting knots, frozen wood, or hidden objects (nails, screws) can damage cutters instantly.

When cutters become dull, the depth gauges (rakers) become relatively too high, preventing the cutters from biting into the wood effectively. This is why both cutters and depth gauges must be maintained together.

Prevent Premature Dulling

Avoid cutting near the ground where the chain can contact soil, sand, or gravel. Keep your chain sharp and properly tensioned.

16. CHAIN TENSION & GUIDE BAR CARE

Chain Tension Basics

Proper chain tension is critical for safety and performance. A chain that is too loose can derail. A chain that is too tight increases friction and can cause the chain to break.

How to Check Tension:

- With the engine off, wear gloves and grasp the chain at the midpoint of the bar's underside
- Pull the chain away from the bar—the drive links should just clear the bar groove
- The chain should snap back to the bar when released
- Check tension at multiple points by rotating the chain

Adjusting Tension:

- Loosen the bar retaining nut(s) slightly
- Use the chain tensioner (screw or tool-free mechanism) to adjust
- Tighten until the chain seats properly against the bar
- Retighten the bar retaining nut(s)
- Recheck tension—the chain should still rotate freely by hand

Over-Tightening Warning

An over-tightened chain creates excessive friction and heat, accelerates wear, and can cause chain failure. If you cannot rotate the chain by hand, it is too tight.

Guide Bar Maintenance

- Clean the bar groove after each use with a groove cleaning tool or flat file
- File down any burrs on the bar rails with a flat file
- Flip the bar periodically to equalize wear (if the bar is designed to be flipped)
- Check for straightness by sighting along the bar
- Lubricate the nose sprocket if your bar has one
- Replace the bar if the groove is excessively worn, the bar is bent, or mounting holes are elongated

Bar Flip Schedule

Many manufacturers recommend flipping the bar every time you sharpen the chain. This helps equalize rail wear on both sides.

17. CHAIN LUBRICATION

Chain lubrication reduces friction between the chain and guide bar, extends the life of both components, and improves cutting performance.

Checking Oil Delivery

- Fill the bar oil tank
- Hold the bar tip close to a light-colored surface (not touching)
- Rev the engine briefly at moderate speed
- You should see a line of oil droplets on the surface
- If no oil appears, do not use the saw—have the oiling system checked

Bar Oil Tips

- Use bar and chain oil specifically designed for chainsaws
- Do not use motor oil, ATF, or other substitutes as primary chain lubricant
- In cold weather, use a lighter-weight bar oil for better flow
- In hot weather, use a heavier-weight bar oil for better adhesion
- Refill bar oil every time you refuel the saw (gas models)
- Drain bar oil before long-term storage to prevent gumming

Never Run Without Oil

Running a chainsaw without proper chain lubrication will rapidly destroy both the chain and guide bar. The friction generates extreme heat and can cause the chain to stretch, bind, or break.

18. CHAIN & GUIDE BAR INSPECTION CHECKLISTS

CHAIN INSPECTION CHECKLIST

Check Item	Acceptable	Action Needed	Date
Cutter sharpness	Sharp edges on all cutters	Sharpen or replace chain	
Cutter length	Cutters at or above minimum length	Replace chain when too short	
Depth gauges	Proper height relative to cutters	File per manufacturer spec	
Drive links	Not visibly worn or thinned	Replace chain if worn	
Tie straps	No cracks or looseness	Replace chain if damaged	
Rivets	Tight; no visible play	Replace chain if loose	
Overall straightness	Chain runs straight on bar	Check bar and chain alignment	
Damage/cracks	No visible damage	Replace chain immediately	
Tension	Proper tension per manufacturer	Adjust or troubleshoot	

GUIDE BAR INSPECTION CHECKLIST

Check Item	Acceptable	Action Needed	Date
Rail height	Even on both sides	Flip bar or replace	
Groove condition	No excessive widening	Replace bar	
Bar straightness	Straight when sighted	Replace bar	
Nose sprocket	Rotates freely; no play	Lubricate or replace	
Mounting holes	Not elongated or worn	Professional assessment	
Rail edges	Smooth; no burrs	File smooth	
Overall condition	No cracks or damage	Replace immediately	

CHAIN MAINTENANCE LOG

Date	Chain ID	Saw Model	Work Performed	Sharpened?	Adjusted?	Replaced?	Notes

Date	Chain ID	Saw Model	Work Performed	Sharpened?	Adjusted?	Replaced?	Notes

PART 5

CHAIN SHARPENING WORKBOOK

Maintaining a Sharp, Effective Chain

19. SHARPENING FUNDAMENTALS

A sharp chain is safer, more efficient, and easier on your equipment. Learning to sharpen your own chain is a valuable skill that saves time and money.

Why Sharpening Matters

- A sharp chain cuts faster with less effort
- Reduced fatigue means better control and safety
- Less strain on the engine/motor extends equipment life
- Clean cuts are better for trees and wood
- A dull chain is a leading cause of kickback

Chain Components in Sharpening

Each cutter on the chain has specific geometry that must be maintained:

- **Cutting Corner** — The sharp edge that slices wood. This is what you sharpen.
- **Top Plate** — The angled surface on top of the cutter.
- **Side Plate** — The inner angled surface. Together with the top plate, it forms the cutting edge.
- **Depth Gauge (Raker)** — Controls how deep the cutter bites. Must be filed lower as cutters wear.

Critical Sharpening Rule

Sharpening specifications—including filing angle, depth gauge clearance, and file size—vary by chain type and manufacturer. There is NO universal filing angle that applies to all chains. Always check your chain manufacturer's specifications before filing.

20. FILING DIRECTION & TECHNIQUE

Use the correct file size and type for your chain. Your chain manufacturer specifies the file diameter for your chain pitch.

General Filing Guidelines

- Always file from the inside of the cutter outward (toward the cutting edge)
- Use smooth, consistent strokes—typically 3-5 strokes per cutter
- Maintain the same number of strokes on each cutter for even results
- Keep the file at the correct angle specified for your chain
- Hold the file at the correct tilt angle for the side plate
- Apply light, even pressure on the forward stroke only
- Lift the file on the return stroke—do not drag it back
- File all cutters on one side first, then switch to the other side

Depth Gauge (Raker) Maintenance

As you sharpen cutters (removing material from the top), the depth gauges become relatively higher, reducing cutting depth. Periodically check and file depth gauges using a depth gauge tool and flat file.

- Use a depth gauge tool (specific to your chain type) to check raker height
- File the top of the depth gauge flat with a flat file
- Round the front of the depth gauge to restore proper shape
- Check depth gauges every 2-3 sharpenings or when cutting performance decreases

Manufacturer Specifications

The filing angle, file size, and depth gauge clearance are specific to your chain type. Consult your chain manufacturer's documentation for exact specifications.

