

OWNER'S MANUAL

MODEL 1900E
EDGER

SERIAL NO.

ENGINE

SHAFT

IMPORTANT NOTE: USE THE ABOVE BOXES TO FILL IN YOUR MODEL'S SERIAL NUMBER FOR YOUR RECORDS.

ASSEMBLY AND OPERATING INSTRUCTIONS

To insure maximum performance read this manual before putting into operation.

WARRANTY CERTIFICATE

TWO (2) YEARS CONSUMER — LIMITED WARRANTY — ONE (1) YEAR COMMERCIAL

HMC warrants THE GREEN MACHINE[®] to be free from defects in material and workmanship under normal use for a period of two (2) years from date of purchase when used by the consumer for residential home use, or 90 days from date of purchase when used commercially.

Should THE GREEN MACHINE[®] product fail within the warranty period due to defective parts or workmanship, just return the unit transportation prepaid to either (1) the retailer who sold it to you or (2) to your regional distributor, whose address is available from your retailer or (3) directly to HMC Factory Service Center, 20710 South Alameda Street, Long Beach, California 90810, U.S.A. HMC will, at its option, repair or replace the unit at no charge. HMC assumes no obligation to pay the registered owner a cash refund under any circumstances.

Please return the enclosed warranty card within ten (10) days after purchase. If we do not have the warranty card on file we will require other proof of purchase before completing the repairs. This warranty only extends to the original purchaser of the product.

This warranty does not apply if the product has been misused or used contrary to the instruction manual, or if it has been repaired or altered by anyone other than an HMC authorized service center.

This warranty applies only to parts or components which are defective and does not cover repairs necessary due to normal wear, misuse,

accidents, or lack of proper maintenance. Regular, routine maintenance of the unit to keep it in proper operating condition is the responsibility of the owner.

HMC IS NOT LIABLE FOR INDIRECT OR CONSEQUENTIAL DAMAGES IN CONNECTION WITH THE USE OF THE PRODUCT INCLUDING ANY COST OF PROVIDING SUBSTITUTE EQUIPMENT DURING PERIODS OF MALFUNCTION.

Some states of the U.S.A. do not allow the exclusion of incidental or consequential damages, so the above exclusion may not apply to you.

THE GREEN MACHINE[®] will perform as indicated in the instruction manual and in the accompanying literature. Your retailer may have sold you the machine with a promise that it would handle a particular task. You may return the machine to him if it does not perform that specific task, but we cannot be responsible for promises which are beyond the scope of the above instruction manual or literature.

THERE ARE NO EXPRESS WARRANTIES OTHER THAN AS CONTAINED IN THIS STATEMENT, AND ANY IMPLIED WARRANTIES SHALL EXPIRE 90 DAYS AFTER DATE OF PURCHASE. Some states of the U.S.A. do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you.

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

WARNING

ALWAYS WEAR SAFETY GOGGLES.
NEVER OPERATE UNIT WITHOUT SHIELDS AND GUARDS IN PLACE.
USE ONLY SPECIFIED GREEN MACHINE BLADES.
KEEP BYSTANDERS AWAY FROM WORK AREA AT ALL TIMES.

MARK MACHINE, INC.

GM 1100MC

FORWARD

We are pleased that you have chosen a Green Machine™ product to assist you with your work. Your Green Machine™ product was assembled using the latest manufacturing methods and materials to bring you a product of the highest quality.

This Owner's Manual is provided to aid you in the proper assembly and the safe, reliable operation of your new Green Machine™ product. Read it and become thoroughly familiar with the proper operating procedures before you first use this product. Make sure anyone who operates your Green Machine™ product is fully acquainted with the proper operating procedures. Careful assembly, safe operation and proper maintenance in accordance with this Owner's Manual will provide you with maximum performance and product life.

SAFETY AWARENESS

Read the Operator's Manual and follow all warnings and safety instructions. Failure to do so can result in serious injury.

Whenever you see the symbols shown below, be sure to read and understand their instructions! Always follow safe operating and proper maintenance practices.



