

**CRAFTOP**®



# Owner's Manual Hedge Trimmer GHT650T



EXPERTS  
IN EQUIPMENTS OF  
GARDENING AND AGRICULTURE

ENGLISH  
VERSION:02-202106

## **We thank you for buying CRAFTOP Hedge Trimmer**

This hedge trimmer provides advanced technology in incorporating many convenient features for you to perform your daily cutting work.

**Before attempting to use this hedge trimmer, please read this manual carefully until you completely understand and can follow all safety rules, precautions, operating and maintenance instructions.** It will help you both to become more familiar with this hedge trimmer and to recognize and avoid situations that could endanger you and others. **Careless or improper use may cause serious or even fatal injury!**

If you have any question about your hedge trimmer and this manual, please contact your local authorized dealer or service center. They always welcome your questions, suggestions, and constructive criticism.

We hope you enjoy this hedge trimmer and wish you many years of safe and enjoyable cutting work.

**CRAFTOP CANADA LTD.**

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## Guide to use this manual

This Owner's Manual refers to a CRAFTOP hedge trimmer, also called a machine in this Owner's Manual.

All information, specifications, descriptions and illustrations in this manual are as accurate as known at the time of publication, but are subject to change without notice. Due to ongoing product development, there may be difference between your machine and the information in this manual. No legal obligations or commitments can be delivered from the information, specifications, descriptions, or illustrations in this manual.

Illustrations are only for orientation and are merely used to help explain the text descriptions and instructions. Illustrations may include optional equipment and accessories, and may not include all standard equipment.

Some signs or symbols on the machine may be a little different refer to special certification requirements for certain markets.

Any technical modifications to the machine that were introduced after the editorial deadline please consult your local dealer for more supplementary information.

All safety precautions and instructions described in this manual should be observed during operation of the hedge trimmer, and all applicable federal, state and local safety regulations, standards, and ordinances should be observed as well.

Do not sell, lend or rent the machine without this owner's manual. Always be sure to include this owner's manual together with the machine, and make sure that anyone using it understands all the information and follows all the instruction contained in this manual.

## Signs and symbols in this manual

### **DANGER**

Texts with this symbol contain information regarding hazardous situations which will cause death or severe injures if not avoided.

### **WARNING**

Texts with this symbol contain information regarding hazardous situations which could cause death or severe injures if not avoided.

### **CAUTION**

Texts with this symbol contain information regarding hazardous situations which could cause minor or moderate injures if not avoided.

### **NOTICE**

Texts with this symbol information regarding situation which could cause hedge trimmer damage if not avoided.

### **information**

Texts with this symbol contain supplementary information.

### **Read and understand the Owner's Manual.**



It is very important that you read this Owner's Manual carefully, make sure that you completely understand and can follow all safety rules, precautions, operating and maintenance instructions before attempting to use this hedge trimmer, failure to do so may cause serious or even fatal injury!



Special safety precautions must be observed when working with this machine because it has very sharp, high-speed cutting blades.



### **Wear proper clothing.**



### **Wear eye, ear and head protection.**

Always wear appropriate personal protective equipments for hedge trimmer operation, inclusive of eye protection, ear protection, and head protection.



### **Face mask required.**

Operators who are sensitive to dust or other common airborne allergens may need to wear a dust mask.



### **Hands protection.**

Always wear appropriate gloves for hedge trimmer operation.



**Foot protection required.**

Steel toe shoes with anti-slip sole required in working area.



The port to refuel mixed fuel with unleaded gasoline and two-stroke oil.

Position: Fuel tank cap



**Fire hazard.**

Risk of fire.  
Highly flammable material.



Pull the handle to start the engine.  
Position: Recoil starter rope handle.



**No smoking.**

Do not smoke in this area.



Set the switch to "RUN" position when starting the engine.  
Position: Top of rear handle.

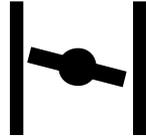


Set the switch to "STOP" position, the engine stops immediately.  
Position: Top of rear handle.



**Sharp edges.  
Watch you fingers.**

Do not touch the cutting blades while the engine is running.

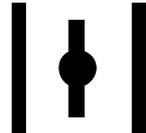


**Choke control.**  
Choke closed.  
"Cold start" position.



**Hazards of electric shock.**

Be careful of high voltage cable when you use machine.  
Do not touch!



**Choke control.**  
Choke open.  
"Run" position.



**Hot surface.**

Do not touch.

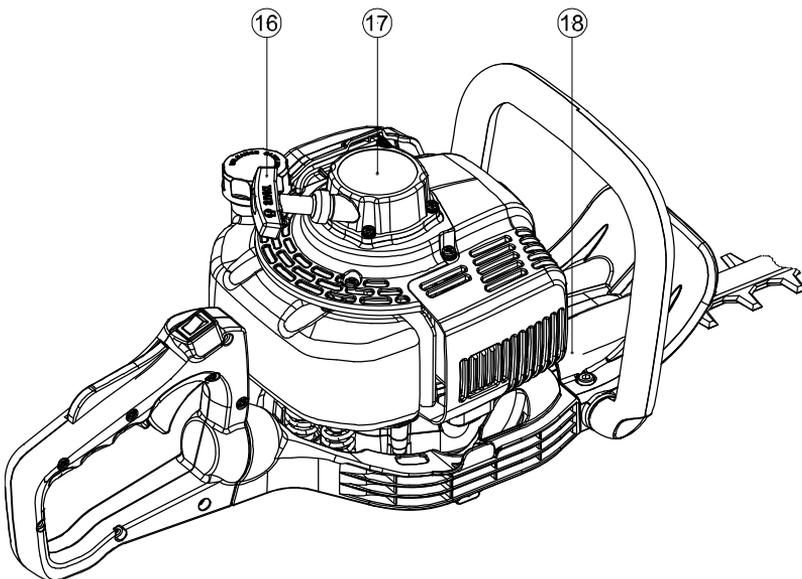
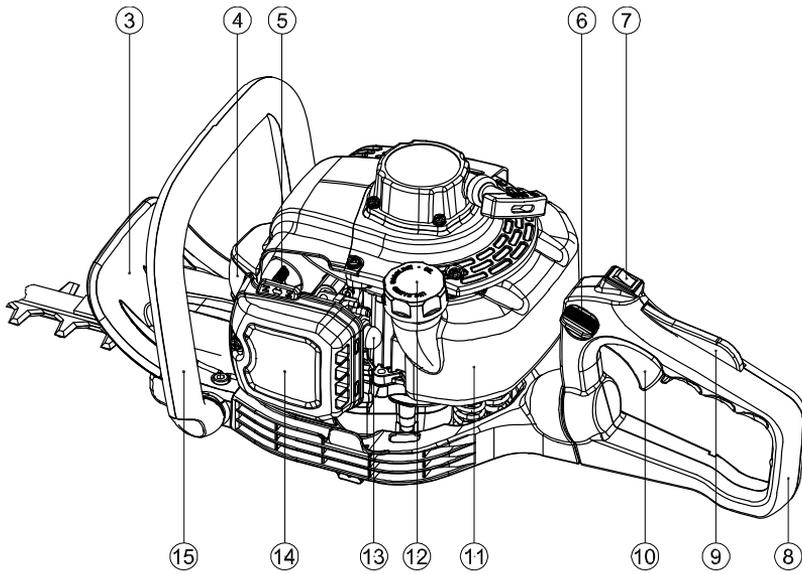
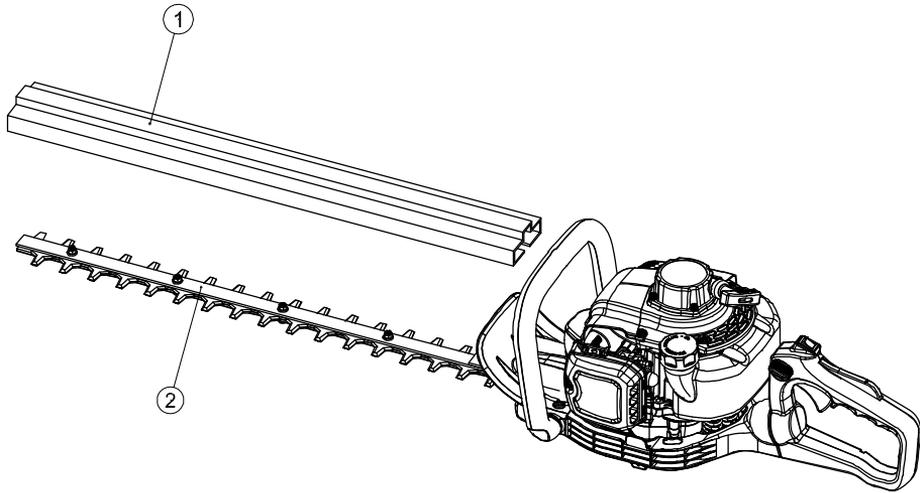


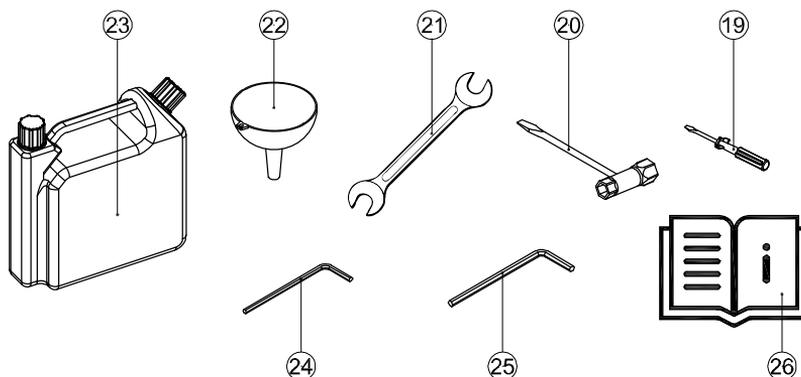
In the event of impending danger or in an emergency, switch off the engine immediately by pressing the engine stop switch backward to STOP position.

