# Instruction Manual



# 32cc/1.9 cu.in. 2-Cycle GASOLINE BRUSHWACKER®

Model No. 358.795180

- Safety
- Assembly
- Operation
- Maintenance
- Parts List
- Español

# RUSHWACKER®

# For Occasional Use Only





# DANGER:

Read and follow all Safety Rules and Operating Instructions before first use of this product.



For answers to your questions about this product: Call 7 am-7 pm, Mon.-Sat., or 10 am-7 pm, Sun.

1-800-235-5878 (Hours listed are Central Time)

Sears, Roebuck and Co., Hoffman Estates, IL 60179 U.S.A.

**530088128** 12/3/01

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## WARRANTY STATEMENT

# FULL TWO YEAR WARRANTY ON CRAFTSMAN<sup>®</sup> GAS POWERED BRUSHWACKER<sup>®</sup> BLADED TRIMMER.

For two years from the date of purchase, when this Craftsman Gas Powered Brushwacker is maintained, lubricated, and tuned up according to the operating and maintenance instructions in the instruction manual, Sears will repair, free of charge, any defect in materials or workmanship.

This warranty excludes nylon line, spark plug, and air filter, which are expendable parts and become worn during normal use.

If this Brushwacker is used for commercial purposes, this warranty applies for only 90 days from the date of purchase. If this Brushwacker is used for rental purposes, this warranty applies for only 30 days from the date of purchase.

This warranty applies only while this product is in use in the United States. WARRANTY SERVICE IS AVAILABLE BY RETURNING THE BRUSHWACKER TO THE NEAREST SEARS STORE OR SERVICE CENTER IN THE UNITED STATES.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Sears, Roebuck and Co., D/817WA, Hoffman Estates, IL 60179

# SAFETY RULES

AWARNING: When using gardening appliances, basic safety precautions must always be followed to reduce the risk of fire and serious injury.

A DANGER: This power tool can be dangerous! This unit can cause serious injury including amputation or blindness to the operator and others. The warnings and safety instructions in this manual must be followed to provide reasonable safety and efficiency in using the unit. The operator is responsible for following the warnings and instructions in this manual and on the unit. Read the entire instruction manual before assembling and using the unit! Restrict the use of this unit to persons who read, understand, and follow the warnings and instructions in this manual and on the unit. Never allow children to operate this unit.





INSTRUCTION MANUAL SAFETY INFORMATION

**DANGER:** Blade can thrust violently away from material it does not cut. Blade thrust can cause amputation of arms or legs. Keep people and animals 50 feet (15 meters) away.

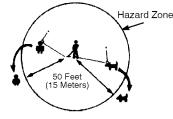


**WARNING:** Trimmer line can throw objects violently. You and others can be blinded or injured. Wear safety glasses and leg protection.





**WARNING:** Hazard zone for thrown objects. Blade/Trimmer line can throw objects violently. Others can be blinded or injured. Keep people and animals 50 feet (15 meters) away.



**A WARNING:** Do not use trimmer head as a fastening device for the blade.



WARNING: The blade continues to spin after the throttle is released or, engine is turned off. The coasting blade can throw objects or seriously cut if accidentally touched. Stop the blade by contacting the right hand side of the coasting blade with material already cut.



#### **OPERATOR SAFETY**

 Dress properly. Always wear safety glasses or similar eye protection when operating, or performing maintenance on your unit. (Safety glasses are available.) Eye protection should be marked Z87.

- Always wear face or dust mask if operation is dusty.
- Always wear heavy, long pants, long sleeves, boots, and gloves. Wearing safety leg guards is recommended.
- Always wear foot protection. Do not go barefoot or wear sandals.
  Secure hair above shoulder length.
- Secure hair above shoulder length. Secure or remove loose clothing and jewelry or clothing with loosely hanging ties, straps, tassels, etc. They can be caught in moving parts.
- Being fully covered also helps protect you from debris and pieces of toxic plants thrown by spinning line/blade.
- Stay Alert. Do not operate unit when you are tired, ill, upset or under influence of alcohol, drugs, or medication.
   Watch what you are doing; use common sense.
- Wear hearing protection.
- Never start or run the engine inside a closed room or building. Breathing exhaust fumes can kill.
- Keep handles free of oil and fuel.
- Always use the handlebar and a properly adjusted shoulder strap with a blade (see ASSEMBLY).

## UNIT/MAINTENANCE SAFETY

**WARNING:** Stop unit and disconnect the spark plug before performing maintenance (except carburetor adjustments).

- Look for and replace damaged or loose parts before each use. Look for and repair fuel leaks before use. Keep unit in good working condition.
- Throw away blades that are bent, warped, cracked, broken, or damaged in any other way. Replace trimmer head parts that are cracked, chipped, broken, or damaged in any other way before using the unit.
- Maintain unit according to recommended procedures. Keep blade sharp. Keep cutting line at the proper length.
- Use only Craftsman<sup>®</sup> brand replacement line. Never use wire, rope, string, etc.
- Install required shield properly before using the unit. Use the metal shield for all metal blade use. Use the plastic shield for all line trimmer use.
- Use only specified blade or trimmer head; make sure it is properly installed and securely fastened.
- Never start engine with clutch shroud removed. The clutch can fly off and cause serious injury.
- 3

- Be sure blade or trimmer head stops turning when engine idles.
- Make carburetor adjustments with the lower end supported to prevent blade or trimmer line from contacting any object. Hold unit by hand; do not use the shoulder strap for support.
- Keep others away when making carburetor adjustments.
- Use only recommended Craftsman<sup>®</sup> accessories and replacement parts.
- Have all maintenance and service not explained in this manual performed by your Sears Service Center.

