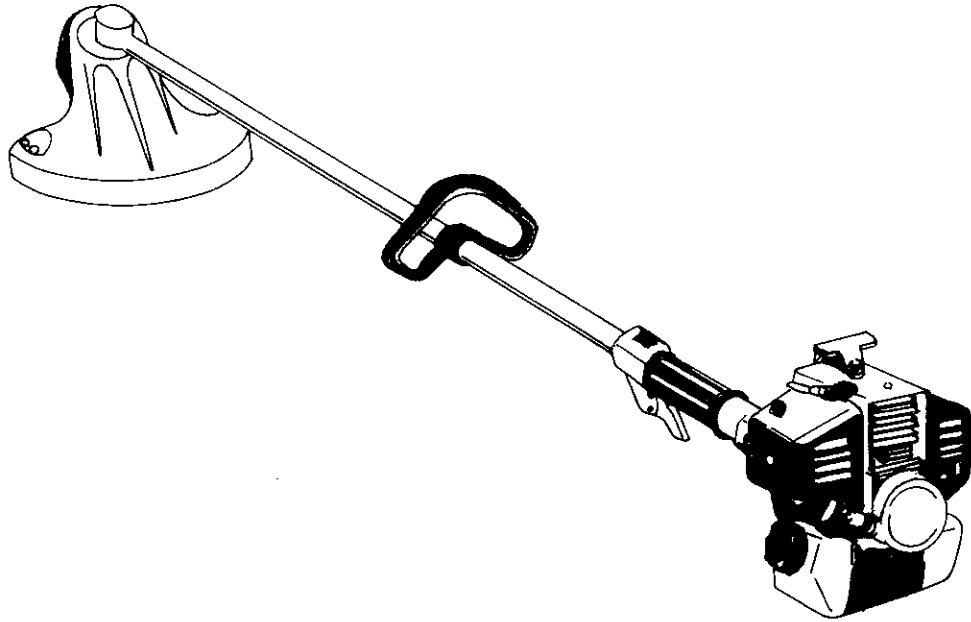


ECHO®



OPERATOR'S MANUAL

ECHO TRIMMER / BRUSHCUTTER SRM-3001

CAUTION

Read Rules for Safe Operation
and Instructions Carefully

1

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INTRODUCTION

ECHO Weed and Grass Trimmers, Model SRM-3001 is lightweight, high performance, gasoline powered unit designed to trim weeds and grass in areas that are difficult to manage by any other means.

This manual provides the information necessary, operation and maintenance.

SAFETY INSTRUCTIONS

1. Do Not operate the unit when you are fatigued.
2. Do Not operate if other people or animals are in the work area.
3. Do Not operate the unit without the shield correctly in position.
4. Do Not operate in a confined area. Carbon monoxide exhaust gas is highly poisonous.
5. Do Not operate the unit while you are smoking.
6. Always wear eye protection goggles when operating the unit.
7. Always hold the unit firmly with both hands and with fingers and thumbs encircling the handles.
8. Always obey local ordinances regulating the use of internal combustion engines in your area.
9. Always use the cutting attachments as approved and supplied by ECHO Inc. for your unit.
10. Always remain alert when operating the unit to avoid possible injury to yourself and other people.
11. Always wear the shoulder harness when operating the unit.
12. Do Not operate the unit while under the influence of drugs or alcohol.

WARNING-DANGER

1. Do Not smoke while handling gasoline.
2. Do Not refuel a hot engine. Wait until it cools.
3. Do Not overfill the tank. Spilled fuel must be wiped up.
4. Always stop the engine when refueling.
5. Always remove the fuel cap slowly in order to relieve any pressure building up in the tank.
6. Always restart the engine at least 10 feet away from the refueling point.
7. Always store gasoline in an approved container.

ATTENTION

For your protection when operating this unit, comply with all Safety Rules as listed in the Operator's Manual. (Replacement manuals are available from your ECHO dealer.)

1. Do not operate unless the debris shield and safety harness are in good condition and properly installed.
2. Do not operate if other persons or animals are in the work area.
3. Do not operate without eye protection goggles available from your ECHO dealer.

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TECHSICAL DATA

Dimension	LxWxH	cm	183x33x31
Weight		kg	6.8
Engine	Type		Air cooled two stroke single cylinder
	Displacement	cc	30.5
	Max revolution	rpm	9,000
	Carburetor		Walbro diaphragm type
	Ignition		Flywheel magneto : TCI system
	Spark plug		CHAMPION CJ-7Y or NGK. BPM-7A
	Starter		Recoif starter
	Clutch		Automatic centrifugal clutch
Fuel	Mixing ratio		Mixture of regular grade leaded gasoline and air cooled two stroke engine oil [32 : 1 Ratio or 50 : 1 Ratio with special oil approved by ECHO]
	Tank capacity	liter	0.7
Drive shaft assembly	Cutter		Nylon line cutter head
	Gear housing		60 degrees spur bevel gears, ratio 1 : 1 . 33 (Counter-clockwise)
	Lubrication		Shell Delpena or good quality lithium grease
	Drive shaft		Hight tensile solid steel, 5 bearings
	Shield		Plastic plate mounted on the gear housing for Nylon line cutter cutter head
	Handle		Loop handle

