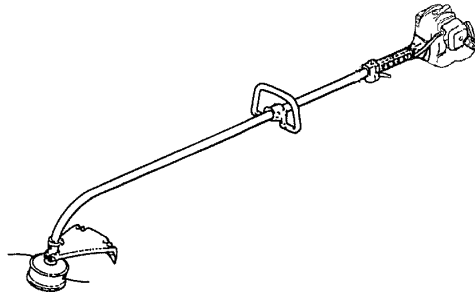


**POWERUP**  
**LAWNCARE PRODUCTS**

**String Trimmer**

**B20**

**B21**



**String Trimmer / Brushcutter**

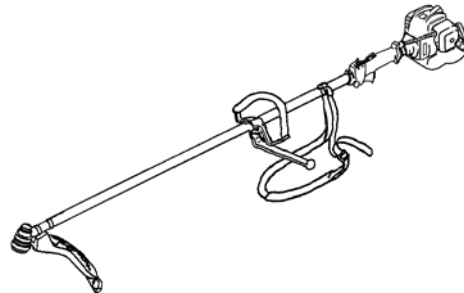
**L20**

**L23**

**L26**

**L30**

**L45**

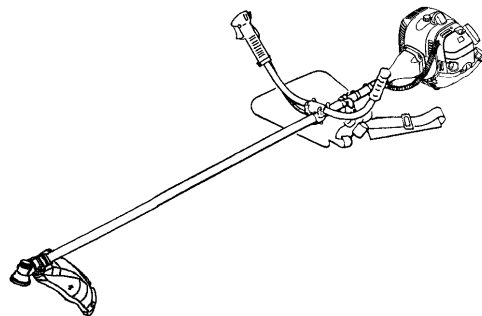


**BC26**

**BC30**

**BC45**

**BC50**



# Owner's / Operator's Manual

Completely read and understand this manual before using this product.

# Foreword

This Owner's/ Operator's Manual is designed to familiarize the operator with the various features and component parts of the equipment and to assist you with the assembly, operation and maintenance of your new Trimmer/ Brushcutter.

It is essential that any operator of this Trimmer/ Brushcutter reads and understands the contents this manual before using the Trimmer/ Brushcutter.

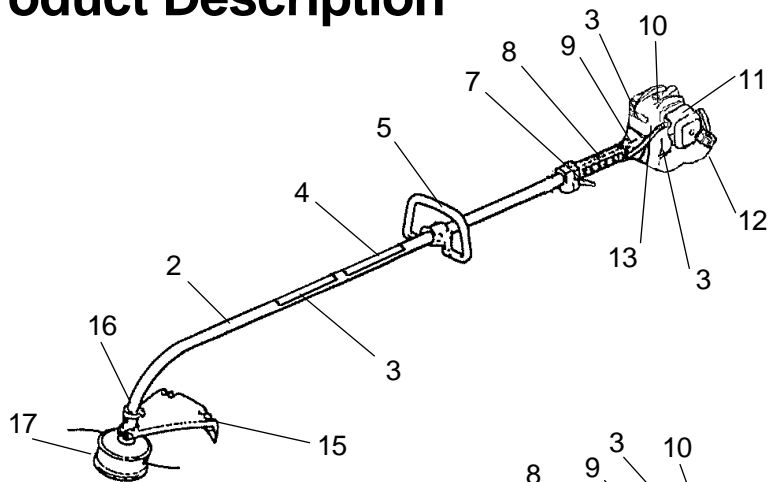
For additional assistance, contact any local authorized PLP dealer.

## Contents

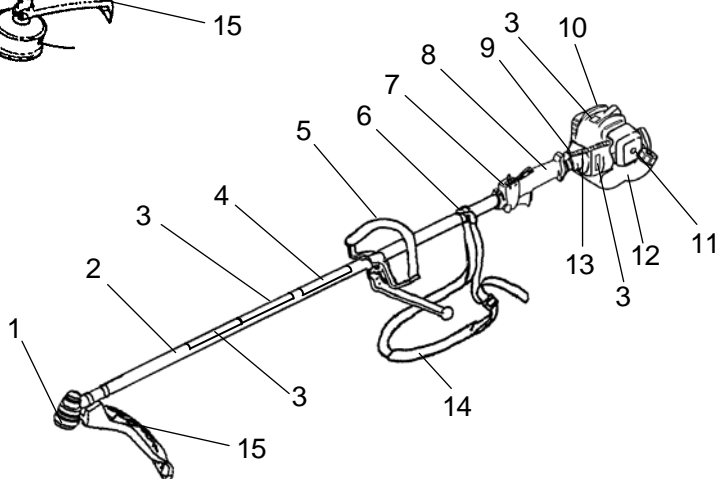
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# Product Description

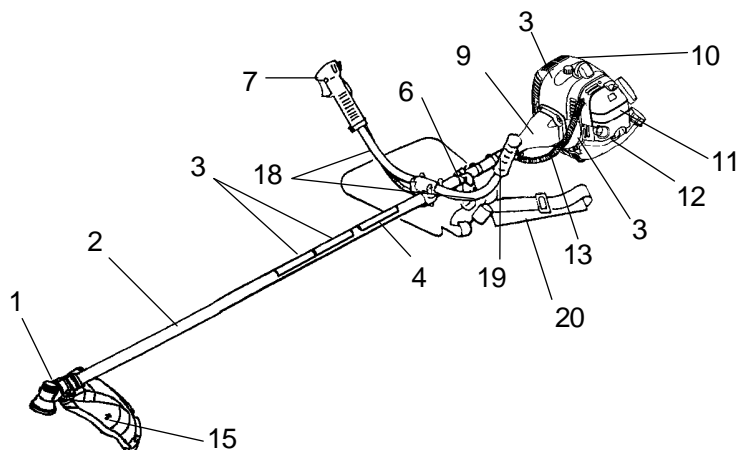
**B20  
B21**



**L20  
L23  
L26  
L30  
L45**



**BC26  
BC30  
BC45  
BC50**

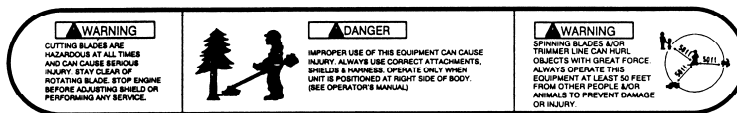


1. Gearcase
2. Shaft Assembly
3. Safety Decal
4. Model Name
5. Loop Handle
6. Attachment Ring for Shoulder Hanging Strap
7. Throttle Trigger and Stop Switch
8. Shaft Grip
9. Clutch Drum Housing
10. Engine
11. Air Filter
12. Fuel Tank
13. Throttle Cable and Stop Switch Wires
14. Shoulder Hanging Strap
15. Cutting Attachment Guard
16. Bearing Case
17. Trimmer Head
18. Horn Handle
19. Handle Grip
20. Shoulder Harness

## Safety Decals



**ON SHAFT (Part No. 221501)**



**ON SHAFT [ Except for B20,B21 ] (Part No. 221502)**



**ON ENGINE  
[ B20, B21, L20, L30, BC30 ]  
(Part No. 214128)**



**ON ENGINE  
[ L23, L26, L45, BC26, BC45, BC50 ]  
(Part No. 267433)**



**ON ENGINE  
(Part No. 283375)**

Safety Decals are easily visible to the operator and are located near any area of potential danger. Replace any decal that is damaged or lost.

# Safety Instructions

The warning system in This manual identifies potential hazards and has special safety messages that help you and others avoid personal injury, even death.

**⚠ DANGER** , **⚠ WARNING** and **⚠ CAUTION** are signal words to identify the level of hazard.

**⚠ DANGER** : signals an extreme hazard that will cause serious injury or death if the recommended precautions are not followed.

**⚠ WARNING** : signals a hazard that may cause serious injury or death if the recommended precautions are not followed.

**⚠ CAUTION** : signals a hazard that may cause minor or moderate injury if the recommended precautions are not followed. Two other words are also used to highlight information. “Important” calls attention to special mechanical information and “Note” emphasizes general information worthy of special attention.

## Operator Safety

1. Read and understand this Manual before using the Trimmer/ Brushcutter. Be thoroughly familiar with the proper use of this Trimmer/ Brushcutter.
2. Always wear eye protection and hearing protection.
3. Always wear heavy long pants, a long sleeved shirt, boots and gloves. Do not wear loose clothing, jewelry, short pants, sandals, or go barefoot. Secure hair so it is above shoulder length.
4. Never operate this Trimmer/ Brushcutter when you are tired, ill, or under the influence of alcohol, drugs or medication.
5. Never start or run the engine inside a closed room or building. Breathing exhaust fumes can cause death.
6. Keep the grip of handles clean of oil, fuel and dirt.

## Trimmer/ Brushcutter Safety

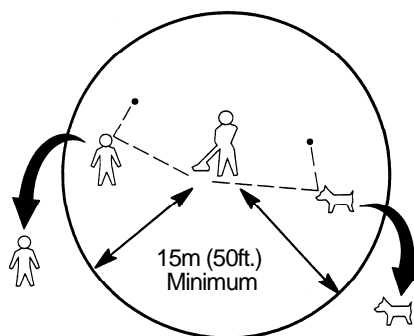
1. Shut off the engine and be certain the cutting attachment has completely stopped rotating before inverting the Trimmer/ Brushcutter, performing maintenance on or working on the machine.
2. Make sure the Trimmer/ Brushcutter is assembled correctly and that the cutting attachment is correctly installed and securely fastened as instructed in the Assembly section.
3. Inspect the Trimmer/ Brushcutter before each use. Replace damaged parts. Check for fuel leaks. Make sure all fasteners are in place and tightened securely. Follow the maintenance instructions beginning on page 20.
4. Make sure the cutting attachment does not rotate at engine idle speed. Refer to Idle Speed Adjustment, page 15.
5. Inspect the cutting attachment and replace any parts that are cracked, chipped or damaged before using the Trimmer/ Brushcutter.
6. Make sure the cutting attachment blade is installed and positioned correctly before using the Trimmer/ Brushcutter.
7. Never use a cutting attachment or replacement parts that are not approved by PLP.
8. Maintain the Trimmer/ Brushcutter according to the recommended maintenance intervals and procedures in the Maintenance section beginning on page 20.
9. If running problems or excessive vibration occur, stop immediately and inspect the unit for the cause. If the cause cannot be determined or is beyond your ability to correct, return the Trimmer/ Brushcutter to your servicing PLP dealer for repair.

