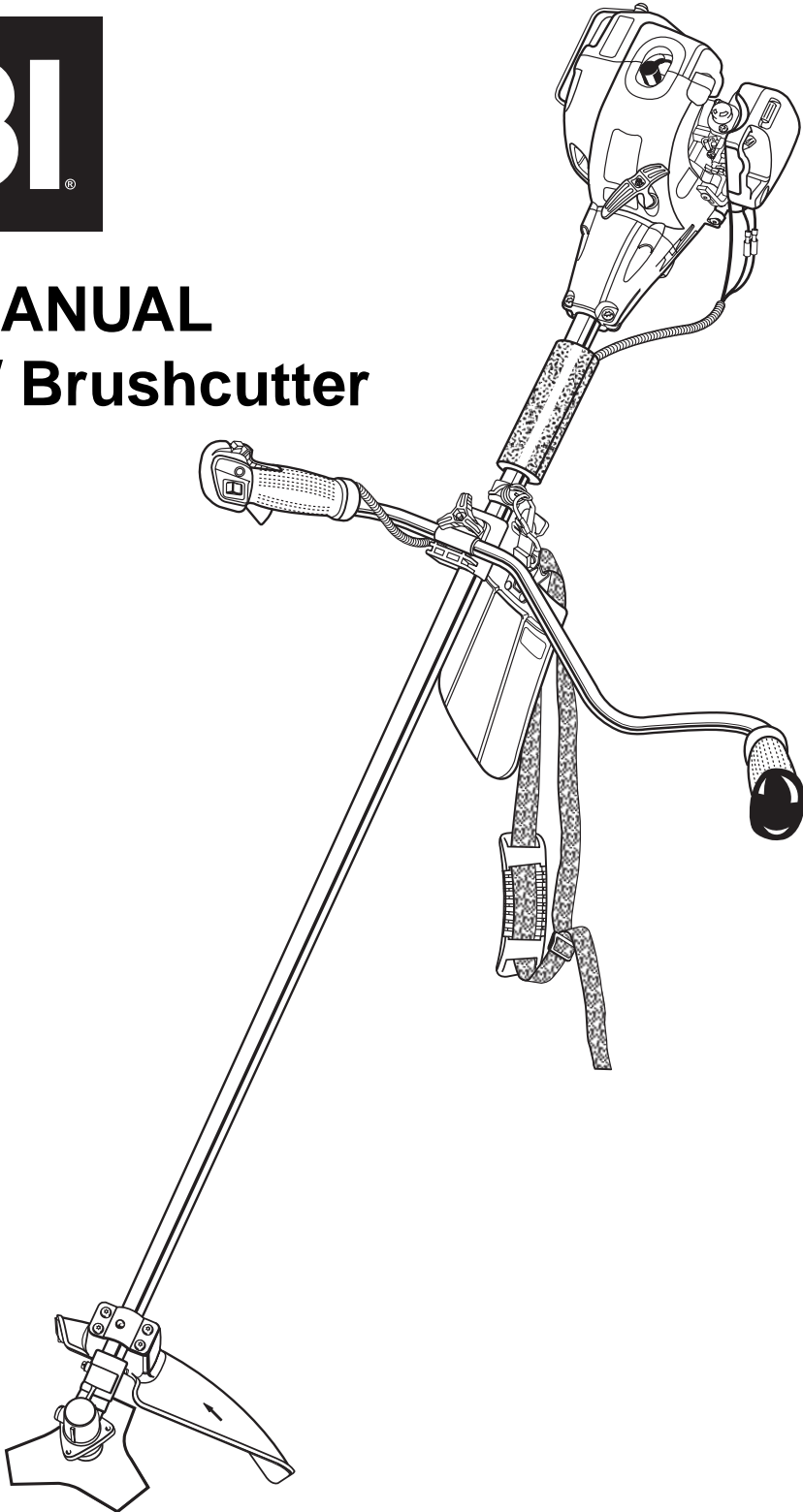




**OPERATOR'S MANUAL**  
**String Trimmer / Brushcutter**  
**PBC3046B**  
**RY70107**



Your new trimmer has been engineered and manufactured to Ryobi's high standard for dependability, ease of operation, and operator safety. Properly cared for, it will give you years of rugged, trouble-free performance.

**⚠ WARNING:** To reduce the risk of injury, the user must read and understand the operator's manual.

Thank you for buying a Ryobi trimmer.

**SAVE THIS MANUAL FOR FUTURE REFERENCE**

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## SAFETY



### WARNING:

Do not attempt to operate this trimmer until you have read thoroughly and understand completely all instructions, safety rules, etc. contained in this manual. Failure to comply can result in accidents involving fire, electric shock, or serious personal injury. Save operator's manual and review frequently for continuing safe operation, and instructing others who may use this tool.

### READ ALL INSTRUCTIONS

#### GENERAL SAFETY RULES

- For safe operation, read and understand all instructions before using the trimmer/brushcutter. Follow all safety instructions. Failure to follow all safety instructions listed below, can result in serious personal injury.
- Do not allow children or untrained individuals to use this unit.
- Never start or run the engine in a closed or poorly ventilated area; breathing exhaust fumes can kill.
- Clear the work area before each use. Remove all objects such as rocks, broken glass, nails, wire, or string which can be thrown or become entangled in the string head or blade.
- Wear full eye and hearing protection while operating this unit.
- Wear heavy long pants, boots, and gloves. Do not wear loose fitting clothing, short pants, jewelry of any kind, or go barefoot.
- Secure long hair so it is above shoulder level to prevent entanglement in any moving parts.
- Keep all bystanders, children, and pets at least 15 m (50 ft.) away.
- Do not operate this unit when you are tired, ill, or under the influence of alcohol, drugs, or medication.
- Do not operate in poor lighting.
- Keep firm footing and balance. Do not overreach. Overreaching can result in loss of balance or exposure to hot surfaces.
- Keep all parts of your body away from any moving part.
- Do not touch area around the muffler or cylinder of the trimmer/brushcutter, these parts get hot from operation.
- Always stop the engine and remove the spark plug wire before making any adjustments or repairs except for carburetor adjustments.

# SAFETY

- Inspect the unit before each use for loose fasteners, fuel leaks, etc. Replace any damaged parts before use.
- The string head or blade will rotate during carburetor adjustments.
- It has been reported that vibrations from hand-held tools may contribute to a condition called Raynaud's Syndrome in certain individuals. Symptoms may include tingling, numbness and blanching of the fingers, usually apparent upon exposure to cold. Hereditary factors, exposure to cold and dampness, diet, smoking and work practices are all thought to contribute to the development of these symptoms. It is presently unknown what, if any, vibrations or extent of exposure may contribute to the condition. There are measures that can be taken by the operator to possibly reduce the effects of vibration:
  - a) Keep your body warm in cold weather. When operating the unit wear gloves to keep the hands and wrists warm. It is reported that cold weather is a major factor contributing to Raynaud's Syndrome.
  - b) After each period of operation, exercise to increase blood circulation.
  - c) Take frequent work breaks. Limit the amount of exposure per day.
  - d) Keep the tool well maintained, fasteners tightened and worn parts replaced.

If you experience any of the symptoms of this condition, immediately discontinue use and see your physician about these symptoms.

- Mix and store fuel in a container approved for gasoline.
- Mix fuel outdoors where there are no sparks or flames. Wipe up any fuel spillage. Move 9 m (30 ft. ) away from refueling site before starting engine.
- Stop the engine and allow to cool before refueling or storing the unit.
- Allow the engine to cool; empty the fuel tank and secure the unit from moving before transporting in a vehicle.

## SPECIFIC SAFETY RULES FOR TRIMMER USE














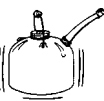
- Replace string head if cracked, chipped, or damaged in any way. Be sure the string head or blade is properly installed and securely fastened. Failure to do so can cause serious injury.
- Make sure all guards, straps, deflectors and handles are properly and securely attached.
- Use only the manufacturer's replacement string in the cutting head. Do not use any other cutting attachment.
- Never operate unit without the grass deflector in place and in good condition.
- Maintain a firm grip on both handles while trimming. Keep string head below waist level. Never cut with the string head located over 76 cm (30 in.) or more above the ground.

## SPECIFIC SAFETY RULES FOR BRUSHCUTTER AND BLADE USE



- After engine stops, keep rotating blade in heavy grass or pulpy weeds until it stops.
- Do not operate the brushcutter unless the blade guard is firmly secured in place and in good condition.
- Use heavy gloves while installing or removing blades.
- Always stop the engine and remove the spark plug wire before attempting to remove any obstruction caught or jammed in the blade or before removing and installing the blade.
- Do not attempt to touch or stop the blade when it is rotating.
- A coasting blade can cause injury while it continues to spin after the engine is stopped or throttle trigger released. Maintain proper control until the blade has completely stopped rotating.
- Replace any blade that has been damaged. Always make sure blade is installed correctly and securely fastened before each use. Failure to do so can cause serious injury.
- Use only the manufacturer's replacement TRI-ARC blade intended for use on this brushcutter. Do not use any other blade.
- The TRI-ARC blade is suited for cutting pulpy weeds and vines only. Do not use for any other purpose. Never use the TRI-ARC blade to cut woody brush.
- Exercise extreme caution when using the blade with this unit. Blade thrust is the reaction that may occur when the spinning blade contacts anything it cannot cut. This contact may cause the blade to stop for an instant, and suddenly "thrust" the unit away from the object that was hit. This reaction can be violent enough to cause the operator to lose control of the unit. Blade thrust can occur without warning if the blade snags, stalls, or binds. This is more likely to occur in areas where it is difficult to see the material being cut. For cutting ease and safety, approach the weeds being cut from the right to the left. In the event an unexpected object or woody stock is encountered, this could minimize the blade thrust reaction.
- Never cut any material over 13 mm (1/2 in.) diameter.
- Always wear the shoulder strap when using the brushcutter and adjust to a comfortable operating position. Maintain a firm grip on both handles while cutting with a blade. Keep the blade away from body and below waist. Never use the brushcutter with the blade located 76 cm (30 in.) or more above the ground level.
- Cover the blade with the blade protector before storing the unit, or during transportation. Always remove the blade protector before using the unit. If not removed, the blade protector could become a thrown object as the blade begins to turn.

