



CONSERVATION • SERVICE • COMMUNITY

Chainsaw & Brushcutter Maintenance Guidebook



FUEL 101

**LABEL ALL FUEL
WITH DATES!**

- **All tools use mixed gas (two-stroke fuel).**
Never use straight gas in saws or brushcutters.
- **Most fuel is pre-mixed for crews.**
Use the fuel provided unless instructed otherwise.
- **If mixing is required:**
Use the pre-measured mix we provide and add it to the gas container exactly as directed.
- **If buying fuel:**
Use recreational (non-ethanol) fuel from the pump whenever possible.
- **Label all fuel containers.**
Mark containers with **flagging tape** that includes the **mix date**. Do not use old or unlabeled fuel.
- **Fuel transport safety:**
When driving, keep fuel **secured in the back of trucks**, in a **shaded or covered area**.

GALLONS OF GASOLINE	FLUID OUNCES OF OIL
1 GALLON	2.6 FLUID OUNCES
2.5 GALLONS	6.4 FLUID OUNCES
5 GALLONS	12.8 FLUID OUNCES





SAW MAINTENANCE CHECKLIST

Daily/Every Use

Pre-Use (Start of Day):

- Chain tension is correctly adjusted
- Fuel and bar oil reservoir is full
- All nuts, bolts, and screws are tight
- Chain moves freely when brake is off
- All safety features appear in good shape

Post-Use (End of Day):

- Clean bar groove and oil holes
- Brush off saw body and around air filter
- Report any damage or mechanical issues
- Sharpen chain

Weekly

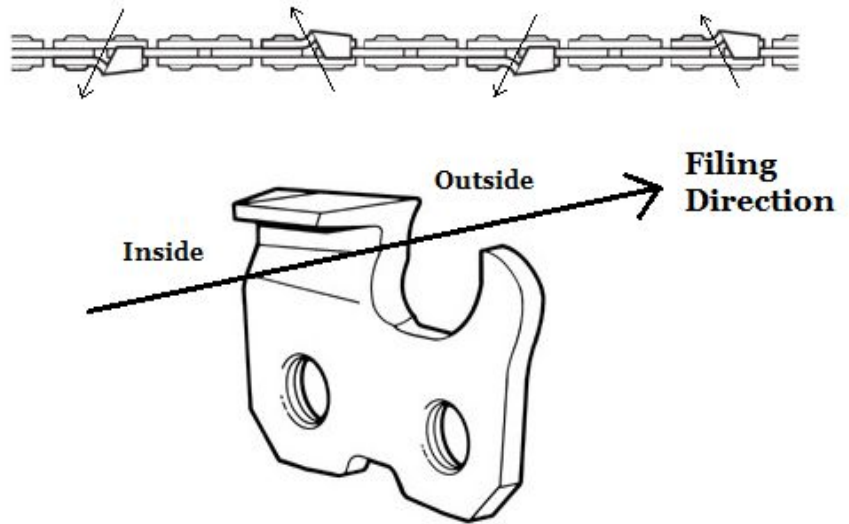
- Remove bar and clean the bar grooves, oil delivery port, and drive sprocket area
- Flip the bar to ensure even wear
- Clean clutch housing & air filter (replace if needed)
- Thoroughly inspect chain and/or other chains used for sharpness and depth



SHARPENING CHAINS TUTORIAL

Chains should be maintained after each use

1. Secure chain
 2. Begin with the most dull cutter
 3. Guide the file by holding the handle with one hand and passing the file in forward strokes past the tooth with the other. File at a 90-degree angle to the guide rail.
 4. Check result. If you can see any light reflecting from the cutting edge, the blade tooth is not yet sharp.
 5. Repeat with all cutters to the same length.
 6. Check the depth gauge setting and adjust it if necessary.
- *Use the 2 in 1 filing guide to sharpen the teeth and reset the depth gauge at the same time**



SCAN ME

YouTube Video:

[STIHL: SHARPENING
THE SAW CHAIN](#)



OUR CHAINSAWS

WisCorps currently uses Stihl saws in two models:

STIHL M-TRONIC™(M)