## Fuel Safety

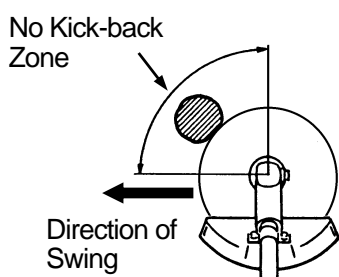
1. Gasoline is highly flammable and must be handled and stored carefully. Use a container approved for fuel for storing gasoline.
2. Pour fuel outdoors and where there are no sparks or flames.
3. Do not smoke near fuel or Trimmer/ Brushcutter, or while using the Trimmer/ Brushcutter.
4. Do not overfill the fuel tank. Stop filling 10mm from the top of the tank.
5. Wipe up any spilled fuel before starting the engine.
6. Move the Trimmer/ Brushcutter at least 3m away from the fueling location before starting the engine.
7. Do not remove the Trimmer/ Brushcutter fuel tank cap immediately after stopping the engine.
8. Allow the engine to cool before refueling.
9. Drain the tank and run the engine dry before storing the unit.
10. Store fuel and Trimmer/ Brushcutter away from open flame, sparks and excessive heat. Make sure fuel vapors cannot reach sparks or open flames from water heaters, furnaces, electric motors, etc.

## Trimmer/ Brushcutter Operating Safety

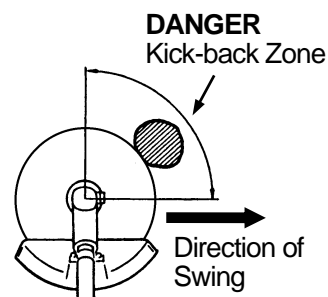
1. **THIS TRIMMER/BRUSHCUTTER CAN CAUSE SERIOUS INJURIES.** Read the instructions carefully. Be familiar with all controls and the proper use of the Trimmer/ Brushcutter.
2. Never allow children to operate the Trimmer/ Brushcutter. It is not a toy. Never allow adults to operate the unit without first reading this Operator's Manual.
3. Avoid using the Trimmer/ Brushcutter near rocks, gravel, stones and similar material that would cause harmful missiles.
4. Keep children, bystanders and animals outside a 15m (50ft.) radius from the operator and Trimmer/ Brushcutter.



5. If you are approached while operating the Trimmer/ Brushcutter, stop the engine and cutting attachment rotation.
6. Use the Trimmer/ Brushcutter only in daylight or good artificial light.
7. Never operate the Trimmer/ Brushcutter without proper guards in place.
8. Do not put hands or feet near or under any rotating parts. Keep clear at all times. Keep all parts of your body away from the rotating cutting attachment and hot surfaces such as the muffler.
9. When cutting heavy brush or small trees, always swing the Brushcutter from right to left to prevent kick-back.



**CORRECT**



**INCORRECT**

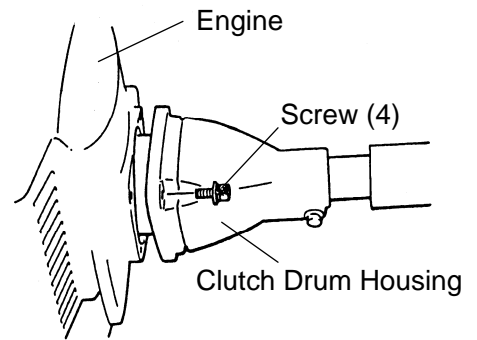
10. Keep a firm footing and balance. Do not overreach.
11. Use the right tool for the job. Do not use the Trimmer/ Brushcutter for any job that is not recommended by PLP.

# Assembly

## Assembling Engine and Drive Shaft Assembly

[Model BC26, BC30, L30, L45, BC45, BC50]

Attach the clutch drum housing to the engine using the four screws supplied with the unit.



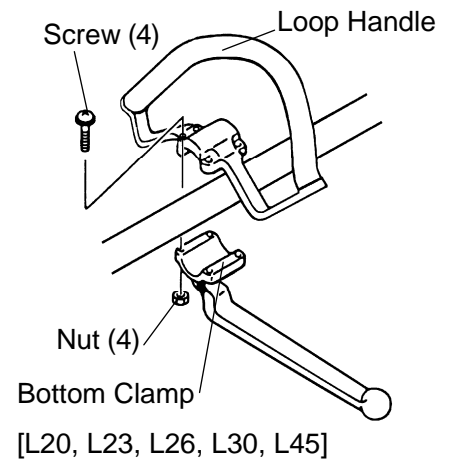
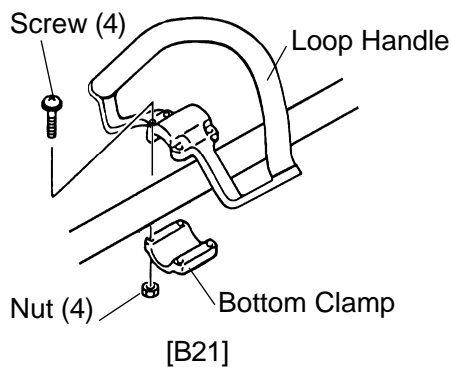
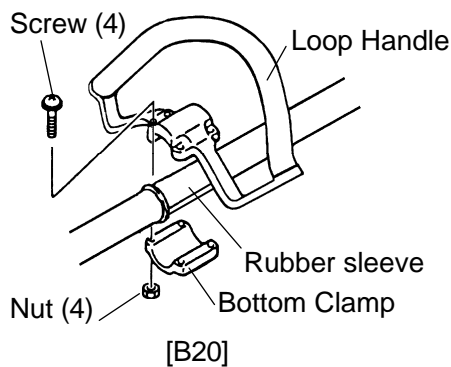
## Loop Handle Installation

[Model B20]

Slip the rubber sleeve around the shaft.

[Model B20, B21, L20, L23, L26, L30, L45]

1. Place the loop handle and the bottom clamp on the shaft approximately 28cm(11 inches) from the end of the stop switch/throttle trigger assembly.
2. Install the four screws and nuts. Tighten the screws evenly.
3. Reposition the loop handle up or down the driveshaft to the most comfortable position, and tighten the screw and nuts.



## Horn Handle Installation

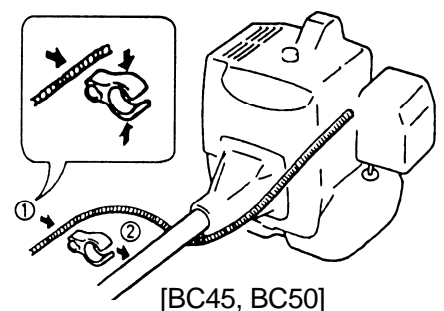
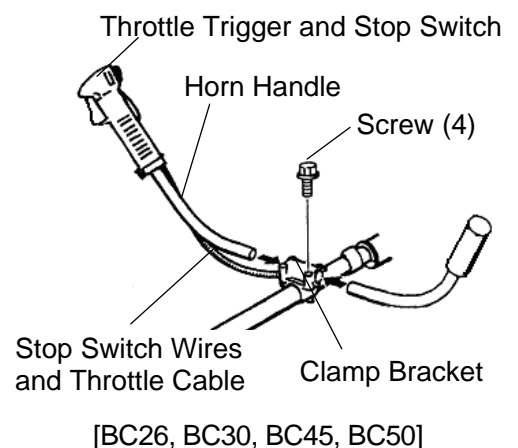
[Model BC26, BC30, BC45, BC50]

**IMPORTANT: Be careful not to damage the throttle cable and stop switch wires when you remove the horn handles from the carton.**

1. Loosen the four screws on the top of the clamp bracket.
2. Insert the left and right horn handles into the clamp bracket. Note that the horn handle with the throttle trigger and stop switch goes on the right-hand side of the Trimmer/ brushcutter.
3. Adjust the horn handles to the desired position, then tighten the four screws.

[Model BC45, BC50]

4. Clamp the throttle cable assembly as shown.



## Connecting Throttle Cable and Stop Switch Wires

### [Model BC26]

1. Press up the bottom of the swivel ring to remove the swivel ring.

Note: Take care of falling the swivel ring in the engine when remove the swivel ring.

2. Lift up the hook, then insert the throttle cable and the cable housing through the hole of the guide.

3. Turn down the hook, dab at throttle cable housing, then tighten up a screw.

4. Position the slotted fitting on the carburetor so the recessed hole for the lug is away from the hook side.

5. Rotate the carburetor throttle cam and slip the throttle cable through the slot in the slotted fitting, making sure the cable lug drops into the recessed hole.

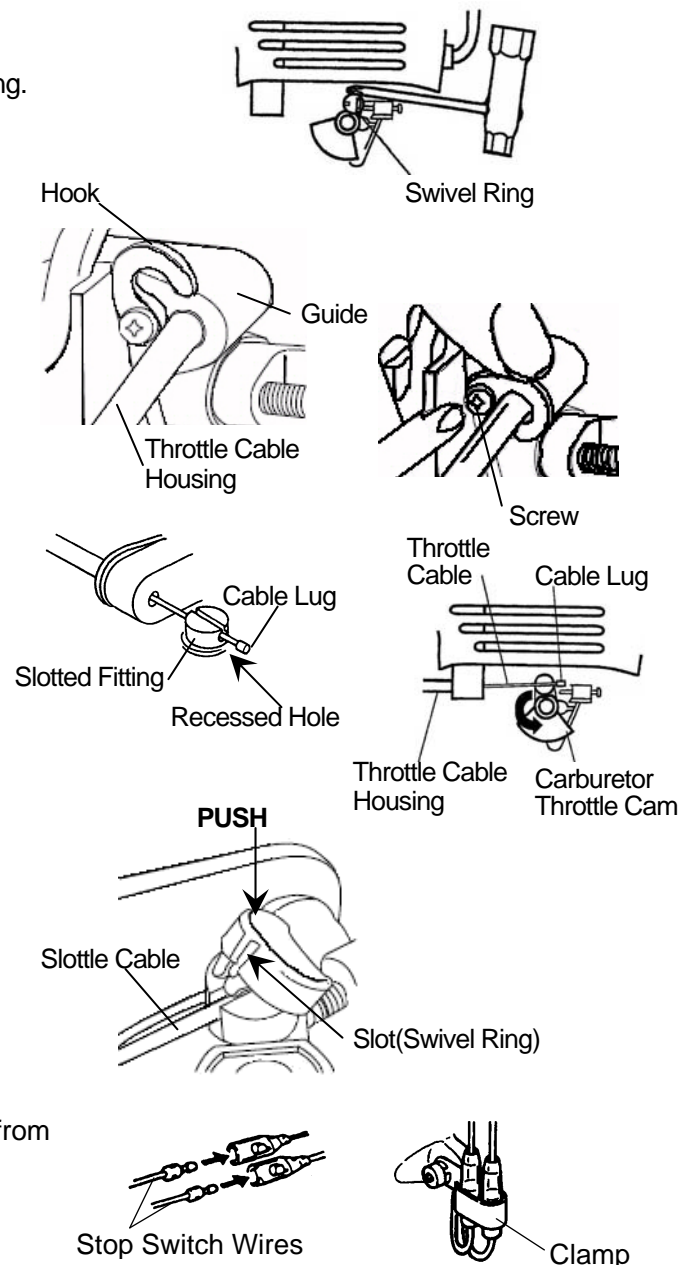
6. Align the slot of the swivel ring with the slotted wire, then press down the swivel ring and fix.