**Signs and symbols on the machine**

For the purpose of safety operation and maintenance, the meanings of signs and symbols may be attached to or embossed on the machine.

# Product overview





Index	Part Name	Description
1	<b>Blade cover</b>	Cover cutting blades during transportation or storage. Remember to remove blade cover before using the machine.
2	<b>Cutting blades</b>	Double reciprocating blades mounted to a blade support bar. The blades are double sided, capable of cutting on either side.
3	<b>Front hand guard</b>	A barrel designed to protect the operator's hand from cutting branches when holding the front handle to perform trimming work.
4	<b>Spark plug</b>	Provides spark to ignite fuel mixture.
5	<b>Choke control lever</b>	Located on the top side of air filter case. Move choke control lever to "COLD START" position  to close the choke for Cold Starting. Move choke control lever to "RUN" position  to open the choke.
6	<b>Rear handle rotation release button</b>	Press the button in to release rear handle, then rotate rear handle until the release button clicks into the next desired position.
7	<b>Engine stop switch</b>	Mounted on the top of the rear handle. Press switch forward to RUN position, and press it backward to STOP position.
8	<b>Rear handle</b>	3-position handle can be rotated right or left with 90 degrees, and locked into each position for a secure grip. Rear handle contains the engine stop switch, throttle safety lockout, throttle trigger, and rear handle rotation release button.
9	<b>Throttle trigger safety lockout</b>	This safety switch must be depressed before throttle trigger can be activated.
10	<b>Throttle trigger</b>	Throttle trigger safety lockout must be fully depressed before throttle trigger can be activated. Throttle trigger controls engine's speed. It can returns to idle position when released. Squeeze trigger gradually to obtain a smooth acceleration.
11	<b>Fuel tank</b>	A container contains fuel and fuel filter.
12	<b>Fuel tank cap</b>	Covers and seals the port for fueling.
13	<b>Purge bulb</b>	Pumping purge bulb before starting engine draws fresh fuel from the fuel tank, purging air from the carburetor. Pump purge bulb until fuel is visible and flows freely in the clear fuel tank return line. Pump purge bulb an additional 4 or 5 times.
14	<b>Air filter</b>	A part to cover and hold air filter.
15	<b>Front handle</b>	Front handle and rear handle provides the grip for operator to hold the machine when working with it.
16	<b>Starter rope handle</b>	Pull the handle to start the engine.
17	<b>Recoil starter</b>	The recoil starter spins the flywheel and crankshaft fast enough to start the

Index	Part Name	Description
		internal combustion. When the recoil starter system is engaged, the operator can crank the engine by hand and get it going fast enough to start.
18	<b>Muffler</b>	A device for reducing the noise emitted by the exhaust of an internal combustion engine. Its surface may be very hot during or just after operation.
19	<b>Screwdriver</b>	Slot head and Phillips head integrated screwdriver.
20	<b>Combination wrench</b>	Combination wrench with size 16mm/19mm for spark plug installation and disassembly.
21	<b>Open end wrench</b>	Metric open end wrench, size is 8mm/10mm.
22	<b>Funnel</b>	Easily add mixed fuel to the fuel tank of machine, or add oil into the fuel mixture container.
23	<b>Fuel mixing container</b>	There are two parts of the container, the large part is for gasoline and small part for engine oil.
24	<b>Hex key 3#</b>	Hex key size is 3mm.
25	<b>Hex key 4#</b>	Hex key size is 4mm.
26	<b>Owner's manual</b>	An instructional book that is supplied with this machine.

## Technical specification

MODEL		GHT650T	
Item	Description	Unit	Specification
<b>Overall</b>	Product dimension (L x W x H)	inch/mm	43.3x9.4x9.4/1100x240x240
	Package dimension (L x W x H)	inch/mm	45.3x10.2x10.2/1150x260x260
	Gross weight	lbs/kg	17/7.7
	Net weight	lbs/kg	12.1/5.5
<b>Engine</b>	Type		Air-cooled single cylinder two-stroke gasoline engine
	Displacement	cc	22.5
	Bore	inch/mm	1.3/32
	Stroke	inch/mm	1.1/28
	Power	kw/rpm	0.65/7500
	Carburetor		Diaphragm carburetor
	Idle speed	rpm	3200±300
	Clutch engagement speed	rpm	4200±300
Wide open throttle speed	rpm	9500±500	
<b>Starter</b>	Type		Recoil starter
<b>Clutch</b>	Type		Spring clutch
<b>Fuel</b>	Type		Mixture of unleaded gasoline and two-stroke oil
	Gasoline		Unleaded gasoline with minimum octane 93

MODEL		GHT650T	
Item	Description	Unit	Specification
	Oil		CRAFTOP oil
	Gasoline : Oil ratio		40:1
	Fuel tank capacity	ml	550
<b>Gear lubrication</b>	Type		Lithium based grease
	Capacity	g	20
<b>Ignition system</b>	Type		CDI
	Spark plug electrode gap	in/mm	0.12~0.2/0.3~0.5
<b>Cutting blades</b>	Type		Double reciprocating blades
	Pitch	in/mm	0.5/12
	Blade length	in/mm	0.8/21
	Cutting length	in/mm	25.6/650
	Blade height	in/mm	0.098/2.5
	Sharpening angle to horizontal	°	40
	Maximum cutting diameter (soft material)	in/mm	0.5/12
	Maximum cutting diameter (woody material)	in/mm	0.5/12
<b>Noise levels</b>	Equivalent noise pressure level	dB(A)	100
	Equivalent noise power level	dB(A)	100
<b>Vibration levels</b>	Front handle	m/s <sup>2</sup>	15
	Rear handle	m/s <sup>2</sup>	15

### information

Specifications, descriptions and illustrations in this manual are as accurate as known at the time of publication, but are subject to change without notice.

## Safety precautions and instructions



Special safety precautions must be observed when working with this machine because it has very sharp, high-speed cutting blades. Careless or improper use may cause serious or even fatal death.



Before attempting to use this hedge trimmer, please read this manual carefully until you completely understand and can follow all safety rules, precautions, operating and maintenance instructions.

## Safety precautions

### WARNING

- Observe all applicable local safety regulations, standards and ordinances.
- If you have not used this type of hedge trimmer before, have your dealer or other experienced operator show you how to operate your machine.
- Because a hedge trimmer is high-speed wood-cutting tool, some special precautions must be observed to reduce the risk of accident and personal injury. Careless or improper use may cause serious or even fatal injury.
- The use of this hedge trimmer may be hazardous. The cutting blade has many sharp edges. If the sharp edge contacts your body, they will cut you, even if the cutting blade is not moving.

- The exhaust from this machine may contain chemicals known by the State of California to cause cancer, birth defects or other reproductive harm.
- The noise emitted from this machine may be restricted to certain times by national or local regulations.
- Minors should never be allowed to use this hedge trimmer. Do not allow other persons near the hedge trimmer when starting or cutting. Keep bystanders, especially children, and animals out of the work area. Keep bystanders, children, and animals a minimum of 50 feet (15m) from the work area.
- The person who use this hedge trimmer must be in good physical condition and mental health, and not under the influence of alcohol and drugs. Never use this hedge trimmer when you are fatigued, sick, or upset. If you feel tired, take a break.
- The components of this machine generate an electromagnetic field during operation, which may interfere with some pacemakers. To reduce the risk of serious or fatal injury, persons with pacemakers should consult with their physician and the pacemaker manufacturer before operating this machine. In the absence of such information, CRAFTOP does not recommend the use of this machine by anyone who has a pacemaker.
- The owner of this machine is responsible for avoiding injury to third parties or damage to their property.

### CAUTION

Prolonged exposure to cold and/or vibration may result in injury. Read and follow all safety and operation instructions to minimize risk of injury. Failure to follow instructions may result in painful wrist/hand/arm injuries.

Raynaud's Phenomenon may affect the fingers of certain individual if a person is exposed to vibration and cold. Exposure to vibration and cold may cause tingling and burning sensations, followed by loss of color and numbness in the fingers. The following precautions are strongly recommended:

- Keep your body warm, especially the head, neck, hands, wrists, ankles and feet, ..
- Maintain good blood circulation by performing vigorous arm exercises during frequent work breaks.
- Limit the hours of operation, have a rest when you feel tired or fatigued.
- If you experience discomfort, redness, and swelling of the fingers followed by whitening and loss of feeling, consult your physician before continuing exposing yourself to cold and vibration.

Overusing the muscles and tendons of the fingers, hands, arms, and shoulders may cause soreness, swelling, numbness, weakness, and extreme pain in those areas.

- Avoid using your wrist in a bent, extended, or twisted posture. Instead, try to maintain a straight wrist position. Also, when grasping, use your whole hand, not just the thumb and index finger.
- Take periodic breaks to minimize repetition and let your hands have a rest.

- Reduce the speed and force with which you do the repetitive movement.
- Do exercise to strengthen your hands and arm muscles.
- Immediately stop using the machine and other power tools, and consult a doctor if you feel tingling, numbness, or pain in the fingers, hands, wrists, or arms.

### DANGER

All over head electrical conductors and communications wires can have electricity flow with high voltages. This machine is not insulated against electrical current. Never touch wires directly or indirectly, otherwise serious injury or even death may result.

### DANGER

Do not operate this machine indoors or in inadequately ventilated areas. Engine exhaust contains poisonous emissions and can cause serious injury or death.