21. SHARPENING PREPARATION & WORKSHEET

SHARPENING PREPARATION CHECKLIST

- ☐ Correct file size for my chain (per manufacturer)
- ☐ Flat file for depth gauges
- ☐ Depth gauge tool/guide
- ☐ File handle/guide (if using)
- ☐ Marker or crayon (to mark starting point)
- ☐ Clean work area with good lighting
- ☐ Chain still on bar or properly secured
- ☐ Engine off / battery removed
- ☐ Manufacturer specifications available
- ☐ Old rag or brush for cleaning chain

SHARPENING SESSION WORKSHEET

Date: _____

Chain Description/ID: _____

Saw Model: _____

File/Tool Used: _____

File Size (per manufacturer): _____

Manufacturer Specification (filing angle, depth gauge clearance): _____

Starting Condition (describe): _____

Work Performed: _____

Final Condition (describe): _____

Notes:

22. CHAIN SHARPENING TRACKER

Track your sharpening sessions to identify patterns, know when to replace the chain, and maintain consistent performance.

[illegible]

PART 6

TROUBLESHOOTING

Common Problems & What to Do

23. TROUBLESHOOTING GUIDE

Use this guide to identify common issues and determine what you can safely check yourself. Always stop and consult a professional when repairs go beyond basic maintenance.

Chainsaw Will Not Start

Category	Details
Possible Causes	Empty fuel tank; stale fuel; spark plug issue; flooded engine; battery not charged
What You Can Check	Check fuel level; check spark plug (gas); charge battery; follow manual starting procedure
When to Stop	If engine cranks but won't start after basic checks, consult manual or professional

Starts But Stops Running

Category	Details
Possible Causes	Fuel delivery issue; dirty air filter; spark plug problem; blocked fuel vent
What You Can Check	Check fuel level; clean/replace air filter; check fuel vent; check spark plug
When to Stop	If problem persists after basic checks, consult manual or professional

Poor Cutting Performance

Category	Details
Possible Causes	Dull chain; wrong chain type; low chain tension; bar damage; low oil
What You Can Check	Sharpen or replace chain; check tension; check bar condition; verify oil flow
When to Stop	If bar is worn or damaged, have it professionally assessed

Chain Does Not Move

Category	Details
Possible Causes	Chain brake engaged; worn clutch; broken sprocket; chain jammed
What You Can Check	Disengage chain brake; check for jams; inspect sprocket (engine off)
When to Stop	Do not force. Consult manual or professional

Chain Comes Loose Repeatedly

Category	Details
Possible Causes	Worn chain; worn bar; stretched chain; incorrect tensioning
What You Can Check	Check chain for stretch/wear; inspect bar groove; verify tensioning mechanism
When to Stop	If bar or chain is worn, replace or have assessed

Excessive Vibration

Category	Details
Possible Causes	Loose fasteners; worn anti-vibration mounts; bent bar; damaged chain
What You Can Check	Tighten all fasteners; inspect anti-vibration mounts; check bar straightness
When to Stop	If vibration continues, stop and have saw professionally inspected

Chain Overheats

Category	Details
Possible Causes	Insufficient oil; dull chain; over-tightened chain; clogged oil passages
What You Can Check	Check oil level and flow; sharpen chain; adjust tension; clean oil passages
When to Stop	Stop immediately if chain is hot to touch or smoking

Poor Lubrication

Category	Details
Possible Causes	Empty oil tank; clogged oil passages; broken oil pump; wrong oil type
What You Can Check	Refill oil tank; clean oil passages; verify oil type per manufacturer
When to Stop	If oil pump is suspected damaged, consult professional

Excessive Smoke

Category	Details
Possible Causes	Too much oil; flooded engine; engine oil in fuel; blocked muffler
What You Can Check	Check fuel mixture; check air filter; let engine clear if flooded
When to Stop	If smoke continues, stop and have engine checked

Saw Cuts Crooked

Category	Details
Possible Causes	Uneven bar wear; uneven chain sharpness; bar not properly mounted
What You Can Check	Check bar mounting; inspect bar rails for even wear; check chain sharpness
When to Stop	If bar is worn or bent, have it professionally assessed

Chain Dulls Unusually Fast

Category	Details
Possible Causes	Cutting dirty wood; hitting rocks/nails; incorrect chain type
What You Can Check	Check chain type vs. manual; review sharpening technique; avoid ground-level cutting
When to Stop	If chain is damaged, replace it

Battery Saw Loses Power Quickly

Category	Details
----------	---------

Possible Causes	Low battery; cold battery; battery nearing end of life
What You Can Check	Charge fully; warm battery to room temp; check battery age/health
When to Stop	If battery won't hold charge, replace per manufacturer

Electric Saw Stops Unexpectedly

Category	Details
Possible Causes	Overload protection triggered; power interruption; extension cord issue
What You Can Check	Check power source; reduce load; check cord connections; let motor cool
When to Stop	If trips continue, consult electrician or manufacturer

Safety First

Never attempt repairs that involve disassembling the engine, clutch, or internal components unless you are qualified to do so.

24. TROUBLESHOOTING WORKSHEET

Use this worksheet to document problems and the steps you take. This record helps identify recurring issues and provides useful information for repair professionals.

Date:	Saw Model:
Symptom:	
Possible Cause(s):	
What I Checked:	
What I Found:	
Action Taken:	
Resolved? (Y/N):	Follow-up Needed:
Notes:	

Date:	Saw Model:
Symptom:	
Possible Cause(s):	
What I Checked:	
What I Found:	
Action Taken:	
Resolved? (Y/N):	Follow-up Needed:
Notes:	

Date:	Saw Model:
Symptom:	
Possible Cause(s):	
What I Checked:	
What I Found:	
Action Taken:	

Resolved? (Y/N):	Follow-up Needed:
Notes:	

PART 7

FIREWOOD PLANNER

Cutting, Tracking & Storage

25. FIREWOOD CUTTING PLANNER

Plan your firewood cutting sessions to stay organized, track progress, and ensure you have enough seasoned wood for the season.

Date	Location	Wood Type	Est. Quantity	Cutting Goal	Completed?	Notes

CUTTING SESSION NOTES

Date / Notes: _____

Date / Notes: _____

Date / Notes: _____

Date / Notes: _____

26. FIREWOOD INVENTORY TRACKER

Track your firewood supply from cutting to burning. This helps you plan future cutting and ensure adequate seasoned wood.

Wood Type	Quantity	Cut Date	Split?	Stacked?	Drying Location	Est. Ready Date	Notes

Drying Note

Firewood drying time varies significantly based on wood species, log size, climate, and storage conditions. Research the specific drying characteristics of the wood species you are working with in your climate zone.

27. FIREWOOD STORAGE GUIDELINES

Proper storage ensures your firewood dries efficiently and remains in good condition until you need it.

Storage Principles

- **Keep wood off the ground** — Use pallets, rails, or a dedicated rack to elevate the bottom row. This promotes air circulation and reduces moisture absorption.
- **Allow air circulation** — Stack wood loosely enough for air to flow between pieces.
- **Cover the top** — Protect the top from rain and snow with a tarp, metal roofing, or purpose-built cover. Leave the sides open for airflow.
- **Keep away from structures** — Store firewood at least 20 feet from your home or other structures.
- **Choose a sunny, breezy location** — Sunlight and wind accelerate drying.
- **Stack neatly** — Organized stacks are more stable and easier to inventory.
- **Check periodically** — Inspect stacks for mold, rot, insect activity, or stack instability.

