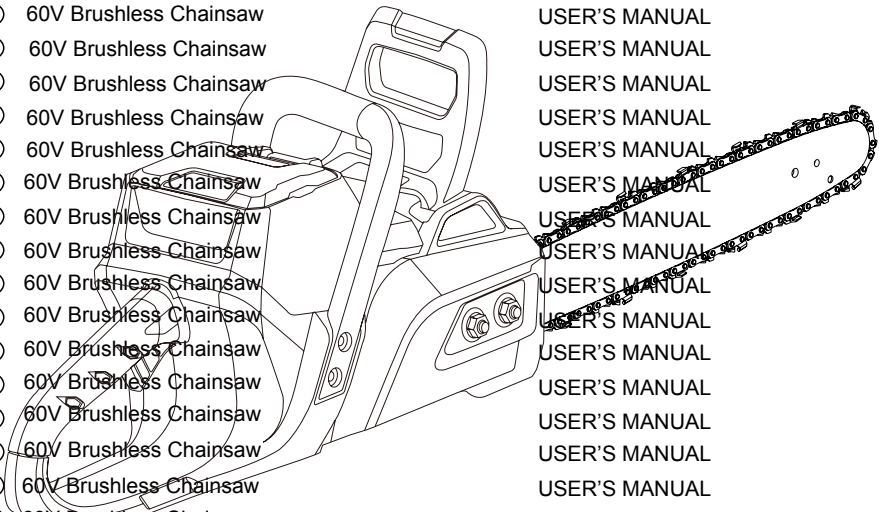


# greenworks

## TOOLS

2001807  
GD60CS40

<b>EN</b>	60V Brushless Chainsaw	USER'S MANUAL	1
<b>DE</b>	60V Brushless Chainsaw	USER'S MANUAL	1
<b>ES</b>	60V Brushless Chainsaw	USER'S MANUAL	1
<b>IT</b>	60V Brushless Chainsaw	USER'S MANUAL	1
<b>FR</b>	60V Brushless Chainsaw	USER'S MANUAL	1
<b>PT</b>	60V Brushless Chainsaw	USER'S MANUAL	1
<b>NL</b>	60V Brushless Chainsaw	USER'S MANUAL	1
<b>RU</b>	60V Brushless Chainsaw	USER'S MANUAL	1
<b>FI</b>	60V Brushless Chainsaw	USER'S MANUAL	1
<b>SV</b>	60V Brushless Chainsaw	USER'S MANUAL	1
<b>NO</b>	60V Brushless Chainsaw	USER'S MANUAL	1
<b>DA</b>	60V Brushless Chainsaw	USER'S MANUAL	1
<b>PL</b>	60V Brushless Chainsaw	USER'S MANUAL	1
<b>CS</b>	60V Brushless Chainsaw	USER'S MANUAL	1
<b>SK</b>	60V Brushless Chainsaw	USER'S MANUAL	1
<b>SV</b>	60V Brushless Chainsaw	USER'S MANUAL	1
<b>HR</b>	60V Brushless Chainsaw	USER'S MANUAL	1
<b>HU</b>	60V Brushless Chainsaw	USER'S MANUAL	1
<b>RO</b>	60V Brushless Chainsaw	USER'S MANUAL	1
<b>BG</b>	60V Brushless Chainsaw	USER'S MANUAL	1
<b>EL</b>	60V Brushless Chainsaw	USER'S MANUAL	1
<b>AR</b>	60V Brushless Chainsaw	USER'S MANUAL	1
<b>TR</b>	60V Brushless Chainsaw	USER'S MANUAL	1
<b>HE</b>	60V Brushless Chainsaw	USER'S MANUAL	1
<b>LT</b>	60V Brushless Chainsaw	USER'S MANUAL	1
<b>LV</b>	60V Brushless Chainsaw	USER'S MANUAL	1
<b>ET</b>	60V Brushless Chainsaw	USER'S MANUAL	1