#### FÚEL SAFETY

- Mix and pour fuel outdoors.
- Keep away from sparks or flames.
- Use a container approved for fuel.
- Do not smoke or allow smoking near
- fuel or the unit or while using the unit. • Avoid spilling fuel or oil. Wipe up all
- fuel spills before starting engine. • Move at least 10 feet (3 meters)
- away from fueling site before starting engine.
- Stop engine and allow it to cool before removing fuel cap.
- Empty the fuel tank before storing or transporting the unit. Use up fuel left in the carburetor by starting the engine and letting it run until it stops.
- Store unit and fuel in area where fuel vapors cannot reach sparks or open flames from water heaters, electric motors or switches, furnaces, etc.
- Always store gasoline in a container approved for flammable liquids.
   CUTTING SAFETY

# WARNING: Inspect the area to

be cut before each use. Remove objects (rocks, broken glass, nails, wire, string, etc.) which can be thrown or become entangled in the blade or trimmer head.

- Keep others including children, animals, bystanders, and helpers at least 50 feet (15 meters) away. Stop engine immediately if you are approached.
- Always keep engine on the righthand side of your body.
- Hold the unit firmly with both hands.
- Keep firm footing and balance. Do not overreach.
- Keep blade or trimmer head below waist level. Do not raise engine above your waist.
- Keep all parts of your body away from blade, trimmer head, and muffler when engine is running. A hot muffler can cause serious burns.
- Cut from your left to your right.

Cutting on right side of the shield will throw debris away from the operator.

- Use only in daylight or good artificial light.
- Use only for jobs explained in this manual.

#### TRANSPORTING AND STORAGE

- Stop the unit before carrying.
- Keep muffler away from your body.
  Allow the engine to cool and secure the unit before storing or transporting it in a vehicle.
- Empty the fuel tank before storing or transporting the unit. Use up fuel left in the carburetor by starting the engine and letting it run until it stops.
- Store unit so the blade or line limiter blade cannot accidentally cause injury. The unit can be hung by the tube.
- Store unit out of reach of children.

SAFETY NOTICE: Exposure to vibrations through prolonged use of gasoline powered hand tools could cause blood vessel or nerve damage in the fingers, hands, and joints of people prone to circulation disorders or abnormal swellings. Prolonged use in cold weather has been linked to blood vessel damage in otherwise healthy people. If symptoms occur such as numbness, pain, loss of strength, change in skin color or texture, or loss of feeling in the fingers, hands, or joints, discontinue the use of this tool and seek medical attention. An anti-vibration system does not guarantee the avoidance of these problems. Users who operate power tools on a continual and regular basis must monitor closely their physical condition and the condition of this tool. SPECIAL NOTICE: This unit is equipped with a temperature limiting muffler and spark arresting screen which meets the requirements of California Codes 4442 and 4443. All U.S. forest land and the states of California, Idaho, Maine, Minnesota, New Jersey, Oregon, and Washington require by law that many internal combustion engines be equipped with a spark arresting screen. If you operate in a locale where such regulations exist, you are legally responsible for maintaining the operating condition of these parts. Failure to do so is a violation of the law. For normal homeowner use, the muffler and spark arresting screen will not require any service. After 50 hours of use, we recommend that your muffler be serviced or replaced by your Sears Service Center.



## ASSEMBLY

#### CARTON CONTENTS

Check carton contents against the following list.

#### Model 358.795180

- Brushcutter
- Blade Shield Screws (4)
- Cupped Washer
- Large Nut for installing Blades
- Hex Wrench
- Metal Shield
- Plastic Shield
- Shoulder Strap with Warning
- 4-Point Weed Blade
- 8-Point Weed Blade
- Trimmer Head (assembled on unit)
- Handlebar (assembled on unit)
- Wing Nut (screwed onto shield)
- Container of line
- Container of oil

Examine parts for damage. Do not use damaged parts.

**NOTE:** If you need assistance or find parts missing or damaged, call 1-800-235-5878.

It is normal for the fuel filter to rattle in the empty fuel tank.

Finding fuel or oil residue on muffler is normal due to carburetor adjustments and testing done by the manufacturer.

#### ASSEMBLY

**WARNING:** Always stop unit and disconnect spark plug before performing any assembly procedures.

WARNING: If received assembled, repeat all steps to ensure your unit is properly assembled and all fasteners are secure.

#### **TOOLS REQUIRED**

- Hex Wrench (provided)
- Adjustable Wrench

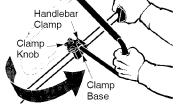
#### ADJUST AND SECURE THE HAN-DLEBAR

ADANGER: To avoid serious injury, the barrier portion of the handlebar must be adjusted and remain installed as shown to provide a barrier between operator and the spinning blade. The handlebar clamp must be positioned between the arrows on the handlebar decal.

1. Lift handlebar to upright position.







- 3. Place the handlebar in a comfortable position.
- Retighten handlebar by turning clamp knob clockwise until handlebar is secure and stationary in clamp base (clamp knob can not be overtightened).

#### ASSEMBLY OF SHOULDER STRAP

**WARNING:** Proper shoulder strap and handlebar adjustments are required before starting the engine.

- Try on shoulder strap and adjust for fit and balance before starting the engine or beginning a cutting operation.
- Insert your right arm and head through the shoulder strap and allow it to rest on your left shoulder. Make sure the danger sign is on your back and the hook is to the right side of your waist.

**NOTE:** A one-half twist is built in the shoulder strap to allow the strap to rest flat on the shoulder.

- Adjust the strap, allowing the hook to be about 6 inches below the waist.
- Fasten the strap hook to the clamp located between the trigger handle and the handlebar clamp base and lift the tool to the operating position.