FIGURE 27A



Photo 27A — Split and stacked: Split firewood stacked for drying. Keep stacks off the ground, aired between pieces, covered on top with open sides.

Firewood Storage Checklist

- ☐ Wood is elevated off the ground
- ☐ Stack allows air circulation
- ☐ Top is covered to shed rain/snow
- ☐ Sides are open for airflow
- ☐ Located away from structures (20+ feet)
- ☐ In a sunny, breezy location
- ☐ Stack is stable and organized

☐ Pest access is minimized

Planning Tip

Track your annual firewood consumption. Once you know how much wood you use per season, you can plan cutting well in advance to ensure fully seasoned wood.

PART 8

TOOLS & PPE

Essential Equipment

28. CHAINSAW PPE CHECKLIST

Personal Protective Equipment (PPE) is essential for chainsaw safety. PPE requirements can vary based on jurisdiction, task, and conditions. Always follow your local regulations.

Category	Item	Purpose	Condition	Have It?
Head	Hard hat / safety helmet	Protection from falling debris		
Eyes	Safety glasses / goggles	Protect eyes from chips and dust		
Face	Face shield / mesh visor	Full face protection from chips		
Hearing	Ear muffs / ear plugs	Protect hearing from engine noise		
Hands	Chainsaw gloves	Cut-resistant hand protection		
Legs	Chainsaw chaps / trousers	Leg protection from chain contact		
Feet	Steel-toe boots with ankle support	Foot protection and stable footing		
Body	Close-fitting work clothing	Avoid loose clothing that can catch		
Other	High-visibility vest (if needed)	Visibility in shared work areas		

PPE Varies by Task

Different tasks may require different levels of PPE. Assess each situation and equip yourself accordingly.

29. MAINTENANCE TOOL CHECKLIST

Keep these tools and supplies organized and accessible for routine chainsaw maintenance.

Category	Item	Have It?	Condition	Need Replace?	Notes
Sharpening	Round file (correct size)				
Sharpening	Flat file				
Sharpening	Depth gauge tool				
Sharpening	File handle / guide				
Cleaning	Wire brush				
Cleaning	Soft cleaning brush				
Bar Tools	Groove cleaning tool				
Bar Tools	Bar rail file				
General	Scrench / combination tool				
General	Socket set / wrenches				
Lubricants	Bar and chain oil				
Fuel	Fuel container (approved)				
Fuel	Fuel stabilizer				
Safety	Work gloves (non-cutting)				
Safety	Safety glasses				
Storage	Tool organizer / caddy				

PART 9

BUYING & REPLACEMENT

Making Informed Purchases

30. CHAINSAW BUYING CHECKLIST

Use this checklist when considering a chainsaw purchase. Answer these questions to clarify your needs before comparing specific models.

1. What types of cutting will I do most often? (firewood, pruning, felling, storm cleanup)
2. How often will I use the chainsaw? (occasional, weekly, daily)
3. What power type is best for my situation? (gas, battery, electric)
4. What bar length is appropriate for the work I will do?
5. What safety features does the manufacturer include?
6. What does the manufacturer recommend for my intended use?
7. How available are replacement parts (chains, bars, filters)?
8. How easy is routine maintenance on this model?
9. What is the warranty coverage and duration?
10. What accessories will I need to purchase additionally?
11. What is my total budget including accessories and PPE?
12. Do I have compatible batteries if choosing a battery saw?

Budget Tip

Consider the total cost of ownership, not just the purchase price. Factor in replacement chains, bar oil, fuel, files, PPE, and maintenance supplies over the life of the saw.

31. CHAINSAW COMPARISON WORKSHEET

Use this worksheet to compare specific models side by side.

Feature	Model A	Model B	Model C
Brand / Model			
Price			
Power Source			
Engine Size / Voltage			
Weight			
Bar Length Options			
Chain Type / Pitch / Gauge			
Safety Features			
Warranty			
Maintenance Requirements			
Battery Ecosystem			
Parts Availability			
Intended Use / Best For			
Pros			
Cons			
Overall Impression			
Notes			

No Universal Best

The best chainsaw for you depends on your specific needs, budget, and intended use. Research specific models and handle the saw before purchasing if possible.

PART 10

PERSONAL CHAINSAW RECORDS

Track, Document, Maintain

32. MAINTENANCE LOG

Record all maintenance performed on your chainsaw. This log is valuable for warranty claims, resale value, and identifying maintenance patterns.

[illegible]

33. CHAIN REPLACEMENT LOG

[illegible]

34. SHARPENING LOG

[illegible]

35. REPAIR LOG

[illegible]

36. OPERATING HOURS TRACKER

Track your chainsaw's operating hours to plan maintenance and maintain warranty documentation.

[illegible]

PART 11

QUICK REFERENCE PAGES

Print & Keep in Your Workshop

37. BEFORE YOU START — QUICK REFERENCE

Print this page and keep it in your workshop.

CHECK	DONE
PPE is on and in good condition	☐
Eye/face protection in place	☐
Hearing protection ready	☐
Gloves on	☐
Sturdy, non-slip footwear	☐
Leg protection (where applicable)	☐
Chain is sharp and in good condition	☐
Chain tension is correct	☐
Guide bar is straight and in good condition	☐
Bar oil tank is filled	☐
Bar oil is flowing to bar tip	☐
Chain brake engages/disengages properly	☐
Throttle operates and returns to idle	☐
Throttle lockout prevents accidental start	☐
Stop switch works	☐
All handles secure	☐
All guards and covers secure	☐
All fasteners tight	☐
Fuel tank filled (gas) / Battery charged	☐
No fuel leaks visible	☐
Work area clear of obstacles	☐
No overhead hazards	☐
Escape path is clear behind you	☐
Stable, secure footing	☐
Bystanders at safe distance (2x bar length)	☐
Weather conditions are safe	☐
You are alert and rested	☐

Remember

If any check fails, address it before starting. No cut is worth the risk.

38. AFTER YOU FINISH — QUICK REFERENCE

TASK	DONE
Engine off; all parts stopped	☐
Chain brake engaged before setting down	☐
Saw allowed to cool before storing	☐
Sawdust and debris cleaned from saw	☐
Chain tension checked/adjusted	☐
Chain condition noted	☐
Bar oil topped off	☐
Guide bar inspected for damage	☐
Fasteners checked for tightness	☐
Air filter inspected	☐
Exterior wiped down	☐
Saw stored in clean, dry location	☐
PPE cleaned and stored	☐
Operating hours recorded (if tracking)	☐

39. CHAIN INSPECTION — QUICK REFERENCE

CHECK	WHAT TO LOOK FOR	ACTION
Sharpness	Cutters produce chips, not dust	Sharpen when dull
Cutter length	Cutters above minimum length	Replace chain when too short
Depth gauges	Proper height relative to cutters	File per manufacturer spec
Drive links	Not visibly worn or thinned	Replace if worn
Tie straps	No cracks or looseness	Replace if damaged
Rivets	Tight; no play	Replace if loose
Tension	Proper tension per manufacturer	Adjust as needed
Overall	No damage or deformation	Replace immediately

40. MAINTENANCE SCHEDULE — QUICK REFERENCE

TASK	FREQUENCY	NOTES
Visual inspection	Every use	
Chain tension	Every use	Adjust as needed
Chain sharpening	As needed	When cutting performance drops
Chain lubrication	Every use	Refill bar oil
Guide bar inspection	Weekly	Check rails and groove
Air filter cleaning	Monthly	More often in dusty conditions
Air filter replacement	Seasonal	Or as needed
Cooling system cleaning	Monthly	Clear fins and screens
Spark plug check	Monthly (gas)	Replace per manual
Fuel filter check	Monthly (gas)	Replace annually
Fastener tightening	Weekly	All accessible fasteners
Safety device check	Every use	Brake, lockout, stop switch
Bar maintenance	Monthly	Clean groove; flip if applicable
Storage preparation	Seasonal	For off-season storage

Note

Always follow your manufacturer's specific maintenance schedule. This is a general reference.