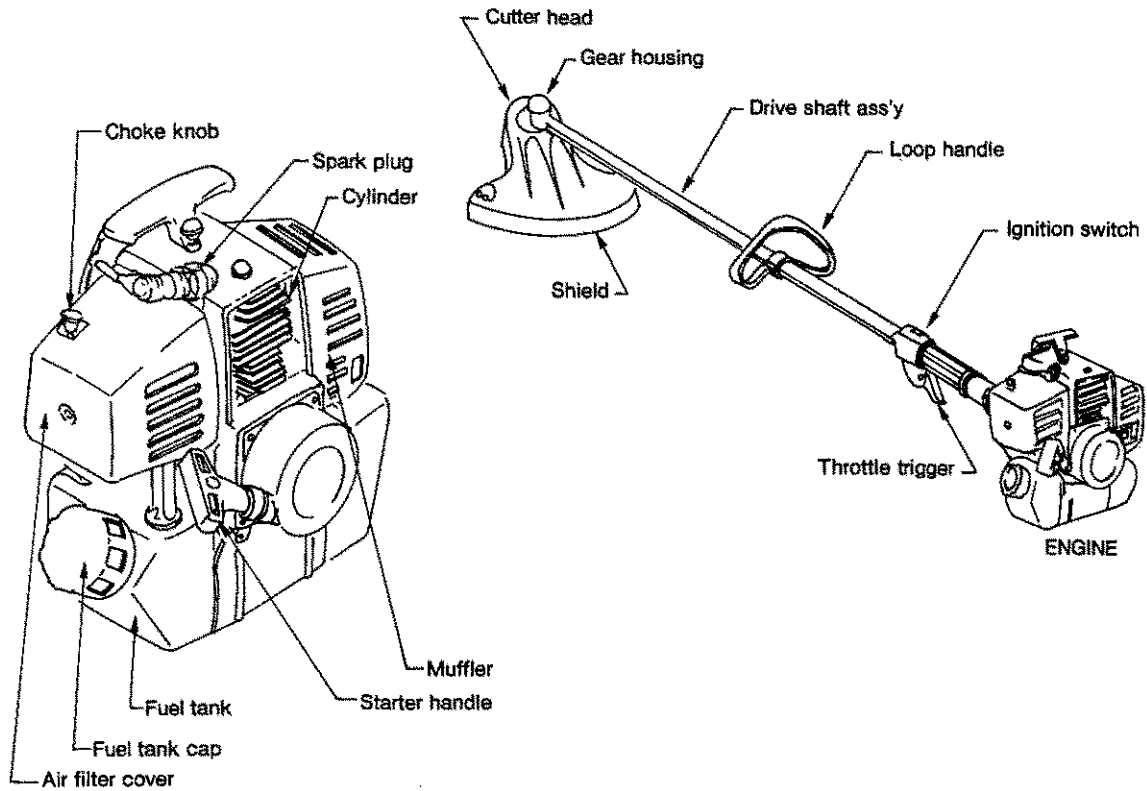
©Technical data subject to change without notice.

WARNING-DANGER

Serious injury may result from the improper use of metal blades. Comply with all Safety Instructions listed in the Operator's Manual and supplied with the blades.

1. The Echo saw tooth blade is designed to cut brush and small trees.
2. The Echo 8 tooth rotary knife blade is designed to cut heavy weeds and grass.
TO AVOID INJURY DUE TO KICKBACK OR BLADE FRACTURE, DO NOT USE THIS BLADE TO CUT BRUSH OR TREES.
3. ECHO INC. will not be responsible for the failure of cutting devices which have not been tested and approved by ECHO for use with this unit.