#### CONFIGURING YOUR UNIT

You can configure your unit using a cutting head for grass and light weeds, or a weed blade for cutting grass, weeds, and brush up to 1/2 inch in diameter. To assemble your unit, go to the section for the desired configuration and follow the instructions.

ASSEMBLY INFORMATION -TRIMMER HEAD



NOTE: Remove the blade and metal shield before attaching the plastic shield and trimmer head. To remove blade, push in locking lever and hold. Rotate blade nut until the locking lever falls into one of the grooves in the dust cup. Continue to hold the locking lever. This will keep the shaft from turning while loosening the blade nut. Remove blade nut by turning clockwise. Release locking lever. Remove both washers and blade. To remove metal shield, loosen and remove the four mounting screws. See ATTACHING THE METAL SHIELD and INSTALLATION OF THE METAL BLADE for illustrations. Be sure to store all parts and instructions for future use.

# INSTALLATION OF THE CUTTING HEAD (if not already installed)

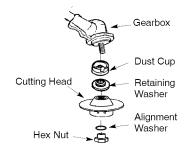
**NOTE:** Before installing the trimmer head, make sure the dust cup and retaining washer are positioned on the shaft of the gearbox. The retaining washer must be positioned with the raised section toward the gearbox.

- 1. Push in locking lever and hold.
- 2. Rotate dust cup until the locking lever falls into one of the grooves.

Locking Lever



- Continue to hold in locking lever. This will keep the shaft from turning while tightening the hex nut.
- Slide the trimmer head onto the shaft of the gearbox.



- 5. Place the alignment washer over the hex nut.
- Install alignment washer and hex nut by threading nut onto the shaft counterclockwise.

**NOTE:** It will be necessary to use a deep socket to tighten the hex nut. The hex nut must be centered in the hole of the cutting head before tightening.

Tighten nut securely (10-12 ft-lbs).
 Release locking lever.

#### ATTACHING THE PLASTIC SHIELD

**WARNING:** The shield must be properly installed. The shield provides partial protection from the risk of thrown objects to the operator and others and is equipped with a line limiter blade which cuts excess line to the proper length. The line limiter blade (on underside of shield) is sharp and can cut you.

- 1. Remove wing nut from shield.
- 2. Insert bracket into slot on shield.
- 3. Pivot shield until bolt passes through hole in bracket.
- Tighten the wing nut securely.
   Bracket Scale



#### ASSEMBLY INFORMATION - WEED BLADES

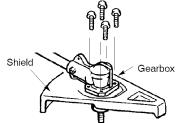


NOTE: Remove the trimmer head and plastic shield before attaching the metal shield and installing one of the weed blades. To remove the trimmer head, push in locking lever and hold. Rotate trimmer head until the locking lever falls into one of the grooves in the dust cup. Continue to hold in locking lever. This will keep the shaft from turning while loosening the hex nut (the hex nut is located in the center of the cutting head). It may be necessary to use a deep socket to loosen the hex nut. Remove the hex nut by turning clockwise. Remove alignment washer and trimmer head. Release locking lever. To remove the plastic shield, loosen and remove wing nut. Pivot shield to release bracket from slot. See INSTALLATION OF THE CUT-TING HEAD and ATTACHING THE PLAS-TIC SHIELD for illustrations. Be sure to store all parts and instructions for future use. Never use the trimmer head with the metal blade installed.

#### ATTACHING THE METAL SHIELD

WARNING: The metal shield must be properly installed on the tool anytime the tool is used with a blade. The forward tip of the metal shield helps to reduce the occurrence of blade thrust which can cause serious injury such as amputation to the operator or bystanders. Failure to install the shield in the position shown can result in serious injury to the operator. The length of the shield must be aligned with the length of the tube.

1. Place the metal shield under the gearbox, and align the screw holes.



 Insert and thread the 4 mounting screws through the holes of the gearbox and the metal shield. Tighten evenly and securely with the hex wrench provided.

#### INSTALLATION OF THE METAL BLADE

**WARNING:** Wear protective gloves when handling or performing maintenance on the blade to avoid injury. The blade is sharp and can cut you even when it is not moving.

WARNING: Do not use any blades, or fastening hardware other than the washers and nuts shown in the following illustrations. These parts must be provided by Sears, and installed as shown below. Failure to use proper parts can cause the blade to fly off and seriously hurt you or others.

**NOTE:** The dust cup and retaining washer are located on the gearbox shaft and not in the parts bag. All other fasteners mentioned in the following assembly steps are in the parts bag.

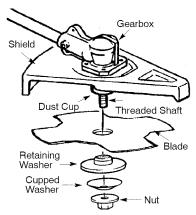
- 1. Remove the retaining washer from the threaded shaft of the gearbox. Leave the dust cup on the shaft.
- 2. Install the blade and the retaining washer over the threaded shaft.
- Make sure the raised part of the retaining washer is facing the gearbox and the raised area fits into the hole in the center of the blade.
- Slide the blade and retaining washer onto the shaft of the gearbox. NOTE: When installing 8-point weed blade, ensure side of blade with decal is facing gearbox and points of blade will rotate counter-clockwise (see illustration).



8-POINT BLADE

DECAL SIDE OF BLADE MUST FACE GEARBOX

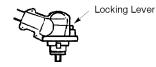
- Place the cupped washer onto the shaft. Make sure the cupped side of the washer is toward the blade.
- Install the blade nut by threading onto the shaft counterclockwise.