41. STORAGE CHECKLIST — QUICK REFERENCE

For chainsaws that will not be used for 30+ days:

TASK	DONE
Chainsaw thoroughly cleaned	☐
Fuel tank run dry or stabilized (gas)	☐
Spark plug area treated (gas; per manual)	☐
Bar oil tank drained	☐
Chain tension relieved slightly	☐
Air filter cleaned or replaced	☐
Saw stored in dry, secure location	☐
Battery stored at 40-60% charge (if battery saw)	☐
Stored away from children and unauthorized users	☐
Maintenance records updated	☐

42. TROUBLESHOOTING — QUICK GUIDE

SYMPTOM	FIRST THINGS TO CHECK	STOP IF...
Won't start	Fuel level; spark plug; battery charge; starting procedure	Engine cranks but won't start after basic checks
Stops running	Fuel level; air filter; spark plug; fuel vent	Problem persists after basic checks
Poor cutting	Chain sharpness; tension; bar condition; oil flow	Bar is worn or damaged
Chain won't move	Chain brake; jams; sprocket	Do not force; consult manual
Chain loose	Chain wear; bar wear; tension adjustment	Bar or chain is worn
Excessive vibration	Fasteners; anti-vibration mounts; bar straightness	Vibration continues after check
Overheating	Oil level; chain sharpness; tension	Chain is hot or smoking
Poor lubrication	Oil level; oil passages; oil type	Oil pump suspected damaged
Crooked cuts	Bar mounting; bar wear; chain sharpness	Bar is worn or bent

43. PPE CHECKLIST — QUICK REFERENCE

EQUIPMENT	CHECK	CONDITION
Hard hat / safety helmet		
Safety glasses / goggles		
Face shield / mesh visor		
Ear muffs / ear plugs		
Chainsaw gloves		
Chainsaw chaps / trousers		
Steel-toe boots		
Close-fitting work clothing		
High-visibility vest (if needed)		

44. FIREWOOD PLANNING — QUICK REFERENCE

Storage Principles

- Keep wood off the ground (use pallets or racks)
- Allow air circulation between pieces
- Cover the top; leave sides open
- Store 20+ feet from structures
- Choose sunny, breezy locations
- Stack neatly for stability and inventory

Cutting Season Planning

Season	Task	Priority
Spring	Assess firewood needs for coming winter	High
Spring/Summer	Cut and split firewood	High
Summer	Stack and begin drying	High
Fall	Check drying progress; add to indoor supply	Medium
Winter	Monitor indoor supply; plan next season	Low
Year-Round	Track inventory and consumption	Medium

PART 12

30-DAY CHAINSAW MAINTENANCE CHALLENGE

Build Better Habits, One Day at a Time

30-DAY MAINTENANCE CHALLENGE

Complete one small task each day for 30 days. By the end, your chainsaw will be better maintained, your workspace more organized, and your maintenance habits stronger.

Day	Task	Done
1	Record your chainsaw model and serial number	☐
2	Locate and read your owner's manual safety section	☐
3	Inspect all PPE — check condition	☐
4	Inspect the guide bar for straightness and wear	☐
5	Check chain condition and sharpness	☐
6	Check and adjust chain tension	☐
7	Check bar oil level and oil flow	☐
8	Clean sawdust from the entire chainsaw	☐
9	Inspect chain brake — test engagement	☐
10	Check throttle trigger and lockout function	☐
11	Tighten all accessible fasteners	☐
12	Clean or inspect the air filter	☐
13	Inspect guide bar groove for wear	☐
14	File any burrs from guide bar rails	☐
15	Review your sharpening technique; practice if needed	☐
16	Organize your maintenance tools	☐
17	Check fuel lines and filter (gas models)	☐
18	Inspect spark plug (gas models)	☐
19	Clean the cooling fins and air intake area	☐
20	Check anti-vibration mounts for looseness	☐
21	Inspect the chain catcher	☐
22	Verify stop switch function	☐
23	Update your chainsaw information sheet	☐
24	Review your maintenance log for upcoming needs	☐
25	Clean and organize your work area	☐
26	Check firewood inventory and drying status	☐
27	Review your PPE checklist — replace as needed	☐
28	Inspect fuel container and storage area (gas models)	☐
29	Plan your next chainsaw purchase or upgrade needs	☐
30	Complete a full pre-use check and test run	☐

BONUS RESOURCES

Printable Tools for Your Workshop

BONUS 1. EMERGENCY INFORMATION CARD

Print this card and keep it with your chainsaw or in your workshop.

EMERGENCY INFORMATION	
Chainsaw Brand / Model:	
Serial Number:	
Owner's Name:	
Emergency Contact:	
Emergency Phone:	
Local Emergency Number:	
Nearest Medical Facility:	
Address:	
Important Medical Information:	
Allergies / Medications:	
Doctor / Physician:	
Doctor Phone:	
Notes:	

Safety Reminder

This card is for emergency reference only. Always operate within your skill level and seek professional help when needed.

BONUS 2. 12-MONTH MAINTENANCE CALENDAR

Month	Maintenance Task	Completed	Notes
JANUARY			
FEBRUARY			
MARCH			
APRIL			
MAY			
JUNE			
JULY			
AUGUST			
SEPTEMBER			
OCTOBER			
NOVEMBER			
DECEMBER			

Tip

Enter your manufacturer's specific maintenance tasks in the 'Maintenance Task' column. This calendar becomes your personalized maintenance schedule.

BONUS 3. WORKSHOP CHAINSAW CHECKLIST

Print and post in your workshop or garage.

CHECKLIST ITEM	CHECK
PPE stored and in good condition	☐
Chainsaw stored clean and dry	☐
Bar oil supply adequate	☐
Fuel supply adequate (gas models)	☐
Sharpening files in good condition	☐
All tools organized and accessible	☐
Emergency information card posted	☐
Manufacturer manual accessible	☐
Work area clean and organized	☐
Fire extinguisher accessible	☐
First aid kit stocked	☐
Replacement chain available	☐
Bar oil containers full	☐
Maintenance log up to date	☐

BONUS 4. 10-MINUTE PRE-CUTTING ROUTINE

Complete this routine before every cutting session. It takes about 10 minutes and ensures you are safe, prepared, and ready to work.