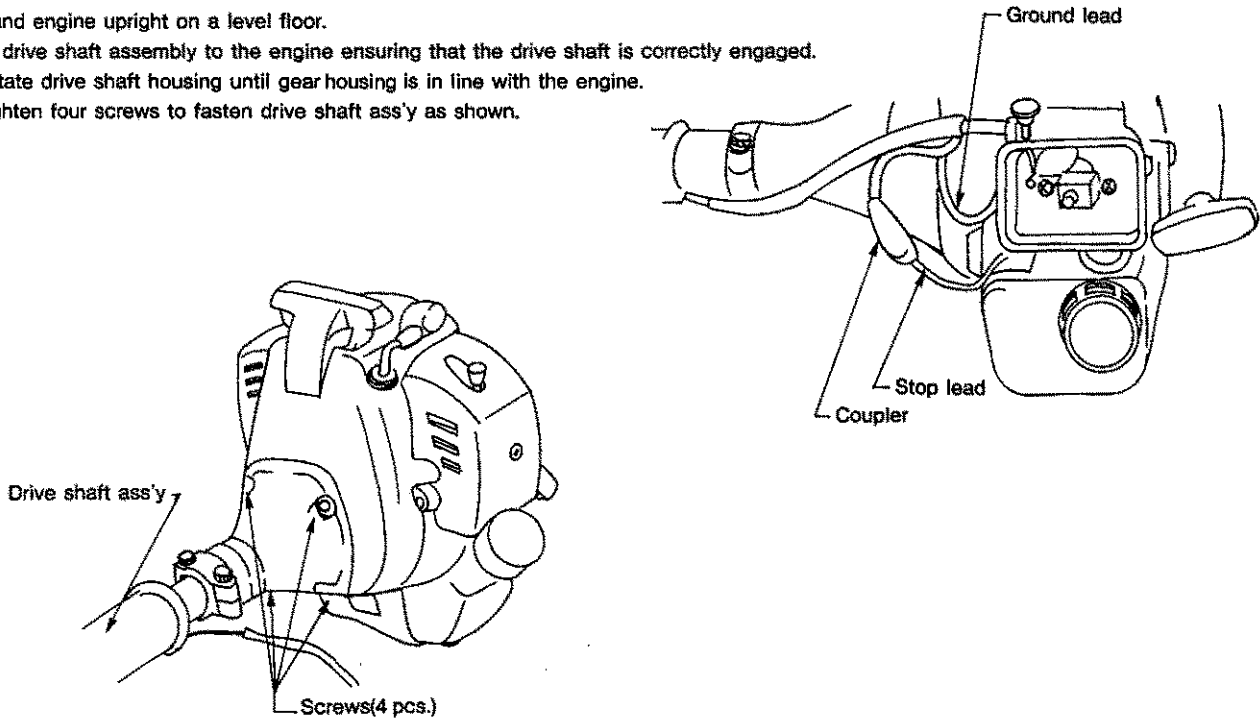
NOMENCLATURE OF PARTS



ASSEMBLING

DRIVE SHAFT

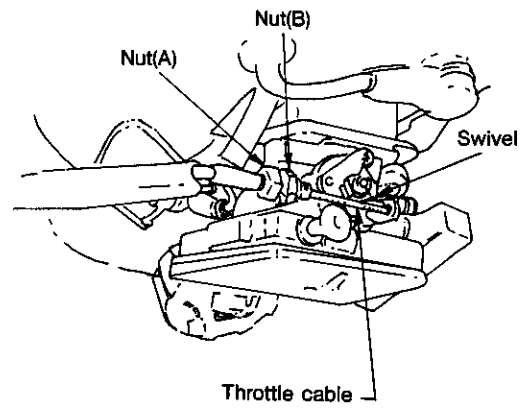
- Stand engine upright on a level floor.
- Fit drive shaft assembly to the engine ensuring that the drive shaft is correctly engaged.
- Rotate drive shaft housing until gear housing is in line with the engine.
- Tighten four screws to fasten drive shaft ass'y as shown.



THROTTLE CABLE

The engine is delivered with throttle cable (engine side) separated, assemble the cable to carburetor as follows.

- Remove the cover (for air filter and carburetor)
- Loosen nut (A)
- Insert throttle cable through the bracket shown.
- Tighten nut (A) finger tight, and attach the inner cable to swivel on throttle lever ensuring that the nipple fits into socket provided on one side of slot.
- Tighten nut (A) to secure in this position.
- Connect the both stop leads and ground leads.
- Check that throttle operates freely and returns to idle position.
- Do not loosen nut (B) unnecessarily, as it is located properly at the factory.
- Install the cover.

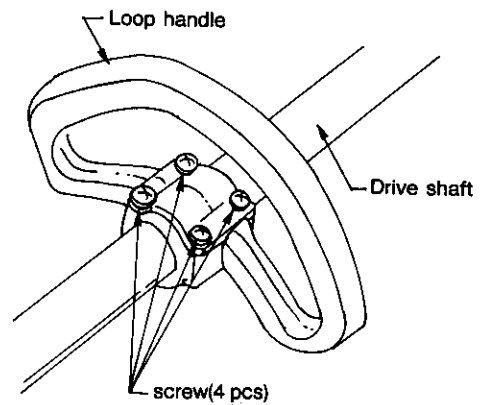


LOOP HANDLE

- Install loop handle on the drive shaft four (4) screw as shown.

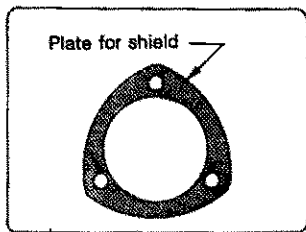
WARNING

Never start engine without driveshaft assembly installed. This could result in serious injury.

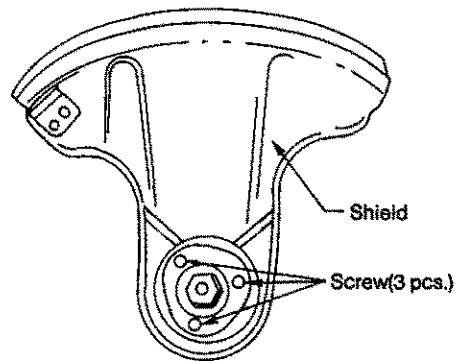


SHIELD (USE ONLY FOR NYLON LINE HEAD)

- Fit the shield then the plate to the gear housing and tighten three screws.
- For safe operation, never use the trimmer without a shield.
- Do not use this shield for steel blades.

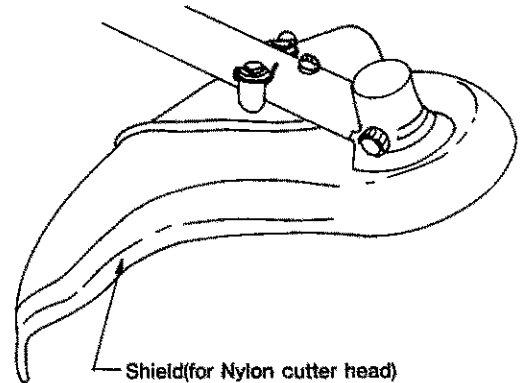


(Use with three screws for shield installation)



NYLON LINE HEAD

- AS for the NYLON LINE CUTTER HEAD follow the instructions, page 7.