NOTE: Make sure all parts are in place as illustrated, and the blade is sandwiched between the dust cup and the retaining washer. There should be no

space between the blade and the dust cup or the retaining washer.

Push in locking lever and hold. 8. Rotate blade nut until the locking lever falls into one of the grooves in the dust cup.

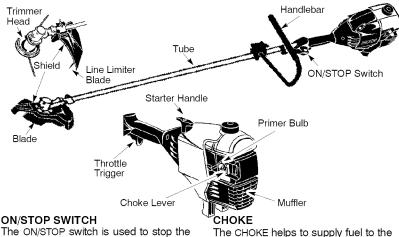


- Continue to hold in locking lever. This will keep the shaft from turning while tightening the blade nut.
- 10. Tighten blade nut firmly with a wrench.
- 11. Release locking lever.
- 12. Turn blade by hand. If the blade binds against the shield, or appears to be uneven, the blade is not centered, and you must reinstall.

# **OPERATION**

#### KNOW YOUR BRUSHWACKER

READ THIS INSTRUCTION MANUAL AND SAFETY RULES BEFORE OPERATING YOUR UNIT. Compare the illustrations with your unit to familiarize yourself with the location of the various controls and adjustments. Save this manual for future reference.



engine. To stop the engine, push and release the engine ON/STOP switch.

#### PRIMER BULB

The PRIMER BULB removes air from the carburetor and fuel lines and fills them with fuel. This allows you to start the engine with fewer pulls on the starter rope. Activate the primer bulb by pressing it and allowing it to return to its original form.

The CHOKE helps to supply fuel to the engine to aid in cold starting. Activate the choke by moving the choke lever to the FULL CHOKE position. After the engine attempts to start, move the choke lever to the HALF CHOKE position. Once engine has started, move the choke lever to the OFF CHOKE position.

#### **BEFORE STARTING ENGINE**

**WARNING:** Be sure to read the fuel information in the safety rules before you begin. If you do not understand the safety rules, do not attempt to fuel your unit. Call 1-800-235-5878.

#### FUELING ENGINE

**WARNING:** Remove fuel cap slowly when refueling.

This engine is certified to operate on unleaded gasoline. Before operation, gasoline must be mixed with a good quality synthetic 2-cycle air-cooled engine oil. We recommend Craftsman brand synthetic oil. Mix gasoline and oil at a ratio of 40:1. A 40:1 ratio is obtained by mixing 3.2 ounces of oil with 1 gallon of unleaded gasoline. Included with this trimmer is a 3.2 ounce container of oil. Pour the entire contents of this container into 1 gallon of gasoline to achieve the proper fuel mixture. DO NOT USE automotive oil or boat oil. These oils will cause engine damage. When mixing fuel, follow instructions printed on container.

Once oil is added to gasoline, shake container momentarily to assure that the fuel is thoroughly mixed. Always read and follow the safety rules relating to fuel before fueling your unit.

#### IMPORTANT

Experience indicates that alcohol blended fuels (called gasohol or using ethanol or methanol) can attract moisture which leads to separation and formation of acids during storage. Acidic gas can damage the fuel system of an engine while in storage. To avoid engine problems, empty the fuel system before storage for 30 days or longer. Drain the gas tank, start the engine and let it run until the fuel lines and carburetor are empty. Use fresh fuel next season.

Never use engine or carburetor cleaner products in the fuel tank or permanent damage may occur.

See the STORAGE section for additional information.

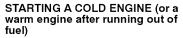
#### HOW TO STOP YOUR UNIT

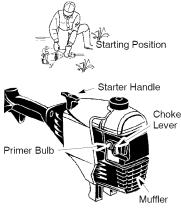
- To stop the engine, push and release the engine ON/STOP switch. The switch will automatically return to the ON position. Wait 5 seconds before attempting to restart unit to allow switch to reset.
- If engine does not stop, move choke lever to FULL CHOKE position.



#### HOW TO START YOUR UNIT

WARNING: The trimmer head will turn while starting the engine. Avoid any contact with the muffler. A hot muffler can cause serious burns.





- 1. Set unit on a flat surface.
- 2. Slowly press the primer bulb 6 times.
- Move choke lever to FULL CHOKE by aligning lever with position shown on decal (see illustration below).



- 4. Squeeze the throttle trigger fully and hold through *all remaining steps*.
- 5. Pull starter rope handle sharply until engine sounds as if it is trying to start, but do not pull rope more than 6 times.
- As soon as engine sounds as if it is trying to start, move choke lever to HALF CHOKE by aligning lever with position shown on decal (see illustration below).





7. Pull starter rope sharply until engine runs, but no more than 6 pulls. If the engine doesn't start after 6 pulls (at the HALF CHOKE position), move the choke lever to the FULL CHOKE position and press the primer bulb 6 times. Squeeze and hold the throttle trigger and pull the starter rope 2 more times. Move the choke lever to the HALF CHOKE position and pull the starter rope until the engine runs, but no more than 6 pulls. If the engine doesn't start, repeat procedure 2 additional times. NOTE: If engine still doesn't start, it is probably flooded. Proceed to

is probably flooded. Proceed to STARTING A FLOODED ENGINE. Once the engine starts, allow it to

3. Once the engine starts, allow it to run 10 seconds, then move the choke lever to OFF CHOKE by aligning lever with position shown on decal (see illustration below). Allow the unit to run for 30 more seconds at OFF CHOKE before releasing the throttle trigger. **NOTE:** If engine dies with the choke lever in the OFF CHOKE position, move the choke lever to the HALF CHOKE position and pull the rope until engine runs, but no more than 6 pulls.



