

# OWNER'S MANUAL

## BRUSHCUTTERS

**BC2310LE**

**BC2610LE/WE**

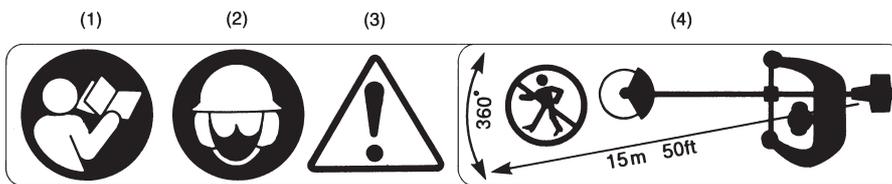
**BC3500LE/WE**

**BC4500WE**

**BC530WE**

Thank you for purchasing a ZENOAH product.  
Before using our brushcutter, please read this manual carefully to understand the proper use of your unit.

### 1 Explanation of pictorials



- (1) Read the owner's manual.
- (2) Wear a helmet, ear protection and eye protection.
- (3) Warning / Attention
- (4) Keep all children, bystanders and helpers 15 meters away from the brushcutter.

### 2 For safe operation

1. Read this manual carefully until you completely understand and can follow all safety notes, precautions, and operating instructions before using of the unit.
2. Do not operate this tool when you are tired, ill, or under the influence of alcohol, drugs, or medication.
3. Always wear eye or face protection and hearing protection.
4. Do not wear loose clothing, jewelry, short trousers, sandals, or go barefoot. Do not wear anything which might be caught by branches or moving part of the unit. Secure hair so it is above shoulder length.
5. Never start or run the engine inside a closed room or building. Exhaust gases contain dangerous carbon monoxide.
6. Before starting the engine, inspect the entire unit for loose fasteners and fuel leakage. Make sure that the cutting attachment is properly installed and securely fastened.
7. Be sure the blade guard is attached in place.
8. Fuel is highly flammable. Always keep open flames and sparks away from the unit and fuel depot. Do not smoke while refueling the unit or mixing fuel.
9. When refueling the unit, make sure to stop the engine and allow it to cool down. Wipe spilled fuel completely from the unit. Move

- at least 3 meters away from fueling site before starting the engine.
10. Check the condition of working area to avoid any accident by hitting hidden obstacles such as stumps, stones, cans, or broken grass.
  11. Keep bystanders and animals at least 15 meters away from the operating point. If you are approached, immediately stop the engine.
  12. Keep firm footholds and balance at all times. Do not use the unit where footing is unsteady or slippery.
  13. Keep cutting attachment below waist level.
  14. Keep all parts of your body away from the rotating cutting attachment and hot surfaces.
  15. Warn the operator of the danger of blade thrust. (Kick back)  
Blade thrust may occur when the spinning blade contacts a solid object in the critical area. A dangerous reaction may occur causing the entire unit and operator to be thrust violently. This reaction is called Kick back. As a result, the operator can lose control of the unit which can cause serious or fatal injury. Kick back is more likely to occur in areas where it is difficult to see the material to be cut.
  16. When inspecting or servicing the unit, make sure to stop the engine and disconnect the spark plug as necessary.
  17. Cover the blade when the transporting or storing the unit. Secure the unit before for

- storage or transporting to prevent loss of fuel, damage or injury.
18. When replacing cutting attachment or other components, be sure to use the parts supplied or recommended by ZENOAH.
  19. When the unit is turned off, make sure the cutting attachment has stopped before the unit is set down.
  20. For units equipped with a clutch, be sure the cutting attachment stops turning when the engine idles.
  21. Use only for tasks explained in the instruction handbook.
  22. Discard blades that are bent, warped, cracked, broken or damaged in any way.
  23. Instructions on stopping a coasting blade.  
A blade can injure while it continues to spin after the engine is stopped or throttle control is released.
  24. Stop the engine and blade before removing material that is blocking or entangling the cutting attachment.
  25. Use a sharp blade. A dull blade is more likely to snag and thrust. Replace the fastening nut according to the manufacturer's instruction.
  26. Cut only material recommended by the manufacturer. Do not let the blade contact material it cannot cut, such as rocks, metal etc.
  27. Always wear safety boots, additionally a helmet is required if there is a risk of contact with falling objects.