CE

## English (original instructions)

### SPECIFICATIONS

Voltage	60V DC
No load speed	5000±10% rpm
Guide bar length	16 in. (406 mm)
Chain stop <b>FPO</b>	< 3s
Chain oil tank capacity	170 ml
Weight (with 4Ah battery pack)	Max 4.3kg ( without guide bar and saw chain )
Emission sound pressure level LpA	81.5dB(A)
Uncertainty KpA	3.0dB(A)
Sound power level LwA	94.7dB(A)
Guaranteed sound power level LwA(G)	97dB(A)
Vibration total value ah	2.5m/s <sup>2</sup>
Uncertainty KwA	1.5m/s <sup>2</sup>

### REMARKS:

- The declared vibration value has been measured with a standard test method and may be used to compare one tool with another.
- The declared vibration value may be used in a preliminary assessment of exposure.

### WARNING

The actual vibration values during use of the tool can be different from the above stated and depend on the use of the tool; and the need to identify safety measures to protect the operator are based on an estimation of exposure in the actual conditions of use (taking account all parts of the operating cycle such as the times when the tool is switched off and when it is running idle in addition to the trigger time).

### CHAIN & BAR INFORMATION

2001807		
Manufacture	Saw chain	Guide bar
Oregon	91PJ056X	160SDEA041
Oregon's chain must be fitted with Oregon's bar; Trilink's chain must be fitted with Tri-link's bar.		

### DESCRIPTION

1. Safety Lock
2. Trigger
3. Rear Handle
4. Front Handle
5. Quick View Oil Indicator
6. Oil Cap
7. Low Kickback Chain
8. Chain Brake
9. Bar
10. Sprocket cover tighten nuts
11. Chain Tensioner adjust knob
12. Wrench
13. Scabbard
14. Sprocket cover
15. Chain cover
16. Bolt for saw chain tension
17. Sprocket
18. Spike bumpers
19. Oil outlet
20. Bar groove
21. Chain drive links
22. Cutter
23. Felling direction
24. Danger zone
25. Escape route
26. Direction of fall
27. Notch
28. Felling back cut
29. Hinge
30. Limb cut
31. Keep work off ground leave support limbs until log is cut
32. Log supported along the entire length
33. Cut from top (over buck) avoid cutting earth
34. Log supported
35. Under buck
36. Over buck

## English (original instructions)

37. Log supported both ends
38. Bucking a log
39. Stand on uphill side when cutting because log may roll

### ASSEMBLY

This chain saw does not require assembly, but user should know how to assemble the guide bar and saw chain. Check the chain tensioning and add oil as described later in this manual before each operation.

#### ASSEMBLING THE GUIDE BAR AND SAW CHAIN

See figure 2 - 7

Make sure remove the battery pack from the unit. Wear protective gloves.

- Unscrew the sprocket cover tighten knob (item 10) and remove the sprocket cover.
- The saw chain should face in the direction of chain rotation. If they face backwards, turn the loop over.
- Place the chain drive links into the bar groove.
- Position the chain so there is a loop at the back of the bar.
- Hold the chain in position on the bar and place the loop around the sprocket and make sure it is correctly mounted. Make sure the bar hole fits well with bolt (item 16) for saw chain tension.
- Replace the sprocket cover, turn the chain tension adjust knob (item 11) clockwise until the saw chain is properly tensioned. The guide bar must then be pushed upwards, check chain tension again, do not tension the chain too tight.
- After the chain is well-tensioned, tighten the knob (item 10) again.

**NOTE:** The saw chain is properly tensioned if, in the middle of the guide bar, it can be lifted 3mm to 4mm from the edge of the guide bar. Start the saw again with a new saw chain, allowing it to run-in for 2~3 minutes.

### WARNING

After the run-in time, check the chain tension and retighten the chain if necessary.

### OPERATION

**For complete charging instructions, refer to the Operator's Manuals for your Greenwork battery pack and charger models.**

**NOTE:** To avoid serious personal injury, always remove the battery pack and keep hands clear of the lock-out button when carrying or transporting the tool.

#### BEFORE EACH USE CHECKING THE CHAIN TENSION

### WARNING

Remove the battery pack from the chain saw before checking the chain tension or making adjustments to the chain. Wear protective gloves while touching the chain, bar or areas around the chain.