#### STARTING A WARM ENGINE

- Move the choke lever to the HALF CHOKE position.
- Squeeze and hold the throttle trigger. Keep throttle trigger fully squeezed until the engine runs smoothly.
- 3. Pull starter rope sharply until engine runs, but no more than 5 pulls.
- 4. Allow engine to run 15 seconds, then move the choke lever to the OFF CHOKE position.

**NOTE:** If engine has not started, pull starter rope 5 more pulls. If engine still does not run, it is probably flooded.

STARTING A FLOODED ENGINE Flooded engines can be started by placing the choke lever in the OFF CHOKE position; then, pull the rope to clear the engine of excess fuel. This could require pulling the starter handle many times depending on how badly the unit is flooded.

If the unit still doesn't start, refer to TROUBLESHOOTING TABLE or call 1-800-235-5878.

#### **OPERATING POSITION**



Cut from your left to your right.

When operating unit, clip shoulder strap onto clamp, stand as shown and check for the following:

- Wear eye protection and heavy clothing.
- Extend your left arm and hold handlebar grip with your left hand.
- Hold throttle grip with your right hand with finger on throttle trigger.
- Keep unit below waist level.
- Keep shoulder strap pad centered on your left shoulder and danger sign centered on your back.
- Maintain full weight of tool on your left shoulder.
- Without bending over, keep the blade or trimmer head near and parallel to the ground and not crowded into material being cut.

# OPERATING INSTRUCTIONS FOR USE WITH TRIMMER HEAD

**WARNING:** Always wear eye protection. Never lean over the trimmer head. Rocks or debris can ricochet or be thrown into eyes and face and cause blindness or other serious injury. Before trimming, bring engine to a speed sufficient to cut material to be trimmed.



Do not run the engine at a higher speed than necessary. The cutting line will cut efficiently when the engine is run at less than full throttle. At lower speeds, there is less engine noise and vibration. The cutting line will last longer and will be less likely to "weld" onto the spool. Always release the throttle trigger and allow the engine to return to idle speed when not cutting. To stop engine:

- Release the throttle trigger.
- Push and release the engine ON/ STOP switch.

**WARNING:** Use minimum speed and do not crowd the line when cutting around hard objects (rock, gravel, fence posts, etc.), which can damage the trimmer head, become entangled in the line, or be thrown causing a serious hazard.

 The tip of the line does the cutting. You will achieve the best performance and minimum line wear by not crowding the line into the cutting area. The right and wrong ways are shown below.

Tip of line does the Line crowded into cutting Right



- The line will easily remove grass and weeds from around walls, fences, trees and flower beds, but it also can cut the tender bark of trees or shrubs and scar fences.
- · For trimming or scalping, use less than full throttle to increase line life and decrease head wear, especially: During light duty cutting.
  - · Near objects around which the line can wrap such as small posts, trees or fence wire.
- For mowing or sweeping, use full throttle for a good clean job.

TRIMMING - Hold the bottom of the trimmer head about 3 in. (8 cm) above the ground and at an angle. Allow only the tip of the line to make contact. Do not force trimmer line into work area.



SCALPING - The scalping technique removes unwanted vegetation down to the ground. Hold the bottom of the trimmer head about 3 in. (8 cm) above the ground and at an angle. Allow the tip of the line to strike the ground around trees, posts, monuments, etc. This technique increases line wear.



MOWING - Your trimmer is ideal for mowing in places conventional lawn mowers cannot reach. In the mowing position, keep the line parallel to the ground. Avoid pressing the head into the ground as this can scalp the ground and damage the tool.



SWEEPING - The fanning action of the rotating line can be used to blow away loose debris from an area. Keep the line parallel to and above the area surface and swing the tool from side to side.





#### OPERATING INSTRUCTIONS FOR USE WITH WEED BLADES

- Blade Thrust is a reaction that only occurs when using a bladed unit. This reaction can cause serious injury such as amputation. Carefully study this section. It is important that you understand what causes blade thrust, how you can reduce the chance of its occurring, and how you can remain in control of unit if blade thrust occurs.
- WHAT CAUSES BLADE THRUST -Blade Thrust can occur when the spinning blade contacts an object that it does not cut. This contact causes the blade to stop for an instant and then suddenly move or "thrust" away from the object that was hit. The "thrusting" reaction can be violent enough to cause the operator to be propelled in any direction and lose control of the unit. The uncontrolled unit can cause serious injury if the blade contacts the operator or others.
- WHEN BLADE THRUST OCCURS

   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. By using the unit properly, the occurrence of blade thrust will be reduced and the operator will be less likely to lose control.



- Cut only grass, weeds, and woody brush up to 1/2 inch in diameter with the weed blade. Do not let the blade contact material it cannot cut such as stumps, rocks, fences, metal, etc., or clusters of hard, woody brush having a diameter greater than 1/2 inch.
- Keep the blade sharp. A dull blade is more likely to snag and thrust.

- Cut only at full throttle. The blade will have maximum cutting power and is less likely to bind or stall.
- "Feed" the blade deliberately and not too rapidly. The blade can thrust away if it is fed too rapidly.
- Cut only from your left to your right. Cutting on right side of the shield will throw debris away from the operator.
- Use the shoulder strap and keep a firm grip on the unit with both hands. A properly adjusted shoulder strap will support the weight of the unit, freeing your arms and hands to control and guide the cutting motion.
- Keep feet comfortably spread apart and braced for a possible sudden, rapid thrust of unit. Do not overreach. Keep firm footing and balance.
- Keep blade below waist level; it will be easier to maintain control of unit.
- Do not raise the engine above your waist as the blade can come
- dangerously close to your body.
  Do not swing unit with such force that you are in danger of losing your balance.