WARNING: This warning symbol identified special instructions or procedures which, if not correctly followed, could result in personal injury or loss of life.



CAUTION: This caution symbol identified instructions or procedures which, if not strictly observed, could result in damage to or destruction of equipment.

NOTE: Indicates points of particular interest for more efficient and convenient operation.

IMPORTANT: Each Power Unit and all attachments are labeled with a serial number. During use of the unit there's a possibility of these numbers being scratched, destroyed or in some other means made illegible. For your convenience, a space is provided on the front page of this manual in which to record your serial numbers. Please record your numbers in the spaces provided; this will speed up ordering parts for your unit and/or reordering a new attachment.

All information contained in this manual is based on the latest product information available at the time of publication. The right is reserved to make changes at any time without prior notice and without incurring an obligation to make such changes to products manufactured previously. See your authorized Green Machine™ Dealer for the latest information on product improvements incorporated after this manual was issued.

1. ASSEMBLY (Figure 1)

- Insert shaft into drive end (clutch housing) of engine as far as it will go.
- Align cutting head at end of shaft so it is parallel with bottom of engine (gas tank).
- Install bolt, washer and nut and tighten until shaft is secure.

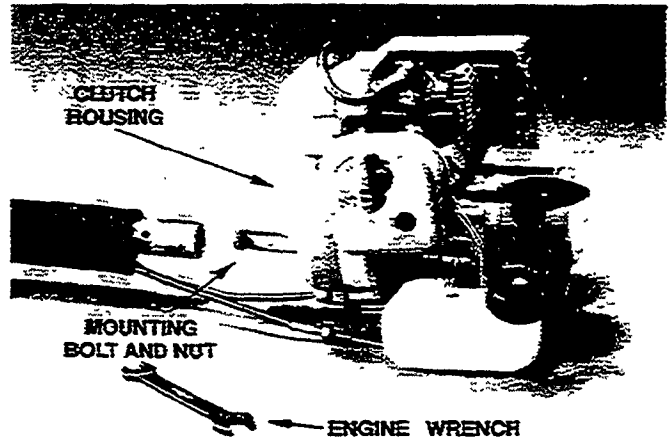


Figure 1

2. INSTALLING MID-HANDLE (Figure 2)

- Snap mid-handle over shaft tube below harness hanger (top of handle should angle back toward engine).
- Install bolt, washer, and wing knob (Figure 2).
- **Note:** Handle may be repositioned for best balance and comfort.

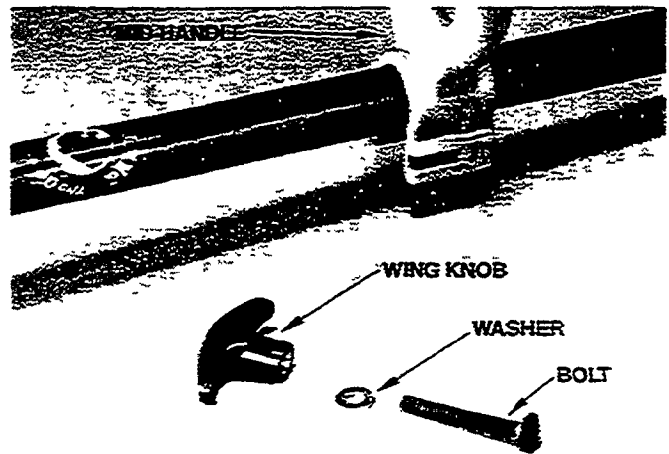


Figure 2

3. INSTALLING THROTTLE CABLE (Figure 3)

- Thread nut over end of throttle cable tube.
- Slip threaded end of throttle cable tube into loop on engine housing.
- Thread second nut over end of throttle cable tube, securing tube to the loop.
- Open throttle as shown (Figure 3), and hook the end of the throttle cable to the carburetor.
- Adjust the bolts so that there is 1 to 2 MM (Approx. 1/16") end play in cable tension when the trigger is closed.