- Pull the chain in the middle of the lower side of the bar away from the bar. The gap between the cutter in the chain and the bar should be between 3mm - 4mm.
- If you need to adjust the chain tension, please refer to the section "ADJUSTING THE CHAIN TENSION" later in this manual.

#### TO INSTALL BATTERY PACK

See Figure 2.

- Align the battery pack with the battery compartment on the chain saw.
- Grasp the chain saw firmly.
- Push the battery pack into the battery compartment until the latch locks into place.
- You should hear a "click" once the battery is installed.

#### TO REMOVE BATTERY PACK

See Figure 2.

- Press the battery release button on the chain saw. This will cause the battery to raise out of the tool slightly.
- Grasp the chain saw firmly, and pull the battery pack out of handle.

#### CHECKING THE CHAIN LUBRICANT

See Figure 2.

- Check the amount of oil in the chain saw by looking at the quick view oil indicator ( item 5). If the oil level is low, follow the steps shown in section "ADDING CHAIN & BAR LUBRICANT" of this manual.

## English (original instructions)

### ⚠ WARNING

Check the chain tension before each use of the saw.

### ⚠ WARNING

Never operate the chain saw without sufficient chain lubrication as this might damage the saw and is a threat to safety. Check the chain lubricant level before each use!

In order to prevent kickback, please follow these safety instructions:

- Never cut with the tip of the guide bar! Be careful when continuing from previous cuts.
- Always start cutting only when the chain saw is already running.
- Make sure that the saw chain is always properly sharpened.
- Never cut through more than one branch at a time! When lopping off branches, be careful not to touch any other branches.
- When cross-cutting, pay attention to trunks standing very close to each other. If possible, use a sawing trestle.

### HOLDING THE CHAIN SAW

See figure 8

Always hold the chain saw with your right hand at the rear handle and your left hand at the front handle. Grip both handles with the thumbs and fingers encircling the handles. Ensure that your left hand is holding the front handle so that your thumb is underneath.

### STARTING OPERATION

- Before starting for operation, you should install the battery pack in the machine.
- Press the safety lock (item 1), this makes the switch trigger operational.
- Press and hold the trigger (item 2), and keep it pressed for continued operation.

### STOPPING OPERATION

- Release the trigger (item 2) to stop the chain saw.

### OPERATING THE CHAIN BRAKE See figure 22

Check the operating condition of the chain brake prior to each use.

- Engage the chain brake by rotating your left hand around the front handle, allowing the back of your hand to push the chain brake lever/hand guard

toward the bar while the chain is rotating rapidly. Be sure to maintain both hands on the saw handles at all times.

- Reset the chain brake back into the RUN position by grasping the top of the chain brake lever/hand guard and pulling toward the front handle.

### ⚠ WARNING

If the chain brake do not stop the chain immediately, or if the chain brake will not stay in the run position without assistance, take the saw to an authorized service center for repair prior to use.

### USING THE CHAIN SAW

Always be sure of your footing and hold the chain saw firmly with both hands while the motor is running.

### BASIC FELLING, LIMBING, AND CROSS-CUTTING TECHNIQUES

See figure 9

#### FELLING A TREE

When bucking and felling operations are being performed by two or more persons at the same time, the felling operation should be separated from the bucking operation by a distance of at least twice the height of the tree being felled. Trees should not be felled in a manner that would endanger any person, strike any utility line or cause any property damage. If the tree does make contact with any utility line, the utility company should be notified immediately.

The chain saw operator should keep on the uphill side of the terrain as the tree is likely to roll or slide downhill after it is felled.

An escape path should be planned and cleared as necessary before cuts are started. The escape path should extend back and diagonally to the rear of the expected line of fall.

Before felling is started, consider the natural lean of the tree, the location of larger branches and the wind direction to judge which way the tree will fall.

Remove dirt, stones, loose bark, nails, and staples from the tree.

#### NOTCHING UNDERCUT (A NOTCH CUT IN A TREE TO DIRECT THE FALL)

See Figure 10

Make the notch 1/3 in diameter of the tree, perpendicular to the direction of falls. Make the lower horizontal notching cut first, this will help to avoid pinching of either the saw chain or the guide bar when the second notch is being made.