SHOULDER STRAP

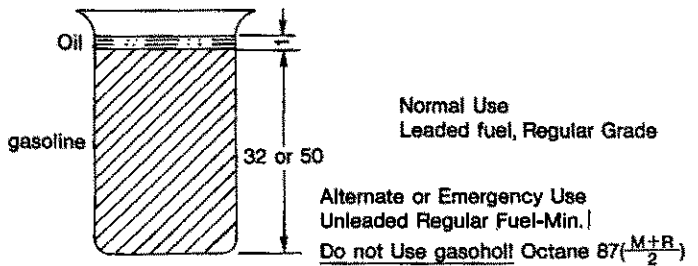
- Fit shoulder strap to hanger, and readjust length of strap to maintain the cutter head parallel to the ground.

OPERATION

- Check for loose nuts, bolts and screws before using the unit every use.

FUEL

- Fuel used for this model is a mixture of regular leaded grade gasoline and ECHO brand motor oil.
- Mixture ratio is
Gasoline 32 parts : Oil 1 part.
—Fuel mixture at a rate other than 32 : 1 may cause malfunction of the engine.
—Pour 1/2 of the gasoline into a safe container, add oil and mix thoroughly.
—Now add the remainder of gasoline and mix again.
—Do not use motor oil other than that recommended above.
—Do not mix directly in engine fuel tank.
- After refueling, secure the fuel tank cap and wipe all spilled fuel with a dry cloth.



(NOTE)

50 : 1 Ratio is applicable with special oil approved by ECHO.

Fuel Mix Chart

32 : 1				50 : 1			
(US)		(METRIC)		(US)		(METRIC)	
GAS	OIL	GAS	OIL	GAS	OIL	GAS	OIL
Gal.	Fl. oz	Liter	cc.	Gal.	Fl.oz	Liter	cc.
1	4.0	4	125	1	2.6	4	80
2	8.0	8	250	2	5.1	8	160
5	20.0	20	625	5	12.8	20	400

STARTING COLD ENGINE

- Slide ignition switch to START/RUN position.
- Push primary pump bulb 3 to 4 times (or until fuel is seen in fuel return line).
- Pull choke knob to cold start position and pull starter until engine fires.
- Push choke knob to run position and start engine and if necessary, restart the engine again and allow to warm up for a few minutes before using.
- After idling, gradually open throttle and cutter head will start to operate as the engine attains clutch engagement speed of 3000 ~3400 RPM approximately.

(NOTE)

Recoil starter : Use short pulls-only 1/2-2/3 of starter rope for starting. Do not allow the rope to snap back in.

Always hold the unit firmly.

STARTING WARM ENGINE

- If fuel tank was not run dry, pull starter one to three times and engine should fire. Do not use choke.
- If fuel tank was run dry, after refilling, push the primer bulb 3 to 4 times then pull the starter. Do not choke. If the engine does not start in 5 pulls, push the primer bulb twice more or until fuel is seen flowing in the return line and start.

STOPPING ENGINE

- Release throttle trigger and allow to run at an idle speed.
- Turn ignition switch to "STOP" position.

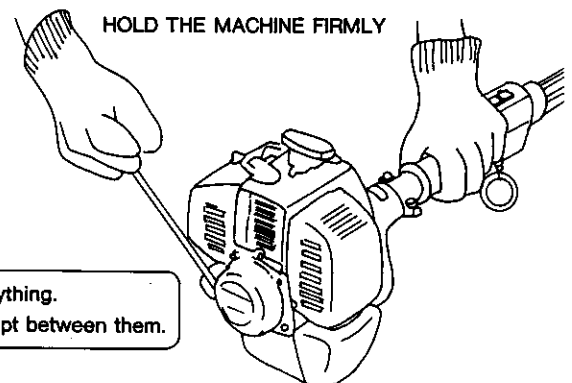
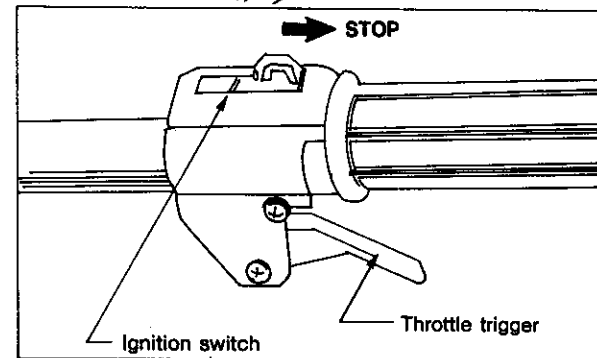
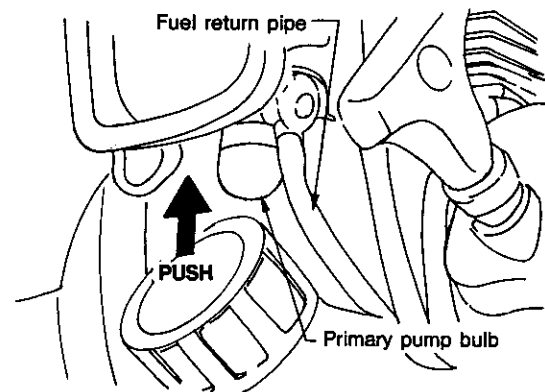
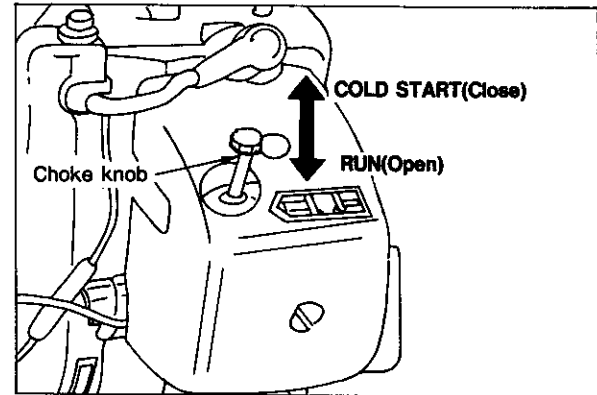
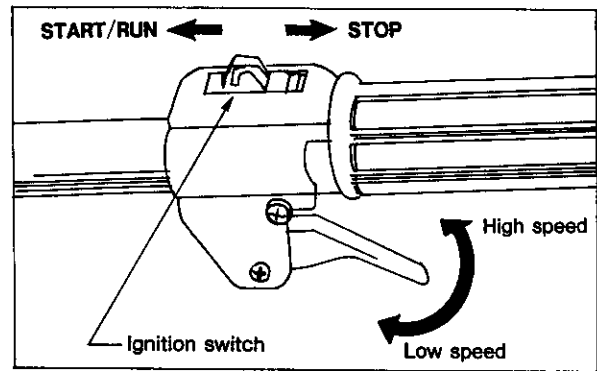
OPERATING THE TRIMMER