Adjusts for dirty air filter, elevation, and fuel quality

HD2 AIR FILTER

Washable and allows for longer run times between cleanings

STIHL QUICKSTOP®

Reduces the risk of injury in certain kickback situations

BUMPER SPIKES

Helps prevent pull-in and provide control for easier cutting

EMATIC™ LUBRICATION SYSTEM

Provides less oil consumption than conventional methods

MS 261C

These are professional grade

MS 271 Farmboss

These are NOT professional grade

INTELLICARB™ COMPENSATING CARBURETOR

Maintains the engine's correct RPMs

ROUND, CANISTER-STYLE AIR FILTER

Keeps air flowing through the engine



ADVANCED ANTI-VIBRATION SYSTEM

Minimizes vibration for optimal user comfort

FUEL-EFFICIENT ENGINE

Delivers 20% longer run times compared to previous model

TOOLLESS FUEL AND OIL CAPS WITH RETAINERS

Never lose another fuel cap



GENERAL SAFETY

BE TRAINED & APPROVED

Only run saws if you've been trained and cleared to do so.

WEAR PPE

Eye protection, gloves, all leather boots (at least 6' high), long pants, saw helmets, and chaps.

CHECK THE TOOL FIRST

Inspect fuel, cutting parts, guards, and safety features before starting.

KEEP THE AREA CLEAR

Maintain safe distance from others and watch footing and surroundings.



USE THE RIGHT TOOL

Use the correct saw and attachment. Don't force or modify equipment.

STOP IF SOMETHING'S OFF

Shut down and report unusual sounds, vibration, or performance.



TROUBLESHOOTING CHAINSAWS

Chainsaws can be tricky especially under extreme environmental conditions or under infrequent use. Below are common issues a sawyer may encounter in the field and potential ways to solve them. If these do not work, reach out to WisCorps staff (your Field Coordinator or the Operations Manager). Avoid making adjustments unless directly advised by staff.

Saw Won't Start (cold)

- Check fuel: Is there fresh, mixed fuel (not old or contaminated)?
- On/Off switch ON?
- Air filter clean (not clogged with dust)?
- Is engine flooded? (Wet spark plug)

Chain Won't Move

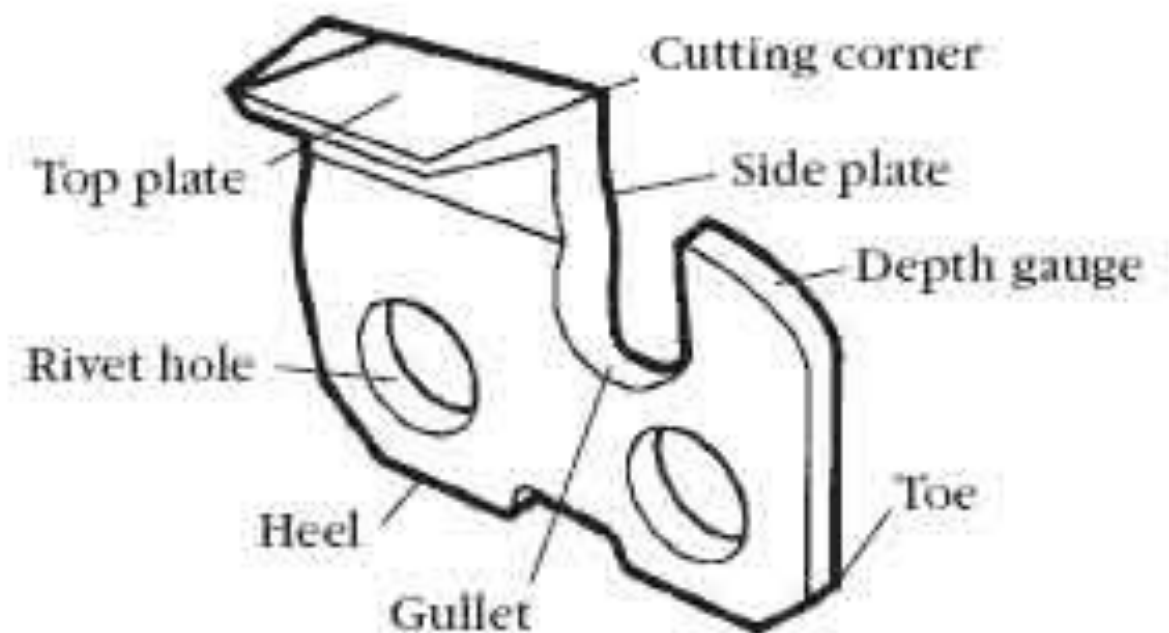
- Clutch cover clear (not jammed with chips or debris)?
- Chain tension correct (not too tight)?
- Bar nuts tight, but not over-tightened?