Note: Take care of falling the swivel ring in the engine when remove the swivel ring.

7. Operate the throttle trigger a few times to make sure that it works correctly.

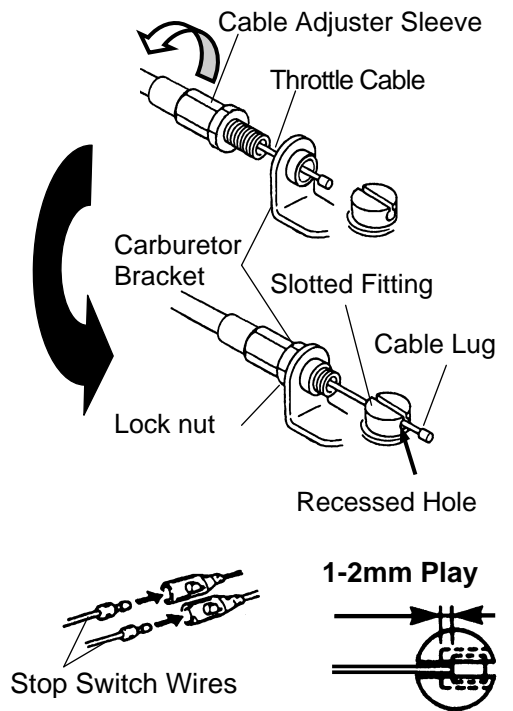
8. Plug the stop switch wires into the matching connectors from the engine. Note that wire polarity is not important.

9. Hold the stop switch wires with the clamp.



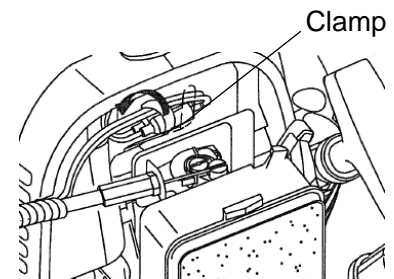
**[Model L30, L45, BC30, BC45, BC50]**

1. Insert the throttle cable through the carburetor bracket, then screw a cable adjuster sleeve into the carburetor bracket fully.
2. Position the slotted fitting on the carburetor so the recessed hole for the lug is away from the cable adjuster sleeve.
3. Rotate the carburetor throttle cam and slip the throttle cable through the slot in the slotted fitting, making sure the cable lug drops into the recessed hole.
4. Operate the throttle trigger a few times to make sure that it works correctly.
5. Adjust the cable adjuster sleeve so the stop on the carburetor throttle cam just contacts the throttle stop and the cable position keep 1-2mm play between cable lug and slotted fittings when the throttle trigger is fully depressed.
6. When the throttle cable is adjusted correctly, tighten the lock-nut.
7. Plug the stop switch wires into the matching connectors from the engine. Note that wire polarity is not important.



**[ Model L45, BC45, BC50]**

8. Lap and fix the stop switch wires and connectors with clamp.



**Installing Guard**

**! WARNING**

**POTENTIAL HAZARD**

- Foreign objects can be thrown by Trimmer/Brushcutter.

**WHAT CAN HAPPEN**

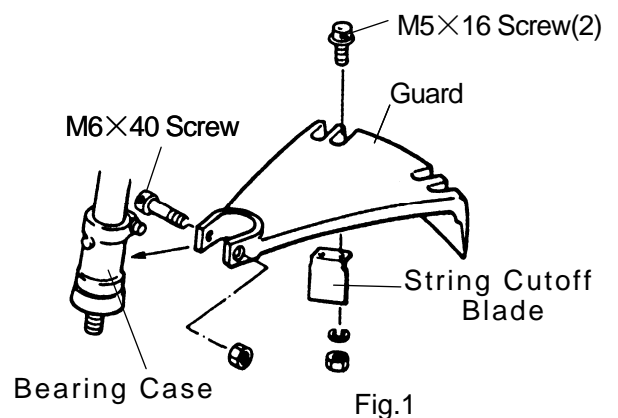
- Contact with thrown objects can cause personal injury.

**HOW TO AVOID THE HAZARD**

- Never operate the Trimmer/Brushcutter without the guard in place.

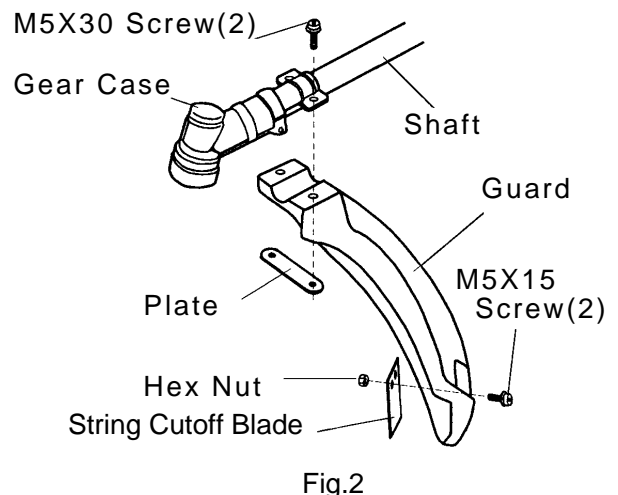
**[Model B20, B21]**

1. Fasten the string cutoff blade to the guard with M5×16 screws as shown on Fig.1.
2. Push the guard onto the bearing case. Install the M6×40 screw and nut, tighten **ONLY AS NEEDED**.



**[Model L20, L23, L26, L30]**

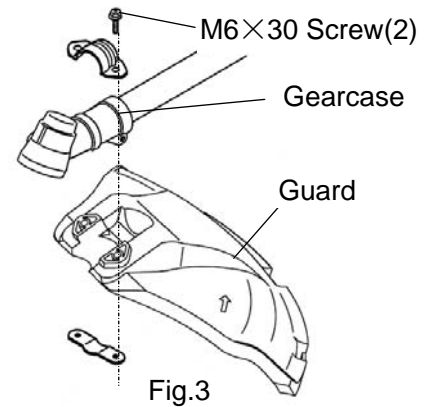
1. Fasten the string cutoff blade to the guard with M5×15 screws as shown on Fig.2.
2. Attach the guard to the shaft with the two M5x30 screws and plate as shown.



[Model BC26, BC30, L45, BC45, BC50]

### Blade Guard

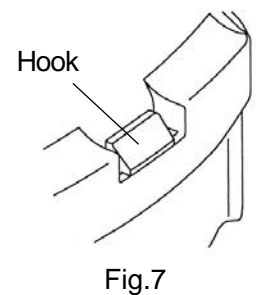
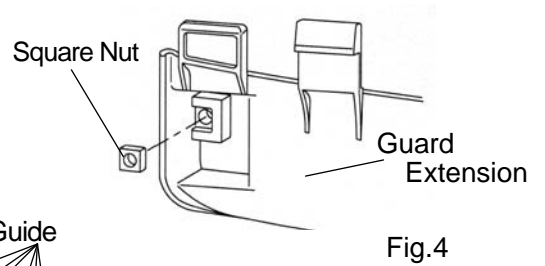
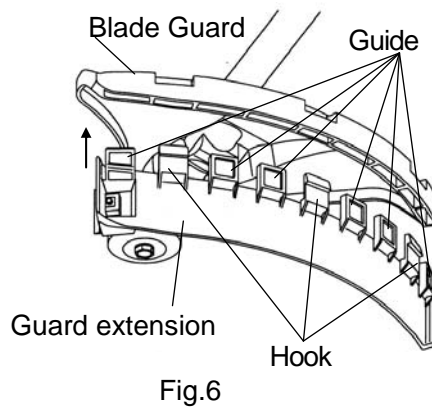
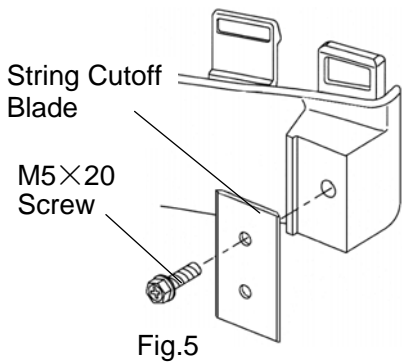
Attach the blade guard to the gearcase with the two M6×30 screws as shown on Fig.3.



### Trimmer Head Guard

(Install the string cutoff blade and guard extension to the blade guard.)

1. Insert the square nut into guard extension as shown on Fig. 4.
2. Attach the String Cutoff Blade to guard extension using M5×20 Screw, locking with square nut (on Fig.4) as shown on Fig. 5.
3. Enter the guide in the slot of Blade Guard on Fig. 6. Make sure place the three hooks into the position on the guard as shown on Fig. 7.



## Installing Cutting Attachment

### Trimmer Head

#### **! WARNING**

##### **POTENTIAL HAZARD**

- If the trimmer head is not adequately tightened, it can come loose from the Trimmer/Brushcutter during use.

##### **WHAT CAN HAPPEN**

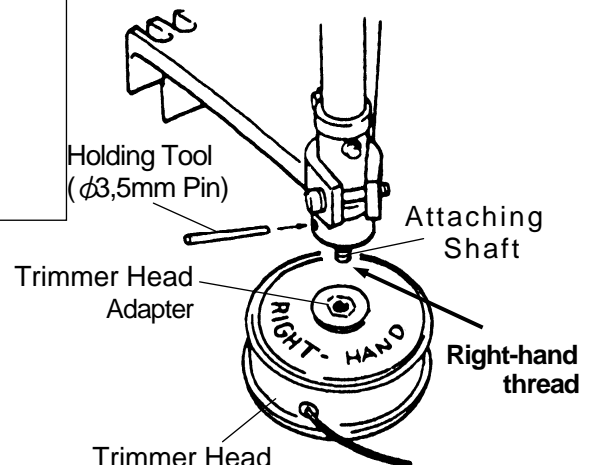
- This may cause damage to property or personal injury.

##### **HOW TO AVOID THE HAZARD**

- Make sure the trimmer head is securely fastened to the attaching shaft in the gearcase.

[Model B20, B21]

1. Align the hole in the boss adapter with the guide slot in the bearing case.
  2. Insert the  $\phi 3,5$ mm pin into the hole and guide slot in the boss adapter and bearing case to lock the attaching shaft (A).
  3. Thread the trimmer head adapter (B) onto the attaching shaft, then tighten the trimmer head firmly by hand.
- Note: The trimmer head adapter has right-hand thread.**
4. Remove the  $\phi 3,5$ mm pin from the boss adapter and bearing case.



[Except for model B20, B21]

**IMPORTANT:** Make sure the trimmer head is for **LEFT-HAND ROTATION (counterclockwise)** as viewed from the operator's position, and that the trimmer head adapter is a male, M8 left-hand thread.

