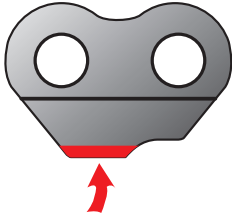


## CHAIN TROUBLESHOOTING CHART

### DRIVE LINKS

Flat bottom



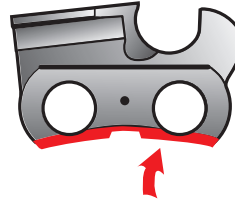
**Cause:**  
Bar groove too shallow.

**Result:**  
Drive links can't clean bar groove.

**Remedy:**  
Replace chain and bar.

### SIDE LINKS AND CUTTERS

Concave wear on bottom of cutters and side links

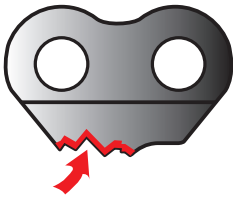


**Cause:**  
Tight chain tensioning on hard nose bar.  
Heavy undercutting or boring with hard nose bar.

**Result:**  
Concave wear on bottom of all parts.

**Remedy:**  
Change to a sprocket nose bar.

### BROKEN BOTTOM

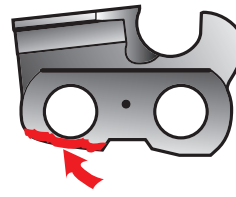


**Cause:**  
Chain derailed.

**Result:**  
Drive links battered and chipped. Won't fit into bar groove.

**Remedy:**  
File off burrs, so drive link fits in bar groove.  
Severely damaged drive links should be replaced.

### EXCESSIVE HEEL WEAR ON CUTTERS AND SIDE LINKS

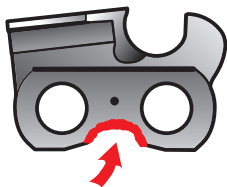


**Cause:**  
Forcing dull chain to cut.  
Blunt top plate filing.  
Incorrect depth gauge settings.

**Result:**  
Heels of cutters and side links wear off rapidly.

**Remedy:**  
File cutters properly. Don't force chain to cut. Use plenty of lubrication.

### PEENED FRONT OR BACK

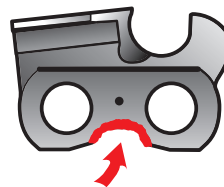


**Cause:**  
Worn sprocket or insufficient chain tensioning.

**Result:**  
Unsuitable sprocket.  
Reduced service life of chain.

**Remedy:**  
Replace sprocket. In some cases, chain may be beyond repair.

### PEENING ON BOTTOM OF CUTTERS AND SIDE LINKS



**Cause:**  
Loose chain tensioning forcing dull chain to cut. Dull or incorrectly filed cutters.

**Result:**  
Bottom of cutters and side links are burred and peened. Joints are tight and will not flex freely.

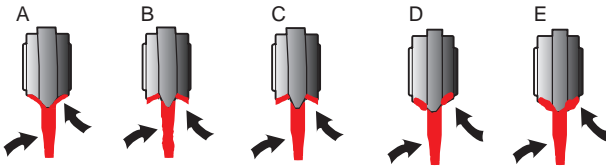
**Remedy:**  
A chain with tight joints is no longer serviceable. Replace chain.

# APPLICATION GUIDE



## CHAIN TROUBLESHOOTING CHART

### DRIVE LINK WEAR PATTERNS



**Cause:**

- A. Worn bar groove or nose rail
- B. Thin bar rails in nose area
- C. Bar rails not flat
- D. Wide or worn rails
- E. One rail worn down

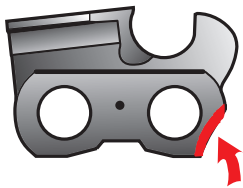
**Result:**

If bar rails are not kept square, the drive links will wear to match the rails condition.

**Remedy:**

Replace bar.

### PEENING ON FRONT OF CUTTERS AND SIDE LINKS



**Cause:**

Loose chain hitting bar groove entry.

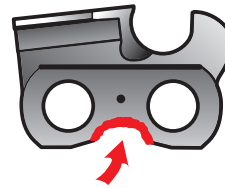
**Result:**

Peening and burring of front corners of cutters and side links.

**Remedy:**

Keep proper chain tension.

### PEENED NOTCH IN CUTTERS AND SIDE LINKS



**Cause:**

Chain run on worn sprocket.

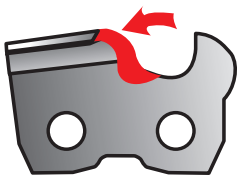
**Result:**

Notch peened on cutters side links. Burrs created on bottom of cutters and side links. Chain has tight joints.

**Remedy:**

Chain is no longer serviceable. Replace chain and sprocket.

### BACKSLOPE ON CUTTING

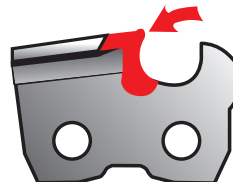


**Cause:** File held too high. Wrong file diameter. Incorrectly dressed grinding wheel. Incorrect adjustment of filing tool.

**Result:** Cutters won't feed into wood correctly. Slow cutting time. Forcing of chain to cut. Causes excessive bottom wear on parts.

**Remedy:** File cutters properly. Check filing manual for proper instructions. Check file size.

### HOOK IN SIDE PLATE CUTTING EDGE



**Cause:**

File held too low. File too small. Incorrectly dressed grinding wheel.

**Result:**

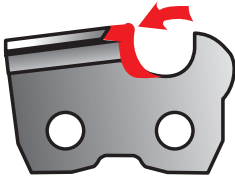
Rough cutting. Chain grabs in wood. Cutters dull quickly.

**Remedy:**

File or grind cutters to recommended angle. Check filing manual for proper instructions.

## CHAIN TROUBLESHOOTING CHART

### BLUNT TOP PLATE CUTTING ANGLE

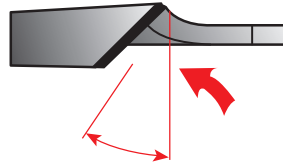


**Cause:**  
File held too high. Wrong file diameter. Incorrectly dressed grinding wheel. Incorrect adjustment of filing tool.

**Result:**  
Cutters won't feed into wood correctly. Slow cutting time. Forcing of chain to cut. Causes excessive bottom wear on parts.

**Remedy:**  
File cutters properly. Check filing manual for proper instructions.  
Check file size.

### TOP PLATE ANGLE MORE THAN RECOMMENDED

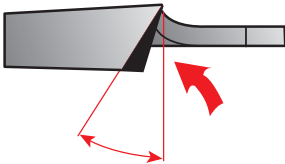


**Cause:**  
File held at more than recommended angle.

**Result:**  
Cutting edge very sharp. Edge will dull quickly. Cutting action rough and erratic.

**Remedy:**  
File or grind cutters to recommended angle. Check filing manual for proper instructions.

### TOP PLATE ANGLE LESS THAN RECOMMENDED



**Cause:**  
File held at less than recommended angle.

**Result:**  
Slow cutting. Requires extra effort to cut properly.

**Remedy:**  
File or grind cutters to recommended angles. Check filing manual for proper instructions.

### COLD WEATHER CUTTING PROBLEMS



**Cause:**  
Dull chain. Low depth gauge setting. Poor lubrications. Improper tensioning.

**Result:**  
Cracks under rear rivet holes of the cutters and opposing side links.

**Remedy:**  
File chain more often. Don't force dull chain to cut. Increase lubrication.