# SYMBOLS

**Important:** Some of the following symbols may be used on your tool. Please study them and learn their meaning. Proper interpretation of these symbols will allow you to operate the tool better and safer.

SYMBOL	NAME	EXPLANATION
	Safety Alert Symbol	Indicates danger, warning or caution. It means attention!!! Your safety is involved.
	Read Your Operator's Manual	Your manual contains special messages to bring attention to potential safety concerns as well as operating and servicing information. Please read all the information carefully to assure satisfaction and safe use.
	Wear eye and hearing protection.	Wear eye and hearing protection when operating this equipment.
	Keep bystanders away.	Keep all bystanders at least 50 feet (15 m) away.
	Ricochet.	Danger of Ricochet.
	Tri-Arc blade.	Tri-Arc blade is appropriate for this unit and is suited for cutting pulpy weeds and vines.
	Do not use toothed blade.	This unit is not intended for use with a toothed saw type blade.
	RPM Decal	Rotational direction and maximum speed of the shaft for the cutting attachment.
	Boots	Wear non-slip safety footwear when using this equipment.
	Gloves	Wear non-slip, heavy-duty gloves.
	No Smoking	Do not smoke when mixing fuel or filling fuel tank.
	Gasoline	Use unleaded gasoline intended for automotive use with an octane rating of 87 ([R + M] / 2) or higher.
	Oil	Use 2-cycle oil for air cooled engines.
	Mix Gasoline and Oil	Mix the fuel mix thoroughly and also each time before fueling.

# SYMBOLS

SYMBOL	NAME	EXPLANATION
	Switch	On/Off Switch I = ON to Run O = OFF to Stop
	Handle Decal	Positioning decal for front handle.

The purpose of safety symbols is to attract your attention to possible dangers. The safety symbols, and the explanations with them, deserve your careful attention and understanding. The safety warnings do not by themselves eliminate any danger. The instructions or warnings they give are not substitutes for proper accident prevention measures.

## SYMBOL MEANING



**DANGER:** Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



**WARNING:** Indicates a potentially hazardous situation which, if not avoided, could result in serious injury.



**CAUTION:** Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices that may cause property damage.

**NOTE:** Advises you of information or instructions vital to the operation or maintenance of the equipment.

## SAVE THESE INSTRUCTIONS

# TECHNICAL DATA

Weight	Without fuel, cutting attachment .....	6.03 Kg
	With blade .....	6.35 Kg
	With string head .....	6.22 Kg
Fuel tank volume .....		42.5 cm <sup>3</sup>
Cutting swath .....		457 mm
Engine displacement .....		30 cm <sup>3</sup>
Maximum engine performance (in accordance with ISO 8893) .....		0.78 kW
Maximum rotational frequency of the spindle .....		10000 min <sup>-1</sup>
Engine Speed (rotational frequency) at recommended max. spindle rotational frequency .....		12500 min <sup>-1</sup>
Engine speed (rotational frequency) at idle .....		2000 - 2500 min <sup>-1</sup>
Fuel consumption (in accordance with ISO 8893) at max. engine performance .....		0.52
Specific fuel consumption (in accordance with ISO 8893) at max. engine performance .....		0.47
Vibration level idling	Left Handle .....	6.0
	Right Handle .....	7.8
Vibration level racing	Left Handle .....	5.1
	Right Handle .....	6.0
Sound pressure level (in accordance with EN ISO 11806:1997, ISO 7917:1987) .....		99
Sound power level (in accordance with ISO 10884) .....		112

# UNPACKING

## INSTRUCTIONS

- Carefully remove the product from the carton.
- Inspect the product to make sure no breakage or damage occurred during shipping.
- Do not discard the packing material until you have inspected and operated the product.

## PACKING LIST FOR OWNER'S KIT

- Grass deflector
- Blade guard
- Tri-Arc blade
- Shoulder strap
- Muffler guard, torx wrench and screws
- Holding pin
- Wrenches - 13 mm (1/2 in.) and 16 mm (5/8 in.)
- Hardware
- Operator's manual