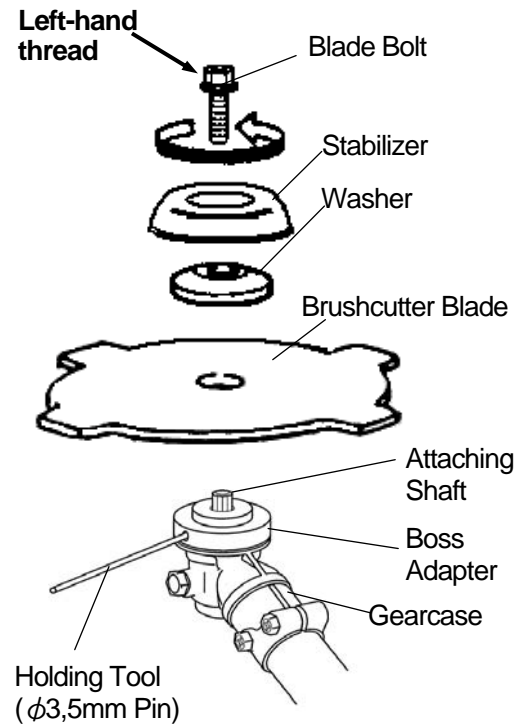
1. Remove the blade bolt and stabilizer from the attaching shaft out of the gearcase. (keep the blade bolt and the stabilizer)

**Note:** The blade bolt has left-hand thread.

2. Align the hole in the boss adapter with the guide slot in the gearcase.
3. Insert the  $\phi 3,5\text{mm}$  pin into the hole in the boss adapter and the guide slot in the gearcase to lock the attaching shaft.
4. Thread the trimmer head adapter into the attaching shaft, then tighten the trimmer head by hand.

**Note:** The trimmer head adapter has left-hand thread.

5. Remove the  $\phi 3,5\text{mm}$  pin from the boss adapter and gearcase.



### Brushcutter Blade [Except for model B20, B21]

#### **! WARNING**

##### **POTENTIAL HAZARD**

- If the Brushcutter blade is not adequately tightened, it can come loose from the Brushcutter during use.

##### **WHAT CAN HAPPEN**

- This may cause damage to property or personal injury.

##### **HOW TO AVOID THE HAZARD**

- Make sure the Brushcutter blade is securely fastened to the attaching shaft in the gearcase.

1. Remove the blade bolt, stabilizer and clamping washer from the attaching shaft out of the gearcase.

**Note:** The blade bolt has left-hand thread.

2. Install the brushcutter blade onto the boss adapter, then reinstall the clamping washer, stabilizer and blade bolt.
3. Align the hole in the boss adapter with the guide slot in the gearcase.

#### **! WARNING**

##### **POTENTIAL HAZARD**

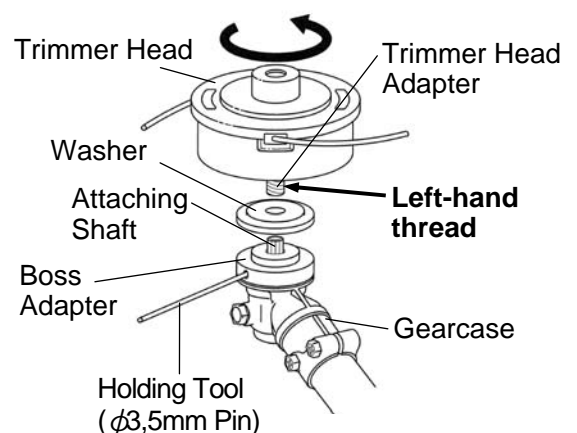
- Brushcutter blade is sharp.

##### **WHAT CAN HAPPEN**

- Contact with sharp blade can cause personal injury.

##### **HOW TO AVOID THE HAZARD**

- Wear gloves when you handle the blade.



4. Insert the  $\phi 3,5\text{mm}$  pin into the hole in the boss adapter and the guide slot in the gearcase to lock the attaching shaft.
5. Tighten the blade bolt.
6. Remove the  $\phi 3,5\text{mm}$  pin from the boss adapter and gearcase.

## Attaching Strap / Harness [Except for model B20, B21]

### WARNING

#### POTENTIAL HAZARD

- Without the Shoulder Hanging Strap Installed on the Trimmer/Brushcutter, the blade can produce side thrust which can expose the operator and bystanders to blade contact.

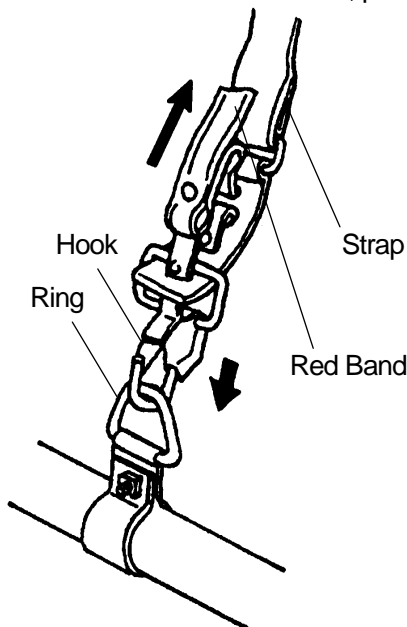
#### WHAT CAN HAPPEN

- Contact with Brushcutter blade can cause severe personal injury.

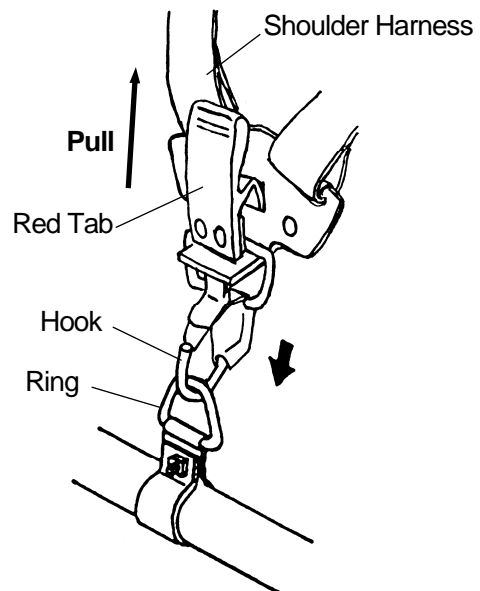
#### HOW TO AVOID THE HAZARD

- Never operate the Trimmer/Brushcutter without installing and using the Shoulder Hanging Strap.

Snap the Hook into the ring on the drive shaft. To detach the Strap / Harness quickly from the Trimmer/Brushcutter, pull upward on the Red Band / Tab.



[L20, L23, L26, L30, L45]



[BC26, BC30, BC45, BC50]

# Before Operation

## Oil and Fuel

1. Mix and pour fuel outdoors and where there are no sparks or flames.
2. Always shut off the engine before refueling. Never remove the Trimmer/Brushcutter fuel tank cap while the engine is running or immediately after stopping the engine.

### **WARNING**

#### **POTENTIAL HAZARD**

- Gasoline contains gasses that can build up pressure inside a fuel tank.

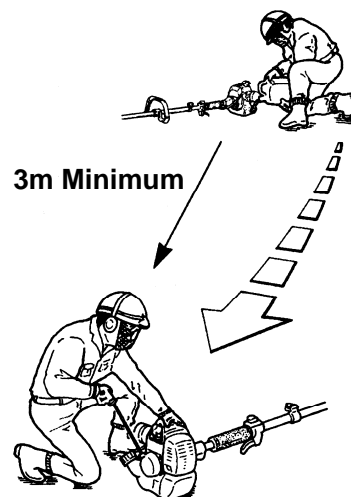
#### **WHAT CAN HAPPEN**

- fuel can be sprayed on you when removing fuel tank cap.

#### **HOW TO AVOID THE HAZARD**

- Remove fuel tank cap slowly to avoid injury from fuel spray.

3. Always open the fuel tank cap slowly to release any possible pressure inside the tank.
4. Do not overfill the fuel tank. Stop filling 10mm from the top of the tank.
5. Tighten the fuel tank cap carefully but firmly after refilling.
6. Wipe up any spilled fuel before starting the engine.
7. Move the Trimmer/Brushcutter at least 3m away from the fueling location and fuel storage container before starting the engine.



### **DANGER**

#### **POTENTIAL HAZARD**

- In certain conditions gasoline is extremely flammable and highly explosive.

#### **WHAT CAN HAPPEN**

- A fire or explosion from gasoline can burn you, others and cause property damage.

#### **HOW TO AVOID THE HAZARD**

- Use a funnel and fill the fuel tank outdoors, in an open area, when the engine is cold.  
Wipe up any gasoline that spills.
- Do not fill the fuel tank completely. Add gasoline to the fuel tank until the level is 10mm below the bottom of the filler neck. This empty space in the tank allows gasoline to expand.
- Never smoke when handling gasoline, and stay away from an open flame with gasoline in an approved container and keep it out of the reach of children.
- Do not mix fuel for more than two month use.

## Recommended Oil Type

Only use a two-cycle engine oil formulated for use in high-performance, air-cooled two-cycle engines.

**IMPORTANT: Do not use two-cycle oil intended for water cooled outboard motors. This type of two-cycle engine oil does not have the additives for air-cooled two-cycle engines and can cause engine damage.**

**Do not use automotive motor oil. This type of oil does not have the proper additives for air-cooled two-cycle engines and can cause engine damage.**

## Recommended Fuel Type

Use clean, unleaded gasoline with an octane rating of 85 or higher. Use of unleaded gasoline results in fewer combustion chamber deposits and longer spark plug life. Use of premium grade fuel is not necessary or recommended.

**IMPORTANT: Never use gasohol or alcohol blended fuels in this engine.**

## Mixing Gasoline and Oil

**IMPORTANT: The engine used on this Trimmer/ Brushcutter is of a two-cycle design. The internal moving parts of the engine, i.e., crankshaft bearings, piston pin bearings and piston to cylinder wall contact surfaces, require oil mixed with the gasoline for lubrication.**

**Failure to add oil to the gasoline or failure to mix oil with the gasoline at the appropriate ratio will cause major engine damage which will void your warranty.**

## Fuel Mixture

The fuel: oil ratio is 25 parts gasoline to 1 part oil or 25:1.

### Fuel Mixture Chart 25:1

Gasoline	two-cycle oil
1 litre	40 ml
2 litre	80 ml
5 litre	200 ml

### Mixing Instructions

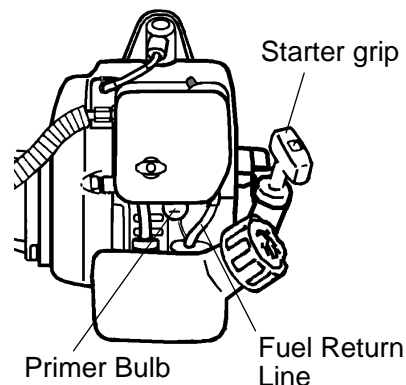
**IMPORTANT: Never mix gasoline and oil directly in the Trimmer/ Brushcutter fuel tank.**

1. Always mix fuel and oil in a clean container approved for gasoline.
2. Mark the container to identify it as fuel mix for the Trimmer/Brushcutter.
3. Use regular unleaded gasoline and fill the container with half the required amount of gasoline.
4. Pour the correct amount of oil into the container then add the remaining amount of gasoline.
5. Close the container tightly and shake it momentarily to evenly mix the oil and the gasoline before filling the tank on the Trimmer/Brushcutter.
6. When refilling the Trimmer/Brushcutter fuel tank, clean around the fuel tank cap to stop dirt and debris from entering the tank during cap removal.
7. Always shake the premix fuel container momentarily before filling the fuel tank.
8. Always use a spout or funnel when fueling to reduce fuel spillage.
9. Fill the tank only to within 10mm from the top of the tank. Avoid filling to the top of the tank filler neck.