THE CUTTER

Remember, to cut smoothly, all teeth on the chain need:

- A sharp cutting point*
- Consistent angles*
- Consistent height differences between point & depth gauge*



DEPTH GAUGE: sets the thickness of the fiber that is cut

CUTTING CORNER: breaks into and begins to cut the fiber

SIDE PLATE: cuts fiber off (side of the kerf) (15° , $\pm 10^\circ$)

TOP PLATE: lifts fiber up in the kerf (usually 25 or 30°)



TROUBLESHOOTING CHAINSAWS

Saw Runs but Bogging/Low Power

- Air filter clean?
- Fuel fresh and mixed correctly?
- Chain tension too tight?
- Chain dull or damaged? (Check cutters)

Chain Not Oiling

- Oil tank has bar oil?
- Oil port not clogged (look under bar)?
- Clean bar groove and oil holes?
- Bar on right way? (Check oil holes line up)

Unusual Noise / Vibration

- Loose parts? (bar nuts, muffler, handles)
- Chain tension okay?
- Chain damaged? Replace if missing or bent cutters



BRUSHCUTTER MAINTENANCE CHECKLIST

Pre-Use (Start of Day):

- Fuel tank filled with correct mixed fuel
- Throttle moves freely and returns to idle
- Cutting head (blade or line) is secure
- Guard is installed and secure
- Shaft and handles are tight
- Safety features appear in good shape

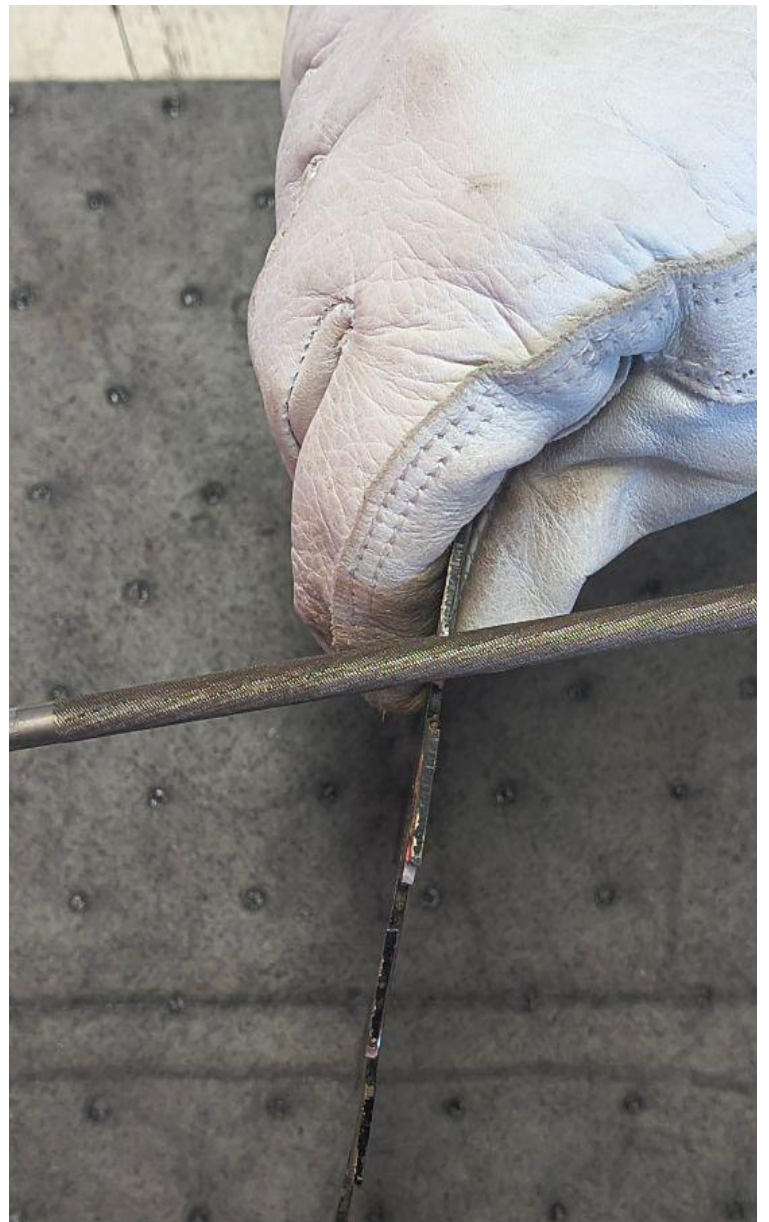
Post-Use (End of Day):