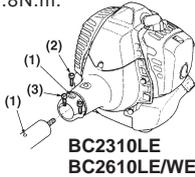
# 3 Setup

## ENGINE

### A: BC2310LE/BC2610LE/WE

- Loosen the bolts temporarily attached to the clutch housing.
- Push the drivershaft toward the gearcase and rotate it by hand to check that the driveshaft is engaged with the gears.
- Insert the shaft tube into the clutch housing until it bottoms. When difficult to engage, twist the engine slightly.
- Align the positioning holes on the clutch housing and the shaft tube and fit the bolt into the holes. And fasten the tightening bolts by turns securely. (Tightning torque: 4.9~7.8N.m. (0.5~0.8kgm))

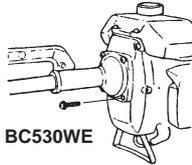
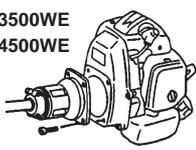
- Positioning hole
- Bolt (M5x10)
- Tightning bolt (M5x22)



### B: BC3500LE/WE/BC4500WE/BC530WE

- Using attached 4 socket screws, secure the connection firmly with equal force.

### BC3500WE BC4500WE

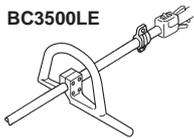


## HANDLE

### A: BC2310LE/BC2610LE/BC3500LE

- Put the handle onto the main pipe and fix it with 4 screws.

### BC3500LE

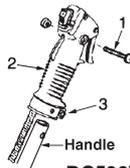


### BC2310LE BC2610LE



### B: BC530WE

- BC530WE only remove the screw(1) from the right grip(2) and put the grip onto the right handle. Align the positioning holes and put the screw through them. Fasten the clamp(3). And then continue to C.



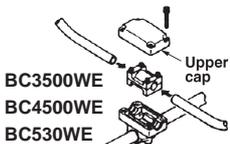
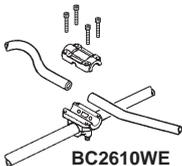
### BC530WE

### C: BC2610WE

- Loosen the 4 bolts on the upper cap and insert the handles equally. Retighten the bolts.
- Put the handle assembly into the bracket and put the upper cap over it. Tighten the cap securely.

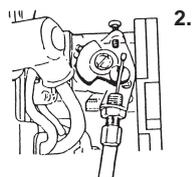
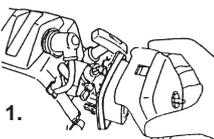
### D: BC3500WE/BC4500WE/BC530WE

- Remove the upper cap from the bracket.
- Loosen the 4 bolts on the clamp and insert the handles equally. Retighten the bolts.
- Put the handle assembly into the bracket and put the upper cap over it. Tighten the cap securely.



## CONNECTING THROTTLE WIRE [EXCEPT BC530]

- Remove the air cleaner cover.
- Connect the end of the throttle wire to the joint on the top of the carburetor.

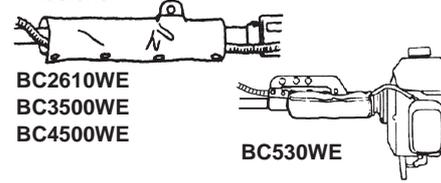


## CONNECTING SWITCH WIRES

- Connect the switch wires between the engine and the main unit.

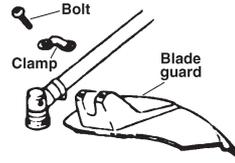
## PROTECTOR

- Wrap the protector around the outer pipe as shown in the figure, and fasten the magic fastener.



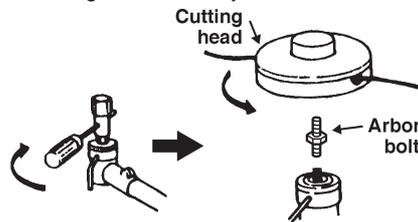
## BLADE GUARD

- Attach the guard to the clamp on the outer pipe just touching the gearcase. Fix it with 2 bolts.