#### FELLING BACK CUT (THE FINAL CUT IN A TREE)

## English (original instructions)

FELLING OPERATION, MADE ON THE OPPOSITE SIDE OF THE TREE FROM THE NOTCHING UNDERCUT)

See Figure 10

Make the felling back cut at least 50mm higher than the horizontal notching cut. Keep the felling back cut parallel to the horizontal notching cut. Make the felling back cut so as to leave enough wood to act as a hinge. The hinge wood keeps the tree from twisting and falling in the wrong direction. Do not cut through the hinge. As the felling cut gets close to the hinge, the tree should begin to fall. If there is any chance that the tree may not fall in the desired direction or it may rock back and bind the saw chain, stop cutting before the felling back cut is complete and use wedges of wood, plastic or aluminium to open the cut and drop the tree along the desired line of fall. When the tree begins to fall, remove the chain saw from the cut, stop the motor, put the chain saw down, and then use the retreat path as planned. Be alert of overhead limbs falling and watch your footing.

### LIMBING A TREE

See figure 11

Limbing is removing the branches from a fallen tree. When limbing, leave the larger lower limbs to support the log off the ground. Remove the small limbs in one cut. Branches under tension should be cut from the bottom up, to avoid binding the chain saw.

### BUCKING A LOG

See figure 12 - 15

Bucking is cutting a log into lengths. It is important to make sure your footing is firm and your weight is evenly distributed on both feet. When possible, the log should be raised and supported by the use of limbs, logs or chocks. Follow the simple direction for easy cutting:

1. When the log is supported along the entire length, it is cut from the top (over buck).
2. When the log is supported on one end, cut 1/3 of the diameter from the underside (under buck). Then make the finished cut by over bucking to meet the first cut.
3. When the log is supported on both ends, cut 1/3 of that diameter from the top (over buck). Then make the finished cut by under bucking the lower 2/3 to meet the first cut.
4. When bucking on a slope, always stand on the uphill side of the log. When cutting through, to maintain complete control, release the cutting pressure near the end of the cut without relaxing your grip on the chain saw handles.

Do not let the chain contact the ground. After completing the cut, wait for the saw chain to stop before you move the chain saw. Always stop the motor before moving from tree to tree.

## MAINTENANCE

### ⚠ WARNING

Always remove the battery pack from the machine before checking the chain tension or making adjustments to the chain. Wear protective gloves while touching the chain, bar or areas around the chain.

### ADJUSTING THE CHAIN TENSION

See Figure 2 and figure 7

- Loosen the chain cover lock nuts (item 10) with the supplied wrench. The chain cover lock nuts do not have to be completely removed in order to adjust the chain tension.
- Rotate the chain adjustment screw (item 11) clockwise to increase the chain tension and rotate counterclockwise to decrease the chain tension.
- Once the chain is at the desired tension, tighten the chain cover lock nuts (item 10).

### REPLACING THE BAR AND CHAIN

See Figure 3-7

- Remove the battery from the chain saw.
- Remove the supplied wrench (item 12) from the rear handle (item 3).
- Remove the two chain cover lock nuts (item 10) from chain cover by rotating them counterclockwise with the wrench.
- **Remove the chain cover (item 15) from the mounting surface.**
- The bar and chain can now be removed by lifting it away from the main body of the saw and releasing the chain from the sprocket.
- Remove the old chain from the bar.
- Lay out the new saw chain in a loop and straighten any kinks. The cutters should face in the direction of chain rotation. If they face backwards, turn the loop over.
- Place the chain drive links into the bar groove.
- Position the chain so there is a loop at the back of the bar.
- Hold the chain in position on the bar and place the loop around the sprocket.
- Fit the bar flush against the mounting surface so that the bar studs are in the long slot of the bar. Ensure that the chain is over the sprocket.
- Replace the chain cover.
- Remove all slack from the chain by turning the chain adjustment screw (item 11) clockwise until the chain seats snugly against the bar with the drive links in the bar groove (item 20).
- Lift the tip of the guide bar up to check for sag.
- Release the tip of the guide bar and turn the chain adjustment screw 1/2 turn clockwise. Repeat this process until sag does not exist.
- Hold the tip of the guide bar up and tighten the chain cover lock nuts by turning them with the wrench. The

## English (original instructions)

- chain is correctly tensioned when there is no sag on the underside of the guide bar, the chain is snug, but it can be turned by hand without binding.