# FEATURES

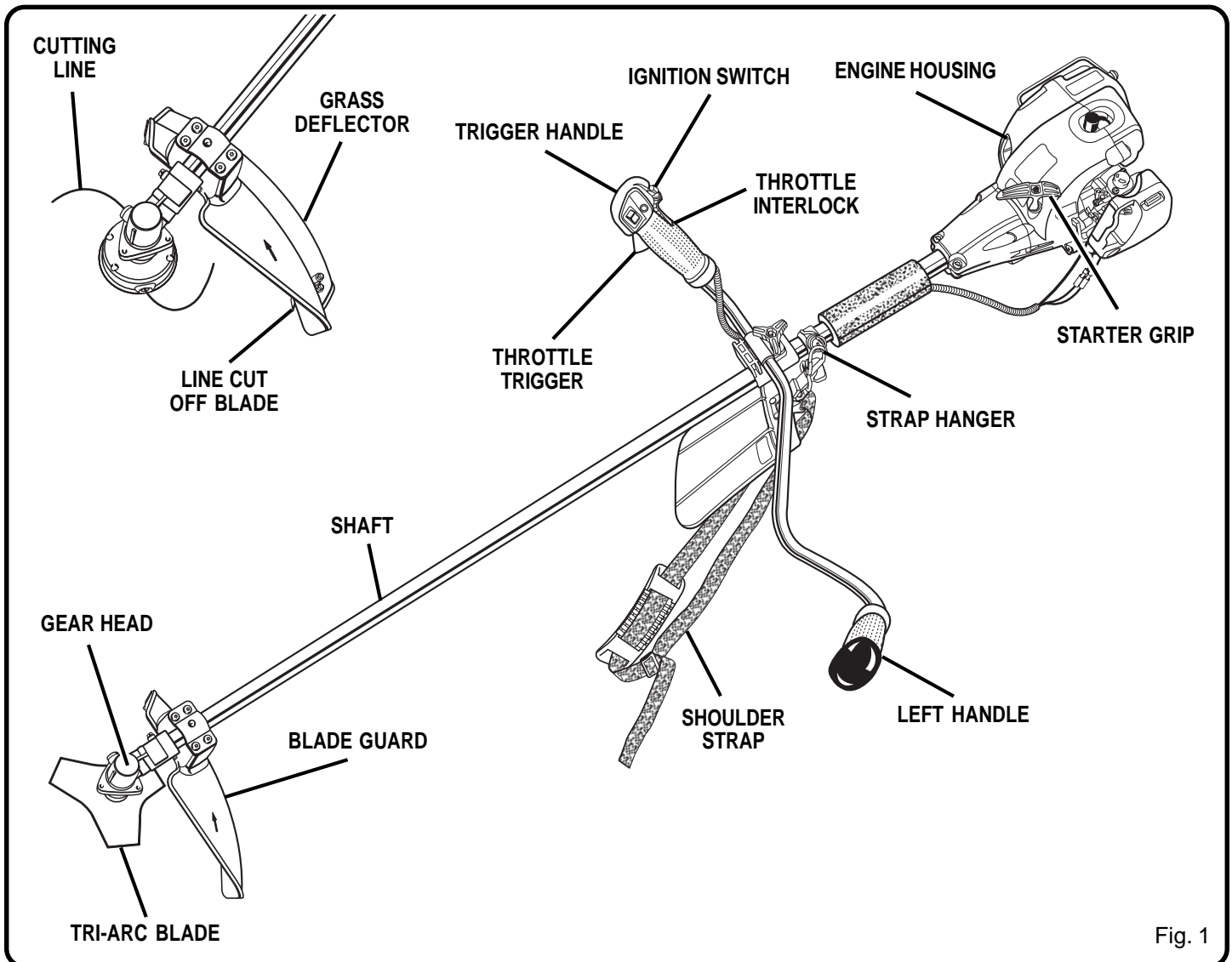


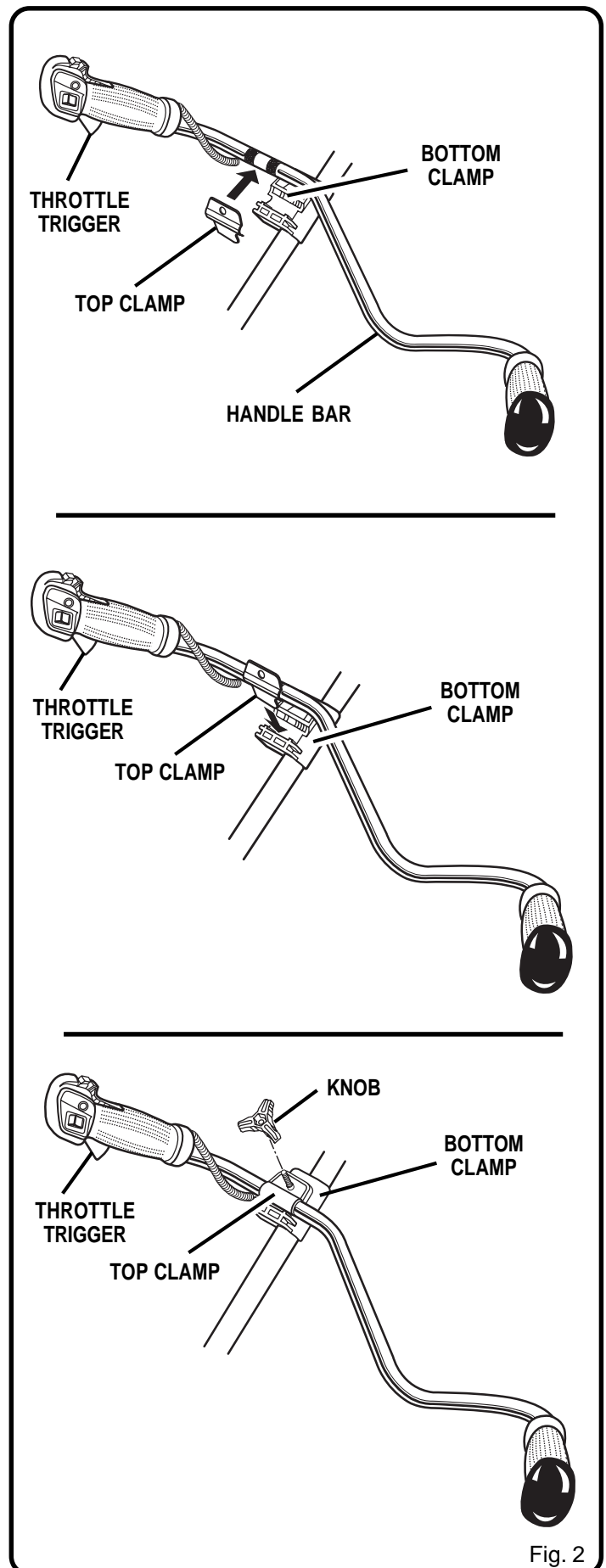
Fig. 1

# ASSEMBLY

## HANDLE

See Figure 2.

1. Place the handle bar in the bottom clamp located on the shaft housing.  
**NOTE:** The throttle trigger must be mounted to the operator's right side.
2. Insert the square tab of top clamp into the mounting hole of the bottom clamp.
3. Adjust the handle bar for best operator control in a comfortable upright position.
4. Install the knob and tighten securely.



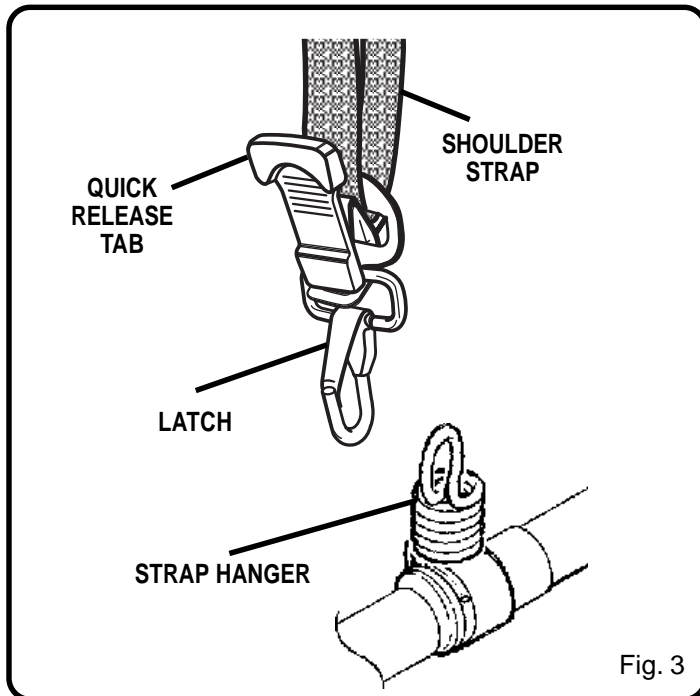
# ASSEMBLY

## ATTACHING THE SHOULDER STRAP

See Figure 3.

1. Connect the latch on the shoulder strap to the strap hanger.
2. Adjust the strap to a comfortable position.

**NOTE:** To quickly release the product from the shoulder strap, sharply pull the quick release tab.



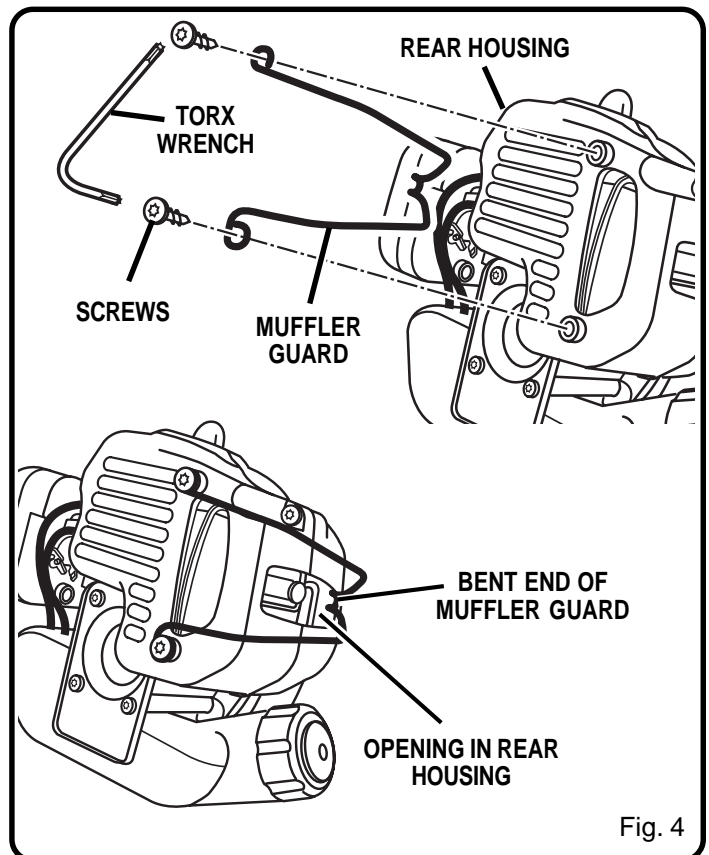
## MUFFLER GUARD ASSEMBLY

See Figure 4.

1. Remove muffler guard and two screws from the owner's kit.
2. Attach the muffler guard to the rear housing.

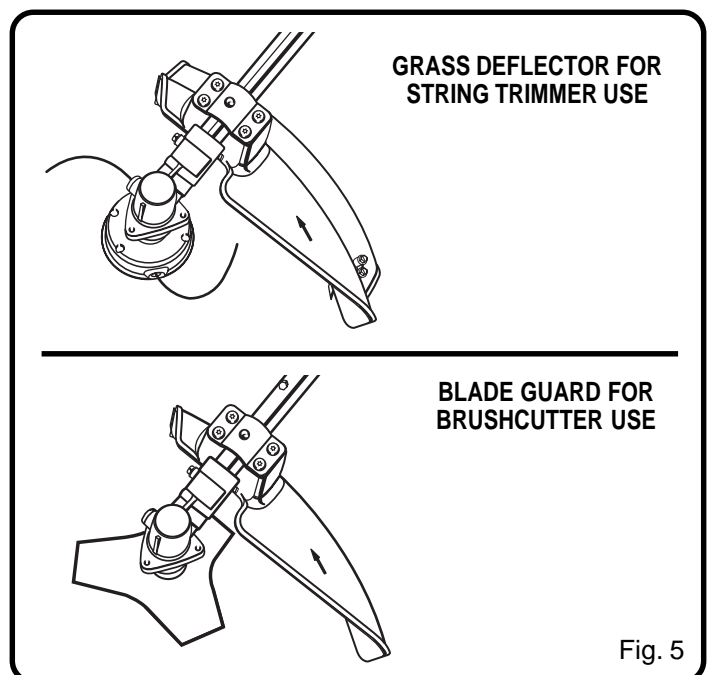
**NOTE:** Make sure the bent end of the muffler guard fits securely into the opening of the rear housing.

3. Using the torx wrench supplied, install the two screws and tighten securely.



## GRASS DEFLECTOR AND BLADE GUARD USE

**NOTE:** When converting from brushcutter to string trimmer, or string trimmer to brushcutter, make sure the correct guard/deflector is being used. See Figure 5.





# ASSEMBLY

## BLADE GUARD

See Figure 6.

1. Attach the blade guard to the mounting bracket; install the four screws (10-24 x 3/4 in.) from the top of the mounting bracket through the blade guard and into the threaded mounting plates.
2. Using the torx wrench supplied, tighten all four screws securely.

**NOTE:** When using the string head, the string shield must be attached to blade guard.

## GRASS DEFLECTOR

See Figure 6.

1. Attach the grass deflector to the blade guard by placing the three locking tabs into the three notches.
2. Snap the blade guard and grass deflector together to lock into place.



### WARNING:

Always stop the engine and remove the spark plug wire before making any adjustments such as changing cutting heads; this is to reduce the risk of serious personal injury.

## CONVERTING FROM STRING TRIMMER TO BRUSHCUTTER

### REMOVING THE STRING HEAD

See Figure 7.

1. Align the slot in the upper flange washer with the hole in the gear head. Place the holding pin through the slot in the upper flange washer and the hole in the gear head. Turn the spool retainer clockwise to remove. Remove the spool and string head from the drive connector.
2. Place the holding pin through the upper flange washer and the gear head. Using the 16 mm (5/8 in.) wrench supplied, turn the drive connector clockwise to remove.
3. Remove the upper flange washer from the gear shaft and retain for blade installation.
4. Remove the grass deflector by pushing in on the three locking tabs while pulling on the grass deflector to separate from the blade guard.