## Starting and Stopping

### Before Starting the Engine

1. Fill the fuel tank as instructed in the Before Operation section of this manual.
2. Rest the Multi-cutter on the ground.
3. Make sure the cutting attachment is clear of any broken glass, nails, wire, rocks or other debris.
4. Keep all bystanders, children and animals away from the working area.



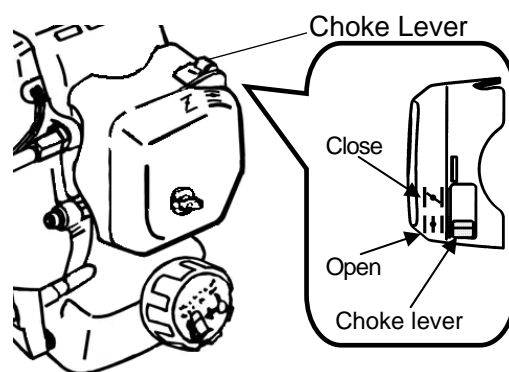
[B20, B21, L20, L23, L26, BC26]

### Cold Starting Procedure

The carburetor on this engine is equipped with a fuel primer and a choke system.

To start a "cold" engine properly, perform the following procedure:

1. Pump the primer bulb until fuel can be seen flowing through the fuel return line to the fuel tank. Flowing fuel should be almost clear, not foamy or full of bubbles.
2. Turn the choke lever to the Close "||" position.
3. With the stop switch "ON", and the throttle trigger positioned at Fast-idle start position, pull the starter grip. After the engine is started, turn the choke lever to the Open "|||" position. Then squeeze and release the throttle trigger to allow it to return to the idle position.

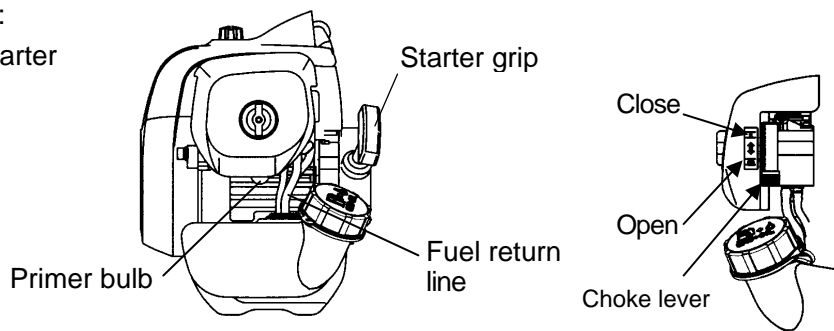


[B20, B21, L20, L23, L26, BC26]

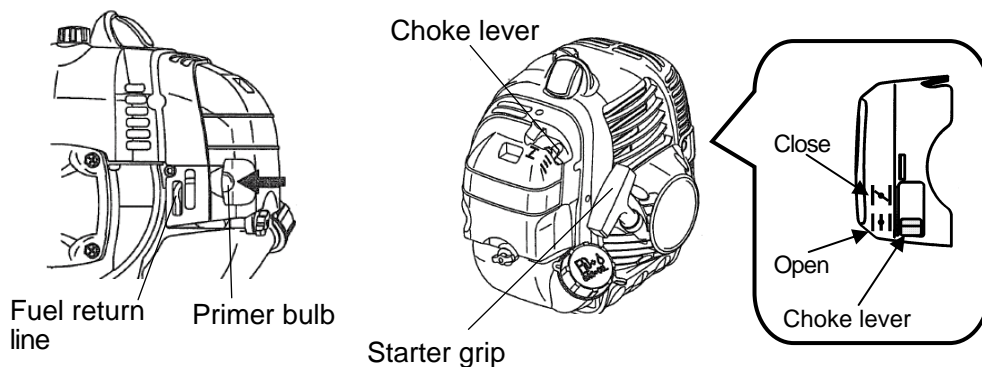
If the engine stops running before you turn

the choke lever to the Open "|||" position :

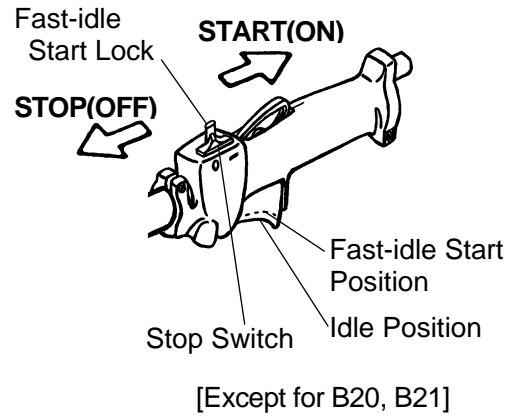
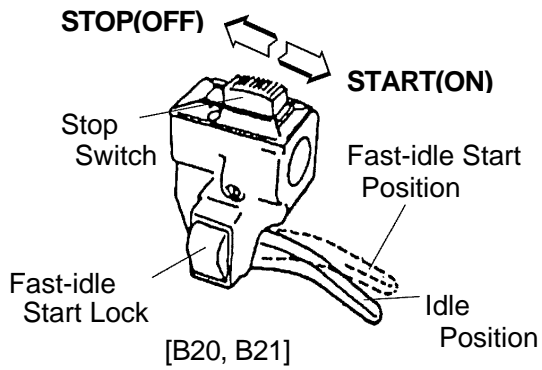
Go ahead and open the choke, pull the starter grip with the throttle trigger positioned at Fast-idle start position.



[L30, BC30]



[L45, BC45, BC50]



## Hot Restart

To start the engine that is already warmed up (hot restart).

1. Turn the choke lever to the open position, and set the stop switch to the "ON" position.
2. Leave the throttle trigger in the idle position and pull the starter grip.
3. If the engine fails to start after three to four pulls, follow the instructions in the Cold Starting Procedure section above.

If the engine fails to start after you follow the above procedures, contact an authorized PLP dealer.

## To Stop the Engine

1. Release the throttle trigger.
2. Slide the stop switch to "STOP" position.

## Idle Speed Adjustment

This Trimmer/Brushcutter is equipped with non-adjustable fuel mixture carburetor. The idle speed is the only adjustment for the operator.

### WARNING

#### POTENTIAL HAZARD

- Engine must be running to make carburetor adjustments.
- When engine is running, attached tool and other parts are moving.

#### WHAT CAN HAPPEN

- Contact with moving attached tool or other moving parts could cause serious personal injury or death.

#### HOW TO AVOID THE HAZARD

- Keep hands, feet and clothing away from attached tool and other moving parts.
- Keep all bystanders and pets away from unit while making carburetor adjustments.

The cutting attachment may be moving during idle speed adjustment. Wear the recommended personal protective equipment and observe all safety instructions. Keep hands and body away from the attached tool.

When the throttle trigger is released, the engine should return to an idle speed. The correct speed for models B20, B21, L20, L23, L26, L30, BC26, BC30 is 2700 - 3300 min<sup>-1</sup> and for model L45, BC45, BC50 is 2400 – 2800 min<sup>-1</sup> (or just below the clutch engagement speed ).

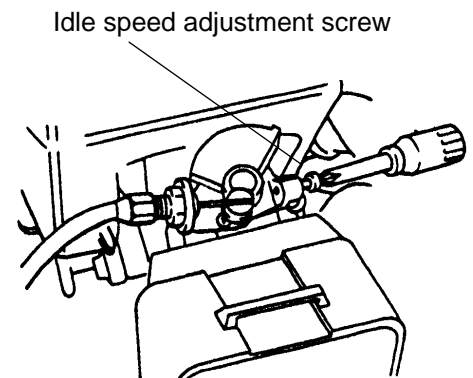
The attached tool must not move and the engine should not stall (stop running) at engine idle speed.

To adjust the engine idle speed, rotate the idle speed adjustment screw on the carburetor.

- Turn the idle speed screw in (clockwise) to increase the engine idle speed.
- Turn the screw out (counterclockwise) to decrease the engine idle speed.

**If idle speed adjustment is necessary, and after adjustment the cutting attachment rotates or the engine stalls, stop using the Trimmer/Brushcutter immediately!**

Contact your local authorized PLP Dealer for assistance and servicing.



# Trimmer Operation

## ! CAUTION

Read the Safety instructions beginning on page 3 concerning proper use of the String Trimmer.

## Trimmer Operating Position

## ! CAUTION

Always wear gloves and protective clothing when operating the String Trimmer.

Before using the Trimmer, check the following:

### [Except for model B20, B21]

1. The operator must be wearing the shoulder hanging strap or shoulder harness attached to the Trimmer, and the Trimmer should be on operator's right side.

### [Model B20, B21, L20, L23, L26, L30, L45]

2. The operator's right hand should be holding the shaft grip, with his or her fingers on the throttle trigger. The right arm should be slightly bent.
3. The left hand should be holding the loop handle with the fingers and thumb fully enclosed around the grip. The left arm should be extended. Reposition the loop handle up or down the driveshaft if necessary for a comfortable position.

### [Model BC26, BC30, BC45, BC50]

2. The operator's right hand should be holding the right-hand horn handle grip, with the fingers on the throttle trigger.
3. The left hand should be holding the left-hand horn handle grip with the fingers and thumb fully enclosed around the grip.

### [All models]

4. The Trimmer weight should be evenly distributed between the arms. The trimmer head should be near and parallel to the ground.
5. Accelerate and hold the engine at cutting speed before entering the material to be cut.
6. Always release the throttle trigger and allow the engine to return to idle speed when not cutting.
7. Stop the Trimmer engine when moving between work sites.
  - If the trimmer head becomes jammed, stop the engine immediately.
  - Make certain all moving parts have stopped and disconnect the spark plug before inspecting the equipment for damage.
  - Never use a String Trimmer that has a chipped, or broken trimmer head.