## INSTALLING CUTTING HEAD

- While locking the gear shaft by inserting the attached bar into the upper holder and the gear box, loosen and remove the hexagon bolt(left-handed)
- Using the arbor bolt, screw in the cutting head to the gear shaft over the holders. Hand-tighten it securely.



# 4 Fuel

## WARNING

- Gasoline is very flammable. Avoid smoking or bringing any flame or sparks near fuel. Make sure to stop the engine and allow it cool before refueling the unit. Select outdoor bare ground for fueling and move at least 3m (10ft) away from the fueling point before starting the engine.



## RECOMMENDED MIXING RATIO GASOLINE 50:OIL 1

- The Zenoah engines are lubricated by oil specially formulated for air-cooled 2-cycle gasoline engine use. If Zenoah oil is not available, use an anti-oxidant added quality oil expressly labeled for air-cooled 2-cycle engine use. (JASO FC GRADE OIL or ISO EGC GRADE)
- Do not use BIA or TCW (2-stroke water-cooling type) mixed oil.
- Exhaust emission are controlled by the fundamental engine parameters and components (eq., carburation, ignition timing and port timing) without addition of any major hardware or the introduction of an inert material during combustion.
- These engines are certified to operate on unleaded gasoline.
- Make sure to use gasoline with a minimum octane number of 89 RON (USA/Canada: 87AL)

- If you use a gasoline of a lower octane value than prescribed, there is a danger that the engine temperature may rise and an engine problem such as piston seizing may consequently occur.
- Unleaded gasoline is recommended to reduce the contamination of the air for the sake of your health and the environment.
- Poor quality gasolines or oils may damage sealing rings, fuel lines or fuel tank of the engine.

## HOW TO MIX FUEL

### Pay attention to agitation.

- Measure out the quantities of gasoline and oil to be mixed.
- Put some of the gasoline into a clean, approved fuel container.
- Pour in all of the oil and agitate well.
- Pour in the rest of gasoline and agitate again for at least one minute. As some oils may be difficult to agitate depending on oil ingredients, sufficient agitation is necessary for the engine to last long. Be careful that, if the agitation is insufficient, there is an increased danger of early piston seizing due to abnormally lean mixture.
- Put a clear indication on the outside of the container to avoid mixing up with gasoline or other containers.
- Indicate the contents on outside of container for easy identification.

## FUELING THE UNIT

- Untwist and remove the fuel cap. Rest the cap on a dustless place.
- Put fuel into the fuel tank to 80% of the full capacity.
- Fasten the fuel cap securely and wipe up any fuel spillage around the unit.

## WARNING

- Select bare ground for fueling.
- Move at least 10feet (3meters) away from the fueling point before starting the engine.
- Stop the engine before refueling the unit. At that time, be sure to sufficiently agitate the mixed gasoline in the container.

## FOR YOUR ENGINE LIFE, AVOID;

- FUEL WITH NO OIL(RAW GASOLINE) – It will cause severe damage to the internal engine parts very quickly.
- GASOHOL – It can cause deterioration of rubber and/or plastic parts and disruption of engine lubrication.
- OIL FOR 4-CYCLE ENGINE USE – It can cause spark plug fouling, exhaust port blocking, or piston ring sticking.
- Mixed fuels which have been left unused for a period of one month or more may clog the carburetor and result in the engine failing to operate properly.
- In the case of storing the product for a long period of time, clean the fuel tank after rendering it empty. Next, activate the engine and empty the carburetor of the composite fuel.
- In the case of scrapping the used mixed oil container, scrap it only at an authorized repository site.

## NOTE

As lot details of quality assurance, read the description in the section Limited Warranty carefully. Moreover, normal wear and change in product with no functional influence are not covered by the warranty. Also, be careful that, if the usage in the instruction manual is not observed as to the mixed gasoline, etc. described therein, it may not be covered by the warranty.