**NOTE:** Store the string head parts together for later use.

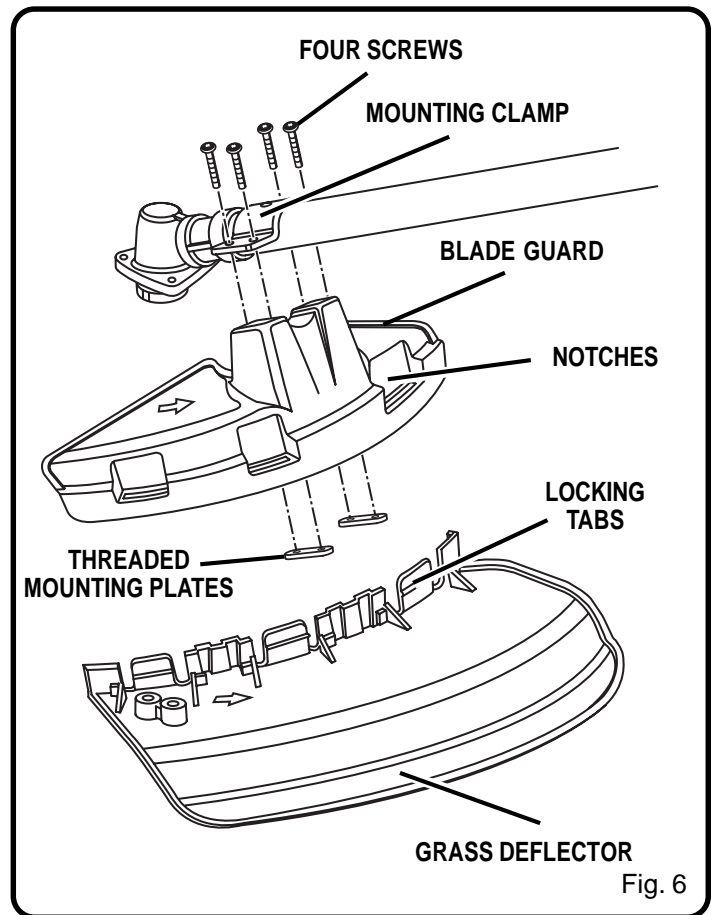


Fig. 6

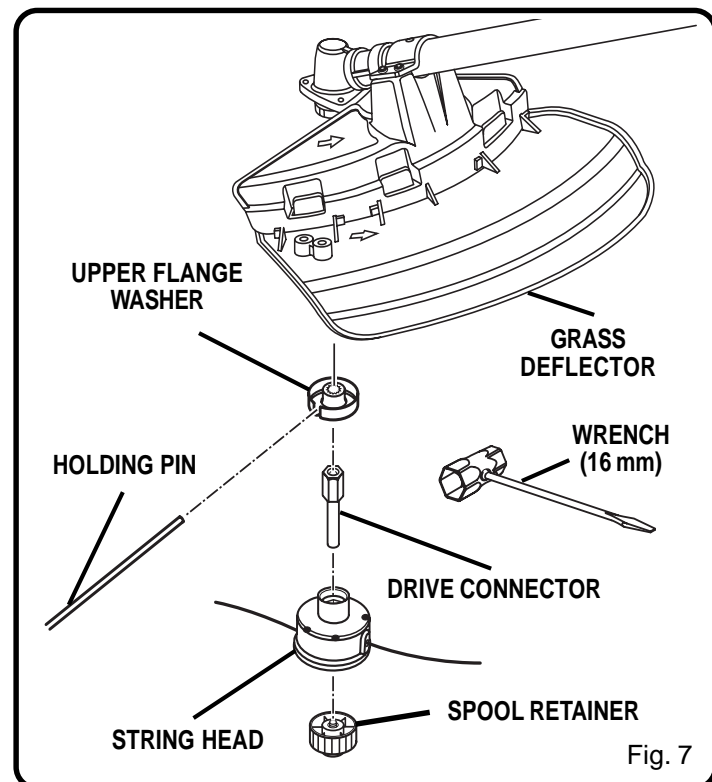


Fig. 7

# ASSEMBLY

## INSTALLING THE BLADE

See Figure 8.

1. Place the upper flange washer over the gear shaft with the hollow side toward the blade guard.
2. Center the blade on the upper flange, making sure the blade sits flat. Install the cupped washer with the raised center away from the blade. Install the blade nut. The blade turns counterclockwise from the operator's position.
3. Place the holding pin through the slot in the upper flange washer and the hole in the gear head. Using the 13 mm (1/2 in.) wrench supplied, turn the blade nut counterclockwise.
4. Tighten nut securely.

## CONVERTING FROM BRUSHCUTTER TO STRING TRIMMER

### REMOVING THE BLADE

See Figure 8.

1. Place the holding pin through the slot in the upper flange washer and the gear head. Turn the blade nut clockwise to remove.
2. Remove the cupped washer and the blade.
3. Remove the upper flange washer from the gear shaft and retain for the string head installation.
4. Attach the grass deflector to the blade guard by placing the three locking tabs into the three notches.
5. Snap the blade guard and grass deflector together to lock into place.

**NOTE:** Store the brushcutter parts together for later use.

### INSTALLING THE STRING HEAD

See Figure 7.

1. Install the upper flange washer onto the gear shaft with the hollow side toward the gear head.
2. Place the holding pin through the slot in the upper flange washer and the hole in the gear head. Using the 16 mm (5/8 in.) wrench supplied, turn the drive connector counterclockwise to install. Tighten securely.
3. Place the string head on the drive connector.
4. Place the holding pin through the slot in the upper flange washer and the hole in the gear head. Install the spool retainer and turn counterclockwise to tighten securely.

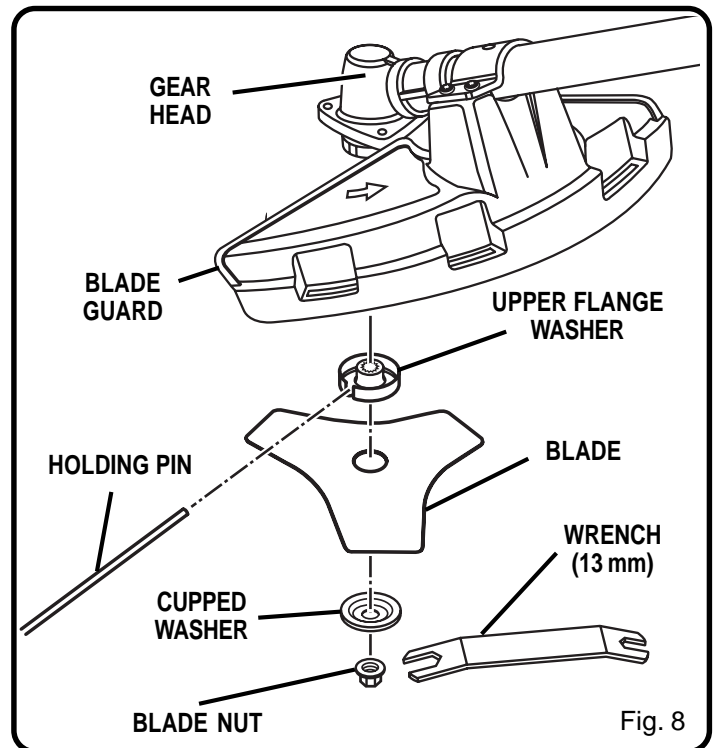


Fig. 8

# OPERATION

## FUEL AND REFUELING

### HANDLING THE FUEL SAFELY

- Always handle fuel with care, it is highly flammable.
- Always refuel outdoors where there are no sparks and flames. Do not inhale fuel vapors.
- Do not let gasoline or oil come in contact with your skin.
- Keep gasoline and oil away from the eyes. If gasoline or oil comes in contact with the eyes, wash them immediately with clean water. If irritation is still present, see a doctor immediately.
- Clean up spilled fuel immediately.

### MIXING THE FUEL

- This product is powered by a 2-cycle engine and requires pre-mixing gasoline and 2-cycle oil. Pre-mix unleaded gasoline and 2-cycle engine oil in a clean container approved for gasoline.
- This engine is certified to operate on unleaded gasoline intended for automotive use with an octane rating of 87 ([R + M] / 2) or higher.
- Do not use any type of pre-mixed gasoline/oil from fuel service stations, this includes the pre-mixed gasoline/oil intended for use in mopeds, motorcycles, etc.
- Use high a quality 2-cycle self mixing oil for air cooled engines. Do not use automotive oil or 2-cycle outboard oil.
- Mix 2% oil into the gasoline. This is a 50:1 ratio.
- Mix the fuel thoroughly and also each time before fueling.
- Mix in small quantities. Do not mix quantities larger than usable in a 30 day period. A 2-cycle oil containing a fuel stabilizer is recommended.



### FILLING THE TANK




1. Clean surface around fuel cap to prevent contamination.
2. Loosen fuel cap slowly to release pressure and to keep fuel from escaping around the cap.
3. Carefully pour fuel mixture into the tank. Avoid spillage.

4. Prior to replacing the fuel cap, clean and inspect the gasket.
5. Immediately replace fuel cap and hand tighten. Wipe up any fuel spillage. Move 9 m (30 ft.) away from refueling site before starting engine.

**NOTE:** It is normal for smoke to be emitted from a new engine during and after first use.

### ⚠ WARNING:

Always shut off engine before fueling. Never add fuel to a machine with a running or hot engine. Move at least 9 m (30 ft.) from refueling site before starting engine. Do not smoke!

	+		=	
1 Litre	+	20 ml	=	} 50:1
2 Litres	+	40 ml	=	
3 Litres	+	60 ml	=	
4 Litres	+	80 ml	=	
5 Litres	+	100 ml	=	

## OPERATING THE TRIMMER

Hold the trimmer/brushcutter with the right hand on the trigger handle and the left hand on the left handle. Keep a firm grip with both hands while in operation. Trimmer should be held at a comfortable position with the trigger handle about hip height. See *Figure 9*.

Always operate trimmer at full throttle. Cut tall grass from the top down. This will prevent grass from wrapping around the shaft housing and string head which may cause damage from overheating. If grass becomes wrapped around the string head, stop the engine, disconnect the spark plug wire, and remove the grass. Prolonged cutting at partial throttle will result in oil dripping from the muffler.