STEP	TIME	TASK	DONE
1	1 min	Put on all PPE	☐
2	1 min	Walk the work area — check for hazards	☐
3	1 min	Clear escape path behind your position	☐
4	1 min	Check chain tension and condition	☐
5	30 sec	Check bar oil level	☐
6	30 sec	Check fuel level (gas) or battery (battery)	☐
7	1 min	Inspect guide bar for damage	☐
8	30 sec	Test chain brake engagement	☐
9	30 sec	Test throttle trigger and lockout	☐
10	30 sec	Verify stop switch works	☐
11	30 sec	Check all fasteners are tight	☐
12	1 min	Clear immediate work area of tripping hazards	☐
13	30 sec	Identify escape paths and overhead hazards	☐

BONUS 5. CHAINSAW OWNERSHIP COST TRACKER

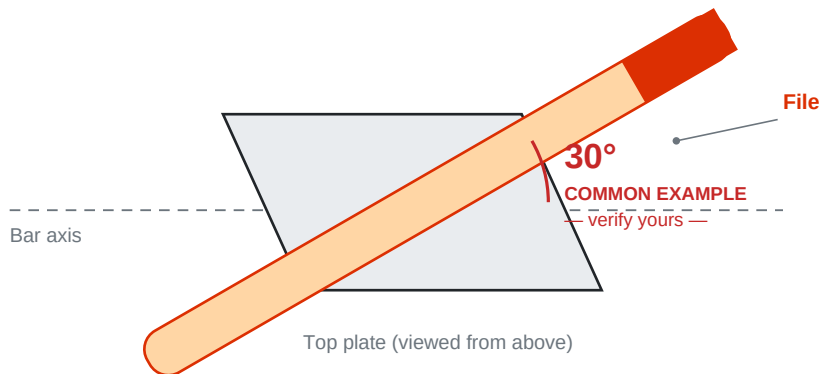
Track the total annual cost of owning and maintaining your chainsaw. This helps with budgeting and future purchase decisions.

Expense Category	Year 1	Year 2	Year 3	Year 4	Year 5
Purchase Price					
Fuel / Electricity					
Bar & Chain Oil					
Replacement Chains					
Files & Sharpening Tools					
Guide Bar					
PPE					
Repairs					
Maintenance Parts					
Accessories					
Other					
ANNUAL TOTAL					
CUMULATIVE TOTAL					

BONUS 6. SHARPENING ANGLE CHEAT-SHEET POSTER

Print this page and post it above your sharpening bench. It shows how a file aligns with the cutter's top plate when viewed from above.

FILING ANGLE — TOP VIEW (EXAMPLE)



Side-plate tilt and depth-gauge setting also come from YOUR chain spec — there is no universal value.

Angles Are Examples — Not Universal Settings

Filing angles vary by chain design and manufacturer. The 30-degree alignment shown is a COMMON EXAMPLE found in many chain documents — it is not a universal setting. Ripping chains and specialty chains use different geometry. Always confirm the exact top-plate angle, side-plate tilt, file diameter, and depth-gauge setting in YOUR chain manufacturer's documentation before filing.

How to Use This Poster

- Identify your exact chain (brand, model, pitch, gauge) and look up its filing specification.
- Select the file diameter your chain manufacturer specifies for your chain.
- Match the poster's file alignment to YOUR specified angle — not to the example number.
- Use the same number of smooth, forward-only strokes on every cutter.
- Check depth gauges every 2-3 sharpenings with the gauge tool made for your chain.

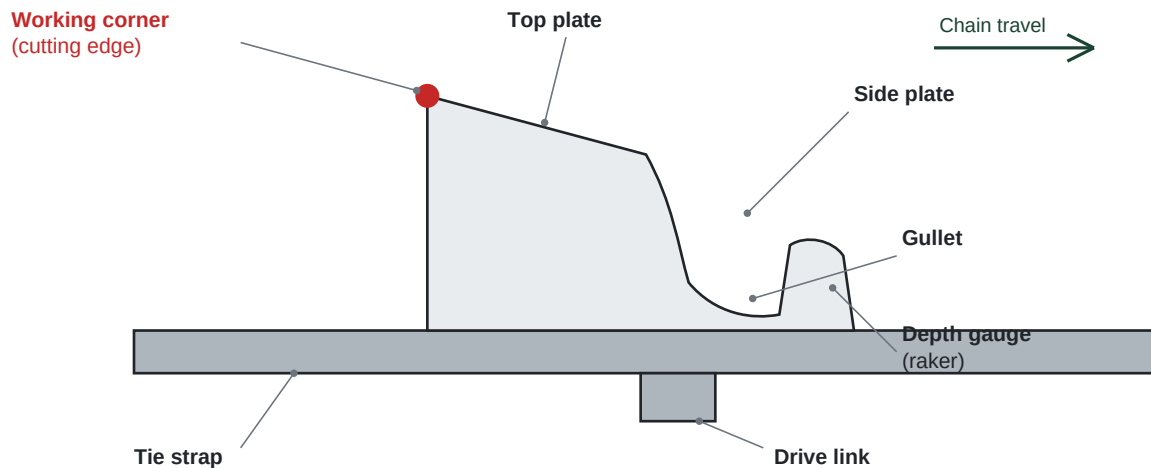
Poster Tip

After printing, write YOUR chain's specification in the margin: angle, file size, and depth-gauge setting. The poster then becomes customized to your equipment.

BONUS 7. CUTTER ANATOMY CLOSE-UP

Learn the name of every part of a cutter. When you can name the parts, sharpening instructions stop sounding like jargon.

CUTTER ANATOMY — ONE CUTTER, ENLARGED



The Parts, in Plain English

- **Working corner (cutting edge)** — the sharp point that slices wood. Dulling destroys it; filing restores it.
- **Top plate** — the angled top surface. Its angle (from YOUR chain spec) controls how aggressively the cutter bites.
- **Side plate** — the inner angled face. Together with the top plate it forms the cutting edge.
- **Gullet** — the scoop that carries the chip out of the cut. Keep it clean; packed gullets cut poorly.
- **Depth gauge (raker)** — the hump ahead of the cutter that limits bite depth. File it lower as cutters wear, per spec.
- **Tie strap** — links cutters together into the chain loop.
- **Drive link** — the tab that rides in the bar groove and engages the sprocket.

FIGURE 7.1

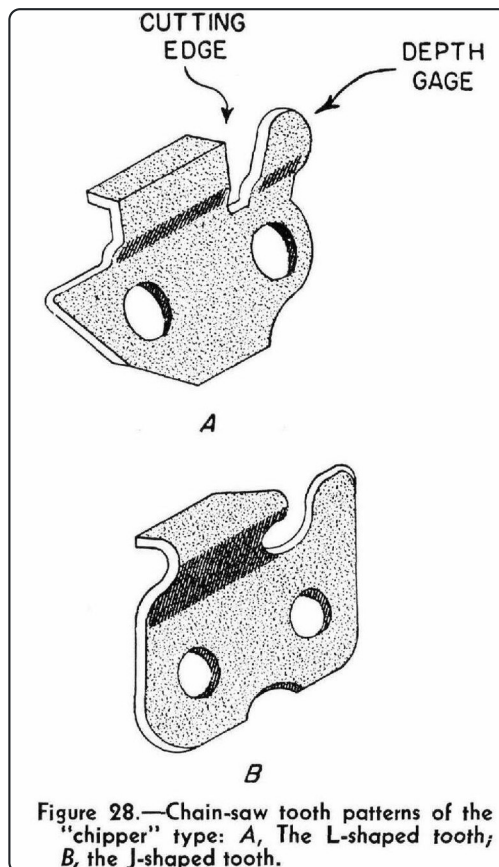


Figure 7.1 — Vintage shop reference (1962): Chipper-tooth patterns with cutting edge and depth gage labeled — the same two features you maintain on modern chains. (U.S. Forest Service, public domain.)