Figure 3

WARNING BLADE COASTS AFTER THROTTLE RELEASE. WITH PROPER RPM ADJUSTMENT, BLADE COULD COAST UP TO 15 SECONDS. WARNING: THE COASTING BLADE COULD HURT YOU OR OTHERS.	WARNING HAZARD ZONE FOR THROWN OBJECTS IS 50 FEET. BLADE AND/OR TRIMMER LINE CAN THROW OBJECTS VIOLENTLY. YOU OR OTHERS CAN BE BLINDED OR HURT. WEAR EYE AND LEG PROTECTION.	WARNING BLADE CAN THRUST VIOLENTLY. AWAY FROM WATER. IT CAN "CUT OFF". BLADE "WHIST" CAN CAUSE AMPUTATION OF ARMS OR LEGS. KEEP PEOPLE AND ANIMALS 50 FEET AWAY.

CAUTION: Be certain wing screws are fully tightened before operating equipment and they should be periodically checked for tightness during use.

3. SUPPLYING FUEL:

- Fill the fuel tank with fuel to $\frac{7}{8}$ full, using a mixed fuel of gasoline and 2 cycle air cooled engine oil.
- HMC recommends using **One-Mix²** in its Green Machine products. When using **One-Mix²**, it is not necessary to figure fuel mixture (oil to gasoline) ratio. Simply mix one packet of **One-Mix²** to one U.S. gallon of regular leaded or unleaded gasoline.
- **Special Note:** Never use gasohol. If gasohol is used, engine warranty will be voided. To test for alcohol content in gasoline, an inexpensive gasohol tester kit is available, order part #27339.
- If you do not wish to use **One-Mix²**, you must then make certain of a proper oil to gasoline ratio.
- When any oil other than **One-Mix²** is used, you must use a ratio of 25:1 (25 parts of gasoline to one part of oil) i.e., 5.12 oz. of oil mixed in one U.S. gallon of gasoline.
- Always thoroughly mix the oil and the gasoline by mixing vigorously to insure thorough blending. There are countless small 2 cycle engines destroyed each year because of improperly mixed oil and gasoline.

Econo Pack	Mixes 1 Gallon of Fuel
Pro Tube	Mixes 1 Gallon of Fuel
8 oz. bottle	Mixes 2½ Gallons of Fuel
32 oz. bottle	Mixes 10 Gallons of Fuel
128 oz. bottle	Mixes 40 Gallons of Fuel



WARNING:

1. Never smoke when refueling or refuel in an area with open flame (such as water heater pilot light). Gasoline vapors spread rapidly and are highly explosive.
2. Always stop engine and wait for it to cool before refueling.
3. Clean up any spills and dispose of clean-up materials.
4. After refueling, move to another area for starting.
5. Never over fill. Fill tank only $\frac{7}{8}$ full to avoid spillage.



Figure 5

4. INSPECTION

- Always inspect all fasteners for tightness and/or missing parts. Tighten or replace before use.
- Read and understand all safety and operating instructions before use.
- Check for any fuel leaks. If any, correct before use.
- Make sure all air passages are free of dirt, dust, or any other foreign material.
- Inspect air cleaner for cleanliness.

STARTING THE ENGINE, WHEN COLD (INITIAL ENGINE STARTING)

- Slide stop switch (on top of trigger) to run position (towards engine).
- Push the primer pump until fuel flows through the clear plastic return line (Figures 17 & 18).
- Place choke lever in the closed position (Figure 18).
- Lock throttle lever in the start position as shown in (Figure 19).
- Pull starter rope slowly, until engine compression is felt (Figure 19). Pull the starter in short rapid strokes until engine starts.
- Avoid pulling the rope to its full extension as starter failure could result.
- Once the engine has started, slowly return the choke lever to its open position.
- Return the throttle lever to its idle position.
- Always allow the engine to run 1 to 2 minutes at idle for warm up before starting work.

Special Note:

Never start unit on the ground by using your foot, knee, or hand, to push down while pulling up on the rope (Figure 20). This will cause the tube & cable to become bent and then break. Never allow the starter rope to snap back.