# OPERATION

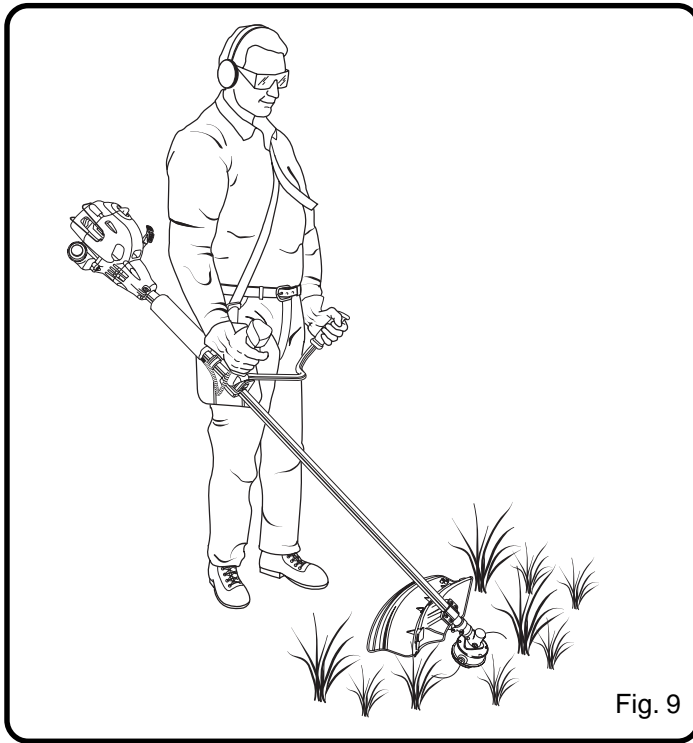


Fig. 9

## ADVANCING THE STRING

### ADVANCING STRING USING THE EZ LINE™ TAP ADVANCE SYSTEM

String advance is controlled by tapping string head on grass while running engine at full throttle.

1. Run engine at full throttle.
2. Tap string head on ground to advance string. String advances each time the head is tapped.
3. Several taps may be required until string strikes the cut off blade.
4. Resume trimming.

**NOTE:** If the string is worn too short you may not be able to advance the string by tapping it on the ground. If so, STOP THE ENGINE, and manually advance the string.

### ADVANCING THE STRING MANUALLY

Push the spool retainer down while pulling on string(s) to manually advance the string.

## CUTTING TIPS

See Figure 10.

- Keep the trimmer tilted toward the area being cut; this is the best cutting area.
- Do not cut in dangerous cutting area.
- Use the tip of string to do the cutting; do not force string head into uncut grass.
- Wire and picket fences cause extra string wear, even breakage. Stone and brick walls, curbs, and wood may wear string rapidly.
- Avoid trees and shrubs. Tree bark, wood moldings, siding, and fence posts can easily be damaged by the string.

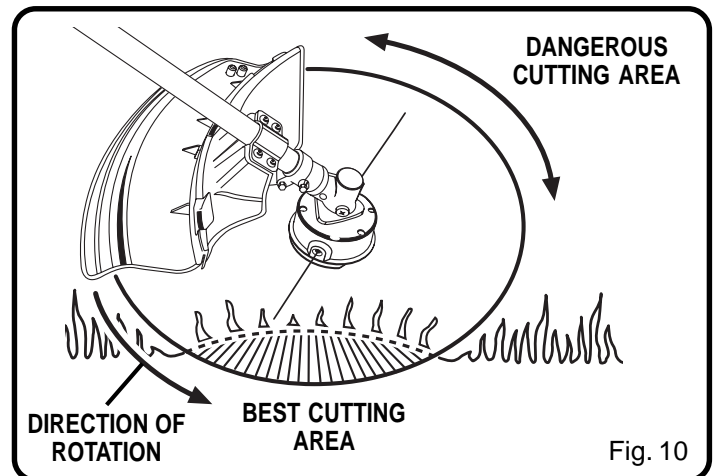


Fig. 10

## GRASS DEFLECTOR LINE TRIMMING CUT-OFF BLADE

See Figure 11.

This trimmer is equipped with a line trimming cut-off blade on the grass deflector. For best cutting, advance string until it is trimmed to length by the cut-off blade. Advance string whenever you hear the engine running faster than normal. This will maintain best performance and keep string long enough to advance properly.

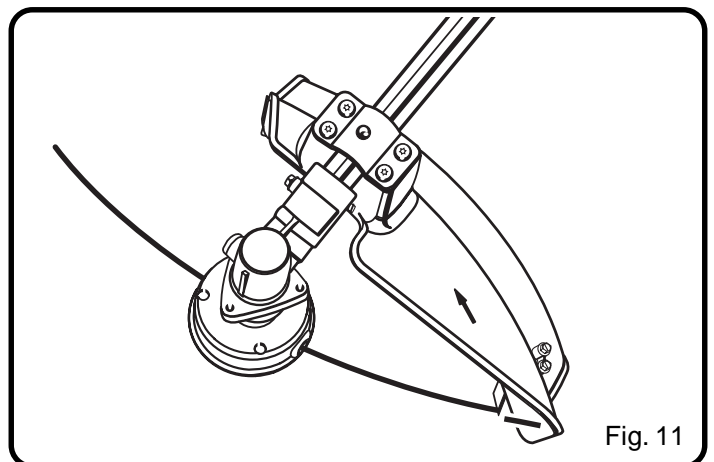


Fig. 11

# OPERATION

## OPERATING THE BRUSHCUTTER

Hold the brushcutter with the right hand on the trigger handle and the left hand on the left handle. Keep a firm grip with both hands while in operation. Brushcutter should be held at a comfortable position with the trigger handle about hip height. Maintain your grip and balance on both feet. Position yourself so that you will not be drawn off balance by the kickback reaction of the cutting blade.

Adjust the shoulder strap to position the brushcutter at a comfortable operating position and to assure that the shoulder strap will reduce the risk of operator contact with the blade. See Figure 12.



Exercise extreme caution when using the blade with this unit. Blade thrust is the reaction that may occur when the spinning blade contacts anything it cannot cut. This contact may cause the blade to stop for an instant, and suddenly “thrust” the unit away from the object that was hit. This reaction can be violent enough to cause the operator to lose control of the unit. Blade thrust can occur without warning if the blade snags, stalls, or binds. This is more likely to occur in areas where it is difficult to see the material being cut. For cutting ease and safety, approach the weeds being cut from the right to the left. In the event an unexpected object or woody stock is encountered, this could minimize the blade thrust reaction. See Figure 13.

**APPROACH THE WEEDS BEING CUT FROM THE RIGHT. THE WEEDS WILL BE CUT AGAINST THE LEFT SIDE OF THE BLADE GUARD.**

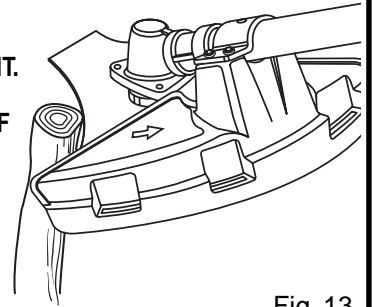


Fig. 13

## TRI-ARC BLADE

The TRI-ARC blade is suited only for pulpy weeds and vines. When the blade becomes dull, it can be turned over to extend the life of the blade. Do not sharpen the TRI-ARC blade.

Use only TRI-ARC blade, part number 984227001, available at your local retailer.

## CUTTING TECHNIQUE - BLADE

### **⚠ WARNING:**

Extreme care must be taken when using blades to insure safe operation. Read the safety information for safe operation using the blade, refer to “Specific Safety Rules for Brushcutter and Blade Use” earlier in this manual.

- Always hold brushcutter with both hands when operating. Use a firm grip on both handles.
- Maintain your grip and balance on both feet. Position yourself so that you will not be drawn off balance by the kickback reaction of the cutting blade.
- Inspect and clear the area of any hidden objects such as glass, rocks, concrete, fencing, wire, wood, metal, etc.
- Never use blades near sidewalks, fencing, posts, buildings or other immovable objects.
- Never use a blade after hitting a hard object without first inspecting it for damage. Do not use if any damage is detected.
- The unit is used as a scythe, cutting from the right to the left in a broad sweeping action from side to side.

# OPERATION

## STARTING AND STOPPING

See Figures 14 and 15.

**NOTE:** The unit is equipped with an automatic choke feature. The starting instructions for this feature are different from units with a manual choke. Be sure to read and follow the starting instructions below.

### **WARNING:**

Never start or run the engine inside a closed or poorly ventilated area; breathing exhaust fumes can kill.

#### TO START A COLD ENGINE:

1. Lay trimmer on a flat, bare surface.
2. Push primer bulb 8 to 10 times.

**NOTE:** Do not squeeze the throttle trigger before engine starts. Squeezing the throttle trigger at this time will prevent the unit from starting.

3. Move the lever to the **"COLD START"** position. See Figure 15.
4. Pull the starter rope until engine runs.
5. Allow the engine to warm up for 4-10 seconds.
6. Depress the interlock then squeeze and release the throttle trigger. This allows the choke to automatically set to the **"WARM START"** position. Your unit is now ready for use.