### ADDING CHAIN & BAR LUBRICANT

- Unscrew and remove the cap (item 6) from the oil tank.
- **Pour the oil into the oil tank and monitor the quick view oil indicator (item 5).** Ensure that no dirt enters the oil tank while filling the oil in.
- Put the oil cap back on and tighten it up.
- One full oil tank will enable you to use the saw for 20- 40 min.

### TRANSPORTING THE CHAIN SAW

Before transporting the chain saw, always remove the battery pack from the chain saw and slide the chain cover over the bar and chain. If several cuts are to be performed with the chain saw, the saw must be switched off between cuts.

### GUIDE BAR COVER

See figure 1

The chain cover (item 15) must be clipped onto the chain and bar as soon as the sawing work has been completed and whenever the machine has to be transported.

### SHARPENING THE SAW CHAIN

See figure 16 - 21

When the chain penetrates into wood with difficulty, it needs sharpening as follows:

- Put the chain under tension.
- Fasten the bar in a vice so that the chain can slide.
- Fasten the file to the file holder and place it on cutter at 35° angle.
- File with forward strokes only until all the worn out parts of the cutting edge are taken away.
- Count the number of strokes given to the cutter as a reference and file away with the same number of strokes on all other cutters.
- If the depth gauge protrudes from the template after sharpening a few times, reset its level. Use a flat file. Finally, round off the depth gauge.

**NOTE:** It is recommended to have the deep or important sharpening carried out by a service agent who is equipped with electric sharpener.

### GUIDE BAR MAINTENANCE

- When you have finished working, clean out the groove and the oil passages with a scraping hook.
- Periodically trim the sides of rails using a flat file. If not done in the long run, the feather edges might break away and damage the bar.
- If one rail is higher than the other one, it is necessary to make it even with a flat file then smooth it with a file or fine grain abrasive paper.

#### WARNING

When servicing, use only identical replacement parts. Use of any other parts may create a hazard or cause product damage.

#### WARNING

To avoid serious personal injury, always remove the battery pack from the tool when cleaning or performing any maintenance.

### GENERAL MAINTENANCE

Before each use, inspect the entire product for damaged, missing, or loose parts such as screws, nuts, bolts, caps, etc. Tighten securely all fasteners and caps and do not operate this product until all missing or damaged parts are replaced. Please call Snapper Customer Service for assistance.

Avoid using solvents when cleaning plastic parts. Most plastics are susceptible to damage from various types of commercial solvents and may be damaged by their use. Use clean cloths to remove dirt, dust, oil, grease, etc.

#### WARNING

Do not at any time let brake liquids, gasoline, petroleum-based products, penetrating oils, etc., come in contact with plastic parts. Chemicals can damage, weaken or destroy plastic which may result in serious personal injury.

Only the parts shown on the parts list are intended to be repaired or replaced by the customer. All other parts should be replaced at an authorised service centre.

## English (original instructions)

### STORAGE

#### STORING THE PRODUCT

- Remove the battery pack from the unit before storing.
- Clean all foreign material from the unit.
- Store it in a place that is inaccessible to children.
- Keep away from corrosive agents such as garden chemicals and de-icing salts.
- Store and charge your batteries in a cool area. Temperatures above or below normal room temperature will shorten battery pack life.
- Never store batteries in a discharged condition. Store battery packs in a 30%-50% charged condition.
- Store the battery pack where the temperature is below 27 C and away from moisture.
- All batteries gradually lose their charge. The higher the temperature, the quicker they lose their charge. If you store your unit for long periods of time without using it, charge the pack as normal every six months of storage. This practice will prolong battery pack life.

### DISPOSAL

Power tools and accessories contain large amount of valuable resources and plastics that can be recycled. Waste electrical products should not be disposed of together with household waste. Please recycle where facilities exist. Check with your local authority or retailer for recycling advice.