Bring the engine to cutting speed before entering the material to be cut.If the blade does not turn when you squeeze the throttle trigger, make sure tube is fully inserted into the engine. Always release the throttle trigger and allow engine to return to idle speed when not cutting. The blade should not turn while the engine is running at idle. If the blade turns at idle, do not use your unit. Refer to the CARBURE-TOR ADJUSTMENT section or contact your Sears Service Center.

- Maintain good firm footing while using the unit. Do this by planting feet firmly in a comfortable apart position.
- Cut while swinging the upper part of your body from left to right.
- As you move forward to the next area to cut, be sure to maintain your balance and footing.

Cut using the 2 o'clock to 4 o'clock position of the blade



A WARNING: The operator or others must not try to clear away cut material with the engine running or the blade turning to avoid serious injury. Stop engine and blade before removing materials wrapped around blade or tube.

## MAINTENANCE

### MAINTENANCE SCHEDULE

A WARNING: Disconnect the spark plug before performing maintenance except for carburetor adjustments.

CARE & MAINTENANCE TASK	WHEN TO PERFORM	
Check for loose fasteners and parts	Before each use	
Check for damaged or worn parts	Before each use	
Inspect and clean unit and decals	After each use	
Clean air filter	Every 5 hours of operation	
Inspect muffler and spark arresting screen	Every 50 hours of operation	
Replace spark plug	Yearly	

#### **GENERAL RECOMMENDATIONS**

The warranty on this unit does not cover items that have been subjected to operator abuse or negligence. To receive full value from the warranty, the operator must maintain unit as instructed in this manual. Various adjustments will need to be made periodically to properly maintain your unit.

# CHECK FOR LOOSE FASTENERS AND PARTS

- Spark Plug Boot
- Air Filter
- Housing Screws
- Assist Handle Screw
- Debris Shield

#### CHECK FOR DAMAGED OR WORN PARTS

Contact Sears Service Center for replacement of damaged or worn parts.

- ON/STOP Switch Ensure ON/STOP switch functions properly by pushing and releasing the switch. Make sure engine stops. Wait 5 seconds before attempting to restart unit to allow switch to reset. Restart engine and continue
- Fuel Tank Discontinue use of unit if fuel tank shows signs of damage or leaks
- Debris Shield Discontinue use of unit if debris shield is damaged.

#### INSPECT AND CLEAN UNIT AND DE-CALS

- After each use, inspect complete unit for loose or damaged parts. Clean the unit and decals using a damp cloth with a mild detergent.
- Wipe off unit with a clean dry cloth.

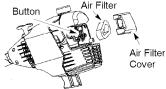
## **CLEAN AIR FILTER**

A dirty air filter decreases engine performance and increases fuel consumption and harmful emissions. Always clean after every 5 hours of operation.

- 1. Clean the cover and the area around it to keep dirt from falling into the carburetor chamber when the cover is removed.
- Remove parts by pressing button to release air filter cover.

NOTE: To avoid creating a fire hazard or producing harmful evaporative emissions, do not clean filter in gasoline or other flammable solvent.

- Wash the filter in soap and water. З. Allow filter to drv. 4.
- Add a few drops of oil to the filter; 5.
- squeeze the filter to distribute oil. 6. Replace parts.



#### **REPLACE SPARK PLUG**

Replace the spark plug each year to ensure the engine starts easier and runs better. Set spark plug gap at 0.025 in. Ignition timing is fixed and nonadjustable.

- Twist, then pull off spark plug boot. 1.
- Remove spark plug from cylinder 2. and discard.
- 3. Replace with Champion RCJ-6Y spark plug and tighten securely with a 3/4 inch socket wrench.
- 4. Reinstall the spark plug boot.



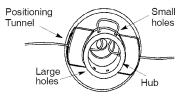
# SERVICE AND ADJUSTMENTS

#### LINE REPLACEMENT

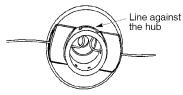
 Always use Craftsman replacement line.

Choose the line size best suited for the job at hand. Green colored line is designed for cutting grass, red line for grass and small weeds. The black colored line is designed for cutting larger weeds and light brush.

- Before inserting the line into the holes in the cutting head, identify the proper holes. When using Green, or Red, insert line into the holes marked small on the cutting head. Black line should be inserted in the holes marked large.
- Insert both ends of your line through the proper holes in the side of the cutting head.



• Insert ends of the line one at a time through the positioning tunnels.



- Pull the line and make sure the line is against the hub and extended fully through the positioning tunnels.
- Correctly installed line will be the same length on both ends.

#### **BLADE REPLACEMENT**

Refer to the ASSEMBLY section for blade replacement instructions and illustrations.

#### CARBURETOR ADJUSTMENT

WARNING: The trimmer head or blade will be spinning during most of this procedure. Wear your protective equipment and observe all safety precautions. After making mixture adjustments, recheck idle speed. The trimmer head or blade must not move/ spin at idle speed. Carburetor adjustment is critical and if done improperly can permanently damage the engine as well as the carburetor. If you require further assistance or are unsure about performing this procedure, call our customer assistance help line at 1-800-235-5878. Old fuel, a dirty air filter, a dirty fuel filter, or flooding may give the impression of an improperly adjusted carburetor. Check these conditions before adjusting the carburetor.

The carburetor has been carefully set at the factory. Adjustments may be necessary if you notice any of the following conditions:

- The trimmer head/blade moves at idle. See IDLE SPEED under adjusting procedure.
- Engine will not idle. See IDLE SPEED under adjusting procedure.
- Engine dies or hesitates instead of accelerating. See ACCELERATION CHECK under adjusting procedure.
- Loss of cutting power. See MIXTURE ADJUSTMENT (L or H) under adjusting procedure.