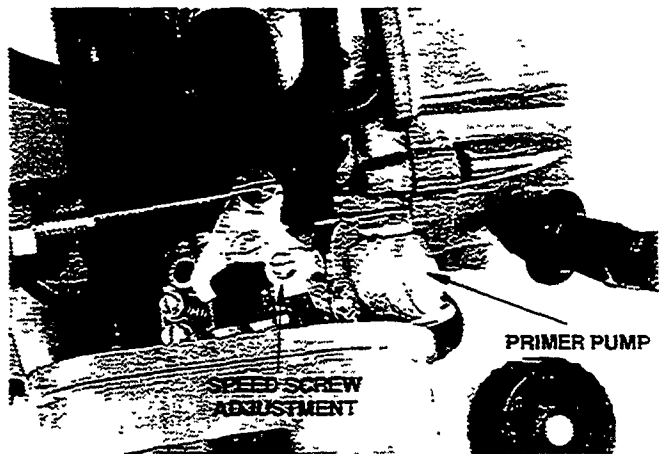


Figure 17

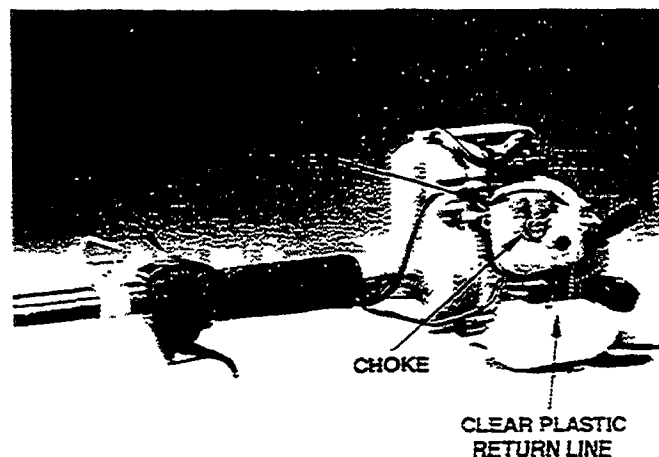


Figure 18

When Warm (Restarting Engine)

- Hold throttle lever in the open position.
- Place choke lever in its open position.
- Pull starter rope as outlined in "Starting When Cold."
- **Note:** If engine fails to start, push primer until fuel appears in clear plastic return line.

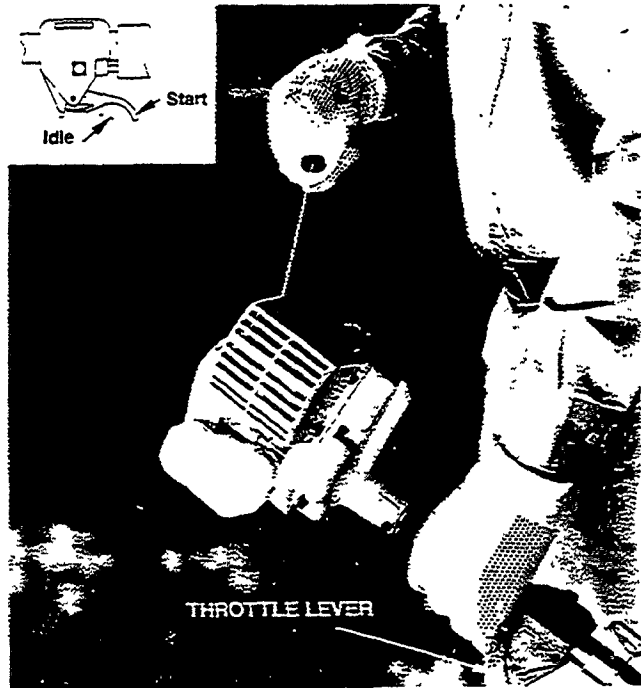


Figure 19

6. STOPPING ENGINE

- Return throttle lever to its idle position, and allow the engine to idle for a short period (approx. 30 sec.). This allows the engine to cool down.
- Push stop switch to "Stop" position (toward the cutting head). Be sure to return the stop switch to the run position before trying to start unit.
- **Note:** Except for emergencies, avoid stopping engine while it is running at high speed, avoids overheating the engine.