- Adjust handle to a convenient position for trimming as instructed on page 4.
- Allow the engine to warm up at a fast idle for a few minutes.
- Increase engine speed as necessary.
- When mowing weeds or grass, swing the cutter head from right to left as you move forward.
 - Avoid striking any obstruction such as rocks, stones or tree stumps which can damage the cutter head. Do not cut into the ground.
 - To avoid damage to the engine, do not run the engine unloaded at full throttle.
- In the event that the cutter strikes an obstruction or is otherwise prevented from rotating in normal operation, the clutch will slip to prevent possible engine damage. In this case, stop the engine, free the cutter and then start the operation again.
- In an emergency, pull out quick release latch of shoulder harness to detach the unit.

CAUTION

Do not allow either people or animals into the work area.
Always wear safety goggles when cutting.
Dress properly-Avoid loose clothing.

When grass or weeds have clogged the cutter head affecting normal operation, first, stop the engine and then remove the debris.



- Before starting up the engine, make sure that the cutter blade is not contacting anything.
- When two or more operators are working together, ensure that a safe distance is kept between them.

ECHOMATIC™ NYLON LINE CUTTING HEAD
(SEMI-AUTO HEAD)

REMOVE SPOOL

1. (Do not push spool in.) Hold drum firmly and turn spool in direction shown (Fig. 1), to take up slack, then twist with a hard snap until plastic peg is not visible in hole (Fig. 2).
2. Pull spool out of drum.

LOCKED POSITION

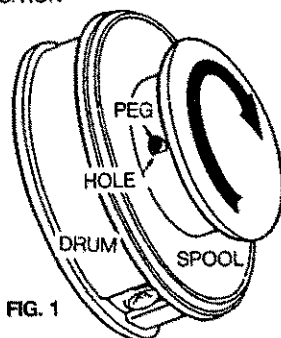


FIG. 1

SEE THROUGH VIEW

UNLOCKED POSITION

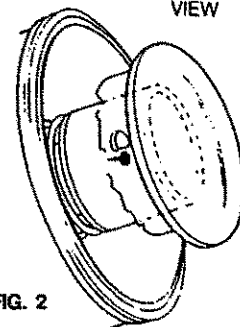


FIG. 2

INSTALL LINE

NOTE: Use one line, 20' long.

1. Thread end of line through hole on spool (Fig. 3), and pull through until line is the same length on both sides of hole.
 2. Wind both ends of line at same time: Wind counterclockwise as shown (Fig. 4) in direction of arrow marked cc on edge of spool.
- CAUTION! Wind tightly and evenly from side to side and do not twist line.**
3. Lock line ends into both notches of the spool. Leave about 5 inches protruding. (This will assist with reinstallation of the spool).