Self-Test

Cover the labels and point to each part on your own chain. When you can name all seven without looking, every sharpening guide becomes far easier to follow.

BONUS 8. KICKBACK DANGER-ZONE POSTER

Post this where you store your saw. One glance reminds every user where kickback starts.

GUIDE BAR — KNOW THE DANGER ZONE



Four Rules for the Tip

1. Never intentionally cut with the upper tip of the bar.
2. Keep the tip clear when limbing — watch for hidden branches behind the cut.
3. Keep a sharp, properly tensioned, well-lubricated chain: dull or loose chains bind and pinch more easily.
4. Keep your chain brake working. Test it before every session; retire the saw to a professional if it fails.

No Poster Replaces Training

This graphic builds awareness only. Kickback forces can exceed reaction time. If your work involves felling, storm damage, or trees near structures or power lines, hire a qualified professional.

BONUS 9. FIELD INSPECTION REFERENCE LIBRARY

Compare your saw against these good-vs-bad references during inspection. If yours looks like the BAD panel, take the corrective action listed.

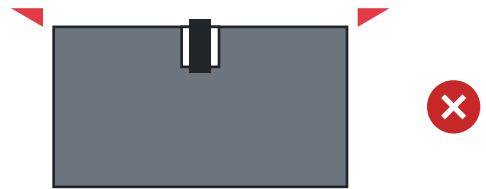
Guide Bar Rails: Good vs Bad

GOOD: square, even rails



Chain sits straight; rails flat and even.

BAD: mushroomed / flared rails



Flared burrs — dress flat with a file.

- **GOOD:** rails flat, square, and even on both sides — chain sits straight. Action: none; flip the bar on schedule if your manual allows.
- **BAD:** mushroomed or flared edges that catch a fingernail — chain wobbles and cuts crooked. Action: dress the edges flat with a file, or replace the bar if wear is heavy.

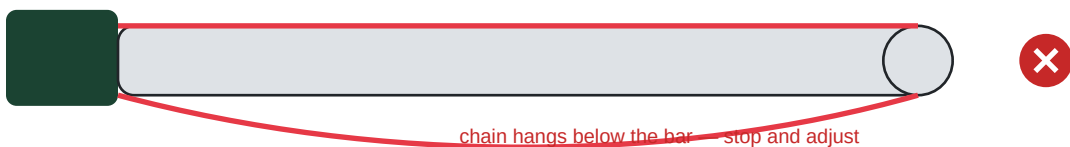
Chain Tension: Proper vs Loose

PROPER: chain snug on the bar



drive links just clear the groove; chain snaps back

TOO LOOSE: sagging chain — do NOT cut



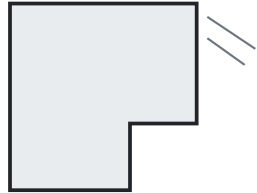
chain hangs below the bar — stop and adjust

- **PROPER:** chain snug; drive links just clear the groove and the chain snaps back. Action: none.
- **TOO LOOSE:** chain hangs below the bar. Action: stop, re-tension per your manual, and recheck after the first cuts.

Cutter Edge: Sharp vs Dull

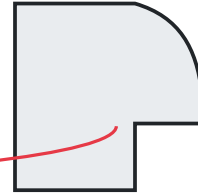
SHARP: crisp working corner

clean, square edge



DULL: rounded, worn edge

rounded edge — time to sharpen



- **SHARP:** crisp square working corner; the saw throws chips. Action: none.
- **DULL:** rounded, light-catching edge; the saw makes dust and needs pushing. Action: sharpen per your chain spec (see Bonus 6).

BONUS 10. FIELD LAMINATED CARD (4-INCH, DOUBLE-SIDED)

Print this page at 100% scale, cut along the heavy outer border of each card, and laminate them back-to-back. The 4-inch width fits a shirt pocket, glove box, or tool kit.

SIDE A — 60-SECOND START ROUTINE
1. PPE on: eyes, ears, gloves, boots, leg protection.
2. Chain sharp, snug, and snapping back to the bar.
3. Bar straight; oil tank full; oil reaching the tip.
4. Brake clicks on/off; throttle returns; lockout holds.
5. Stop switch works; fasteners tight; guards in place.
6. Correct fuel mix in tank (gas) / battery charged.
7. No fuel leaks; work area and escape path clear.
8. No overhead hazards; footing solid and stable.
9. Bystanders and pets 2x bar length away.
10. Weather safe; you are alert and rested. Any NO-GO? Fix it first.
<i>SAWOFF.com — Fix every NO-GO before starting.</i>

SIDE B — TROUBLESHOOTING FLOW
1. Won't start? Fuel fresh and full? Battery charged? Then follow the manual's start steps exactly.
2. Starts, then dies? Air filter clean? Fuel vent clear? Plug per manual?
3. Cuts poorly? Chain sharp? Tension snug? Bar straight? Oil flowing to the tip?
4. Chain won't move? Brake OFF? Jam cleared with the saw OFF? If not — STOP.
5. Overheats or smokes? STOP immediately. Check oil, tension, sharpness after it cools.
6. Vibration or crooked cuts? Fasteners tight? Rails even? If it persists — pro assessment.
7. Still stuck? STOP. Log it on the Part 6 worksheet .
<i>SAWOFF.com — When in doubt, stop and call a professional.</i>

BONUS 11. CHAIN INVENTORY & ASSET TRACKER

Give every chain an ID (Chain A, B, C...) and log its life here. Rotating chains extends their life, and this log tells you exactly when a chain owes you nothing.

Chain ID	Fits Saw	Pitch / Gauge	In Service	Sharpenings	Condition	Action	Cost

Retirement Rule

Retire a chain when its cutters are filed near the manufacturer's minimum length, when rivets develop play, or when it needs sharpening far more often than its siblings. Log the retirement date in the Action column.

BONUS 12. WINTERIZATION ROADMAP (GAS SAWS)

Off-season storage in eight steps. Check each box and date the log at the end so spring-you knows exactly what was done.

Step	Task	Done
1	Clean the saw fully: bar groove, air intake, sprocket area, exterior.	☐
2	Fuel: run the tank dry OR add stabilizer and run to circulate (per your manual).	☐
3	Cylinder care per your manual (plug-area treatment where specified).	☐
4	Drain the bar-oil tank; wipe the oil outlet clean.	☐
5	Ease chain tension slightly to unload the bar.	☐
6	Clean or replace the air filter; inspect fuel filter and lines.	☐
7	Sharpen the chain now — or tag it NEEDS FILING so spring-you knows.	☐
8	Store dry, locked, and away from children; log the date below.	☐

Battery Saws

Store the battery at roughly half charge in a cool, dry place, off the charger, and check your manual for the exact storage charge and temperature range.