7. ADJUSTING ENGINE

- Your Green Machine engine has been adjusted at the factory for optimum performance and fuel consumption, and no further adjustment should be required. However, because of varying atmospheric and climatic conditions, some minor adjustment may be needed for your area.
- Adjusting idle speed should always be done with a tachometer to insure proper idle speed (2,800 to 3,300 rpm). If a tachometer is not available, the idle speed may be adjusted as follows (Figure 17):
 1. Turn idle speed screw clockwise until cutting head or lower drive begins to move.
 2. Turn idle speed screw counterclockwise until lower drive stops.
 3. Turn idle speed screw approximately $\frac{1}{4}$ to $\frac{3}{4}$ turn further counterclockwise.
- If the engine does not idle properly after this adjustment, contact your nearest Green Machine dealer for service.
- Condition of the air cleaner is very important to the operation and life of the engine, and also has a major effect on carburetor adjustments. The air cleaner should be checked for cleanliness before each use, and before making any carburetor adjustment.



Figure 20

8. MAINTENANCE

Daily

- Carefully inspect complete unit for damaged, loose or missing parts. Correct before use

- Carefully inspect for any fuel leaks. Correct immediately.
- Check air cleaner for cleanliness.
- Remove all dust, dirt, and grass from the entire unit after each use.
30-Hour Service, or Once a Week for Professional Gardener use.
- All items under daily service plus:
- Remove, clean, and regap spark plug (0.025 in.). When replacing spark plug, use **Champion DJ8J** or **NGK BM6F**.
- Clean and service air filter (after cleaning put small amount of engine oil on sponge and squeeze out excess) (Figure 21).
- Check fuel filter in tank and clean if needed (Figure 21).
- Remove cylinder cover and clean out all dust, dirt, and foreign material.

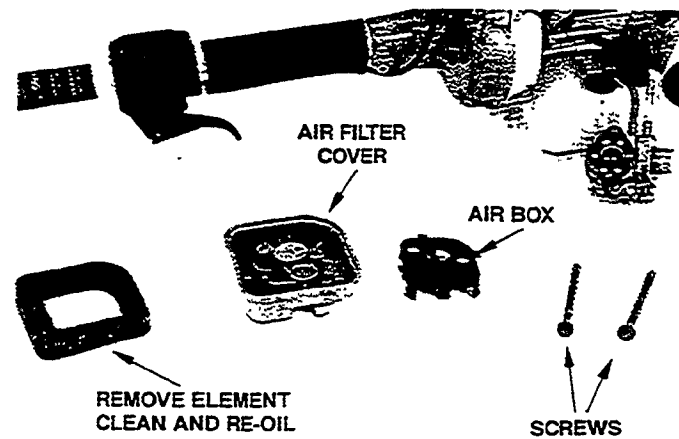


Figure 21



SAFETY:

- Before each use always inspect your Green Machine for loose, missing, damaged or broken parts. Correct before using.
- Always wear approved eye protection (safety goggles).
- Do not wear loose fitting clothes while operating unit.
- Never operate unit while barefoot or wearing sandals.
- Never operate unit without shields or guards in place and in good working order.
- Use only genuine Green Machine blades and rotary heads.
- Never use any type of wire in place of the nylon string.
- Never touch engine or muffler during operation, or immediately after shutdown.
- Never touch spark plug ignition plug cap, or high tension wire while engine is running.
- Always make sure engine is securely mounted to driveshaft before each use.
- Always check for any fuel leaks before each use and correct before use.
- Never operate unit indoors or in an enclosed area.
- Keep bystanders away from work area at all times.
- Your Green Machine is not a toy. Do not allow children to play with it or use it.