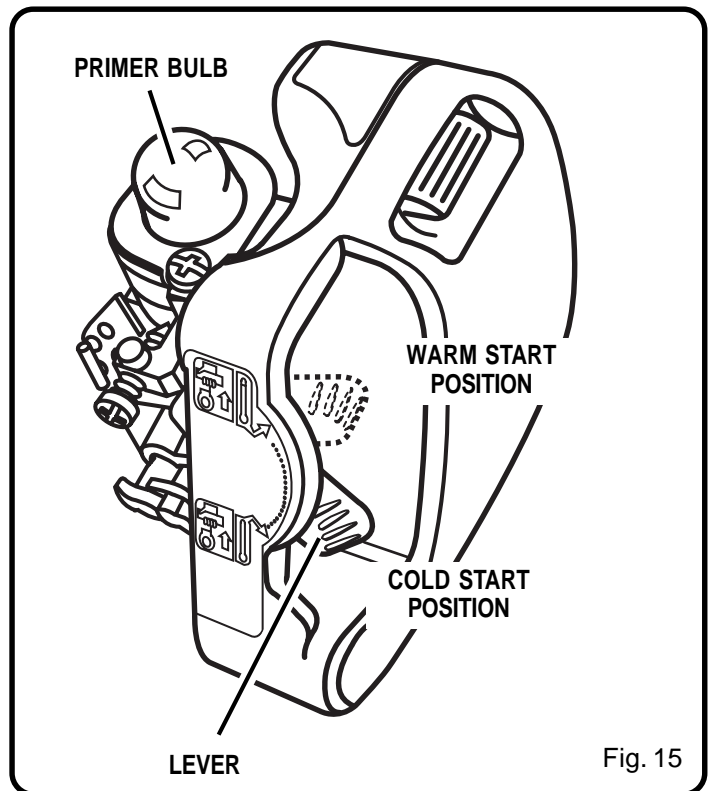
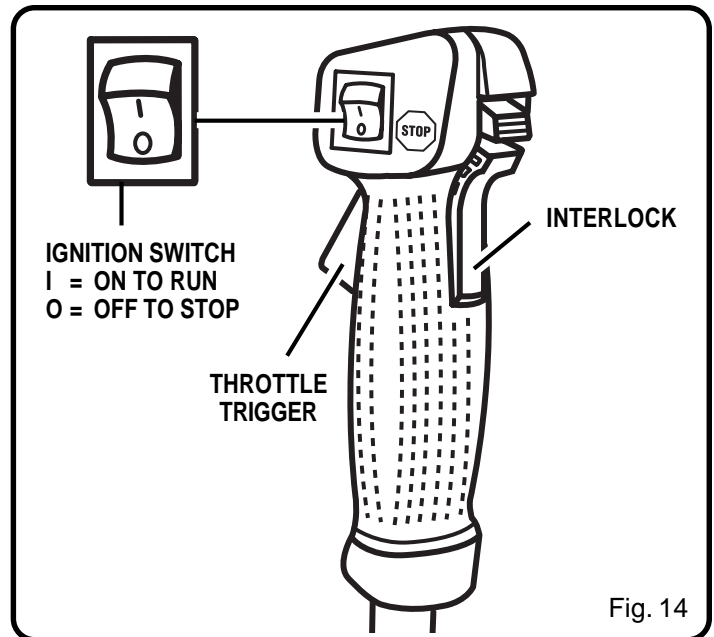
**NOTE:** The lever will automatically set to the **"WARM START"** position after the throttle trigger is squeezed for the first time.

#### TO START A WARM ENGINE:

1. Lay trimmer on a flat, bare surface.
2. Choke lever should already be in the **"WARM START"** position. If not, squeeze and release throttle trigger. Pull the starter rope until unit runs.

#### TO STOP THE ENGINE:

To stop the engine, depress the switch to the **"O"** position.





# MAINTENANCE



## WARNING:

Use only original manufacturer's replacement parts, accessories and attachments. Failure to do so can cause possible injury, poor performance and may void your warranty.

- You may make adjustments and repairs described here. For other repairs, have the trimmer serviced by an authorized servicing dealer.
- Consequences of improper maintenance may include excess carbon deposits resulting in loss of performance and discharge of black oily residue dripping from the muffler.
- Make sure all guards, straps, deflectors and handles are properly and securely attached to avoid the risk of personal injury.

## SPOOL REPLACEMENT

### EZ LINE™ TAP ADVANCE SYSTEM

#### NEW PREWOUND SPOOL

See Figures 16 and 17.

If replacing string only, refer to "String Replacement" later in this manual.

Use only 2.4 mm (.095 in.) diameter monofilament string. Use the manufacturer's replacement string for best performance.

1. Stop the engine, disconnect the spark plug wire. Hold the string head and unscrew the spool retainer. Turn clockwise.
2. Remove the empty spool from the string head. Keep the spring attached to the spool.
3. To install the new spool, make sure the two strings are captured in the slots opposite each other on the new spool. Make sure the ends of each string is extended approximately 152 mm (6 in.) beyond each slot.
4. Thread the strings into the eyelets in the string head. Carefully push the spool into the string head (gently pull the strings to the outside if necessary). When the spool is positioned in the string head, grasp the strings and pull sharply to release them from the slots in the spool.
5. Push down and turn the spool counterclockwise until it no longer turns. Hold the spool down and rotate clockwise a small amount. Release the spool. The spool should be locked down in the string head. If not, hold down and rotate until locked.

6. Make sure the string head and the spool retainer are installed on the shaft by turning the retainer counterclockwise to tighten.
7. Pull the strings again to rotate the spool into cutting position. Push the spool retainer down while pulling on string(s) to manually advance the string and to check for proper assembly of the string head.

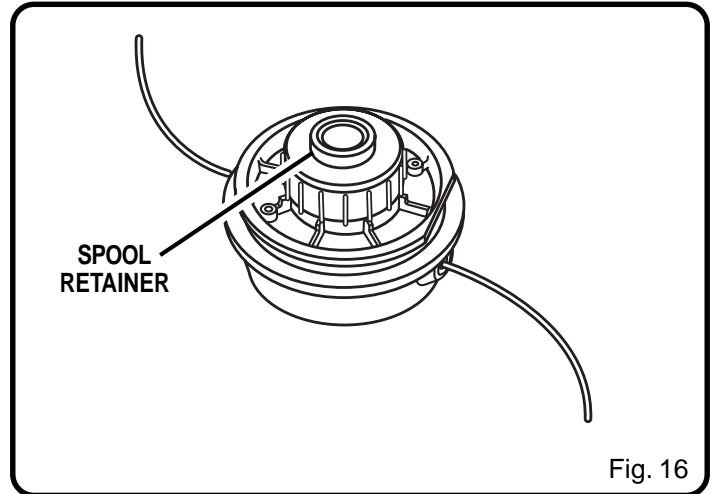


Fig. 16

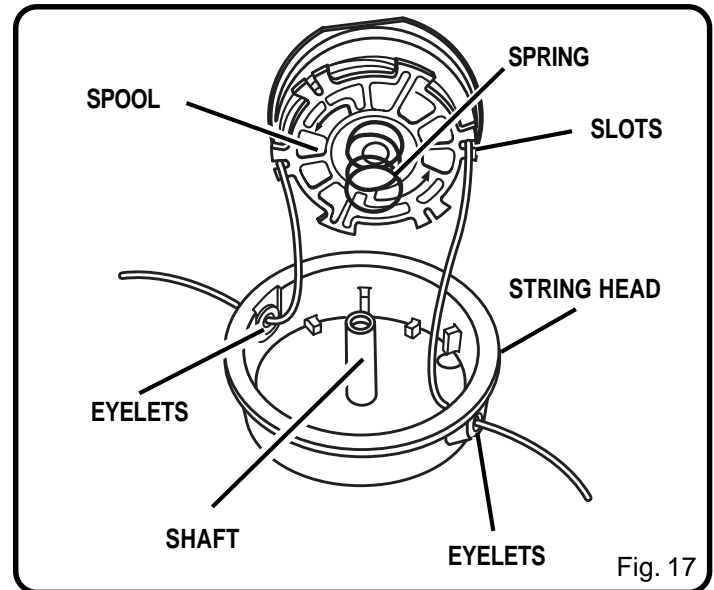


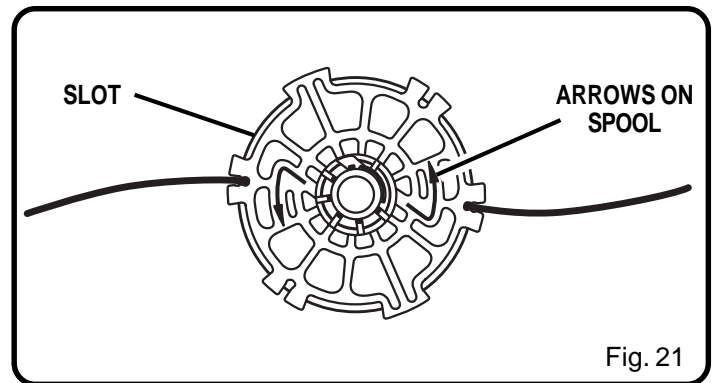
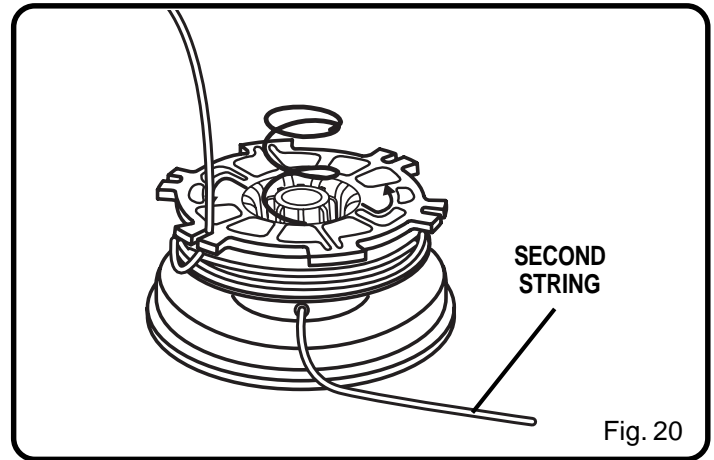
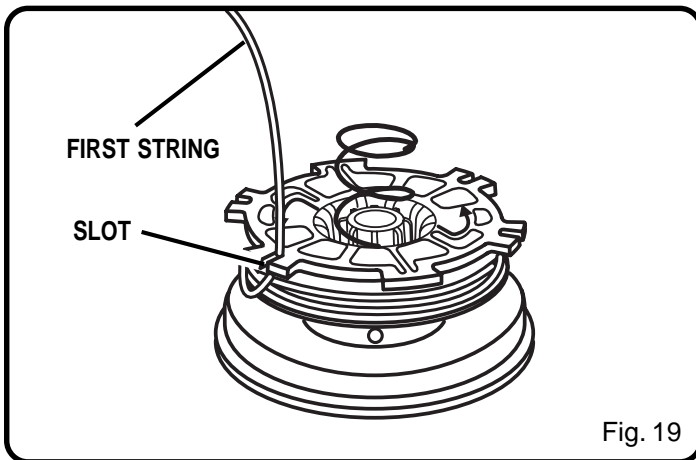
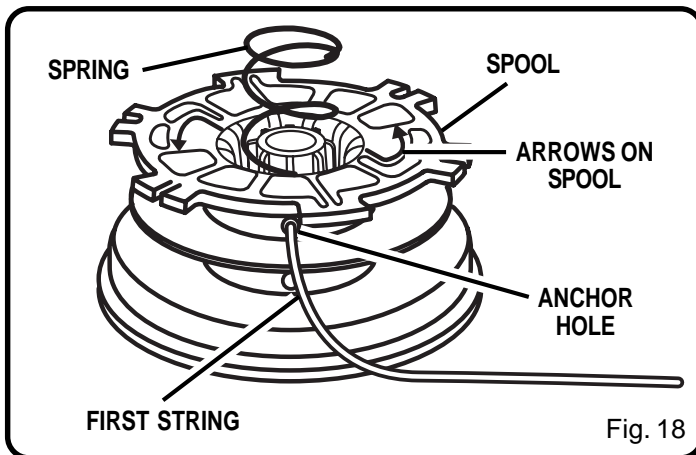
Fig. 17