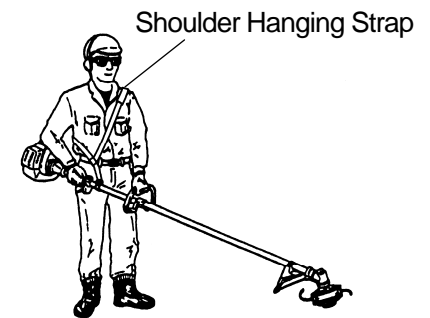
### [Except for model B20, B21]

### IMPORTANT:

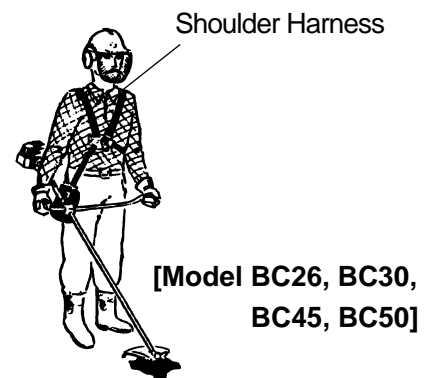
To detach the shoulder harness/ Strap quickly from the Trimmer, pull upward on the Tab.



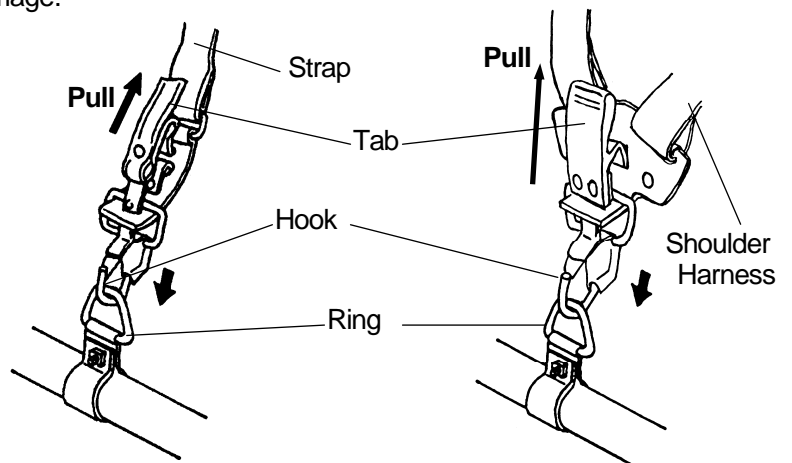
[Model B20, B21]



[Model L20, L23, L26, L30, L45]



[Model BC26, BC30, BC45, BC50]

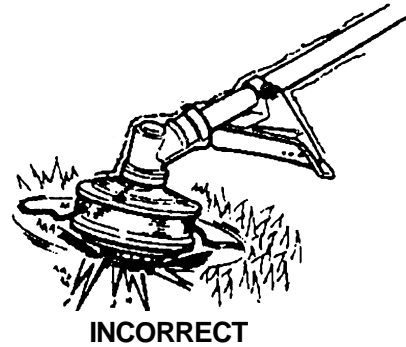
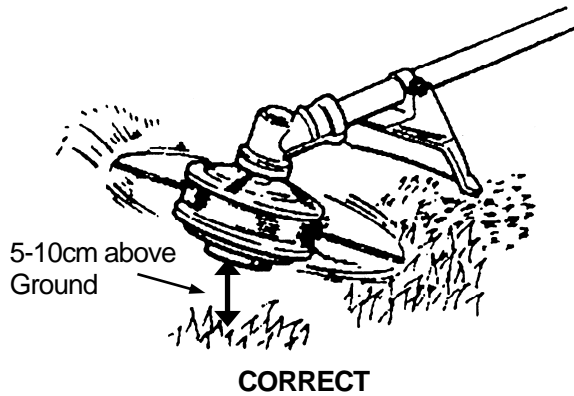


[Model L20, L23, L26, L30, L45]

[Model BC26, BC30, BC45, BC50]

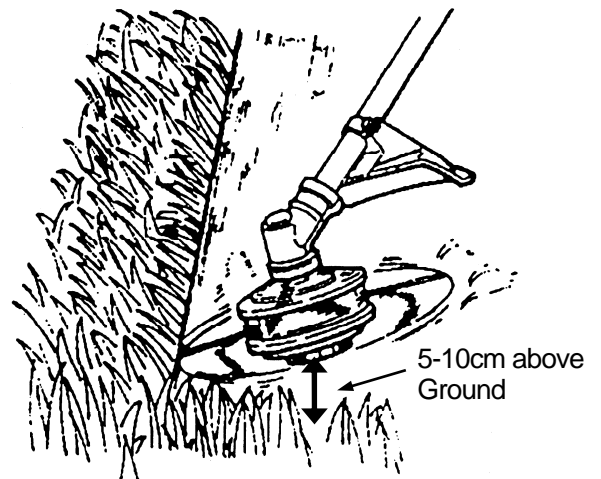
## Cutting with Nylon Trimmer Line

- The tip of the line does the cutting. The line should stay extended while cutting.
- Do not force the line into the material. Forcing the line will cause it to slap against the material, increasing line usage and causing poor cutting results.



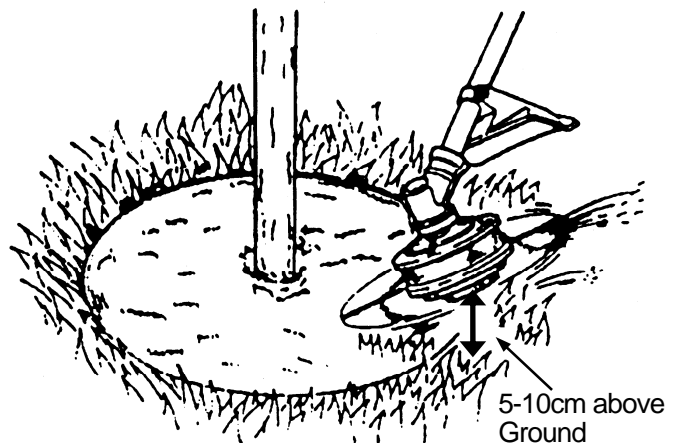
## Trimming

Hold the bottom of the trimmer head about 5-10cm above the ground and at an angle. Allow only the tip of the line to make contact.



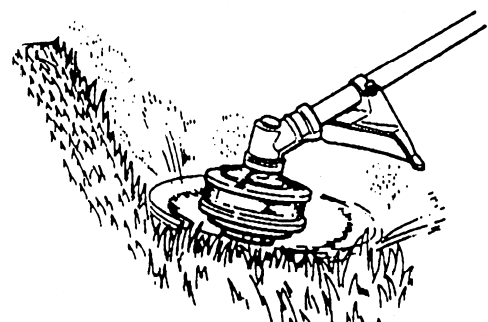
## Scaling

To remove unwanted vegetation, hold the trimmer head about 5-10cm above the ground and at an angle. Allow the tip of the line to strike the ground cutting the vegetation off at the surface.



## Mowing

Keep the line parallel to the ground and use a gentle side-to-side motion.



# Brushcutter Operation [Except for model B20, B21]

## WARNING

### POTENTIAL HAZARD

- Foreign objects can be thrown by Brushcutter.

### WHAT CAN HAPPEN

- Contact with thrown objects can cause personal injury.

### HOW TO AVOID THE HAZARD

- Never operate the Brushcutter without the blade guard in place.

## CAUTION

- Read the Safety instructions beginning on page 3 concerning proper use of the Brushcutter.

## Brushcutter Operating Position [Except for model B20]

Before using the Brushcutter, check the following:

## WARNING

### POTENTIAL HAZARD

- Without the shoulder hanging Strap installed, the Brushcutter blade can produce side thrust which can expose the operator and bystanders to blade contact.
- If the Brushcutter is not correctly positioned on the operator's right side, the blade can produce side thrust which can expose the operator and bystanders to blade contact.

### WHAT CAN HAPPEN

- Contact with the Brushcutter blade can cause severe personal injury.

### HOW TO AVOID THE HAZARD

- Never operate the Brushcutter without installing and using the shoulder hanging strap.
- Always operate the Brushcutter with the unit on your right side.

1. The operator must be wearing the shoulder hanging strap or shoulder harness attached to the Brushcutter, and the Brushcutter must be on the operator's right side.

#### [Model L20, L23, L26, L30, L45]

2. The operator's right hand should be holding the shaft grip, with his or her fingers on the throttle trigger. The right arm should be slightly bent.
3. The left hand should be holding the loop handle with the fingers and thumb fully enclosed around the grip. The left arm should be extended. Reposition the loop handle up or down the driveshaft if necessary for a comfortable position.

#### [Model BC26, BC30, BC45, BC50]

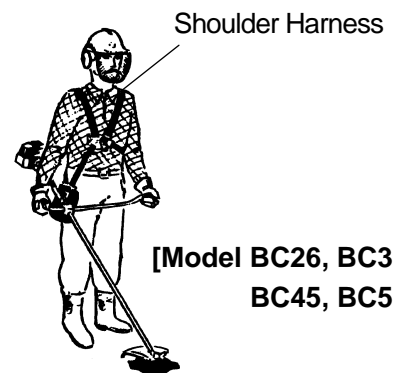
2. The operator's right hand should be holding the right-hand horn handle grip, with his or her fingers on the throttle trigger.
3. The left hand should be holding the left-hand horn handle grip with the fingers and thumb fully enclosed around the grip.

#### [All models except for model B20, B21]

4. Always release the throttle trigger and allow the engine to return to idle speed when not cutting.
5. Stop the Brushcutter engine when moving between work sites.



[Model L20, L23, L26, L30, L45]



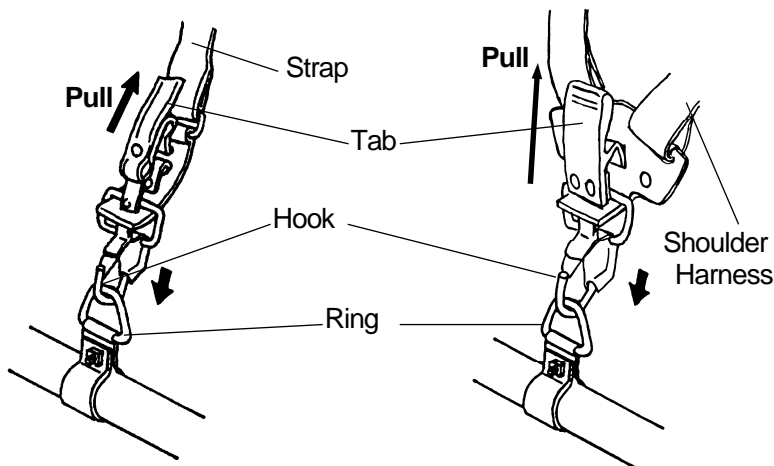
[Model BC26, BC30, BC45, BC50]

## **! CAUTION**

- Always wear gloves and protective clothing when operating the Brushcutter.

- If the Brushcutter blade becomes jammed, stop the engine immediately.
- Make certain all moving parts have stopped and disconnect the spark plug before inspecting the equipment for damage.
- Never use a Brushcutter that has chipped, cracked or broken cutting attachment or guard.