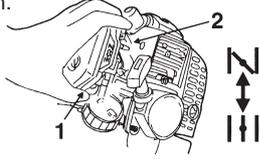
# 5 Use

## STARTING THE ENGINE

**⚠** Take care that the cutting head will start rotating upon the engine starts.

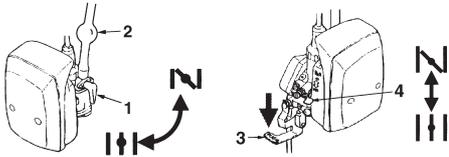
### A: EXCEPT BC530WE

1. Push the primer pump(1) several times until overflow fuel flows out in the clear tube.
2. Move the choke lever(2) to the closed position.

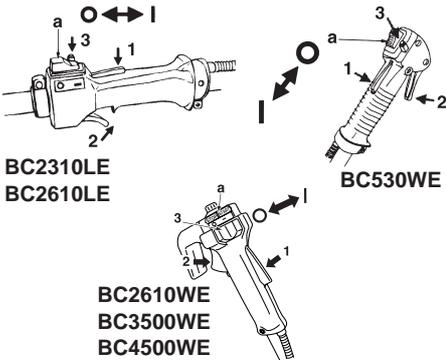


### B: BC530WE

- 1-1. Open the fuel shutoff valve. (1)
- 1-2. While pushing the tickler lever(3), push the primer pump(2) several times until the flow of fuel into the overflow pipe.
2. Move the choke lever(4) to the closed position.

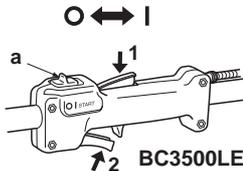


3. **A: BC2310LE/BC2610LE/WE BC3500WE/BC4500WE/BC530WE**  
Set the engine switch(a) to the "I" position. Set the throttle lever to the start position (1-2-3).

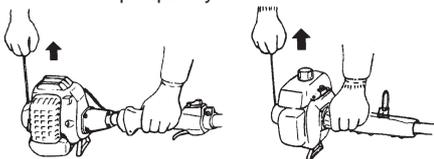


### B: BC3500LE

While pulling the throttle lever (1,2), set the engine switch(a) to the "I (START)" position and release the throttle. Then the throttle lever is in to the "start position".



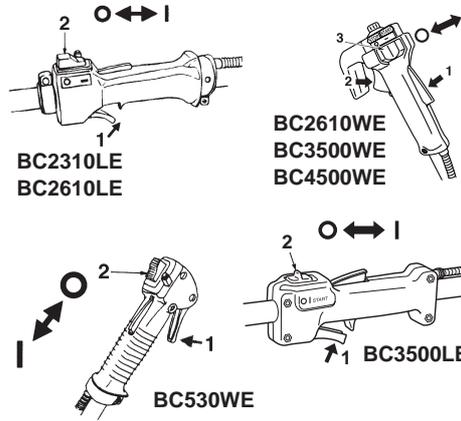
4. Place the unit on a flat, firm place. Keep the cutting head clear of everything around it.
5. While holding the unit firmly, pull out the starter rope quickly.



6. After the engine has started, open the choke gradually and allow the engine to warm up. Pull the throttle lever to unlock it.

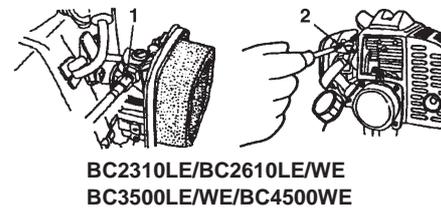
## STOPPING THE ENGINE

1. Release the throttle lever.
2. Move the engine switch to the "O" position.

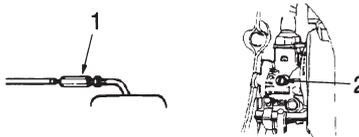


## ADJUSTMENTS

- Throttle cable: The normal play is 1 or 2 mm when measured at the carburetor side end. Readjust with the cable adjuster(1) as required.
- Engine idling speed: It is normal that the engine keeps running without the blade rotation, when the throttle lever is released. When the engine speed is too high or too slow, readjust the idle set screw (2).



## BC530WE

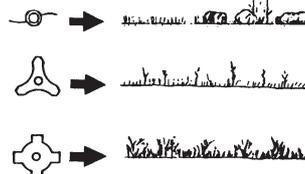


## CUTTING WORK

- By using the shoulder strap, hang the unit on your right side. Adjust the strap length so that the cutting head may become parallel to the ground.