# MAINTENANCE

## STRING REPLACEMENT

See Figures 18, 19, 20, and 21.

1. Stop the engine, disconnect the spark plug wire. Hold the string head and unscrew the spool retainer. Turn clockwise.
2. Remove the spool from the string head. **NOTE:** Keep the spring attached to the spool. Remove any old string remaining on the spool.
3. Cut two pieces of string, each being approximately 2.7 m (9 ft.) long.
4. Insert the first string into the anchor hole in the upper part of the spool. Wind the first string around the upper part of the spool counterclockwise, as shown by the arrows on the spool. Place string in the slot on upper spool flange, leaving about 152 mm (6 in.) extended beyond the slot. Do not overfill. After winding the string, there should be at least 6 mm (1/4 in.) between the wound string and the outside edge of the spool.
5. Repeat above step with second string, using the bottom part of spool. Do not overfill.
6. Replace the spool and the spool retainer. Refer to "Spool Replacement" earlier in this manual.

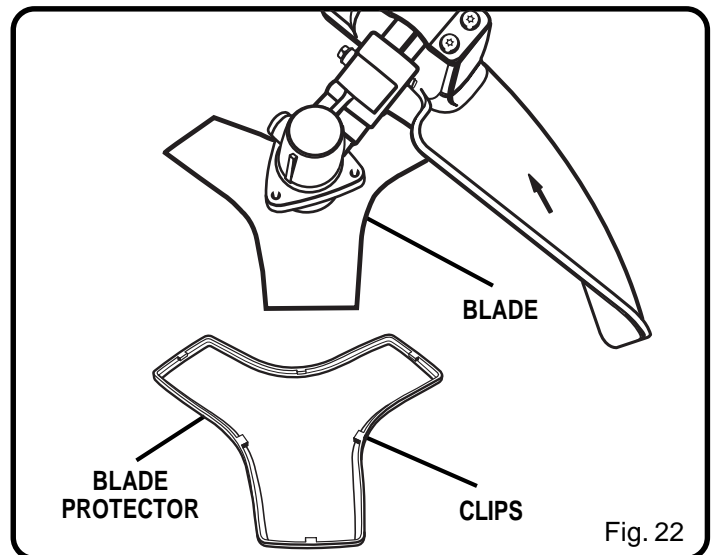


## BLADE PROTECTOR

See Figures 22.

Always place the blade protector on the blade when the unit is not in use. The blade protector has clips around the edges to snap over the blade and keep it in place. Wear gloves and be cautious when handling the blade.

**NOTE:** Always remove the blade protector before using the unit. If not removed, the blade protector could become a thrown object as the blade begins to turn.





# MAINTENANCE

## CLEANING THE EXHAUST PORT AND MUFFLER

Depending on the type of fuel used, the type and amount of oil used, and/or your operating conditions, the exhaust port and muffler may become blocked with carbon deposits. If you notice a power loss with your gas powered tool, a qualified service technician will need to remove these deposits to restore performance.

## SPARK ARRESTOR

The spark arrestor must be cleaned or replaced every 25 hours or yearly to ensure proper performance of your product. Spark arrestors may be in different locations depending on the model purchased. Please contact your nearest service dealer for the location of the spark arrestor for your model.

### Cleaning Instructions:

- Remove the spark arrestor from the muffler.
- If your spark arrestor is made of a fiberglass material, discard and replace.
- If your spark arrestor is made of a metal material follow these cleaning instructions:
  1. Spray the spark arrestor with a quality carbon cleaner.
  2. Gently clean using a wire brush.
  3. Install the new or cleaned spark arrestor and reassemble completely before use.

## REPLACING AND CLEANING AIR FILTER

See Figures 23 and 24.

For proper performance and long life, keep air filter clean.

1. Remove the air filter cover by pushing down on the latch with your thumb while gently pulling on the cover.
2. Remove the filter, clean it in warm soapy water. Rinse and let dry completely. For best performance, replace annually.
3. Reinstall the filter.
4. Replace the air filter cover by inserting the tabs on the bottom of the cover into the slots on the air filter base; push the cover up until it latches securely in place.

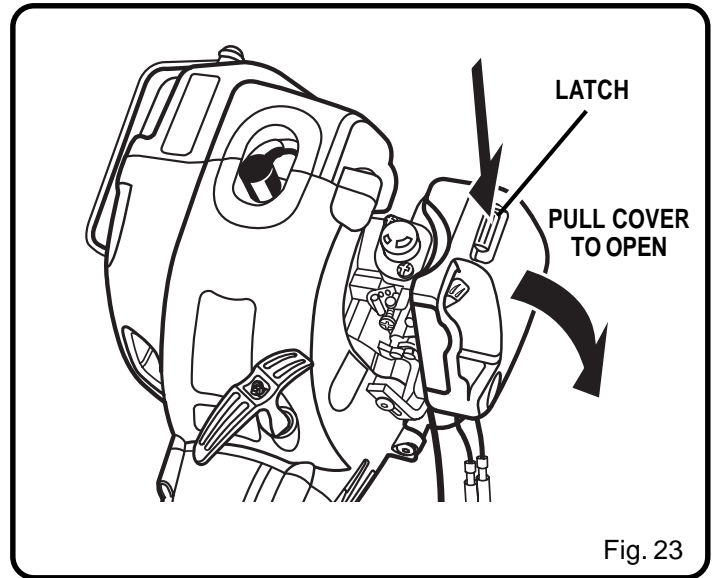


Fig. 23

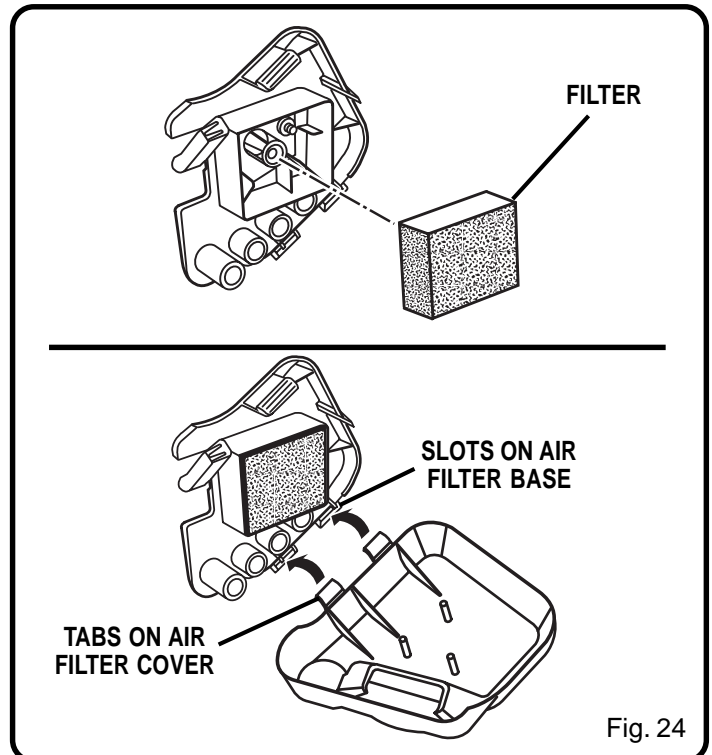


Fig. 24

# MAINTENANCE

## FUEL CAP



### **WARNING:**

A leaking fuel cap is a fire hazard and must be replaced immediately.

The fuel cap contains a non-serviceable filter and a check valve. A clogged fuel filter will cause poor engine performance. If performance improves when the fuel cap is loosened, check valve may be faulty or filter clogged. Replace fuel cap if required.

## SPARK PLUG

This engine uses a Champion RCJ-6Y with 0,63 mm (.025 in.) electrode gap. Use an exact replacement and replace annually.

## STORAGE (1 MONTH OR LONGER)

1. Drain all fuel from tank into a container approved for gasoline. Run engine until it stops.
2. Clean all foreign material from the trimmer. Store it in a well-ventilated place that is inaccessible to children. Keep away from corrosive agents such as garden chemicals and de-icing salts.
3. Cover the blade with the blade protector before storing the unit, or during transportation.
4. Abide by all ISO and local regulations for the safe storage and handling of gasoline. Excess fuel should be used up in other 2-cycle engine powered equipment.