## Clothing and PPE

### WARNING

Most hedge trimmer accidents happen when the cutting blade touches the operator. You must wear proper clothing and approved personal protective equipments (PPE) whenever you use a hedge trimmer.

#### Wear proper clothing.

Clothing must be sturdy but allow complete freedom of movement. Wear snug-fitting clothing, an overall and jacket combination, do not wear a work coat.



Avoid clothing that could get caught on branches or brush or moving parts of the machine. Do not wear a scarf, necktie or jewelry. Tie up and confine long hair with a hair net, cap, or hard hat for instance.

#### Wear eye, ear and head protection.



Always wear appropriate personal protective equipments for hedge trimmer operation, inclusive of eye protection, ear protection, and head protection.

#### Face mask required.



Operators who are sensitive to dust or other common airborne allergens may need to wear a dust mask.

Dust masks can provide protection against dust, plant debris, and other plant matter such as pollen. Make sure the mask does not impair your vision, and replace the mask as needed to prevent air restrictions.



### Hands protection.

Always wear heavy-duty work gloves made of durable material (e.g. leather) for hedge trimmer operation.



### Foot protection required.

Wear sturdy steel toe shoes with anti-slip soles in your working area.

Personal protective equipments can not eliminate the risk of injury, but it will reduce the degree of injury if an accident does happen. Ask your hedge trimmer dealer for help in choosing the right equipments.

Long-time or continuous exposure to high noise levels may cause permanent hearing impairment. Always wear approved hearing protection when operating a hedge trimmer.

## Handle your hedge trimmer safely

**! WARNING**

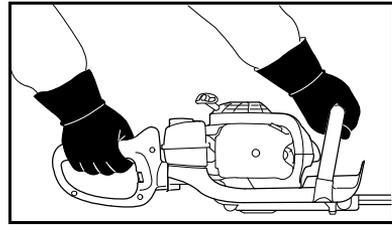
This hedge trimmer must only be used to trim hedges or shrubs with thinner branches. Do not use the machine to cut trees, thick branches, grass, solid metal, sheet metal, plastic, or any other types of material.

Do not use the hedge trimmer as a lever to lift, move or break objects, nor lock it on fixed supports.

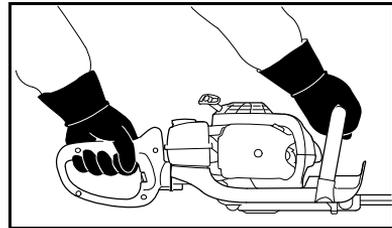
Under any circumstance, you should not modify the original design of the hedge trimmer without approval from the manufacturer. Always use genuine spare parts. Unauthorized modifications or accessories may lead to serious or even fatal injury.

Under any circumstance, you should not operate your hedge trimmer if it is damaged, improperly adjusted or maintained, or not completely or securely assembled. Always inspect the hedge trimmer before each use, and replace the parts immediately if it is worn, loose, damaged or missing.

- Always disconnect spark plug wire and place wire where it can not contact spark plug to prevent accidental starting when setting up, transporting, adjusting or making repairs except carburetor adjustments.
- Always hold the hedge trimmer firmly with two hands when the engine is running. Do not operate a hedge trimmer with one hand. Serious injury to the operator, helpers, bystanders or any combination of these persons may result from one-handed operation. **The hedge trimmer MUST be used with two hands!**
- If you are right-hander, place your left hand on the front handle and your right hand on the rear handle, with your thumbs and fingers tightly encircling the handles.



- If you are left-hander, place your right hand on the front handle and your left hand on the rear handle, with your thumbs and fingers tightly encircling the handles.



- Operate the hedge trimmer only in a well-ventilated outdoor area. Never start or run the engine inside a closed room or building. Exhaust fumes contain dangerous carbon monoxide.
- Never operate the machine at night, at times of heavy fog, or at any other times when your field of vision might be limited and it would be difficult to maintain a clear view of the working area.
- During rain, storms at times of strong or gale-force winds, or at any other times when weather conditions might make it unsafe to use this machine.
- Carefully plan your cutting operation in advance. Never start cutting until you have a clear work area.
- Maintain footing and balance at all times. Do not stand on slippery, uneven or unstable surfaces. Do not operate the hedge trimmer in odd position or on a ladder or ladders.
- Always shut off the engine before putting the hedge trimmer down.
- Keep exhaust area clear of flammable debris. Avoid contact hot surfaces during and immediately after operation.
- Use a damp cloth, soft bristle brush, and/or air compressor (Max 25 PSI) to clear your hedge trimmer. Do not use a pressure washer to clean hedge trimmer as the solid jet of high pressure water may damage parts of the machine.

## Maintain in good work order

**! CAUTION**

All hedge trimmer service, other than the items listed in the maintenance section of this manual, should be performed by authorized service dealer or competent hedge trimmer service personnel.

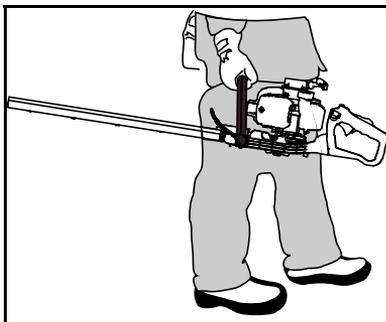
**! WARNING**

Only use high-quality replacement parts in order to avoid the risk of accidents and damage to the power tool. If you have any questions in this respect, consult

an authorized dealer or service center. CRAFTOP recommends the use of genuine spare parts. They are specifically designed to match your model and meet your performance requirements.

- To reduce the risk of injury, always shut off the engine before carrying out any maintenance or repairs or cleaning the machine, only excepts carburetor and idle speed adjustments.
- Check the machine for loose/missing nuts, bolts, and screws. Tighten and/or replace as needed.
- Check that the cutting attachment is firmly attached and in safe operating condition. Dull, loose or damaged blades should not be used.
- Do not turn the engine over on the starter with the spark plug boot or spark plug removed since there is otherwise a risk of fire from uncontained sparking.
- Check fuel system for leaks due to fuel tank damage, especially if the machine is dropped accidentally. If damages or leaks are found, do not use the machine any more, otherwise serious personal injury or property damage may occur. Have your machine repaired by an authorized dealer or service center before using.
- Check the fuel filler cap for leaks at regular intervals.
- Check the engine oil level is located at the proper position.
- To reduce the risk of fire, do not service or store your machine near open flames.
- Use only a spark plug type which is approved by CRAFTOP and make sure it is in good condition.
- Inspect the ignition lead (insulation in good condition, secure connection).
- Check the condition of the muffler. To reduce the risk of fire and damage to hearing, do not operate your machine if the muffler is damaged or missing.
- Do not touch a the muffler, spark plug, or other metallic parts of the engine while the engine is running or immediately shutting down, otherwise burn injury will result.
- When planning your work schedule, allow plenty of time to rest. Limit the amount of time over which the machine is to be use continuously to somewhere around 30~40 minutes per session, and take 10~20 minutes of rest between work sessions. Also try to keep the total amount of work performed in a single day under 2 hours or less.

## Transporting your hedge trimmer



- When transporting your hedge trimmer by hand, the engine must be shut off and the cutting blades must be covered with the blade cover (scabbard) and in the proper position (for example, grip the top of front handle, place the muffler and gear housing away from your body, and the cutting blades to the rear). Avoid touching hot parts of the machine, especially the muffler and gear housing, otherwise you could suffer serious burns.
- When transporting your hedge trimmer in a vehicle, the cutting blades should be covered with the blade cover (scabbard) and properly secured to avoid turnover, fuel spillage and damage to your machine.

## Handle fuel with caution

Your hedge trimmer use a gasoline-oil mixture for fuel.

### **WARNING**

Gasoline is an extremely flammable fuel. Pay high attention when mixing, storing or handling, otherwise serious personal injury may result.



If spilled and ignited by a spark or other ignition source, gasoline can cause fire and serious burn injury or property damage.



Do not smoke or bring any fire or flame while handling fuel or while operating the hedge trimmer. Note that combustible fuel vapor may escape from the fuel system.

- Mix and pour fuel in a well ventilated outdoor area on bare ground; store fuel in a cool, dry well ventilated place; and use an approved, marked container for all fuel purposes. Wipe up all fuel spills before starting the machine.
- Eliminate all sources of sparks or flame(i.e. smoking, open flames, or work that can cause sparks) in the areas where fuel is mixed, poured, or stored. Always shut off the engine and allow it to cool down before refueling.
- Always use with caution when handling fuel. Wipe up all spills and then move the hedge trimmer at least 10feet (3 meters) from the fueling point before starting the engine.
- To reduce the risk of fire and explosion, fuel your machine only in a well-ventilated area, outdoors away from flames, pilot lights, heaters, electric motors, and other sources of ignition
- Always shut off the engine before refueling, let the machine cool down in a non-combustible area, not on dry leaves, straw, paper, etc. Do not fuel a hot engine because fuel may spill out and cause a fire.
- Loose a bit of the fuel cap carefully so as to allow any pressure build-up in the fuel tank to release slowly and avoid fuel spillage.. Never remove the fuel cap when engine is running!
- If you spill fuel, wipe the machine immediately. If fuel spills on your clothing, change it immediately.

- Tight the fuel cap securely to the proper position, make sure it does not loosen or come off due to the machine vibrations.
- To reduce the risk of serious or fatal burn injuries, check for fuel leakage. If fuel leakage is found, do not start or run the engine until leak is fixed.
- Do not inhale fuel fumes as they are toxic.
- Store the machine and fuel in an area where fuel vapors cannot reach sparks or open flames from water heaters, electric motors or switches, furnaces, etc.