Storage date: _____

Return-to-service check planned for: _____

BONUS 13. PRO-TIP INSERTS

The Finger Test — Feel for Bar Burrs

Mushroomed rail edges (see Bonus 9) catch the chain and tilt cuts. A fingertip finds them faster than eyes do.

1. Engine OFF, chain brake ON, bar cool, gloves on, saw on a steady bench.
2. Hold the bar steady with one hand.
3. Lightly drag a fingertip sideways ACROSS each rail edge — never along the chain.
4. A healthy rail feels flat; a burr or flare catches the skin.
5. Catch something? Dress the edge flat with a file. Heavy flaring means pro assessment or a new bar.

Fuel-Mix Ratio Grid — Worked Examples

Use ONLY Your Manual's Ratio

Your owner's manual specifies ONE fuel-to-oil ratio for your saw. This grid pre-calculates oil amounts for three ratios you may encounter — use the ONE column that matches your manual and ignore the rest. Never guess the ratio. Use fresh fuel and manufacturer-approved two-stroke oil.

Fuel	50:1 EXAMPLE (2.6 oz/gal)	40:1 EXAMPLE (3.2 oz/gal)	32:1 EXAMPLE (4.0 oz/gal)
1 gallon	2.6 oz	3.2 oz	4.0 oz
2 gallons	5.1 oz	6.4 oz	8.0 oz
2.5 gallons	6.4 oz	8.0 oz	10.0 oz
5 gallons	12.8 oz	16.0 oz	20.0 oz

The Math

Oil (oz) = 128 x gallons / ratio, since one gallon holds 128 oz. Example: 2 gallons at 50:1 = $128 \times 2 / 50 = 5.1$ oz. Mix in an approved container and label it with the date.

Fresh Fuel

Stale mix is a leading cause of hard starts. Mix only what you will use within your manual's freshness window and discard old mix per local regulations.

BONUS 14. VISUAL GLOSSARY — FIGURE PLATES

Each plate below pairs a license-verified photo (full credits in the License Log) with the matching vector reference already in this book. Every caption describes exactly what its photo shows — nothing is staged or mismatched.

FIGURE 1.1

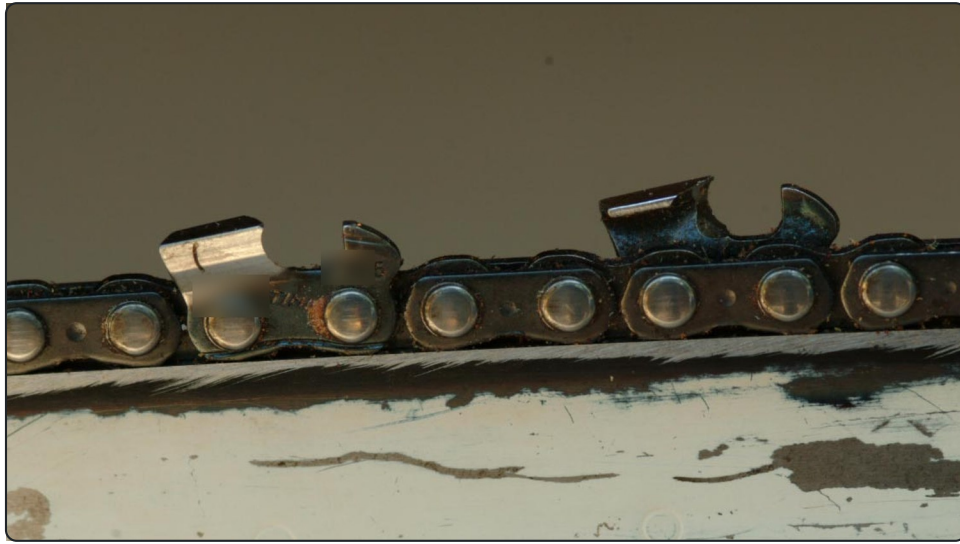


Figure 1.1: Cutters and depth gauges in profile on the bar. The working corner's bright face is the primary cutting surface — crisp and square when sharp, rounded and light-catching when dull, most often after contact with dirt, sand, or metal. *Pair with: Bonus 7 (Cutter Anatomy) and Bonus 9 (Sharp vs Dull).*

FIGURE 1.2

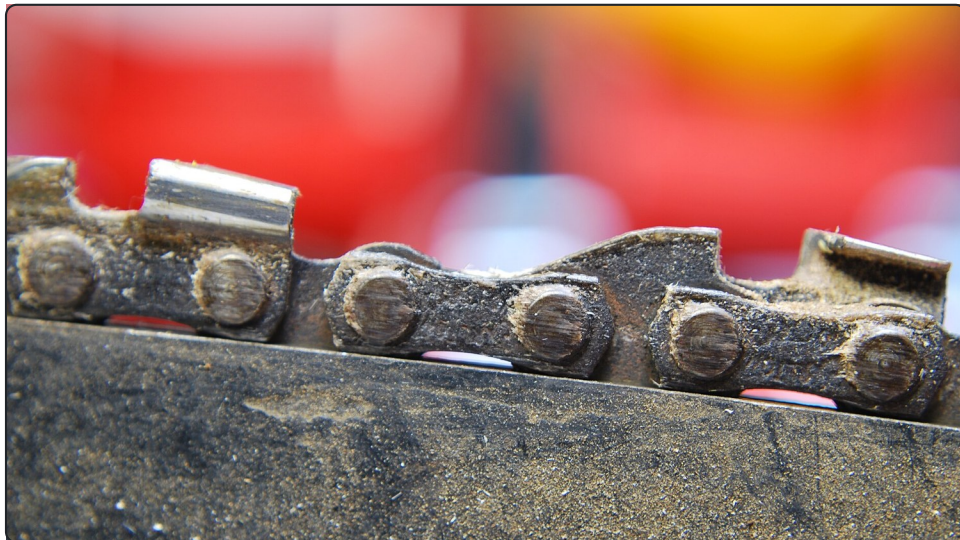


Figure 1.2: What neglect looks like — caked grime and surface rust hide the cutting edges and accelerate wear. Clean the chain and bar before judging sharpness, tension, or rail condition. *Pair with: Part 3 (After-Use Checklist) and Bonus 9.*

FIGURE 2.1



Figure 2.1: Chain seated snug on the bar rail. Correctly tensioned drive links just clear the groove at mid-bar and the chain snaps back when released; a hanging, sagging chain must be re-tensioned before cutting. *Pair with: Bonus 9 (Tension diagram).*

FIGURE 3.1



Figure 3.1: Full kit in the field — helmet with visor and ear muffs, hi-visibility clothing, and gloves before the first cut. PPE requirements vary by task and jurisdiction. *Pair with: Part 8 (PPE Checklist). Face obscured for privacy.*