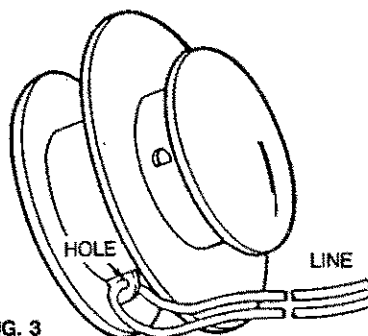


FIG. 3

TIGHT AND EVEN

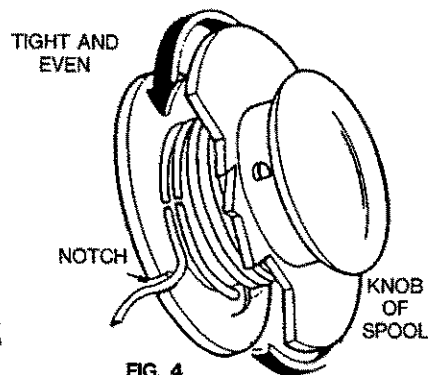


FIG. 4

INSTALL SPOOL

1. Index (turn) the outer drive so that both pegs are lined up with the eyelets in the drum.
2. Feed ends of line out through eyelets on drum.
3. Align pegs on outer drive with slots in spool and push spool into drum.
4. Pull both lines to disengage from notches in spool.
5. Hold drum firmly, twist spool sharply in direction shown (Fig. 6), until peg goes into hole with a click and locks spool to drum.
6. Cut lines to 4".

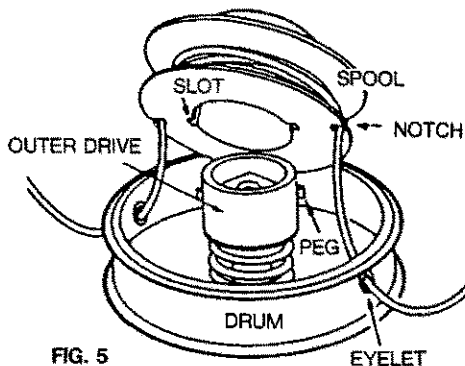


FIG. 5

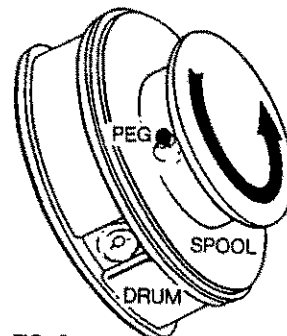
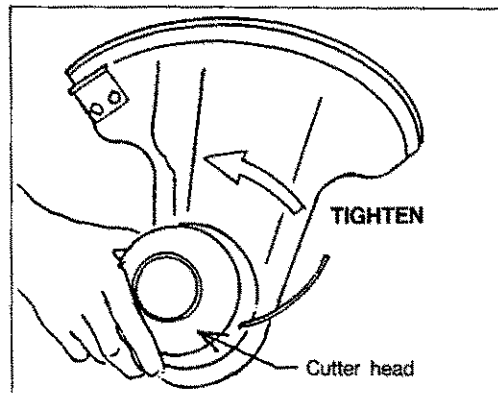


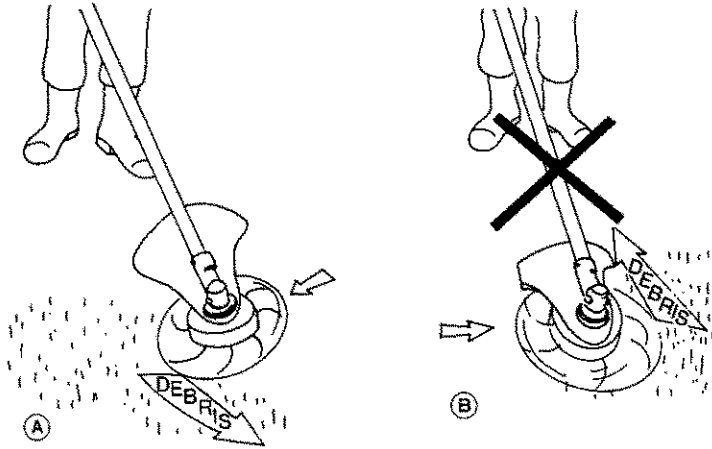
FIG. 6

Install the cutter head as shown. (Turn counter clockwise)



OPERATING INSTRUCTIONS nylon line

- Always use the end of the line for cutting. Forcing the cutter head too close to the work will result in reduced efficiency and broken line.
- Maintain the line at the recommended length of 5 to 6 inches. A longer line will reduce engine speed, a shorter line may result in engine damage.
- The trimmer head rotates counterclockwise. Always cut with the head tilted to the right to deflect debris away from the operator. (See below illustration)
- Always observe the SAFETY RULES on Page 1 when using the unit.



TRIMMING

The nylon line will allow you to trim along walls and fence lines. Always try to trim from right to left, walking behind the unit and parallel to the wall or fence, thus deflecting debris away from operator. See Fig. 5



Fig. 5

EDGING

- The nylon line is intended only to cut grass and should not be used to cut a normal edging trench along stone or concrete driveways etc.
- Tilt the unit vertically as illustrated and use only the line tip to remove unwanted growth. See Fig. 6

EDGING

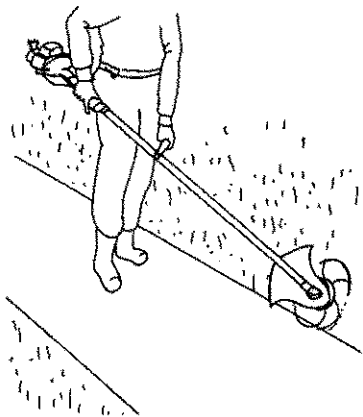


Fig. 6

MOWING

- The nylon line will effectively mow large areas of heavy grass and/or weeds. Use the standard 5-6 inches of line and operate at full throttle.
- When mowing cultivated areas such as lawns hold the cutter head parallel to the ground to avoid scalping. See Fig. 7