## Before starting the engine

A area within a minimum radius of 50feet (15m) from the using the machine should be considered as a hazardous area, into which on one should enter. If necessary, yellow warning rope and warning signs should be placed around the perimeter of the area. When work is to be performed simultaneously by two or more persons, special care should also be taken to constantly look around or otherwise check for the presence and locations of other people working, so as to maintain sufficient safety distance between each person.

Before starting the engine, check that your machine is properly assembled and in good condition

- Check the fuel system for leaks, paying high attention to visible parts such as the fuel tank cap, hose connections and the manual fuel pump (if equipped). If there are any leaks or damage, do not start the engine because of potential risk of fire. Have your machine repaired by an authorized dealer or service center before using it again.
- The engine stop switch must move easily in direction of STOP position and spring back to the normal RUN position.
- Smooth action of throttle trigger lockout and throttle trigger - The throttle trigger must return automatically to the idle position by itself.
- Check that the spark plug boot is secure – a loose boot may cause arcing that could ignite combustible fumes and cause a fire.
- Cutting blades securely mounted and in good condition (clean, move freely, not warped, properly sharpened).
- Check the cutter guard for damage.
- Never attempt to modify the controls or safety devices in any way.
- Keep all handles dry and clean, free from oil and dirt – for safe control of the machine.
- To reduce the risk of accidents, do not operate your machine if it is damaged or not properly assembled.

## When starting the engine

**! WARNING**  
Note that the cutting blades continue to run for a short period after you let go of the throttle trigger, due to flywheel effect.

- Start the engine at least 10feet (3m) from the fueling spot, outdoors only.

- Keep bystanders, especially children and animals at least 50feet (15m) from the operating point. If you are approached, immediately stop the engine.
- This machine is equipped with a centrifugal clutch mechanism, so the cutting attachments begin to move as soon as the engine is started by squeeze the throttle trigger into the start position.
- Place the machine on firm ground in an open and well ventilated area. Make sure you have good balance and secure footing. Hold the machine securely. The cutting blades must not contact the ground and all other obstructions because they may begin to run when the engine starts.
- Your machine is designed to be operated by one person only. Do not allow other persons in the work area even when starting.
- To reduce the risk of injury, avoid contact with the cutting blades.
- Do not drop start the power tool, just follows the way and start the engine as described in this manual.
- Never place the throttle trigger into the high-speed position when starting the engine.
- Never start the engine by standing on the cutting attachments side.
- Check idle speed setting: The cutting blades must not move when the engine is idling with the throttle trigger released. If it continues to move even after the throttle trigger has been completely released, shut off the engine and take the machine to your authorized dealer or service center for inspection and/or repair.

### **i** information

*When a new machine is first operated, in the first few minutes grease may come out of the gear case. But, since this is excessive grease, there is no cause of alarm. Just wipe it off with the engine stopped for next use.*

## During operation

### **! WARNING**

Moving parts can amputate fingers or cause severe injuries. Keep hands, clothing and loose objects away from all moving parts. Always stop engine, disconnect spark plug, and make sure all moving parts have come to a complete stop before removing obstructions, clearing debris, or servicing unit.



Do not touch any moving parts, especially the cutting blades, while the motor is running. If the cutting blades become jammed by thick branches or other obstructions, switch off the engine immediately before attempting to free the blades – there is otherwise a risk of injury.



To avoid the risk of electrocution, do not touch electric power lines – never cut through electric power lines.



**Hot surface.**  
Do not touch.



In the event of impending danger or in an emergency, switch off the engine immediately by pressing the engine stop switch backward to STOP position.

- Always carry related tools, equipments, spare parts, and consumables with you:
  - Attached tools in the product package.
  - Personal protective equipments.
  - Properly reserved fuel
  - Spare parts (spare blade, etc.).
  - Things to notify your working are (rope, warning signs, etc.).
  - Whistle (for collaboration or emergency).
  - Hatchet or saw (for removal of obstacles).
- Check that there are no bystanders, children, and animals in the general work area. If someone comes:
  - Guard against hazardous situations at all times. Warn adults to keep children and pets away from your working area. Be careful if you are approached. Injury may result from flying debris.
  - If someone calls out or otherwise interrupts you while working, always be sure to shut off the engine before turning around. Avoid operating which people, especially children are nearby.
- Always be aware of surroundings and stay alert for possible hazards that you may not hear due to the noise of the machine.
- Make sure you always have good balance and secure footing. Place your feet slightly apart (slightly further apart than the width of your shoulders), so that your weight is distributed evenly across both legs, and always be sure to maintain a steady, even posture while working.
- Take special care in slippery conditions (ice, wet ground, snow), on slopes or uneven ground.
- Clear away fallen branches, scrub and cuttings.
- Watch out for obstacles (roots, tree stumps or holes) which could cause you to trip or stumble.
- When working at heights:
  - Always use a lift bucket.
  - Never work on a ladder or in a tree.
  - Never work on an insecure support.
  - Never operate your machine with one hand.
- Watch the cutting blades at all times, do not cut areas of the hedge that you cannot see clearly. Check the conditions of working area to avoid any accident by hitting hidden obstacles, such as stumps, stones, cans, or broken glass.
- Be extremely careful when cutting tall hedges, check the other side of the hedge before starting work.
- Inspect the hedge and work area to avoid damaging the cutting blades:
  - Remove stones, rocks, pieces of metal and other solid objects.
  - When working close to the ground, make sure that no sand, grit or stones get between the blades.
  - Take particular care when cutting hedges next to or against wire fences.
- Make sure the idle speed setting is correct. The cutting blades must not run when the engine is idling with the throttle trigger released. If the cutting blades still run, have your machine checked by an authorized dealer or service center, to make proper adjustments or repairs. Check and correct the idle speed setting regularly.
- Note that the cutting blades continue to run for a short period after you let go of the throttle trigger, due to flywheel effect.
- The gearbox becomes hot during operation. To reduce the risk of burn injury, do not touch the gearbox housing.
- Be particularly alert and cautious when wearing hearing protection because your ability to hear warnings (shouts, alarms, etc.) is restricted.
- To reduce the risk of accidents, take sufficient break in good time to avoid tiredness or exhaustion.
- Work calmly and carefully in daylight conditions and only when visibility is good. Stay alert so as not to endanger others.
- To reduce the risk of serious or fatal injury from breathing toxic fumes, ensure proper ventilation when working in trenches, hollows or other confined locations.
- To reduce the risk of accidents, stop work immediately in the event of nausea, headache, visual disturbances (e.g. reduced field of vision), problems with hearing, dizziness, deterioration in ability to concentrate. Apart from other possibilities, these symptoms may be caused by an excessively high concentration of exhaust gases in the work area.
- Operate your machine so that it produces a minimum of noise and emissions. Do not run the engine unnecessarily, accelerate the engine only when working. To avoid noise complaints, in general operate the machine between 8AM and 5PM on weekdays, and 9AM to 5PM on weekends, detail please refer to your local regulations.
- Do not operate your machine in the starting throttle position because engine speed cannot be controlled in this position.
- To reduce the risk of fire, do not smoke while operating or standing near your machine. Note that combustible fuel vapor may escape from the fuel system. Always clean plant residue, chips, debris, leaves and excess lubricant off the engine and muffler. Note that stop the engine before you perform the cleaning work.
- If your power tool is subjected to unusually high loads for which it was not designed (e.g. heavy impact or a fall), always check that it is in good condition before

continuing work. Check the fuel system in particular for leaks and make sure the safety devices are working properly. Do not continue operating your machine if it is damaged. In case of doubt, consult your local authorized dealer or service center.

- Opening the throttle while the blades are blocked increases the load and reduces engine speed. The clutch then slips continuously and this causes overheating and damage to important components (e.g. clutch, polymer housing components) – and this can increase the risk of injury from the cutting blades moving while the engine is idling.
- The dust that occurs during operation may be harmful to health. If dust levels are very high, wear a suitable respirator.
- Before leaving the power tool unattended: Shut off the engine.
- Check the cutting blades at regular short intervals during operation or immediately if there is a noticeable change in cutting behavior:
  - Shut off the engine.
  - Wait until the cutting blades have come to a complete standstill.
  - Check condition and tightness, look for cracks.
  - Check sharpness.

### **WARNING**



The dust that occurs during hedge trimmer operation may be harmful to health. Operators who are sensitive to dust or other common airborne allergens may need to wear a dust mask.

### **After finishing your work**

- Always clean dust and dirt off the machine. Do not use any grease solvents for this purpose.
- Do not use a pressure washer to clean hedge trimmer. The solid jet of high pressure water may damage parts of the machine.

### **Assembly**

This model is factory assembled.

### **WARNING**

Always shut off the engine and allow it cool down before carrying out any work on the hedge trimmer.



Always wear appropriate gloves when handling the hedge trimmer, in order to protect your hands from injury. The cutting blades are sharp and can cut you even when it is not moving!

## **Fuel and fueling**

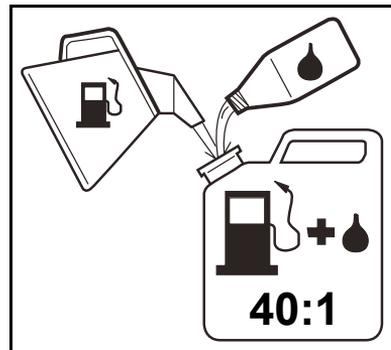
### **Fuel**

#### **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 down before refueling the machine. Select well-ventilated outdoor bare ground for fueling and move at least 3 m (10 ft) away from the fuming point before starting the engine.