- Brush off grass and debris from tool
- Clear debris from cutting head and guard
- Check blade or line for damage or heavy wear
- Report any damage or mechanical issues



HOW TO SHARPEN A CLEARING SAW BLADE

1. Sharpen the circular clearing saw blade using a 5/7ths round file
2. Hold the file 15 degrees from perpendicular to the disc
3. Lick each tooth with a pushing motion, lifting the file off the blade on the pull stroke





TROUBLESHOOTING BRUSHCUTTERS

Just like chainsaws, brushcutters may not work well if used infrequently or under extreme conditions. If these do not work, reach out to WisCorps staff (your Field Coordinator or the Operations Manager).

Brushcutter Won't Start (Cold)

- Check fuel: Is there fresh, mixed fuel (not old or contaminated)?
- On/Off switch ON?
- Choke in correct starting position?
- Air filter clean (not clogged with dust or grass)?
- Is engine flooded? (Wet Spark plug)

Brushcutter Starts but Cutting Head Won't Spin

- Throttle cable connected and moving properly?
- Cutting attachment installed correctly and tightened?
- Gearbox jammed with grass or debris?
- Shaft engaged properly (not slipping)?
- Debris wrapped around head?

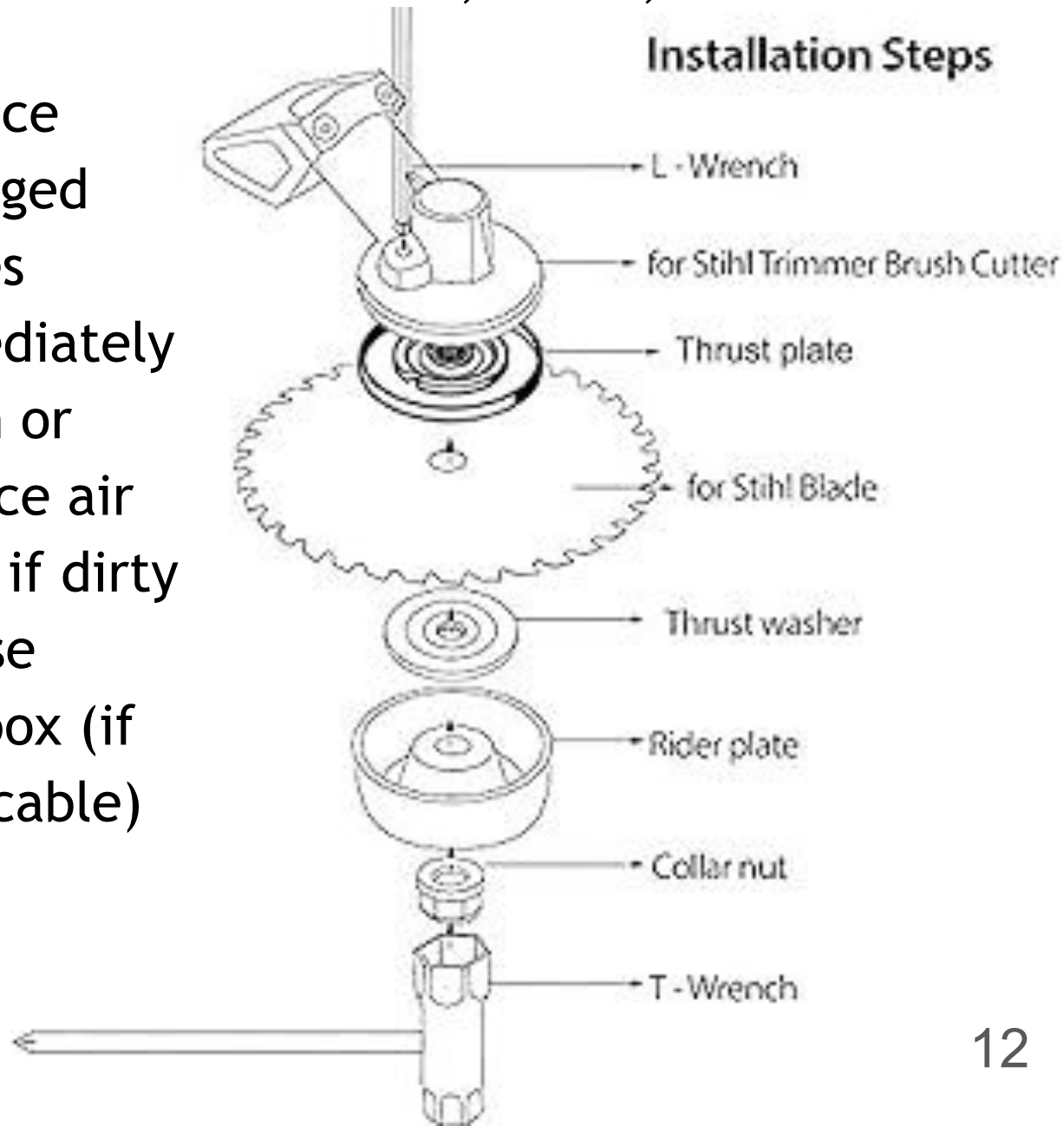


BRUSHCUTTER MAINTENANCE CHECKLIST

Weekly

- Remove cutting head and clean:
 - Blade or line head
 - Gearbox area