FIGURE 4.1

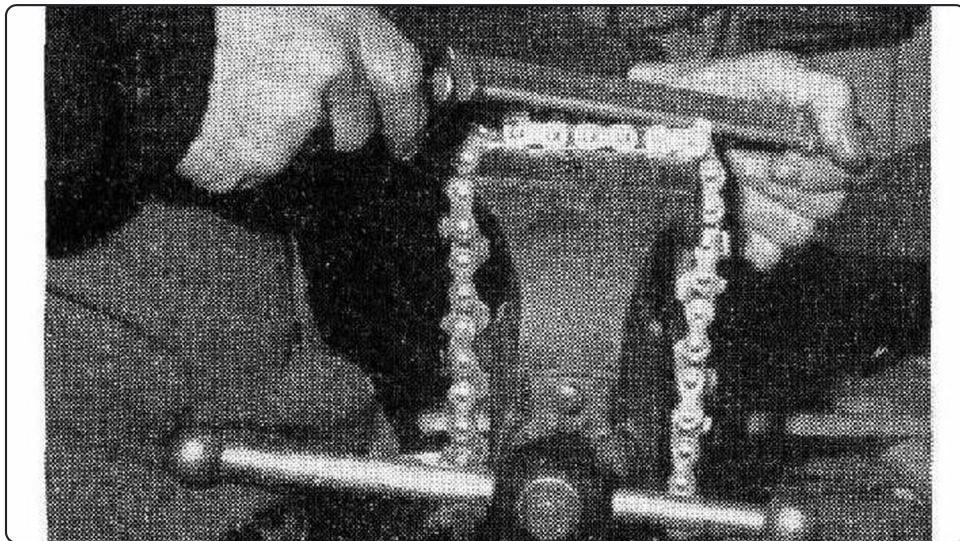


Figure 4.1: Hand-filing a chain secured in a vice — smooth, forward-only strokes with the file size the chain specification calls for. File size and angles vary by chain; confirm in the chain documentation before use. *Pair with: Bonus 6 (Cheat-Sheet Poster).*

FIGURE 4.2



Figure 4.2: Field maintenance in action — saws get their full inspection and service before work begins, not after something fails. *Pair with: Part 3 (Maintenance System).*

FIGURE 5.1



Figure 5.1: Raw material on a commercial log deck — what you buck and split becomes firewood only after proper stacking, airflow, and drying. *Pair with: Part 7 (Storage Guidelines).*

BONUS 15. IMAGE CREDITS & LICENSE LOG

Keep this log with your product files. If a license ever requires proof, this page plus your saved source URLs is your receipt.

How to Credit Each Source

- **Unsplash / Pexels / Pixabay images:** commercial use in ebooks is permitted and attribution is not legally required — give it anyway (creator name + source). Never imply the photographer endorses your product.
- **Wikimedia Commons / Creative Commons (CC-BY):** attribution is LEGALLY REQUIRED — creator name, work title, license name, and a link to the license. Paste the exact credit line from the file page.
- **Public Domain (CC0):** no credit required; credit the source anyway as good practice.
- **Icons (e.g., Flaticon free tier):** attribution is REQUIRED unless you hold a premium license — add the required credit line here.
- **AI-generated images:** verify every technical detail against Bonus 7 before publishing — generators routinely invent wrong cutter geometry. Keep the generation prompt and date in the Notes column.

De-Brand Every Photo

Remove or avoid visible manufacturer logos, distinctive trade dress, and identifiable faces (unless you hold a signed model release). A generic, unbranded saw keeps the book applicable to every reader and avoids trademark disputes.

Photo Credits

Glossary plates (all via Wikimedia Commons): Fig 1.1 — Emrys2, depth-gauge macro (CC SA 1.0; brand stamp retouched out). Fig 1.2 — J.smith, chain macro (CC BY-SA 3.0). Fig 2.1 — Frettie, chain on bar (CC BY 3.0; cropped to exclude branding). Fig 3.1 — GIZ Bush Control Project, worker in protective gear (CC BY-SA 4.0; face and logo obscured). Fig 4.1 — USDA Forest Service (1962), hand-filing in a vice (public domain). Fig 4.2 — U.S. Navy / JO1 D. Herring, crew servicing saws (public domain). Fig 5.1 — NVSBL Media (CC0).

Chapter photos (all via Wikimedia Commons): Photo 1A — Arp, full saw (CC0; badges retouched). Photos 5A, 5B, 10A, 10B — component close-ups (CC SA 1.0; no machine-readable author on the file pages — credited by work title, source, and license; see file history). Photo 27A — Dinkum, firewood stack (CC0). Fig 7.1 — USDA Forest Service (1962), tooth patterns (public domain).

Receipt Rule

For every image, save the source page URL and a screenshot of its license terms on the day you download it. Licenses can change; your dated receipt proves compliant use.

SAFETY, SOURCES & FURTHER READING

The information in this toolkit is provided for general educational and organizational purposes. It is based on widely accepted chainsaw safety and maintenance principles from the following types of authoritative sources:

Safety Organizations

- **Occupational Safety and Health Administration (OSHA)** — OSHA provides chainsaw safety guidelines for workplace operations. Their resources cover personal protective equipment requirements, safe operating procedures, and hazard awareness. Visit [osha.gov](https://www.osha.gov) for current information.
- **National Institute for Occupational Safety and Health (NIOSH)** — NIOSH conducts research on chainsaw-related injuries and prevention strategies.

Manufacturer Resources

- Your chainsaw manufacturer's **owner's manual** is the primary source of information specific to your equipment. It contains model-specific maintenance schedules, safety procedures, specifications, and troubleshooting guidance.
- Chain manufacturers provide specifications for filing angles, file sizes, depth gauge settings, and chain selection for their products.
- Guide bar manufacturers provide specifications for bar maintenance, wear limits, and compatibility.

Professional Organizations

- The **Tree Care Industry Association (TCIA)** provides resources and standards for professional tree care, including chainsaw safety training standards.
- The **International Society of Arboriculture (ISA)** offers educational resources on tree care and chainsaw safety.

Additional Resources

- Your local **fire department** or **emergency services** can provide guidance on firewood storage safety and local burning regulations.
- Your state's **forestry division** or **extension service** may offer chainsaw safety courses and firewood information specific to your region.
- Your local **hardware store** or **chainsaw dealer** can provide model-specific advice and may offer maintenance services.

Disclaimer

This guide is for general educational and organizational purposes. It does not replace the chainsaw manufacturer's instructions, professional training, applicable laws, workplace requirements, or qualified professional advice. Chainsaws are potentially dangerous tools. Users are responsible for following their equipment manufacturer's instructions and applicable safety requirements. The author and SAWOFF.com are not responsible for any injuries or damages resulting from the use or misuse of this information.

SAWOFF.com

"Real Reviews. Useful Guides. Safer Cuts."

Want more practical chainsaw guides?

Visit **SAWOFF.com** for chainsaw reviews, buying guides, maintenance resources, safety information, and practical outdoor cutting content.

THE ULTIMATE CHAINSAW MAINTENANCE CHECKLIST

50+ Practical Checklists, Worksheets & Trackers

© SAWOFF.com. All rights reserved. For personal use only.