#### **NOTICE**

*The hedge trimmer is equipped with a two-stroke engine, and it is certified to operate on unleaded gasoline and two-stroke air cooled engine oil at a recommended mix ratio of 40:1. It is important to accurately measure the amount of oil to be mixed to ensure that the correct mixture is obtained. When mixing small amount of fuel, even small inaccuracies can drastically affect the ratio of the mixture.*



**Gasoline:** Use good quality unleaded or leaded petrol. Gasoline may contain up to 10% Ethanol (grain alcohol) or 15% MTBE (methyl tertiary-butyl ether). Gasoline containing methanol (wood alcohol) is NOT approved.

- Poor quality gasoline or oil may damage sealing rings, fuel lines or fuel tank of the engine.
- Unleaded gasoline is recommended to reduce the contamination of the air for the sake of your health and the environment.
- The lowest octane recommended is 93. If you run the engine on a lower octane grade than 93 so-called, knocking can occur. This gives rise to a high engine temperature, which can result in serious engine damage.
- 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.
- When working with continuous high speed (e.g. delimiting), a higher octane grade is recommended.
- Exhaust emission are controlled by the fundamental engine parameters and components (for example, carburetion, ignition timing and port timing) without addition of any major hardware or the introduction of an inert material during combustion.
- Take care when handling gasoline. Avoid direct contact with the skin and avoid inhaling fuel vapor

**Two-stroke oil:** A two-stroke air-cooled engine oil meeting ISO-L-EGD (ISO/CD 13738) and J.A.S.O. FD Standards must be used. Do not use BIA or TCW (2 stroke water cooling type) mixed oil.

- Never use two-stroke oil intended for water cooled outboard motors, so-called, outboard oil.
- Never use oil intended for four-stroke engines.

## Mixing

1. Measure out the quantities of gasoline and oil to be mixed.
2. Put half of the gasoline into a clean container approved for fuel use.
3. Pour in entire amount of oil and agitate well.
4. Pour in the remaining amount of gasoline and agitate again for at least one minute. As some oil 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 increase danger of early piston seizing due to abnormal lean mixture.

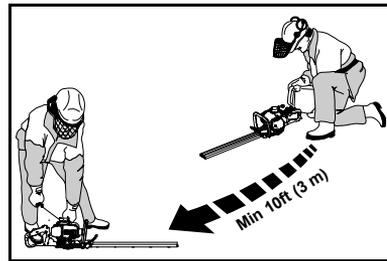


5. Put a clear indication on the outside of the container to avoid mixing up with gasoline or other containers.
6. Indicate the contents on outside of container for easy identification.

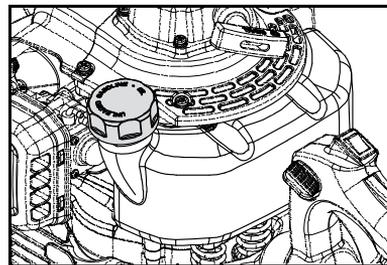
**NOTICE**  
Do not mix more than max. one month's supply of fuel.  
If the machine is not used for some time the fuel tank should be emptied and cleaned.

## Fueling

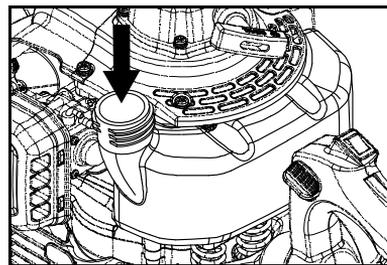
- WARNING**
- Do not smoke or place warm objects in the vicinity of the fuel.
  - Select bare ground for fueling.
  - Always shut off the engine before refueling the machine.
  - Move at least 10 feet (3 meters) away from the fueling point before starting the engine.



1. Before fueling, clean the filler cap and the area around it to ensure that no dirt falls into the tank.
2. Loosen a bit of the fuel cap carefully so as to allow any pressure build-up in the fuel tank to release slowly. Never remove the fuel cap when engine is running!



3. Put mixed fuel into the fuel tank to 80% of the full capacity. Make sure the fuel is well mixed by shaking the container before fuelling. Take care not to spill fuel while fueling and do not overfill the tank.



4. Tighten the fuel cap securely after fuelling.
5. Wipe up any fuel spillage around the fuel cap and fuel tank.

**CAUTION**  
Experience indicates that alcohol blended fuels (called gasohol or using ethanol or methanol) can attract moisture which leads to separation and formation of acids during storage. Acidic gas can damage the fuel system of an engine while in storage. To avoid engine problems, empty the fuel system before storage for 30 days or longer. Drain the gas tank, start the engine and let it run until the fuel lines and carburetor are empty. Use fresh fuel next season. Never use engine or carburetor cleaner products in the fuel tank, otherwise permanent damage may occur.

- If fuel without mixing of oil (raw gasoline), it will cause severe damage to the internal engine parts very quickly.
- Do not use gasohol, otherwise it can cause deterioration of rubber and/or plastic parts and disruption of engine lubrication.

- Do not use 4-cycle engine oil, otherwise 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.

### **NOTICE**

If your fuel cap can not be tightened properly, it may be damaged or broken. Stop using the hedge trimmer and take it to your authorized dealer or service center for repair.

## Start and stop the engine

### **WARNING**

It is very dangerous to run a hedge trimmer that equipped with broken parts or lacks of any parts. Before starting the engine, make sure that all the parts including cutting blades and blades guard are installed properly.

### **WARNING**

The cutting blades are very sharp and they will start moving upon the engine starts. Touching them may lead to severe personal injury. Avoid touching blades whenever possible, and always wear gloves to protect hands.

### **WARNING**

To reduce the risk of serious or even fatal injury:

- Do not allow children or other unauthorized persons to attempt to start or otherwise use the machine.
- Never allow children or unauthorized persons access to the machine.
- Never leave the machine unattended while working or during work breaks
- After work, store the machine in a safe, secure location out of the reach of children and other unauthorized persons
- Observe safety precautions and instructions.

### **WARNING**

When starting the engine, make sure that your body does not contact with the muffler. A hot muffler can cause serious burns.

## Start cold engine

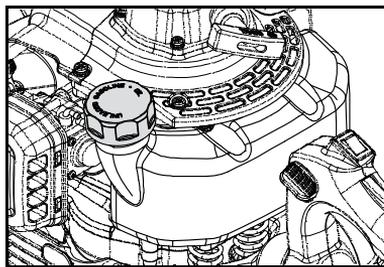
### **WARNING**

Before you start the engine, make sure that the cutting blades are not touching ground or any other obstacles.

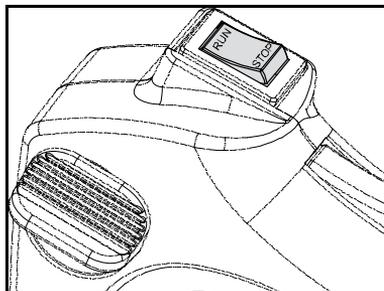
### **CAUTION**

The blade cover is used for transportation and storage. Remove blade cover before using the machine.

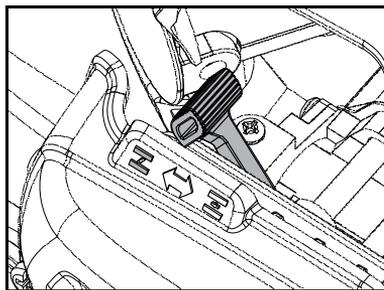
1. Fill fuel into the fuel tank and tighten the fuel cap securely.



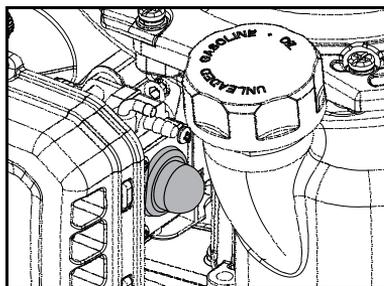
2. Press engine stop switch forward to "RUN" position.



3. Move choke control lever upwards to "CLOSE" position.

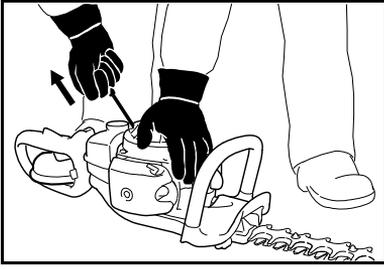


4. Pump purge bulb until fuel is visible and flows freely in the clear fuel tank return line. Pump bulb an additional 4 or 5 times.



5. Place the machine on a flat and firm ground in a clear area.

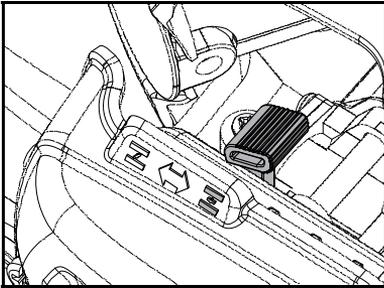
- Hold the machine firmly with your left hand on the housing and press down.
- Put your right foot into the rear handle and press down.



6. Grip the starter rope handle securely with right hand, and pull it until engine fires (or 5 pulls maximum).

**NOTICE**  
Do not pull out the starter rope all the way, otherwise it might break.  
Do not let the starter rope snap back by itself. Guide it slowly back into the housing, so that the starter rope can rewind properly.

7. After engine fires (or 5 pulls), move choke control lever downwards to "OPEN" position.



8. Restart engine if necessary and allow the machine to warm up at idle engine speed for several minutes.

**NOTICE**  
If engine does not start with choke control lever in "OPEN" position after 5 pulls, repeat steps 3 ~ 7.

**WARNING**  
The blades must not move at idle speed, otherwise serious personal injury may result. Periodic carburetor adjustment may be necessary to assure blades do not move at idle speed. If blades move, have the carburetor readjusted by your local authorized dealer or service center.