1. ASSEMBLY:

- The edger lower unit is fully assembled at the factory

2. OPERATION

- Before using your edger you should adjust the depth of cut by rotating the blade shield to which the guide/depth wheel is attached (Fig. 33).



WARNING: Never adjust blade height with engine running.

- To adjust the blade's depth of cut, first loosen the wing knob as shown (Figure 33).
- Rotating blade shield back (toward the operator) will reduce the cutting depth.
- Rotating forward, will increase the blade's depth of cut (Figure 33-34).
- The best depth setting is that which produces a fine cut line between sidewalk and grass with a minimum of blade depth. (Usually 1/2 inch of blade in the ground.)
- Blade depth may have to be adjusted for each edging job due to different concrete to grass heights.
- It is not recommended to adjust the depth to its maximum where not needed. This will only make the edging work more difficult and shorten blade life.
- To begin edging, first determine which direction you wish to travel so that your walking will not be on the grass. Always operate from left hand side.
- Start the engine and run at half throttle before putting blade into the ground. Gently lower the blade into the ground at the point you wish to start edging. Be careful not to nit the concrete (Figure 35).



WARNING: Always use eye protection (safety goggles) when edging. Always remove obstacles and throwable objects.

- Move forward as quickly as the blade and its cutting will allow. Don't force it, let the blade do the work.
- Use only as much engine speed as is needed to do the job. Overspeed will only shorten blade life.
- While edging, try not to allow blade to touch the concrete.
- The correct handling of your edger is shown in (Figure 35)
- **Note:** Sidewalk edges that have not been maintained may require more than one pass to obtain a clean cut. Periodic edging will keep the edge neat and make the job easier
- It is recommended that a watering of the edge area be done to soften the ground some time before edging