- Choose a suitable recommended cutting attachment according to the object to be cut. Never use other cutting attachment not approved by ZENOAH.



## LINE HEAD USAGE

### ⚠ WARNING

1. Always wear eye protection such as safety goggles. Never lean over the rotating cutting head. Rocks or other debris could be thrown into eyes and face and cause serious personal injury.
2. Keep the debris guard attached in place at all times when the unit is operated.

## TRIMMING GRASS AND WEEDS

- Always remember that the TIP of the line does cutting. You will achieve better results by not crowding the line into the cutting area. Allow the unit to trim at its own pace.
1. Hold the unit so the head is off the ground and is tilted about 20 degrees toward the sweep direction.
  2. Use full throttle when cutting.
  3. You can avoid thrown debris by sweeping from your left to the right.
  4. Use a slow, deliberate action to cut heavy growth. The rate of cutting motion will depend on the material being cut. Heavy growth will require slower action than will light growth.
  5. Never swing the unit so hard as you are in danger of losing your balance or control of the unit.
  6. Try to control the cutting motion with the hip rather than placing the full workload on the arm and hands.
  7. Take precautions to avoid wire, grass and dead, dry, long-stem weeds from wrapping around the head shaft. Such materials can stall the head and cause the clutch to slip, resulting in damage to the clutch system if repeated frequently.

## ADJUSTING THE LINE LENGTH

- Your brushcutters is equipped with a semi-auto type nylon line head that allows the operator to advance the line without stopping the engine. When the line becomes short, lightly tap the head on the ground while running the engine at full throttle.
- Each time the head is bumped, the line advance about 1 inch(25.4 mm). For better effect, tap the head on bear ground or hard soil. Avoid bumping in thick, tall grass as the engine may stall by overload.

# 6 Maintenance

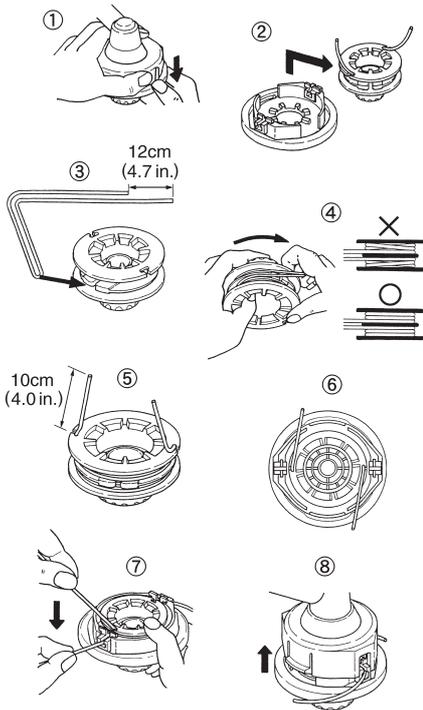
**⚠** Before cleaning, inspecting, or repairing the unit, make sure that the engine has stopped and is cool.

## REFILLING TRIMMING LINE

1. For replacement line, use a diameter of 2.4 mm. The spool is capable for a line upto 6 m on the 4" head. Avoid using a larger line as it may cut down the trimming performance.
2. Pinch the slotted area on the both sides of the spool housing to unhook the bottom cap.
3. Take out the spool and pull off the old line. Put one end of new line through the spool holes and pull it until the length is equal between each part of the line.
4. Wind up the line in the correct direction as indicated on the spool.
5. Hook each end of the line in the slot on the edge of the spool, and then put the ends through the eyelets on the housing.

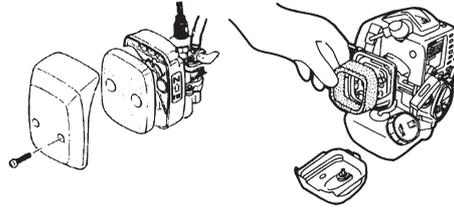
Make sure that the spring and the washers are in place.

- While holding the spool against the housing, pull the line ends to release them from the slot.
- Line up the slot on the bottom cap with the hook on the housing, press the cap against the housing until it clicks.