**IMPORTANT: To detach the shoulder harness/ Strap quickly from the Brushcutter, pull upward on the Tab.**



[Model L20, L23, L26, L30, L45]

[Model BC26, BC30, BC45, BC50]

## **Cutting Direction of Brushcutter Blade [Except for model B20, B21]**

### **! WARNING**

#### **POTENTIAL HAZARD**

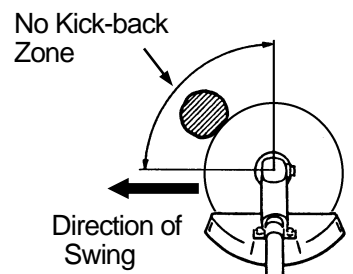
- Cutting heavy brush or small trees from the wrong direction can cause the Brushcutter blade to kick back.

#### **WHAT CAN HAPPEN**

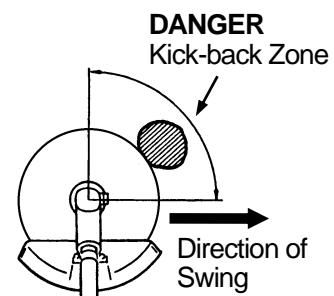
- Contact with the Brushcutter blade can cause severe personal injury.

#### **HOW TO AVOID THE HAZARD**

- Always swing the Brushcutter from right to left when cutting heavy brush or small trees as shown.



**CORRECT**



**INCORRECT**

When cutting heavy brush or small trees, always swing the Brushcutter from right to left. Swinging the Brushcutter from left to right can cause the blade to kick back.

## **Cutting Blades [Except for model B20, B21]**

1. Use only the correct blade (PLP genuine part) approved for the application and model Brushcutter.
2. Carefully check the condition of the blades before and after operation.
3. Sharpen dull blades. Replace any blade that is worn, cracked or damaged.
4. If a blade produces eccentric rotation or vibration, replace the blade and the boss adapter with genuine PLP parts.

# Maintenance

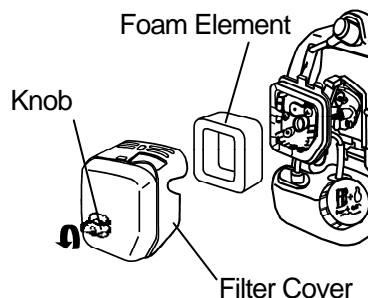
## Air Filter

### Maintenance Interval

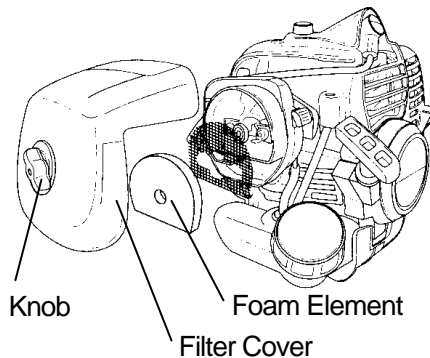
- The air filter should be cleaned **daily**, or more often when working in extremely dusty conditions.
- Replace after every 100 hours of operation.

### Air Filter Cleaning

1. Remove the filter cover and foam element.
2. Clean the foam element with warm, soapy water. Let the element dry completely.
3. Apply a light coat of SAE 30 motor oil to the foam element and squeeze out all excess oil.
4. Reassemble the foam element and filter cover.



[Model B20, B21, L20, L23, L26, BC26]



[Model L30, BC30]

## Fuel Filter

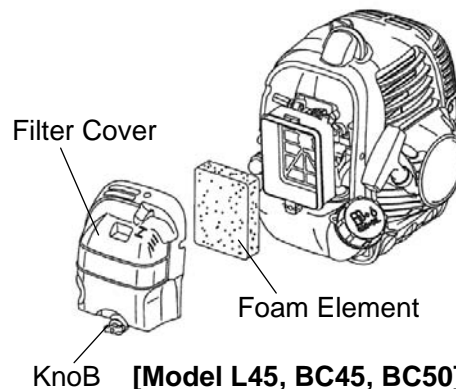
### Maintenance Interval

The fuel filter should be replaced after every 100 hours of operation.

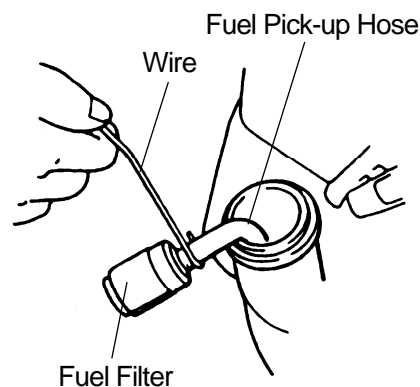
### Fuel Filter Replacement

The fuel filter is attached to the end of the fuel pick-up hose inside the tank. To replace the fuel filter:

1. Make sure the fuel tank is empty.
2. Loosen the fuel tank cap.
3. Using a wire hook, gently pull the fuel filter out through the fuel filler opening.
4. Grasp the fuel hose next to the fuel filter fitting and remove the filter, but do not release the hose.
5. While still holding on to fuel hose, attach the new fuel filter.
6. Drop the new fuel filter back into the fuel tank.
7. Make sure that the fuel filter is not stuck in a corner of the tank, and that the fuel hose is not doubled over (kinked) before refueling.



[Model L45, BC45, BC50]



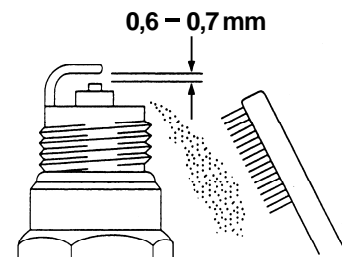
## Spark Plug

### Maintenance Interval

- The spark plug should be removed from the engine and checked after each 25 hours of operation.
- Replace the spark plug after every 100 hours of operation.

### Spark Plug Maintenance

1. Twist the high tension lead boot on the spark plug back and forth a couple of times to loosen the boot, then pull the boot off of the spark plug.
2. Remove the spark plug.
3. Clean the electrodes with a stiff brush.
4. Adjust the electrode air gap to 0,6-0,7 mm.
5. Replace the spark plug if it is oil-fouled, damaged, or if the electrodes are worn down.
6. Do not over tighten the spark plug when installing.  
The tightening torque is 10.7-16.6 N·m.



## Cylinder Cooling Fins

### Maintenance Interval

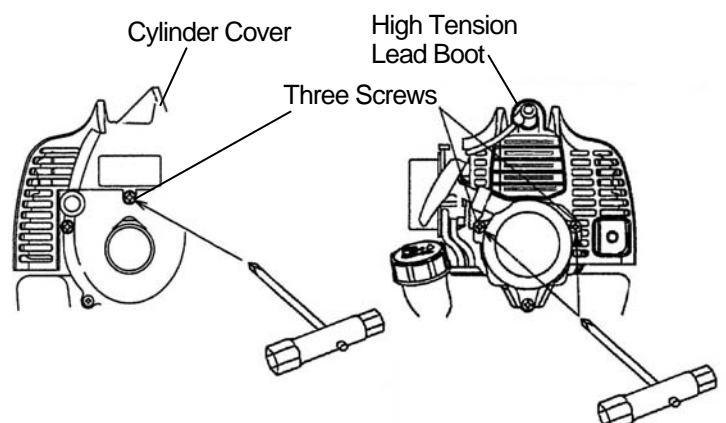
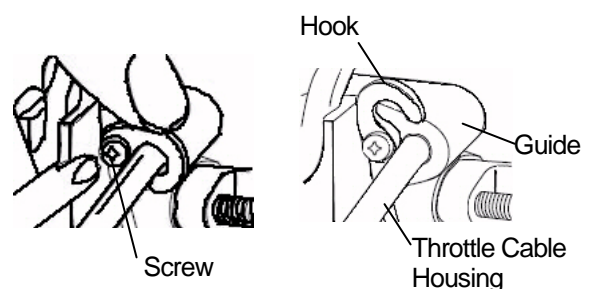
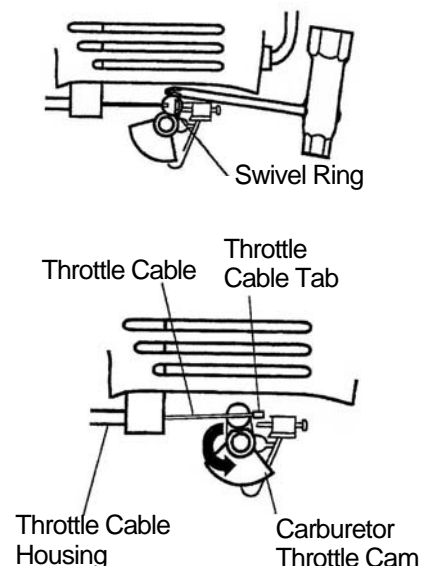
- The cylinder cooling fins should be cleaned after every 25 hours of operation, or once a week, whichever comes first.
- Air must flow freely around and through the cylinder cooling fins to prevent engine overheating. Leaves, grass, dirt and debris buildup on the fins will increase the operating temperature of the engine, which can reduce engine performance and shorten engine life.

### Cooling Fin Cleaning

[Model B20, B21, L20, L23, L26, BC26]

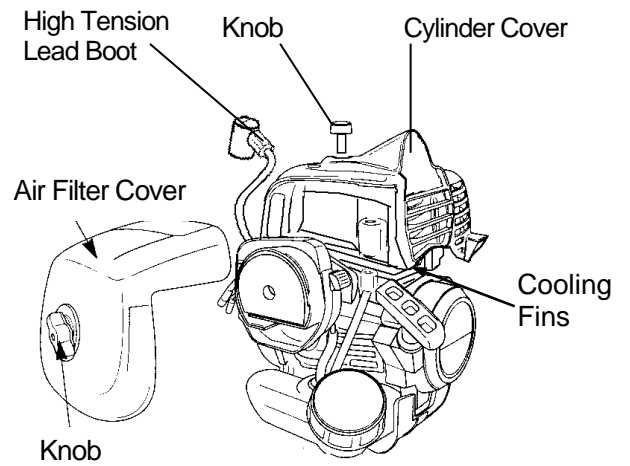
Note: It's necessary to remove the swivel ring before detach the cylinder cover.

1. Press up the bottom of the swivel ring to remove the swivel ring. Note: Take care of falling the swivel ring in the engine when remove the swivel ring.
2. Rotate the carburetor throttle cam and slip out the throttle cable tab from the slot in the slotted fitting.
3. Loosen the screw. Turn up the hook, then pull out the throttle cable housing from the guide.
4. Twist the high tension lead boot on the spark plug back and forth a couple of times to loosen the boot, then pull the boot off of the spark plug.
5. Remove three screws and lift off the cylinder cover.
6. Clean all dirt and debris from the cooling fins and from around the cylinder base.
7. After cleaning, reinstall the cylinder cover and the high tension lead boot. Then reinstall the throttle wire, hook, throttle cable end and swivel ring in order.