- Inspect blade for cracks, bends, or dullness

- Replace damaged blades immediately
- Clean or replace air filter if dirty
- Grease gearbox (if applicable)





OUR BRUSHCUTTERS

WisCorps currently uses Stihl brushcutters in four models:



FS-91
FS-311
FS-240
FS-251

Each model may vary but this is generally where each part is:





TROUBLESHOOTING BRUSHCUTTERS

Brushcutter Runs but Bogging / Low Power

- Air filter clean?
- Fuel fresh and mixed correctly?
- Blade dull or damaged?
- Cutting head clogged with grass or vines?
- Throttle fully opening when trigger is pressed?

Excessive Vibration or Unusual Noise

- Cutting attachment bent or unbalanced?
- Blade nut or head tightened correctly?
- Loose bolts on handles, shaft, or engine housing?
- Gearbox damaged or low on grease?
- Shaft bent or damaged?

Cutting Poorly

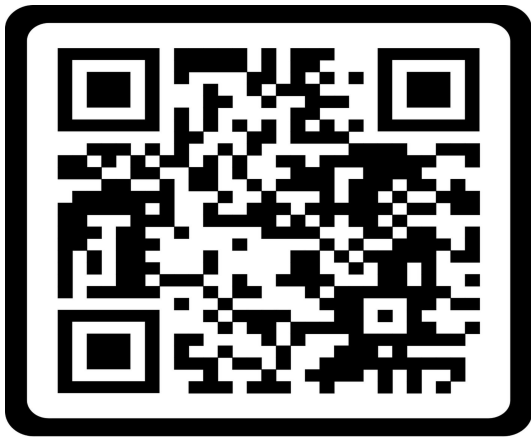
- Blade dull or incorrect for vegetation type?
- Using too large or inappropriate blade?
- Guard installed correctly?

Head Overheating / Burning Smell

- Gearbox greased properly?
- Debris blocking airflow around engine?
- Blade binding in thick material?
- Running at full throttle without cutting?

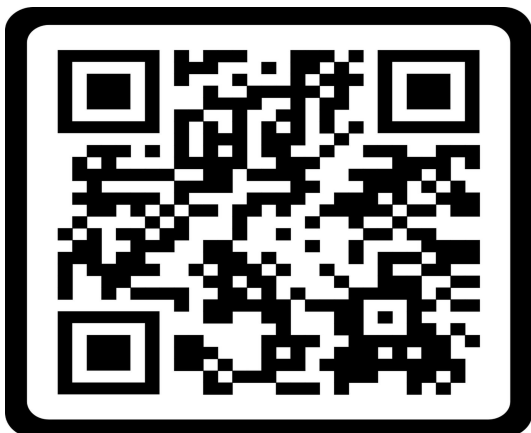


SHARPENING BLADES TUTORIALS



SCAN ME

[YouTube Video: How to Sharpen Clearing Saw Blade](#)



SCAN ME

[YouTube Video: How to Sharpen Grass Blade](#)