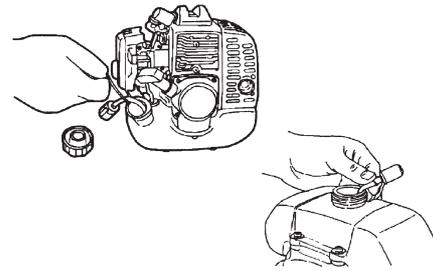
#### ■ AIR FILTER

- A clogged air filter will reduce the engine performance. Check periodically and clean the filter element in warm, soapy water as required. Dry completely before installing. If the element is broken or shrunk, replace with a new one.



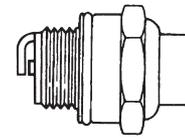
#### ■ FUEL FILTER

- When the engine runs short of fuel supply, check the fuel strainer for blockage.



#### ■ SPARK PLUG

- Starting failure and mis-firing are often caused by a fouled spark plug. Periodically clean the spark plug, and replace with a new one as required.

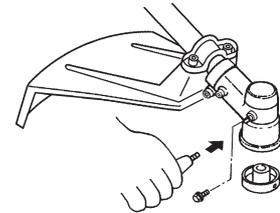


Model	Type of Plug	Spark Gap
BC2310LE	NGK BPMR7A	0.6 - 0.7 mm
BC2610LE / WE	NGK BPMR7A	0.6 - 0.7 mm
BC3500LE / WE	NGK BPMR7A	0.6 - 0.7 mm
BC4500LE	NGK BPMR7A	0.6 - 0.7 mm
BC530WE	NGK BPMR6A	0.6 - 0.7 mm

#### ■ GEARCASE

- Supply multi-purpose grease at every 25 hours of use.

- Remove the cutter holders.
- Charge grease until waste grease appears around the gear shaft.



#### ■ MAINTENANCE BEFORE STORAGE

- Old fuel left in the carburetor may cause starting failure. When a series of operation finished, make sure to empty the fuel tank and drain the carburetor.
- Check all parts and the functions. If the failed or damaged parts have been found, replace them with new ones.

## 7 Specifications

MODEL CODE	Unit	BC2310LE	BC2610LE	BC2610WE	BC3500LE	BC3500WE	BC4500WE	BC530WE
Overall size								
Length	mm	1810	←	←	1850	←	1860	1875
Width	mm	245	←	665	390	630	←	←
Height	mm	240	←	530	340	465	←	←
Dry weight	Kg	4.8	4.9	5.4	6.4	7.0	7.3	8.9
Engine model	*	G23LS	G26LS	←	G35L-D	←	G45L-D	G5K-D
Displacement	cc	22.5	25.4	←	33.6	←	41.5	52.5
Carburetor	*	Diaphragm		←	←	←	←	←
Fuel (Mixture ratio)	*	50:1 (Gasoline and 2cycle oil)		←	←	←	←	←
Fuel tank capacity	litter	0.6	0.75	←	0.74	←	0.94	1.0
Service range	rpm	5000~8000		←	←	←	←	←
Spark plug	*	BPMR7A		←	←	←	←	BPMR6A
Clutch system	*	Two-shoe Centrifugal-Type		←	←	←	←	←
Anti-vibration system								
Housing	*	Yes	←	←	←	←	←	No
Handle-bracket	*	No	←	←	←	Yes	←	←
Gearhead								
Neck angle	deg	60	←	←	←	←	←	←
Reduction ratio	*	1.357	←	←	←	←	←	←
Blade rotation	*	Counter-clockwise		←	←	←	←	←
Handle type	*	Loop	←	Both	Loop	Both	←	←
Throttle lever	*	Trigger Type (With Safety-lock)		←	←	←	←	←
Standard cutter	*	Nylon		←	←	←	←	←
Harness type	*	Single	←	←	Double	←	←	←
Quick release	*	Yes	←	←	←	←	←	←
Standard accessories								
Goggle	*	●	←	←	←	←	←	←
Tool-kit	*	●	←	←	←	←	←	←
Owner's manual	*	●	←	←	←	←	←	←

Specifications are subject to change without notice.