There are three adjustment screws on the carburetor. The low speed adjustment screw is marked with the letter L, and the high speed adjustment screw is marked with the letter H. The third screw is the idle adjustment screw.

Adjustment (H) Adjustment (L)



Idle Screw Adjustment
ADJUSTING PROCEDURE

**CAUTION:** Do not force plastic limiter caps on screws beyond the built-in stops or damage will occur. Be sure trimmer line is extended to the maximum length allowed by the line limiter blade.

#### Initial Settings

- Turn both mixture screws (L and H) counterclockwise until they stop.
- Turn the idle speed screw clockwise until it stops. Now turn counterclockwise 4 1/2 turns.
- Start engine, cut grass for 3 minutes, then proceed to adjust screws according to the instructions below.
   If engine performance at initial settings is acceptable, no further adjustments are necessary. If engine



does not start, refer to TROUBLE-SHOOTING TABLE. If still unable to remedy situation, call 1-800-235-5878.

#### Idle Speed

Allow engine to idle. If the trimmer head moves, idle speed is too fast. If the engine stalls, idle speed is too slow.

- Turn idle speed screw clockwise to increase engine speed.
- Turn idle speed screw counterclockwise to decrease engine speed.

#### Low Speed Mixture Adjustment - L

- 1. Allow the engine to idle.
- 2. Turn low speed mixture screw (L) slowly clockwise until the speed begins to drop.
- Turn the low speed mixture screw (L) counterclockwise until the speed increases and then starts to drop again.
- Set the low speed mixture screw (L) at the midpoint between the two positions.

Readjust the idle speed (See IDLE SPEED).

#### High Speed Mixture Adjustment - H

CAUTION: Do not operate engine at full throttle for prolonged periods while making adjustments as damage to the engine can occur. Adjust the mixture screw 1/16 of a turn at a time. A 1/16 turn is about the width of the slot in the top of the screw.

- 1. Allow the engine to idle.
- Squeeze the throttle trigger fully. 2. Turn the high speed mixture screw (H) counterclockwise until it stops.
- Turn the high speed mixture screw З. (H) 1/16 of a turn clockwise at a time until the engine runs smoothly.

After completing adjustments, check for acceleration and trimmer head movement at idle. Reset if necessary.

#### Acceleration Check

If engine dies or hesitates instead of accelerating, turn the low speed mix-ture screw (L) counterclockwise until you have smooth acceleration.

## STORAGE

#### **WARNING:** Perform the following steps after each use:

- Allow engine to cool before storing or transporting.
- Store unit and fuel in a well ventilated area where fuel vapors cannot reach sparks or open flames from water heaters, electric motors or switches, furnaces, etc.
- Store unit with all guards in place. Position unit so that any sharp obiect cannot accidentally cause injury.
- Store unit and fuel well out of the reach of children.

#### SEASONAL STORAGE

Prepare unit for storage at end of season or if it will not be used for 30 days or more.

If your unit is to be stored for a period of time:

- Clean the entire unit before lengthy storage.
- Store in a clean dry area.
- Lightly oil external metal surfaces.

#### FUEL SYSTEM

Under FUELING ENGINE in the OPERA-TION section of this manual, see message labeled IMPORTANT regarding the use of gasohol in your engine. Fuel stabilizer is an acceptable alternative in minimizing the formation of fuel gum deposits during storage. Add stabilizer to the gasoline in the fuel tank or fuel storage container. Follow the mix instructions found on stabilizer container. Run engine at least 5 minutes after adding stabilizer.

Craftsman 40:1, 2-cycle engine oil (air cooled) is already blended with fuel stabilizer. If you do not use this Sears oil, you can add a fuel stabilizer to your fuel tank.

#### ENGINE

- Remove spark plug and pour 1 teaspoon of 40:1, 2-cycle engine oil (air cooled) through the spark plug opening. Slowly pull the starter rope 8 to 10 times to distribute oil.
- Replace spark plug with new one of recommended type and heat range. Clean air filter.
- · Check entire unit for loose screws, nuts, and bolts. Replace any damaged, broken, or worn parts.
- At the beginning of the next season, use only fresh fuel having the proper gasoline to oil ratio.
- OTHER
- · Do not store gasoline from one season to another.
- Replace your gasoline can if it starts to rust.
- 15

#### TROUBLESHOOTING TABLE

WARNING: Always stop unit and disconnect spark plug before performing all of the recommended remedies below except remedies that require operation of the unit.