**NOTICE**  
When restarting the engine immediately after stopping it, leave the choke control lever in "OPEN" position.

9. After engine warm-up, grip the front handle and rear handle firmly. Depress the throttle trigger safety lockout, and gradually depress throttle trigger to increase engine RPM to operating speed.

### Start warm engine

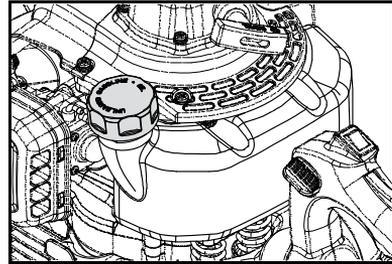
The WARM starting procedure is almost same as COLD starting except the choke control lever position, instead it is starting from "OPEN" position.

**NOTICE**  
When restarting the engine immediately after stopping it, leave the choke control lever in "OPEN" position.

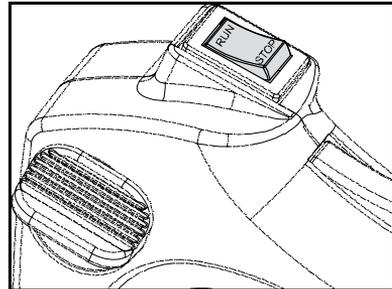
**WARNING**  
Before you start the engine, make sure that the cutting blades are not touching ground or any other obstacles.

**CAUTION**  
The blade cover is used for transportation and storage. Remove blade cover before using the unit.

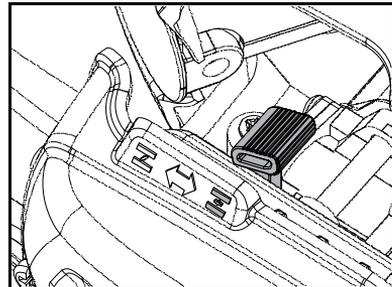
1. Fill fuel into the fuel tank and tighten the fuel cap securely.



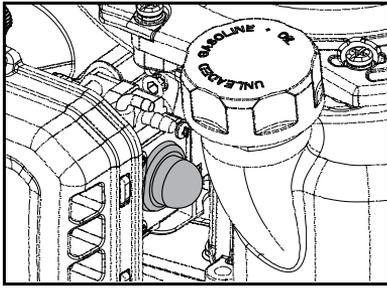
2. Press engine stop switch forward to "RUN" position.



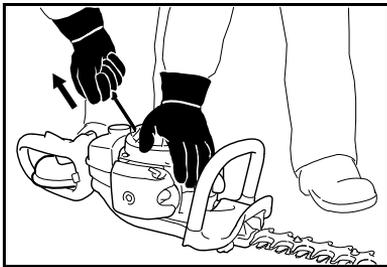
3. Move choke control lever downwards to "OPEN" position.



4. Pump purge bulb until fuel is visible and flows freely in the clear fuel tank return line. Pump bulb an additional 4 or 5 times.



5. Place the machine on a flat and firm ground in a clear area.
  - Hold the machine firmly with your left hand on the housing and press down.
  - Put your right foot into the rear handle and press down.



6. Grip the starter rope handle securely with right hand, and pull it until engine starts

**NOTICE**  
 Do not pull out the starter rope all the way, otherwise it might break.  
 Do not let the starter rope snap back by itself. Guide it slowly back into the housing, so that the starter rope can rewind properly.

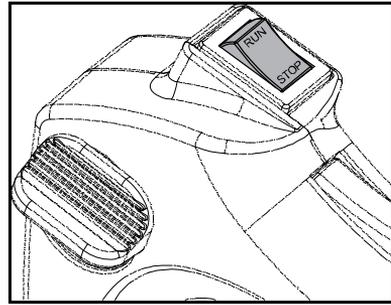
**NOTICE**  
 If engine does not start after 5 pulls, use "Start cold engine" procedure.

**WARNING**  
 The blades must not move at idle speed, otherwise serious personal injury may result. Periodic carburetor adjustment may be necessary to assure blades do not move at idle speed. If blades move, have the carburetor readjusted by your local authorized dealer or service center.

7. Grip the front handle and rear handle firmly. Depress the throttle trigger safety lockout, and gradually depress throttle trigger to increase engine RPM to operating speed.

### Stop the engine

1. Release throttle trigger and allow engine to return to idle speed for a few minutes.
2. Move engine stop switch backwards to "STOP" position.



**WARNING**  
 If engine does not stop when engine stop switch is moved to "STOP" position, move choke control lever to "CLOSE" position to stall engine. Have your local authorized dealer or service center to repair engine stop switch before using the machine again.

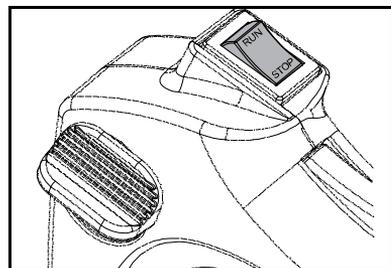
### Rear handle

To reduce fatigue when trimming hedges, this machine is equipped an angle-adjustable rear handle. It can be swiveled through 90° to the left or the right. This design can help you maintain a more comfortable posture during operation.

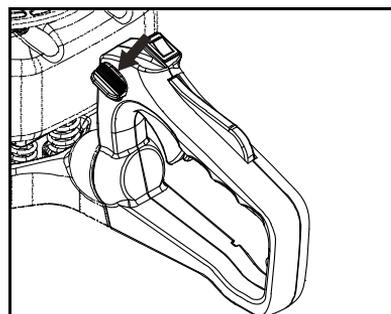
**WARNING**  
 Always shut off the engine before rotating rear handle position, otherwise serious personal injury may result.

**DANGER**  
 Changing rear handle angle may change exhaust direction. Make sure to select and use a grip and operating position that blows exhaust away from you.

1. Move engine stop switch backwards to "STOP" position.



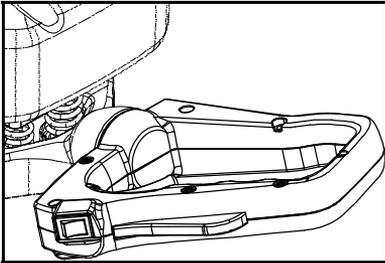
2. Press rear handle rotation release button to unlock handle rotation.



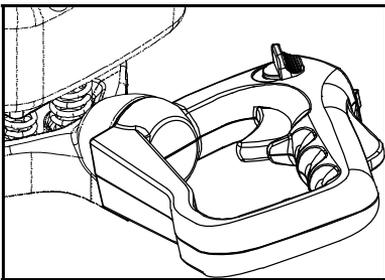
## **NOTICE**

Throttle trigger must be at idle position in order to press the rotation lock button.

3. Rotate rear handle to the left until the locking device clicks into next place.



4. Or, rotate rear handle to the right until the locking device clicks into next place.



5. Grip the rear, press the throttle trigger safety lockout lever down with palm of hand and squeeze throttle trigger to reset rear handle rotation release button, and lock rear handle in position.
6. When the rear handle is locked in its new position, you can use the throttle trigger again.

## **information**

If the throttle trigger does not function after rotating rear handle, move rear handle slightly to left and right until locking device engages and throttle trigger can be operated normally.

## **information**

You can swivel the rear handle even with the engine idling because the hedge trimmer is equipped with a blade brake that maintains the blades at a standstill.

## Hedge trimming techniques

This section describes basic hedge trimming technique with safety rules for using a hedge trimmer to perform your trimming work. This information is no substitute for professional skills and experience. If you get into a situation where you feel unsafe, stop and seek expert advice. **DO NOT ATTEMPT ANY TASK THAT YOU FEEL UNSURE OF!**

## **WARNING**

Engine exhaust is hot, and it can cause serious burns. Engine exhaust contains Carbon Monoxide (CO), a poison gas. Breathing CO can cause unconsciousness,

serious injury, or death. Always position your machine so that exhaust is directed away from your face and body.

## **WARNING**

Hedge Trimmer blades are very sharp. Touching them may lead to severe personal injury. Avoid touching blades whenever the cutting attachments are moving, and always wear gloves to protect your hands.

## **WARNING**

Never remove hands from unit when blades are moving.

## **WARNING**

The engine continues running even when the blades have stopped due to an obstruction. If this occurs, stop the engine, disconnect ignition cable and remove the obstruction.

## **information**

Observe all country-specific or municipal rules and regulations for trimming hedges.

Do not use your machine during other people's normal rest periods.

## **information**

Any working position above head height is tiring. To minimize the risk of accidents, work in such positions for short periods only.

## Trimming sequence

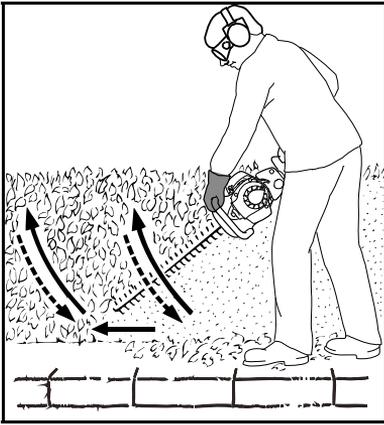
1. Use lopping shears or a chain saw to cut out thick branches first.
2. Trim both sides of the hedge (Vertical Cut).
3. Trim the top of the hedge (Horizontal Cut).

## Vertical cut

1. Always hold firmly the machine with your both hands



2. Squeeze throttle trigger to accelerate engine.
3. Tilt trimmer so cutting teeth are angled slightly toward the hedge or shrub and proceed to cut.
4. Swing the cutting blade from the bottom upwards in an arc – lower the nose of the blade, move along the hedge and then swing the blade up again in an arc.



**i information**

Trimming slowly, especially with thick hedges.

**! CAUTION**

Avoid to use this machine to cut thick branches, for which will damage the cutting blades and shorten the life of drive systems.