MOWING



Fig. 7

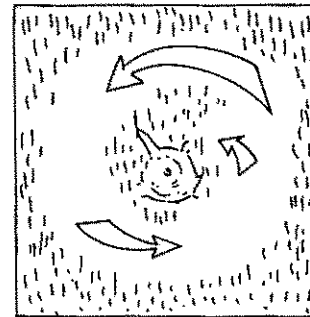
SCALPING

- The cleaning of weeds and grass right down to the earth can be accomplished very easily with the nylon line.
- Scalping around trees and bushes is particularly effective, but care should be exercised not to bruise the bark of young and sensitive growth.
- In flower beds, always remember that the nylon line will cut in a complete circle to avoid cutting flowers instead of weeds. See Fig. 8

SCALPING



Fig. 8



SWEEPING

- Sweeping grass and other debris from a hard surface can be done very quickly. See Fig. 9

SWEEPING

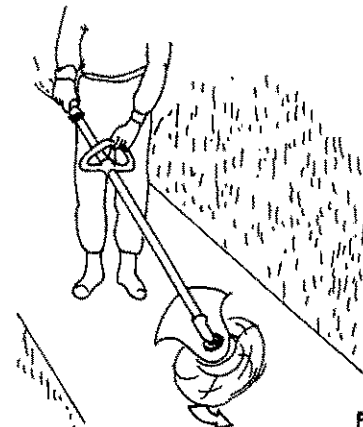


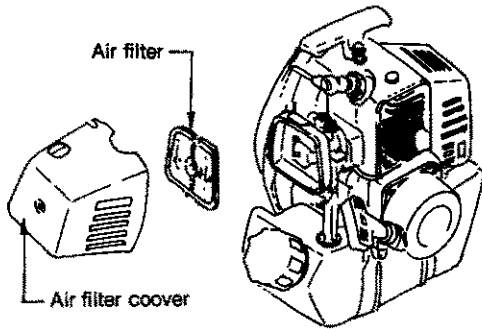
Fig. 9

MAINTENANCE AND CARE

= ALWAYS KEEP THE UNIT CLEAN =

AIR FILTER

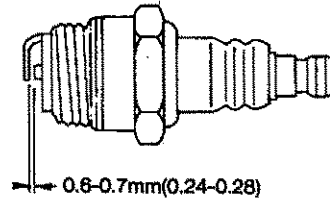
- Clean before using the unit.
 - Remove air cleaner cover and filter.
 - Brush off dust lightly or wash it in suitable cleaning liquid.
 - When you wash it in a solvent, dry it completely before putting back in place.
 - Fit air cleaner and cover back on engine.



SPARK PLUG

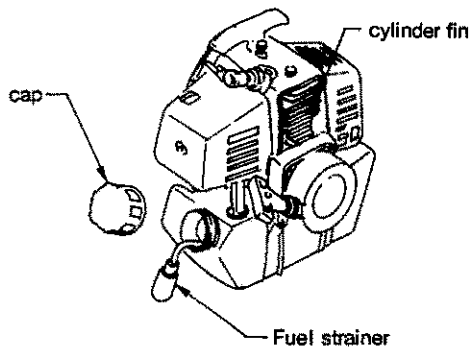
- Check periodically.
- Standard spark gap is 0.6-0.7 mm (0.024-0.028 in).
- Replace if either electrode is worn or if the insulator is fouled by oil or other deposits.
- TORQUE = 145-155 kg-cm (125-135 in. lb)

CAUTION
Do not over torque.



FUEL STRAINER

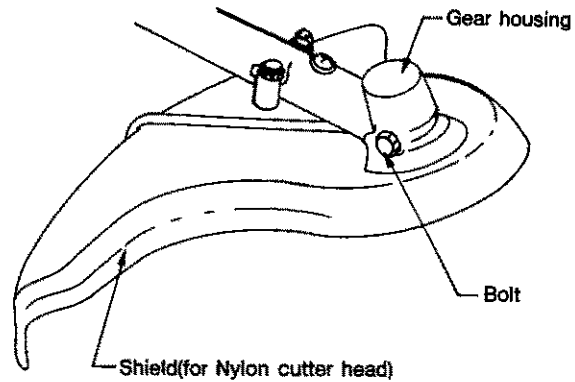
- Check periodically.
 - Do not allow dust to enter into fuel tank.
 - Clogged strainer will cause difficulty in starting engine or abnormalities in engine performances.
 - Pick up fuel strainer through fuel inlet port with a piece of steel wire or the like.
 - When strainer is dirty, wash it in suitable cleaning liquid or replace it.



GEAR HOUSING

- Remove the bolt every 50 hours and check.
- Replenish as necessary, but do not overfill.
 - Shell delpena or good quality lithium multi grease is recommendable.