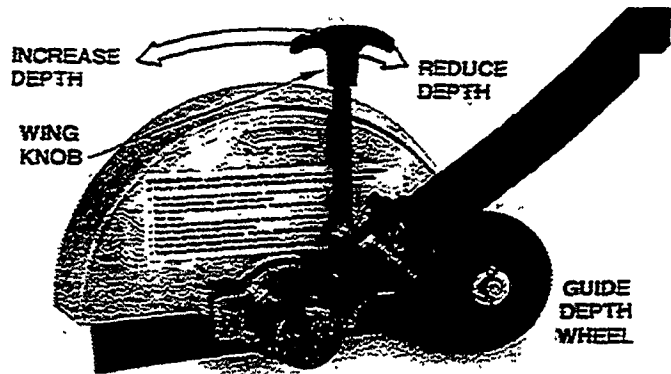


Figure 33

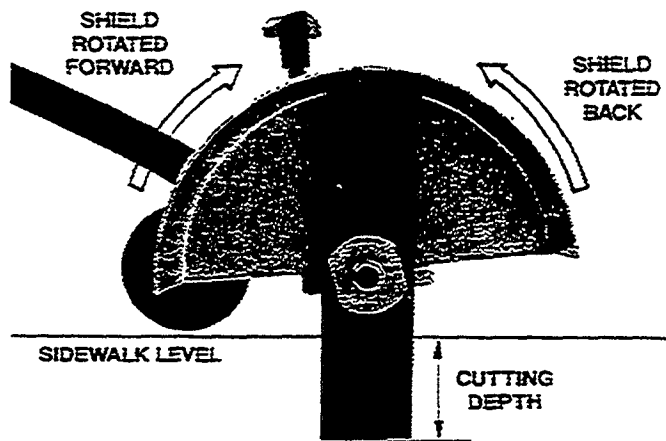


Figure 34

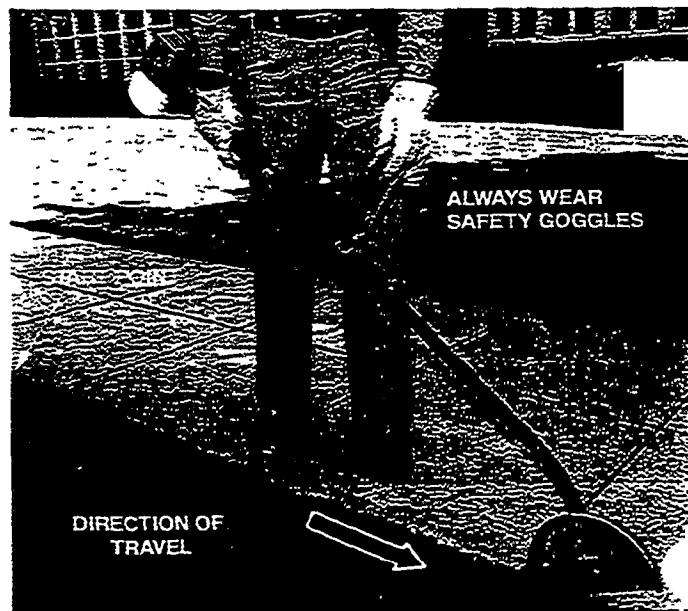


Figure 35

3. MAINTENANCE

- Before each use, inspect complete unit for loose or missing fasteners or parts. If found, correct before using.
- Replace blades as needed. Never wear blade shorter than 3 inches.
- Each 10 hours of use the gearcase should be regreased by first removing the blade, blade holders and seal collar (Figure 36).



CAUTION: Greasing without removing blade and holders will cause gear and bearing damage.

- To replace blade or to grease gearbox, first make certain engine is stopped. Fit spanner wrench supplied onto flats of holder B (Figure 37).
 - Using suitable wrench, loosen blade bolt by turning clockwise. NOTE: left hand thread
 - Remove blade and holders for regreasing.
 - Remove only holder B and old blade if only blade is replaced.
 - Install new blade onto holder A. Install holder B and bolt.
- Make certain blade is properly centered before tightening blade bolt.
- Turn counterclockwise to tighten blade bolt.
 - Tighten securely.
 - Rotate blade to see that blade tips don't touch blade shield at any point.



SAFETY

- Never allow children to operate edger. It is not a toy.
- Always read and understand owners manual before operation.
- Keep area of operation clear of all persons: inspect area for obstacles and throwable objects.
- Dress properly - Do not wear loose clothes or jewelry. They can be caught in moving parts.
- Never wear sandals or operate barefoot.
- Wear long pants.
- Make certain engine is stopped whenever adjusting blade height or making repairs.
- Always wear safety goggles.
- Keep all fasteners tight to insure the edger is in safe working condition.
- Never operate without guard in place.
- Keep bystanders at least 50 feet away.
- Never operate near gravel or in especially rocky soil.
- Never operate from right hand side