The battery contains material which is hazardous to you and the environment. It must be removed and disposed of separately at a facility that accepts lithium-ion batteries. Li-ion battery. This product has been marked with a symbol relating to separate collection for all battery packs and battery pack. It will then be recycled or dismantled in order to reduce the impact on the environment. Battery packs can be hazardous for the environment and for human health.



### TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	REMEDY
Bar and chain running hot and smoking	Check chain tension for overtightened condition Bar lube reservoir empty.	Tension chain. Refer to Chain Tension earlier in this manual. Check bar lube reservoir.
Motor runs, but chain is not rotating	Chain tension too tight. Check guide bar and chain assembly. Check guide bar and chain for damage.	Retention chain. Refer to Chain Tension earlier in this manual. Refer to Replacing the Bar and Chain earlier in this manual. Inspect guide bar and chain.

Fabricant: Changzhou Globe Ltd.  
 Adresse: No. 65 Xinggang Rd. Zhonglou Zone, Changzhou, Jiangsu, China  
 Nom et adresse de la personne habilitée à établir le dossier technique:  
 Nom: Dennis Jacobson (Director of Outdoor Power Equipment)  
 Adresse: Greenworks Tools Europe GmbH,  
 Wankelstrasse 40, 50996 Koln Germany

Déclarons par la présente que le produit  
 Catégorie.....Tronçonneuse à moteur sans balais  
 Modèle.....2000907  
 Numéro de série.....Voir plaque signalétique  
 Année de fabrication.....Voir plaque signalétique

- est conforme aux réserves applicables de la Directive Machinerie (2006/42/EC)
- est conforme aux réserves applicables des autres Directives EC- suivantes  
 Directive EMC ( 2014/30/EU ), RoHS Directive 2011/65/EC  
 Directive Emissions Sonores (2000/14/EC modifiée 2005/88/EC)

Nous déclarons par ailleurs que

- les parties suivantes (parties/clauses des) standards Européens harmonisés ont été utilisées  
 EN 60745-1, EN 60745-2-13;  
 EN ISO 3744, EN 55014-1, EN 55014-2;

Niveau de puissance sonore mesuré  $L_{WA}=94.7$  dB (A)  
 Niveau de puissance sonore garanti 97 dB (A)  
 Méthode d'évaluation de conformité de l'annexe V/ Directive 2000/14/EC

The EC type-examination certificate number:  
 issued by intertek Deutschland GmbH (Notified body 0905)

Fait à, le: Changzhou, 01/02/2015

Signature: Gary Gao Naixin (BEng, CEng, MIET)  
 Vice president of Engineering



## EC DECLARATION OF CONFORMITY

Manufacturer: Changzhou Globe Ltd.  
 Address: No. 65 Xinggang Rd. Zhonglou Zone, Changzhou, Jiangsu, China  
 Name and address of the person authorised to compile the technical file:  
 Name: Dennis Jacobson (Director of Outdoor Power Equipment)  
 Address: Greenworks Tools Europe GmbH,  
 Wankelstrasse 40, 50996 Koln Germany

Herewith we declare that the products

Category.....Brushless Chain Saw for cutting wood  
 Model.....2000907  
 Serial number.....See product rating label  
 Year of Construction.....See product rating label

- is in conformity with the relevant provisions of the Machinery Directive 2006/42/EC
- is in conformity with the provisions of the following other EC-Directives  
 EMC Directive ( 2014/30/EU ), RoHS Directive 2011/65/EC  
 Noise Emission Directive (2000/14/EC amended by 2005/88/EC)

And furthermore, we declare that

- the following (parts/clauses of) European harmonised standards have been used  
 EN 60745-1, EN 60745-2-13;  
 EN ISO 3744, EN 55014-1, EN 55014-2;

Measured sound power level  $L_{WA}=94.7$  dB (A)  
 Guaranteed sound power level 97 dB (A)  
 Conformity assessment method to Annex V/ Directive 2000/14/EC

The EC type-examination certificate number:  
 issued by intertek Deutschland GmbH (Notified body 0905)

Place, date: Changzhou, 01/02/2015

Signature: Gary Gao Naixin (BEng, CEng, MIET)  
 Vice president of Engineering