# TROUBLESHOOTING

IF THESE SOLUTIONS DO NOT SOLVE THE PROBLEM CONTACT YOUR AUTHORIZED SERVICE DEALER.

PROBLEM	POSSIBLE CAUSE	SOLUTION
Engine will not start:	<ol style="list-style-type: none"> <li>1. No spark.</li> <li>2. No fuel.</li> <li>3. Flooded engine.</li> <li>4. Starter rope pulls harder now than when new.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check spark. Remove spark plug. Reattach the spark plug cap and lay spark plug on metal cylinder. Pull the starter rope and watch for spark at spark plug tip. If there is no spark, repeat test with a new spark plug.</li> <li>2. Push primer bulb until bulb is full of fuel. If bulb does not fill, primary fuel delivery system is blocked. Contact a servicing dealer. If primer bulb fills, engine may be flooded (see next item).</li> <li>3. Remove spark plug, turn trimmer so spark plug hole is aimed at the ground. Make sure lever is in the "WARM START" position and pull starter cord 10 to 14 times. This will clear excess fuel from engine. Clean and reinstall spark plug. With the throttle trigger fully depressed, pull starter cord three times with lever at "WARM START" position. If engine does not start, move choke lever to "COLD START" and follow normal starting instructions in "STARTING AND STOPPING" section. If engine still fails to start, repeat procedure with a new spark plug.</li> <li>4. Contact a servicing dealer.</li> </ol>
Lever will not go into the "COLD START" position:	Throttle trigger is depressed.	Release throttle trigger. Refer to "Starting and Stopping" earlier in this manual.
Engine starts but will not accelerate:	Carburetor requires adjustment.	*Turn "L" needle counterclockwise 1/16 turn. If "L" low needle can not be turned counterclockwise, do not force plastic limiter caps. Contact a servicing dealer. See <i>Figure 25</i> .
Engine does not reach full speed and emits excessive smoke:	<ol style="list-style-type: none"> <li>1. Check oil fuel mixture.</li> <li>2. Air filter dirty.</li> <li>3. Carburetor requires adjustment.</li> </ol>	<ol style="list-style-type: none"> <li>1. Use fresh fuel and the correct 2-cycle oil mix.</li> <li>2. Clean air filter. Refer to "Replacing and Cleaning Air Filter" earlier in this manual.</li> <li>3. Turn "H" needle clockwise 1/16 - 1/8 turn. See <i>Figure 25</i>.</li> </ol>
Engine starts, runs, and accelerates but will not idle:	Carburetor requires adjustment.	Turn idle speed screw clockwise to increase idle speed. See <i>Figure 25</i> .
Blade continues to rotate at idle speed:	Carburetor requires adjustment.	Turn idle speed screw counterclockwise to reduce idle speed. See <i>Figure 25</i> . If after adjustment, blade continues to rotate, return to an authorized servicing dealer for repair.

# TROUBLESHOOTING

IF THESE SOLUTIONS DO NOT SOLVE THE PROBLEM CONTACT YOUR AUTHORIZED SERVICE DEALER.

PROBLEM	POSSIBLE CAUSE	SOLUTION
String will not advance:	<ol style="list-style-type: none"> <li>1. String welded to itself.</li> <li>2. Not enough string on spool.</li> <li>3. String worn too short.</li> <li>4. String tangled on spool.</li> <li>5. Engine speed too slow.</li> </ol>	<ol style="list-style-type: none"> <li>1. Lubricate with silicone spray.</li> <li>2. Install more string. Refer to "String Replacement" earlier in this manual.</li> <li>3. Pull strings while alternately pressing down on and releasing spool retainer.</li> <li>4. Remove string from spool and rewind. Refer to "String Replacement" earlier in this manual.</li> <li>5. Advance string at full throttle.</li> </ol>
Grass wraps around shaft housing and string head:	<ol style="list-style-type: none"> <li>1. Cutting tall grass at ground level.</li> <li>2. Operating trimmer at part throttle.</li> </ol>	<ol style="list-style-type: none"> <li>1. Cut tall grass from the top down.</li> <li>2. Operate trimmer at full throttle.</li> </ol>
Spool retainer hard to turn:	Screw threads dirty or damaged.	Clean threads and lubricate with grease - if no improvement, replace spool retainer.
Oil drips from muffler:	<ol style="list-style-type: none"> <li>1. Operating trimmer at part throttle</li> <li>2. Check oil/fuel mixture.</li> <li>3. Air filter dirty.</li> <li>4. Carburetor requires adjustment.</li> </ol>	<ol style="list-style-type: none"> <li>1. Operate trimmer at full throttle.</li> <li>2. Use fresh fuel and the correct 2-cycle oil mix.</li> <li>3. Clean per instruction in Maintenance Section.</li> <li>4. Turn "H" needle clockwise 1/16 - 1/8 turn. <i>See Figure 25.</i></li> </ol>

**NOTE:** The carburetor adjustment needle(s) are equipped with plastic cap(s) that prevents counterclockwise rotation from the original factory adjustment. If your unit exhibits specific performance problem(s) where the Trouble Shooting Section recommends a counterclockwise needle adjustment and no adjustments have been made since original purchase, the unit should be taken to a factory authorized service dealer for repair. In most cases, the needed adjustment is a simple task for the factory trained service representative.

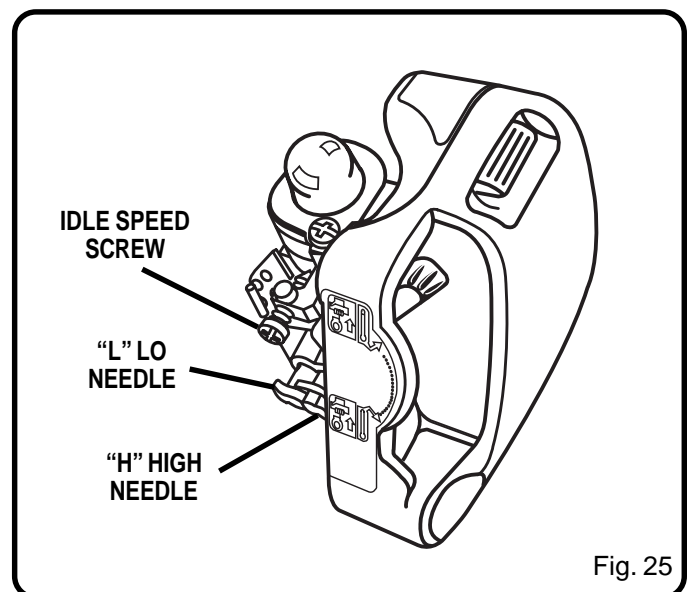


Fig. 25

# WARRANTY

## GUARANTEE – STATEMENT

### (RTSA / RTUK / RTG)

All Ryobi products are guaranteed from defects in material and workmanship, for a period of twenty-four (24) months, effective and evidenced from date of original invoice or delivery note.

Defects caused by normal wear and tear, unauthorized/improper maintenance/handling or overload are excluded from this guarantee as are accessories such as battery packs, bulbs, blades and bits, etc.

In the event of malfunction within the guarantee period, please return the assembled product with proof of purchase, to your dealer or nearest Ryobi Service Centre.

Your statutory rights in respect of defective products remain unaffected by the warranty.

**Ryobi Technologies GmbH**, Itterpark, D-40724 Hilden, Germany

**Ryobi Technologies**, Customer Services, Anvil House, Tuns Lane, Henley-on-Thames, RG9 1SA, UK

**Ryobi Technologies**, BP 50012 - 95945 Roissy CDG Cedex – FRANCE

**Ryobi Technologies Australia PTY Limited**, 359-361 Horsley Road, Milperra, NSW 2214 Australia

# SAFETY DIRECTIVE

## SOUND POWER/PRESSURE & HANDLE VIBRATION CHART FOR STRING TRIMMERS / BRUSHCUTTERS

Information on Noise Emission per European Machine Safety Directive 98/37/EC.

The individual equipment listed was operated in a manner consistent with normal working conditions.

The A-weighted sound pressure level (LpA) at the operator's ear and the A-weighted sound power level (LWA) were both measured in accordance with Directive 79/113/EEC. Hearing protection is recommended where levels exceed 85 dBA.

Handle vibration was measured in accordance to ISO 7916. Read the safety precautions section of the manual.

MODEL	MODEL NO.	SOUND PRESSURE LpA (dBA)	SOUND POWER LwA (dBpA)	VIBRATION m/s <sup>2</sup>
PBC3046B	RY70107	99	112	6.0

## EC DECLARATION OF CONFORMITY

According to machinery directive 98/37/EC and EMC directive 89/336/EEC - We,

Ryobi Technologies Inc., 1428 Pearman Dairy Road, Anderson, SC 29625

declare in sole responsibility that the product: PBC3046B (RY70107) - to which this certificate applies, conforms to the basic health and safety requirements of the Machinery Directive 98/37/EC and other relevant directives, like EMC Directive 89/336/EEC and Outdoor Directive 2000/14/EC.

To effect correct application of the health and safety requirements stated in the EEC directives, the following European and/or national standards and/or technical specifications were consulted: EN ISO 14982:1998, ISO 7916 & 7917, EN ISO 11806:1997, ISO 7918-1995, ISO 8380-1993, ISO 8893-1989, ISO 10884-1995, EN 292-1:1991, EN 292-2-1991, EN 292-2:1991/A1;1995, EN 563-1994, EN 27917-1991, ISO 7112-1982, ISO 7113-1991

Wayne Hill  
Director, Environmental Compliance

Ryobi Technologies Inc.  
1428 Pearman Dairy Road  
Anderson, SC 29625



December 21, 2002



**OPERATOR'S MANUAL**  
**String Trimmer / Brushcutter**  
**PBC3046B**  
**RY70107**

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