TROUBLE	CAUSE	REMEDY
Engine will not start.	<ol> <li>Engine flooded.</li> <li>Fuel tank empty.</li> <li>Spark plug not firing.</li> <li>Fuel not reaching carburetor.</li> <li>Carburetor requires adjustment.</li> </ol>	<ol> <li>See "Starting a Flooded Engine" in Operation Section.</li> <li>Fill tank with correct fuel mixture.</li> <li>Install new spark plug.</li> <li>Check for dirty fuel filter; replace. Check for kinked or split fuel line; repair or replace.</li> <li>See "Carburetor Adjustment" in Service and Adjustments Section.</li> </ol>
Engine will not idle properly.	<ol> <li>Carburetor requires adjustment.</li> <li>Crankshaft seals worn.</li> <li>Compression low.</li> </ol>	<ol> <li>See "Carburetor Adjustment" in Service and Adjustments Section.</li> <li>Contact Sears Service Center.</li> <li>Contact Sears Service Center.</li> </ol>
Engine will not accelerate, lacks power, or dies under a load.	<ol> <li>Air filter dirty.</li> <li>Spark plug fouled.</li> <li>Carburetor requires adjustment.</li> <li>Carbon build-up on muffler outlet screen.</li> <li>Compression low.</li> </ol>	<ol> <li>Clean or replace air filter.</li> <li>Clean or replace plug and regap.</li> <li>See "Carburetor Adjustment" in Service and Adjustments Section.</li> <li>Contact Sears Service Center.</li> <li>Contact Sears Service Center.</li> </ol>
Engine smokes excessively.	<ol> <li>Choke partially on.</li> <li>Fuel mixture incorrect.</li> <li>Air filter dirty.</li> <li>Carburetor requires adjustment.</li> </ol>	<ol> <li>Adjust choke.</li> <li>Empty fuel tank and refill with correct fuel mixture.</li> <li>Clean or replace air filter.</li> <li>See "Carburetor Adjustment" in Service and Adjustments Section.</li> </ol>
Engine runs hot.	<ol> <li>Fuel mixture incorrect.</li> <li>Spark plug incorrect.</li> <li>Carburetor requires adjustment.</li> <li>Carbon build-up on muffler outlet screen.</li> </ol>	<ol> <li>See "Fueling Engine" in Operation section.</li> <li>Replace with correct spark plug.</li> <li>See "Carburetor Adjustment" in Service and Adjustments Section.</li> <li>Contact Sears Service Center.</li> </ol>

## U.S. EPA EMISSION CONTROL WARRANTY STATEMENT

YOUR WARRANTY RIGHTS AND OBLIGATIONS: The U. S. Environmental Protection Agency and Sears, Roebuck and Co., U.S.A., are pleased to explain the emissions control system warranty on your year 2001-2004 small off-road engine. Sears must warrant the emission control system on your small off-road engine for the periods of time listed below provided there has been no abuse, neglect, or improper maintenance of your small off-road engine. Your emission control system includes parts such as the carburetor and the ignition system. Where a warrantable condition exists, Sears will repair your small off-road engine at no cost to you. Expenses covered under warranty include diagnosis, parts and labor. **MANUFACTURER'S WARRANTY COVERAGE:** If any emissions related part on your engine (as listed under Emissions Control Warranty Parts List) is defective or a defect in the materials or workmanship of the engine causes the failure of such an emission related part, the part will be repaired or replaced by Sears. **OWNER'S WAR-RANTY RESPONSIBILITIES:** As the small off-road engine owner, you are responsible for the performance of the required maintenance listed in your in-

struction manual. Sears recommends that you retain all receipts covering maintenance on your small off-road engine, but Sears cannot deny warranty solely for the lack of receipts or for your failure to ensure the performance of all scheduled maintenance. As the small off-road engine owner, you should be aware that Sears may deny you warranty coverage if your small off-road engine or a part of it has failed due to abuse, neglect, improper maintenance, unapproved modifications, or the use of parts not made or approved by the orig-inal equipment manufacturer. You are responsible for presenting your small off-road engine to a Sears authorized repair center as soon as a problem exists. Warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days. If you have any questions regarding your warranty rights and responsibilities, you should contact your nearest authorized service center or call Sears at 1-800-469-4663. WARRANTY COMMENCEMENT DATE: The warranty period begins on the date the small off-road engine is purchased. LENGTH OF COVERAGE: This warranty shall be for a period of two years from the initial date of purchase. WHAT IS COVERED: REPAIR **OR REPLACEMENT OF PARTS.** Re pair or replacement of any warranted part will be performed at no charge to the owner at an approved Sears servicing center. If you have any questions regarding your warranty rights and responsibilities, you should contact your nearest authorized service center or call Sears at 1-800-469-4663. WARRAN-TY PERIOD: Any warranted part which is not scheduled for replacement as required maintenance, or which is scheduled only for regular inspection to the effect of "repair or replace as necessary" shall be warranted for 2 years. Any warranted part which is scheduled

for replacement as required maintenance shall be warranted for the period of time up to the first scheduled replacement point for that part. DIAGNOSIS: The owner shall not be charged for diagnostic labor which leads to the determination that a warranted part is defective if the diagnostic work is performed at an approved Sears servicing center. CONSEQUENTIAL DAMAGES: Sears may be liable for damages to other engine components caused by the failure of a warranted part still under warranty. WHAT IS NOT COVERED: All failures caused by abuse, neglect, or improper maintenance are not covered. ADD-ON OR MODIFIED PARTS: The use of add-on or modified parts can be grounds for disallowing a warranty claim. Sears is not liable to cover failures of warranted parts caused by the use of add-on or modified parts. HOW TO FILE A CLAIM: If you have any questions regarding your warranty rights and responsibilities, you should contact your nearest authorized service center or call Sears at 1-800-469-4663 WHERE TO GET WARRANTY SER-VICE: Warranty services or repairs shall be provided at all Sears service centers. Call 1-800-469-4663. MAINTE-NANCE, REPLACEMENT AND RE-PAIR OF EMISSION RELATED PARTS: Any Sears approved replacement part used in the performance of any warranty maintenance or repair on emission related parts will be provided without charge to the owner if the part is under warranty. EMISSION CONTROL WARRANTY PARTS LIST: Carburetor, Ignition System: Spark Plug (covered up to maintenance schedule), Ignition Module. MAINTENANCE STATE-MENT: The owner is responsible for the performance of all required maintenance as defined in the instruction manual.

This engine is certified to be emissions compliant for the following use:

X Moderate (50 hours)

Intermediate (125 hours)

Extended (300 hours)