Figure 36

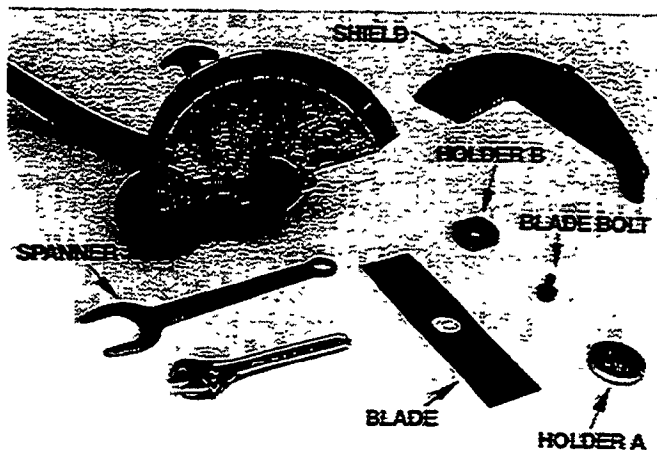


Figure 37

**THE GREEN MACHINE®
TROUBLE SHOOTING CHART**

TROUBLE	POSSIBLE CAUSE	CORRECTION
FAILURE OF ENGINE TO START — NO SPARK 1. Failure located on the spark plug side	1. The electrode of spark plug is wet 2. Carbon deposit sticks to the electrodes of spark plug 3. Poor insulation caused by crack, etc. of insulator 4. Undersize or oversize gap of the electrodes of spark plug 5. Burning of the electrodes of spark plug	1. Dry it 2. Clean it 3. Replace spark plug 4. Adjust the gap to 0.6mm 5. Replace spark plug
2. Failure located on the magneto side	1. Coil burnout 2. Coil poor insulation 3. Cord coating breakage 4. Unit burnout	1. Replace coil 2. Replace coil 3. Replace or repair cord 4. Replace magneto
HAS SPARK 1. Proper compression and sufficient fuel	1. Engine flooded 2. Use of improper fuel mixture	1. Discharge outward with recoil starter 2. Replace with proper fuel: 25:1 ONE-MIX®
2. Sufficient supply of fuel but compression is poor	1. Heavy wear of cylinder, piston and piston ring 2. Loose spark plug	1. Replace all worn parts 2. Tighten
3. No supply of fuel to the carburetor	1. Fuel tank is empty 2. Loose fuel hose fitting or loose carburetor 3. Filter clogging 4. Fuel is available in the tank, however, fuel does not reach the carburetor 5. Air vent in the fuel tank clogging	1. Refill the fuel tank 2. Tighten fuel lines or carburetor 3. Clean or replace filter 4. Refer to the starting procedure 5. Clean it
POWER IS NOT SUFFICIENT 1. Compression of engine is normal and there is no misfiring	1. Air cleaner clogging 2. The muffler is plugged with carbon 3. Air leakage through the pipe fitting, etc. 4. Fuel passage clogging 5. Water is mixed in fuel	1. Clean 2. Clean the muffler or replace 3. Tighten the fitting securely 4. Clean 5. Replace with proper fuel
2. Overheating is observed	1. Excessive lean fuel mixture 2. Use of improper mixed oil 3. Carbon deposit 4. Fan cover, cylinder fin, etc. are stuffed with dirt 5. Forced operation	1. Adjust and clean carburetor 2. Replace with 2-cycle ONE-MIX® 3. Clean 4. Clean and remove dirt 5. Operate properly
3. Knocking noise is heard	1. Cylinder overheat 2. Use of improper fuel 3. The combustion is covered with carbon deposits	1. Adjust carburetor, clean cylinder fin 2. Replace with proper fuel: 25:1 ONE-MIX® 3. Clean the combustion chamber
4. Air Suction	1. Loose carburetor 2. Loose fuel pipe	1. Tighten 2. Insert firmly
ENGINE RUNS BUT TOOL WILL NOT PERFORM	1. Lower tool not fully engaged in coupler.	1. Refer to owners manual for proper assembly or see authorized service dealer for assistance.
ENGINE STOPS WHILE IN OPERATION 1. Engine stops abruptly	1. Defective stop button 2. Dislocation of plug cap 3. The piston shows score surface with indication of seizure 4. Short circuit of spark plug electrode due to carbon deposit 5. Failure of proper functioning of magneto	1. Replace 2. Fix firmly 3. Repair or replace 4. Clean 5. Disassemble and replace necessary parts
2. Engine stops gradually	1. Empty fuel tank 2. Inside carburetor clogging 3. Fuel tank clogging 4. Water is mixed in fuel	1. Refill 2. Disassemble and clean 3. Disassemble and clean breather 4. Replace with proper fuel
ENGINE WILL NOT STOP WHEN TURNED OFF	1. The extreme end portion of ignition plug is red-heated 2. Broken stop button	1. Clean or replace spark plug and adjust the gap to 0.6 mm 2. Replace worn part
SHAFT VIBRATES	1. Cord is not in balance — both cords not of same length 2. Cord is worn out 3. Nylon cord head is bent 4. Saw or Brush blade not centered on Holder A 5. Grease or oil has gotten into clutch assembly (clutch housing) 6. Lower gear case is out of grease	1. Equalize cord length at 6 inches 2. Same as #1 3. Replace arbor post 4. Re-center blade on holders 5. Clean clutch shoes and drum 6. Grease gear case — 30 operating hours