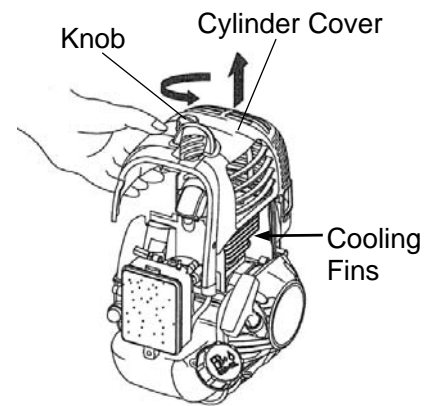
**[Model L30, BC30]**

1. Loosen the knob and remove the air filter cover.
2. Twist the high tension lead boot on the spark plug back and forth a couple of times to loosen the boot, then pull the boot off of the spark plug.
3. Loosen the knob and lift off the cylinder cover.
4. Clean all dirt and debris from the cooling fins and from around the cylinder base.
5. After cleaning, reinstall the cylinder cover and the high tension lead boot.



**[Model L45, BC45, BC50]**

1. Loosen the knob and remove the air filter cover.
2. Loosen the knob and lift off the cylinder cover.
3. Clean all dirt and debris from the cooling fins and from around the cylinder base.
4. After cleaning, reinstall the cylinder cover.



## Spark Arrester

### **WARNING**

#### **POTENTIAL HAZARD**

- Muffler surface becomes hot when Trimmer/Brushcutter is in operation and remains hot for sometime after the engine is shut off.

#### **WHAT CAN HAPPEN**

- Contact with hot muffler surface could cause a burn.

#### **HOW TO AVOID THE HAZARD**

- Make sure the muffler is cool before inspecting and cleaning the spark arrester.

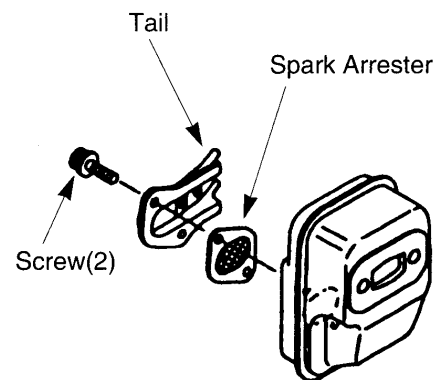
### **Maintenance Interval**

- The spark arrester should be inspected and cleaned after every 25 hours of operation. Replace the screen if it cannot be thoroughly cleaned or if it is damaged.

### **Maintenance**

#### **[B20, B21, L20, L23, L30, BC30]**

1. Remove the cylinder cover. (See section "Cylinder Cooling Fins")
2. Remove the socket head screw holding the spark arrester assembly to the muffler.
3. Remove and clean the spark arrester assembly with a safety solvent and a stiff brush. If any part cannot be thoroughly cleaned, it must be replaced.
4. Reinstall the spark arrester assembly onto the muffler, then reinstall and tighten the socket head screws.
5. Reinstall the cylinder cover.

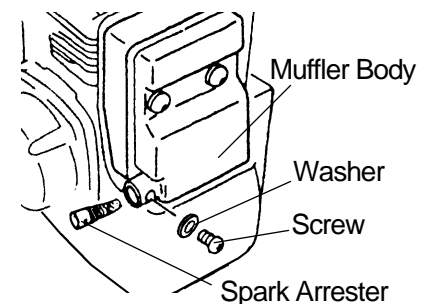


#### **[ L26, L45, BC26, BC45, BC50 ]**

- The spark arrester is installed inside the exhaust outlet of the muffler.

**One screw and washer located on the side of the exhaust outlet holds the spark arrester in place.**

1. Remove the cylinder cover. (See section "Cylinder Cooling Fins")
2. Remove spark arrester retaining screw, then using a suitable pair of pliers, withdraw the spark arrester. Do not crush or distort the spark arrester flange during removal.
3. The screen can be cleaned using a non-flammable solvent and a stiff wire brush. To reinstall insert the spark arrester into the exhaust outlet while aligning the holes in the arrester flange and outlet for the retaining screw.
4. Reinstall the screw and washer, then reinstall the cylinder cover.



## Flexible driveshaft [Model B20, B21]

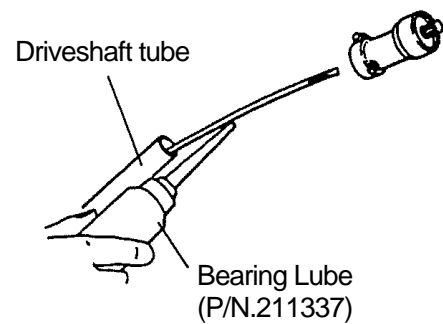
### Maintenance Interval

The flexible driveshaft should be lubricated after each 30 hours of operation.

### Driveshaft Lubrication

Loosen the two screws on the bearing case and remove the bearing case. The inner flexible driveshaft is easily removed by gripping the end securely and pulling it from the driveshaft tube. Lubricate the entire length the flexible driveshaft and insert it into the driveshaft tube. If the tool attachment is connected to the power unit, twist the flexible shaft while pushing to insure that it seats correctly into the driveshaft coupler.

Reinstall the bearing case onto the driveshaft tube and tighten the two screws.



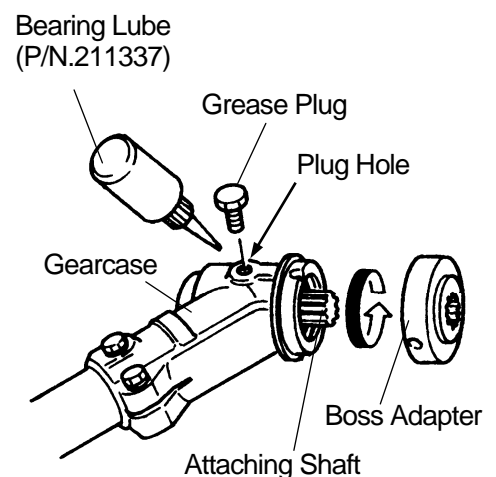
## Gearcase [Except for model B20, B21]

### Maintenance Interval

The gearcase should be checked for lubrication after each 30 hours of use.

### Gearcase Lubrication

Remove the cutting attachment and the boss adapter. Clean any dirt and debris from the area between the boss adapter and the gearcase. Remove the grease plug from the side of the gearcase. While rotating the attaching shaft, inject lithium-base bearing lube (P/N 211337) through the plug hole until the gearcase is full. Reinstall the boss adapter and grease plug.



## General Cleaning and Tightening

### WARNING

#### POTENTIAL HAZARD

- When engine is running, attached tool and other parts are moving.

#### WHAT CAN HAPPEN

- Contact with moving tool or other moving parts could cause serious personal injury or death.

#### HOW TO AVOID THE HAZARD

- Always turn off your Trimmer/Brushcutter before you clean or perform any maintenance on it.

The PLP Trimmer/Brushcutter will provide maximum performance for many, many hours if it is maintained properly. Good maintenance includes regular checking of all fasteners for correct tightness, and cleaning the entire machine.

## Storage

For long term storage of the Trimmer/Brushcutter:

### CAUTION

#### POTENTIAL HAZARD

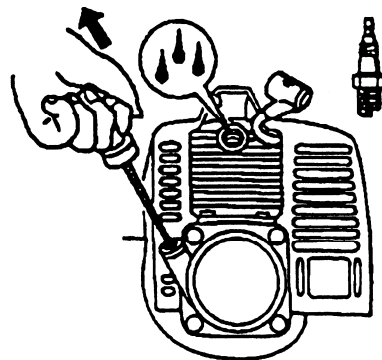
- Oil may squirt out of the spark plug opening when you pull the starter grip.

#### WHAT CAN HAPPEN

- Oil can cause eye injuries.

#### HOW TO AVOID THE HAZARD

- Protect your eyes and keep your face away from the spark plug opening.



1. Empty the fuel tank into a suitable fuel storage container.
2. Run the engine to remove any fuel that may remain in the carburetor.
3. Perform all regular maintenance procedures and any needed repairs.
4. Remove the spark plug and squirt a very small amount of engine oil into the cylinder.
5. Pull the starter grip once.
6. Slowly pull the starter grip to bring the piston to the top of the cylinder (TDC).
7. Reinstall the spark plug.
8. Store the Trimmer/Brushcutter in a dry place away from excessive heat, sparks or open flame.

# Troubleshooting

Problem	Cause	Action
Engine will not start	<ul style="list-style-type: none"> <li>• STOP switch set to off position</li> <li>• Empty fuel tank</li> <li>• Engine flooded</li> </ul>	<ul style="list-style-type: none"> <li>• Move switch to on position</li> <li>• Fill fuel tank</li> <li>• Use warm engine starting procedure</li> </ul>
Engine will not Idle	<ul style="list-style-type: none"> <li>• Idle speed set incorrectly</li> </ul>	<ul style="list-style-type: none"> <li>• Set Idle speed</li> </ul>
Engine lacks power or stalls when cutting	<ul style="list-style-type: none"> <li>• Throttle wire has come loose</li> <li>• Dirty air filter</li> </ul>	<ul style="list-style-type: none"> <li>• Tighten throttle wire</li> <li>• Clean or replace air filter</li> </ul>

If further assistance is required, contact your local authorized PLP service dealer.

# Specificaciones

	B20	B21	L20	L23	L26	BC26
Dry Weight without fuel, harness and cutting attachment, kg ※1	4,3	4,1	4,4	4,5	4,8	5,3
Engine displacement, cm <sup>3</sup>	19,8	19,8	19,8	22,5	25,4	25,4
Fuel tank capacity, liters	0,6	0,6	0,6	0,6	0,6	0,6
Type of carburetor	Diaphragm					
Ignition System	Solid State					
Spark plug	NGK BPMR6Y					
Electrode gap, mm	0,6 - 0,7					
Fuel Mixture	2 – Cycle Oil Mix 25:1 Ratio					
Cutting equipment Grass blade (optional) Trimmer head (optional)	– Semi-auto head(R)4 (Auto head, Manual head)		(∅230 3-teeth, 4-teeth,8-teeth) (Auto head, Semi-auto head, Manual head)			

	L30	L45	BC30	BC45	BC50
Dry Weight without fuel, harness and cutting attachment, kg ※1	5,4	7,6	5,9	8,2	8,2
Engine displacement, cm <sup>3</sup>	30,1	41,5	30,1	41,5	49,9
Fuel tank capacity, liters	0,6	1,0	0,6	1,0	1,0
Type of carburetor	Diaphragm				
Ignition System	Solid State				
Spark plug	NGK BPMR6Y				
Electrode gap, mm	0,6 - 0,7				
Fuel Mixture	2 – Cycle Oil Mix 25:1 Ratio				
Cutting equipment Grass blade (optional) Trimmer head (optional)	(∅255 3-teeth, 4-teeth, 8-teeth) (Auto head, Semi-auto head, Manual head)				

※1. Dry weight without Cutting Attachment, harness and fuel.

**PLP POWERUP**  
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