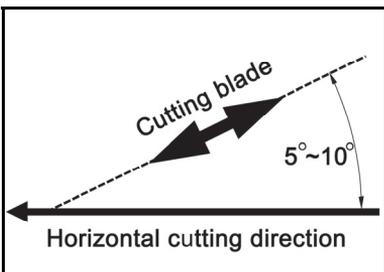
**Horizontal cut**

1. Always hold firmly the machine with your both hands
2. Squeeze throttle trigger to accelerate engine.
3. Tilt trimmer so cutting teeth are angled slightly toward the hedge or shrub and proceed to cut.
4. Swing the cutting blade from the bottom upwards in an arc – lower the nose of the blade, move along the hedge and then swing the blade up again in an arc.



**i information**

In order to get the best trimming results, slightly tilt the blades 5~10° towards the cutting direction.



**i information**

Always remember to use the tip of the blades to do the trimming work. You will achieve better results by not crowding the line into the cutting area. Allow the machine to rim as its own pace.

## Maintenance and care

### Maintenance schedule

<b>IMPORTANT!</b> Time intervals shown are maximum. Actual use and your experience will determine the frequency of required maintenance.		Before starting to work	Daily and/or at the end of work	Whenever tank is refilled	Weekly	Monthly	Yearly	if there is a failure	if there is a damage	As required
		System / Component	Maintenance Procedure							
Complete machine	Visual inspection (Condition, leak)	√		√						
	Clean		√							
Engine stop switch, Throttle trigger, Throttle trigger safety lockout, Choke control lever, Rear handle rotation release button	Function test	√								
Air filter	Inspect	√								
	Clean							√		√
	Replace								√	
Fuel system	Inspect	√								
	Clean									√
	Replace								√	
Purge bulb	Function test	√								
	Have it checked by dealer								√	
Fuel filter	Inspect							√		
	Replace								√	
Fuel cap gasket	Inspect	√								
	Replace								√	
Fuel tank	Clean							√		√
Recoil Starter Rope	Inspect	√								
	Clean			√						
Gear box	Inspect	√								
	Lubricate				√					
Carburetor	Inspect	√		√						
	Adjust							√		
Cutting blades	Inspect	√		√						
	Sharpen				√					
	Adjust				√					
	Replace								√	
Cooling system	Inspect	√								
	Clean				√					
Spark Plug	Inspect							√		

	Clean							√		
	Adjust							√		
	Replace								√	
<b>Spark arresting screen in muffler</b>	Inspect				√					
	Clean				√					
	Replace								√	
<b>Cylinder Exhaust Port</b>	Inspect	√								
	Clean					√				
	Replace								√	
<b>Anti-vibration system</b>	Inspect	√								
	Have it checked by dealer							√	√	
<b>Fasteners, inclusive of Bolts, Screws, Nuts</b>	Inspect	√								
	Tighten									√
	Replace									√
<b>Safety Information Label</b>	Replace								√	

## WARNING

Moving parts can amputate fingers or cause severe injuries. Keep hands, clothing and loose objects away from all moving attachments.

Always stop engine, disconnect spark plug, and make sure all moving parts have come to a complete stop before removing obstructions, clearing debris, or servicing unit.

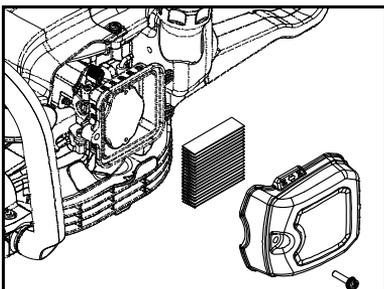
Allow the machine to cool down before performing maintenance service. Wear gloves to protect hands from sharp edges and hot surfaces.

Before cleaning, inspecting or repairing the machine, make sure that engine has been stopped and cooled down. Disconnect the spark plug to prevent accidental starting.

### Air filter

The machine is equipped with an air filter made of paper material.

1. Move choke control lever upwards to "CLOSE"  position. This prevents dirt from entering into the carburetor throat when the air filter is removed.
2. Brush accumulated dirt from air filter area.
3. Loosen the screw and remove air filter cover. Brush dirt from inside cover.

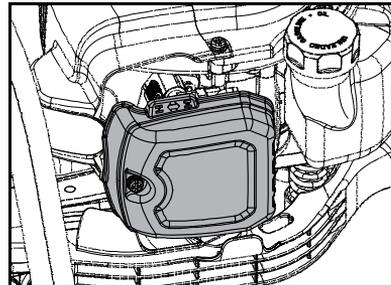


4. Replace air filter if it is damaged, fuel soaked, very dirty, or the rubber sealing edges are deformed.

- Lightly brush debris from filter.

- Soak heavily soiled filters in warm, soapy water/detergent solution to loosen dirt, then brush lightly.

5. Dry the air filter completely before re-installing.
6. Install air filter in air filter case.
7. Insert air filter cover onto the air filter case, the fix it with the screw.



### Fuel filter

## DANGER

Fuel is very flammable. Use extreme care when mixing, storing or handling, or serious personal injury may result.

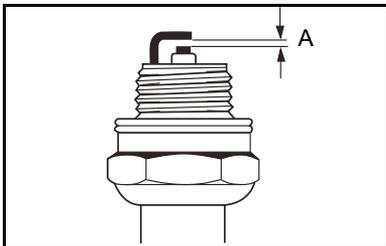
1. Use a clean rag to remove loose dirt from around fuel cap and empty fuel tank.
2. Use a fuel line hook to pull the fuel line and filter from the tank.
3. Remove the used fuel filter from the line, replace it with a new fuel filter.
4. Install the new fuel filter.

## Spark plug

Starting failure and misfiring are often caused by a fouled spark plug. Clean the spark plug and check that the plug gap is in the correct range.

For a replacement plug, use the correct type. The type of replacement plug is a NHSP LD L8RTF or Champion RCJ7Y.

1. Remove spark plug and check for fouling, worn and rounded center electrode.
2. Clean the plug or replace with a new one. Do not clean it with sand blast. Remaining sand will damage the engine.
3. According to Technical Specification, adjust spark plug gap (A) by bending outer electrode.
4. Tighten spark plug with a torque of 20 Nm.



### NOTICE

Using any spark plug other than those designated in this manual may result in the engine failing to operate properly, or in the engine becoming overheated and damaged.

## Engine cooling system

This engine is air-cooled.

### NOTICE

To maintain proper engine operating temperatures, cooling air must pass freely through the cylinder fin area. This flow of air carries combustion heat away from the engine.

Dust clogging between inlet port of cooling air and cylinder fins will cause overheating of the engine. Periodically check and clean the cylinder fins after removing air filter and cylinder cover.

1. Remove cylinder cover.
2. Clean dirt and dust from fins.
3. Re-install cylinder cover.

### NOTICE

Do not use a metal scraper to remove dirt from the cylinder fins.

## Exhaust port cleaning

### NOTICE

Never use a metal tool to scrape carbon from the exhaust port. Do not scratch the cylinder or piston when cleaning the exhaust port. Do not allow carbon particles to enter the cylinder.

1. Remove spark plug lead from spark plug, and remove engine cover.
2. Place piston at top dead center. Remove muffler and heat shield.
3. Use a wood or plastic scraping tool to clean deposits from cylinder exhaust port.
4. Inspect heat shield, and replace if damaged.
5. Install heat shield and muffler.
6. Tighten muffler mounting bolts (or nuts) with a torque 5.5~6 Nm.
7. Install engine cover and attach spark plug lead.
8. Start engine, and warm to operating temperature.
9. Stop engine, and re-tighten mounting bolts (or nuts) to specifications.

## Carburetor adjustment

The carburetor has been adjusted at the factory with a standard setting.

This setting provides an optimal fuel-air mixture under most operating conditions.

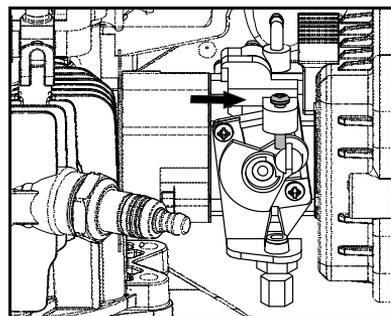
### WARNING

The cutting blades must not move at idle speed, otherwise serious personal injury may result. Periodic carburetor adjustment may be necessary to ensure cutting blades do not move at idle speed.

### NOTICE

Carburetor adjustments, other than idle speed, must be performed by an authorized dealer or service center.

- A. Preparation
1. Shut off the engine.
  2. Check the air filter, clean or replace it if necessary.
  3. Check the spark arresting screen in the muffler, clean or replace it if necessary.
  4. Inspect cutting blades, make sure they move freely and are not warped, clean them if necessary.
- B. Engine stops at idle speed → Idle speed adjustment
1. Carry out the carburetor standard setting.
  2. Start and warm up the engine.
  3. Turn the idle speed screw clockwise until the cutting blades begin to run, then back it off 1 1/2 turns.



- C. Cutting blades run when engine is idling → Idle speed adjustment
1. Carry out the carburetor standard setting.

2. Start and warm up the engine.
3. Turn the idle speed screw counterclockwise until the cutting blades stop moving, then turn it another 1 1/2 turns in the same direction.

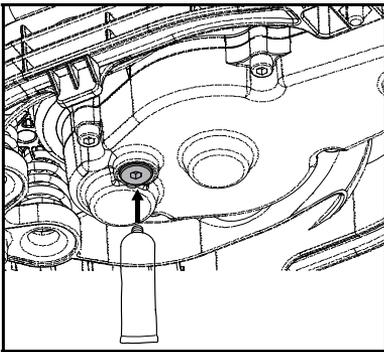
**WARNING**  
When carburetor adjustment is completed properly, the cutting attachment should not move at idle speed, otherwise serious personal injury may result.

### Gear box lubrication

1. Clean dirt from the grease fitting .
2. Apply 1- 2 pumps of grease into fitting.

**NOTICE**  
Do not over fill. Leave room for the grease to expand during operation.

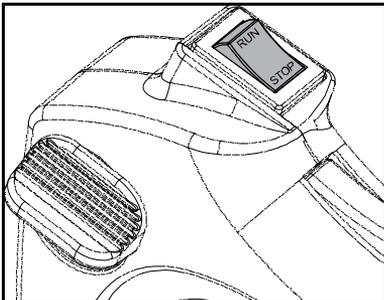
3. Wipe excess grease from around grease fitting.



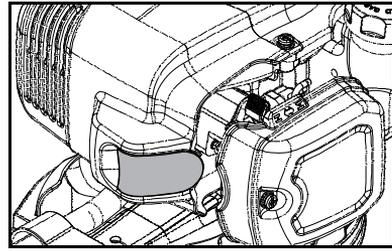
### Cutting blades lubrication

**WARNING**  
Cutting blades are very sharp. Touching them may lead to severe personal injury. Avoid touching cutting blades whenever they are moving, and always wear gloves to protect hands.

1. Move engine stop switch backwards to “STOP” position.



2. Disconnect spark plug wire from spark plug.



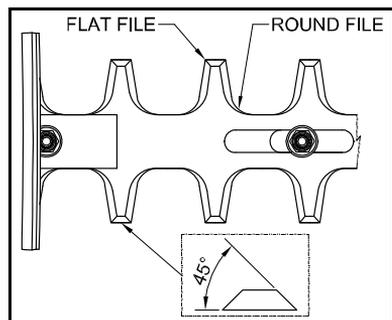
3. Brush loose debris from blades, and coat both sides of blade with cleaning mixture.
4. Allow cleaning mixture to soften the remaining gummy residue then wipe it from the blade.
5. Apply clean oil to the entire length of the blade. Be certain the blade bolts and nuts are lubricated.
6. Wipe excessive oil from the blade before operating the machine.

### Cutting blades sharpening

**WARNING**  
Cutting blades are very sharp. Touching them may lead to severe personal injury. Avoid touching cutting blades whenever they are moving, and always wear gloves to protect hands.

**NOTICE**  
Cutting blades should only be removed and reinstalled by an Authorized dealer or service center, otherwise premature wear or internal damage may occur.

1. Move stop switch backwards to “STOP” position.
2. Disconnect spark plug and wire.
3. Remove blades guard, if installed.
4. Slide blades to allow file clearance using slots on bottom of blade. Do not pry against cutting edges.
5. File each edge carefully. Follow the original shape of the blade.
  - Keep the end corner sharp by flat file.
  - Round the root of the edge by round file.



**NOTICE**  
Always keep the file or sharpener at an angle of 45° to the blade, and:

- Always grind in the direction of the cutting edge.
- Move the file only in one direction; lift the file from the blade when returning to start a new pass.

- Remove all burr from the edge of the blade with a slip stone.
- Remove as little material as possible.

6. Install blade guard, if necessary.
7. Remove filings and then lubricate blades.
8. Re-connect spark plug and wire.

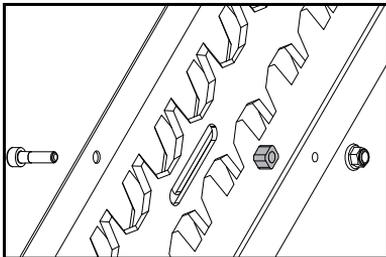
**NOTICE**  
Do not try to sharpen a damaged blade, change it or take it to an authorized dealer or service center.

### Cutting blades adjustment

You need not to adjust the gap between upper blade and lower blade as this machine is designed to have optimal gap when it is properly set up.

**WARNING**  
Cutting blades are very sharp. Touching them may lead to severe personal injury. Avoid touching cutting blades whenever they are moving, and always wear gloves to protect hands.

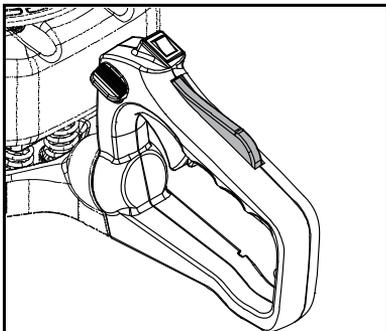
**NOTICE**  
Cutting blades should only be removed and reinstalled by an Authorized dealer or service center, otherwise premature wear or internal damage may occur.



**NOTICE**  
When mounting the blades, make sure to fasten the spacer, washer and bolt firstly, then fasten the nut.

### Throttle trigger safety lockout

Throttle trigger safety lockout is the device that let you not to accelerate the throttle trigger without intention. Only while pressing the safety lockout, you can accelerate the throttle trigger.



**WARNING**

Do not operate the machine when the throttle trigger safety lockout is defective. If you are using the machine, stop it immediately.

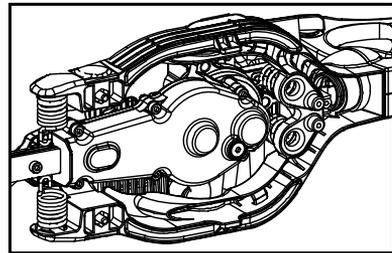
If you find any defects below, have your machine checked and repaired by local dealer or service center:

- Check if the throttle trigger does not move when you do not press the safety lockout.
- Check if the throttle trigger moves when you grasp or release it while pressing the safety lockout.
- Check if the safety lockout returns its original position when you release your hand from safety lockout.

### Anti-vibration system

**WARNING**  
The deformed or damaged anti-vibration system may cause the breakages like getting rickety or falling off of engine and/or blades.

Check periodically to make sure that the springs are not deformed or damaged.



### After every 100 hours of use

1. Remove the muffler, insert a screwdriver into the vent, and wipe away any carbon buildup.
2. Wipe away any carbon buildup on the muffler exhaust vent and cylinder exhaust port at the same time.
3. Tighten all screws, bolts, and fittings.
4. Check to see if any oil or grease has worked its way in between the clutch lining and drum, and if it has, wipe it away using oil-free, lead-free gasoline.

### Storage

**DANGER**  
Do not store the machine in enclosure where fuel fumes may accumulate or reach an open flame or spark, otherwise serious personal injury may result.

**WARNING**  
The muffler and surrounding covers become hot during operation. Always keep exhaust area clear of flammable debris during transportation or when storing, otherwise serious property damage or personal injury may result.

**WARNING**  
Hedge Trimmer blades are very sharp. Touching them may lead to severe personal injury. Avoid touching

moving blades, and always wear gloves to protect hands.

Do not store your machine for periods of time 30 days or longer without performing protective storage maintenance which includes the following procedure:

1. Store your machine in a dry, dust free place, out of the reach of children.
2. Place the engine stop switch in the "STOP" position.
3. Remove accumulation of grease, oil, dirt and debris from exterior of unit.
4. Perform all periodic lubrication and services that are required.
5. Apply clean oil to the entire length of the blade. Be certain the blade bolts and nuts are lubricated as well.
6. Install blade cover on blades.
7. Securely tighten all the screws and nuts.
8. Drain fuel tank completely. Press purge bulb 6-7 times to remove remaining fuel from carburetor then drain the tank again. Close choke, start and run the engine until it stops due to lack of fuel.
9. Allow the engine to cool, then remove the spark plug and pour 7cc (1/4oz.) of fresh, clean, two-stroke engine oil into the cylinder through the spark plug hole.
  - Place a clean cloth over the spark plug hole.
  - Pull the recoil starter handle 2-3 times to distribute the oil inside the engine.
  - Observe the piston location through the spark plug hole. Pull the recoil handle slowly until the piston reaches the top of its travel and leave it there.
10. Install the spark plug (do not connect ignition cable).

## NOTICE

*Always store and transport hedge trimmers in a stable, horizontal position. Support gear case and cutting blades to prevent excessive flexing, which may cause damage to these components. Always install blade cover when transporting or storing unit.*

## Disposal

Observe all country-specific and local waste disposal rules and regulations.

CRAFTOP products must not be thrown in the garbage bin. Take the product, accessories and packaging to an approved disposal site for environment friendly recycling.

Do not throw the hedge cuttings that you trimmed down in the garbage bin, as they can be composted!

Contact your local authorized dealer or service center for the latest information on waste disposal.

## Troubleshooting guide

### DANGER

Fuel vapors are extremely flammable and may cause fire and/or explosion. Never test for ignition spark by grounding spark plug near cylinder plug hole, otherwise serious personal injury may result.

Problem	Cause	Solution
Failure to start the engine	No fuel	Add correct fuel
	Incorrect fuel	Drain it completely and add correct fuel
	Fuel filter is clogged	Clean the fuel filter or replace it with a new one
	Carburetor adjustment screw out of normal range	Adjust to normal range
	Spark plug is fouled or wet	Clean and dry
	Spark plug gap is incorrect	Adjust the electrode gap to specification
	Spark plug wire loose	Attach wire to spark plug
	Choke control lever in the wrong position	Adjust choke lever position
Engine starts but can not keep running / hard to re-starting	Incorrect fuel or staled fuel	Drain it completely and add correct fuel
	Carburetor adjustment screw out of normal range	Adjust to normal range
	Carbon is built-up at muffler and/or cylinder (exhaust port)	Wipe way
	Air filter clogged with dust	Clean the air filter or replace it with a new one
	Cylinder fins and/or fan cover	Clean

### information

*If your hedge trimmer seems to need further service, please consult with your local authorized dealer or service center.*

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