Air filter Air filter cover Cylinder fin Cap Fuel strainer

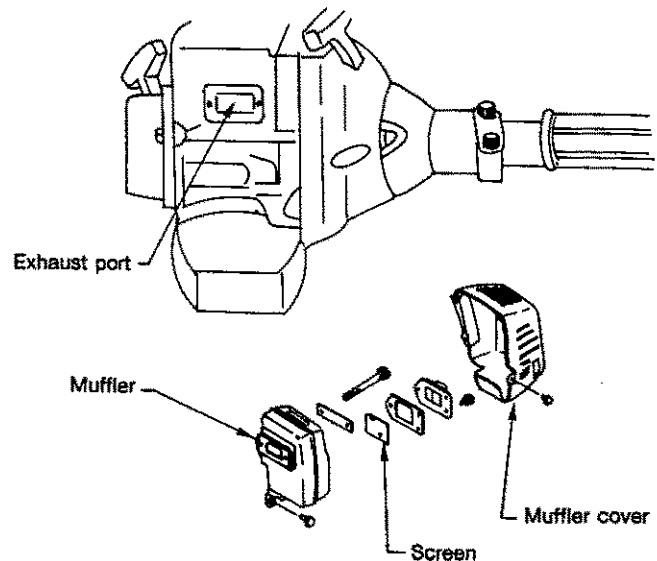


MUFFLER AND EXHAUST PORT(SAM)

- Clean as necessary.
- Carbon deposits in cylinder exhaust port and muffler will reduce engine output.
 - Muffler can be removed by taking off muffler cover.
 - Be careful not to scratch cylinder or piston when cleaning cylinder exhaust port.
- Use non-ferrous plastic or wood.

CYLINDER FINS

- Check periodically.
- Clogged fins will result in poor engine cooling.
- Remove dirt and dust from between fins to let cooling air pass easily.



CARBURETOR ADJUSTMENT

Carburator is set at the factory. So normally, further adjustment is unnecessary. If adjustment is required, refer to the following instructions.

ADJUSTMENT OF IDLING SPEED

If idling adjustment is too low or too high, adjust the idle adjustment screw (Shown on illustration).

- 1) Turn screw clockwise until cutter blade on running.
- 2) Then turn screw back (Counter clockwise) about half or one turn.

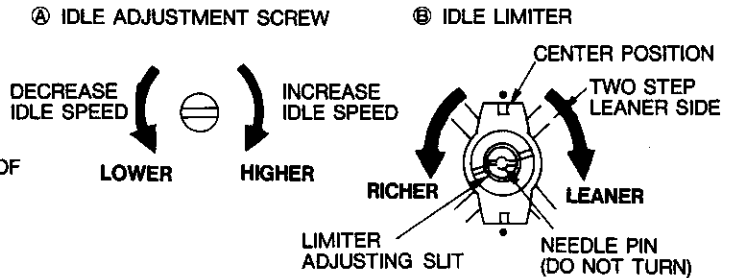
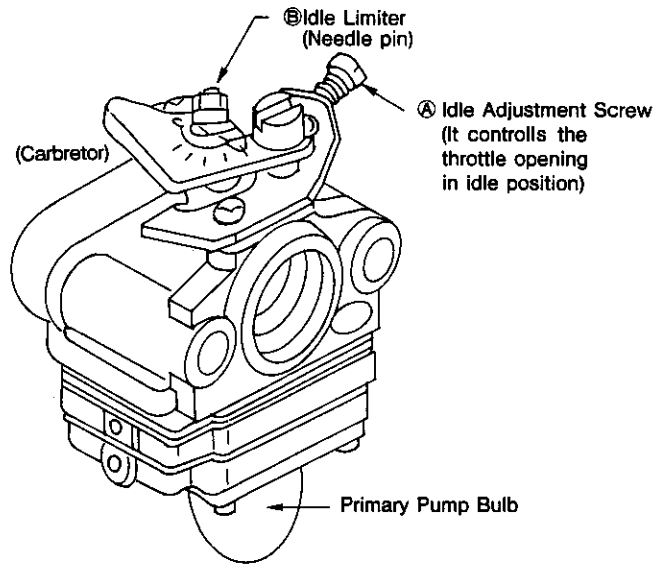
IF FURTHER ADJUSTMENT THAN ABOVE IS REQUIRED, PLEASE TAKE UNIT TO SERVICE DEALER.

If carburator adjustment seems too lean or too rich in idling position.

- 1) Start engine and allow to warm up.
- 2) Turn idle limiter one or two steps clockwise to get leaner condition, or counterclockwise to get richer.
- 3) Recheck idle and reset idle adjustment screw if necessary.

CAUTION

DO NOT TURN NEEDLE PIN WHICH IS INSIDE OF LIMITER.
PLEASE FOLLOW ECHO SERVICE MANUAL FOR MORE DETAIL OF ADJUSTMENT.



NOTE : IF USE THE UNIT HIGHER THAN 3000 FEET IN ELEVATION, PLEASE CONTACT WITH SERVICE, DEALER.

MAGNETO

The unit is incorporated with a magneto of T.C.I.(Transistor Controlled Ignition) system, which does not require adjustment of ignition timing and the contact breaker point gap. Ensure wire connections and couplers assembling.

TROUBLE SHOOTING

Poor performance of the engine and/or trimming mechanism can normally be prevented by carefully following below listed.

Poor performances can easily be corrected even by a beginner.

When the engine does not function properly check the following three (3) points first.

- Is engine compression adequate?
- Is fuel system in good condition and is enough fuel being supplied?
- Is electrical system in good condition and is spark plug operating normally?

When there is serious trouble with the unit, do not try to repair it yourself but have your distributor or dealer do it for you.

For detailed TROUBLE SHOOTING refer to tables 1 and 2. Locate the problem on the following charts and repair as necessary.

Table 1

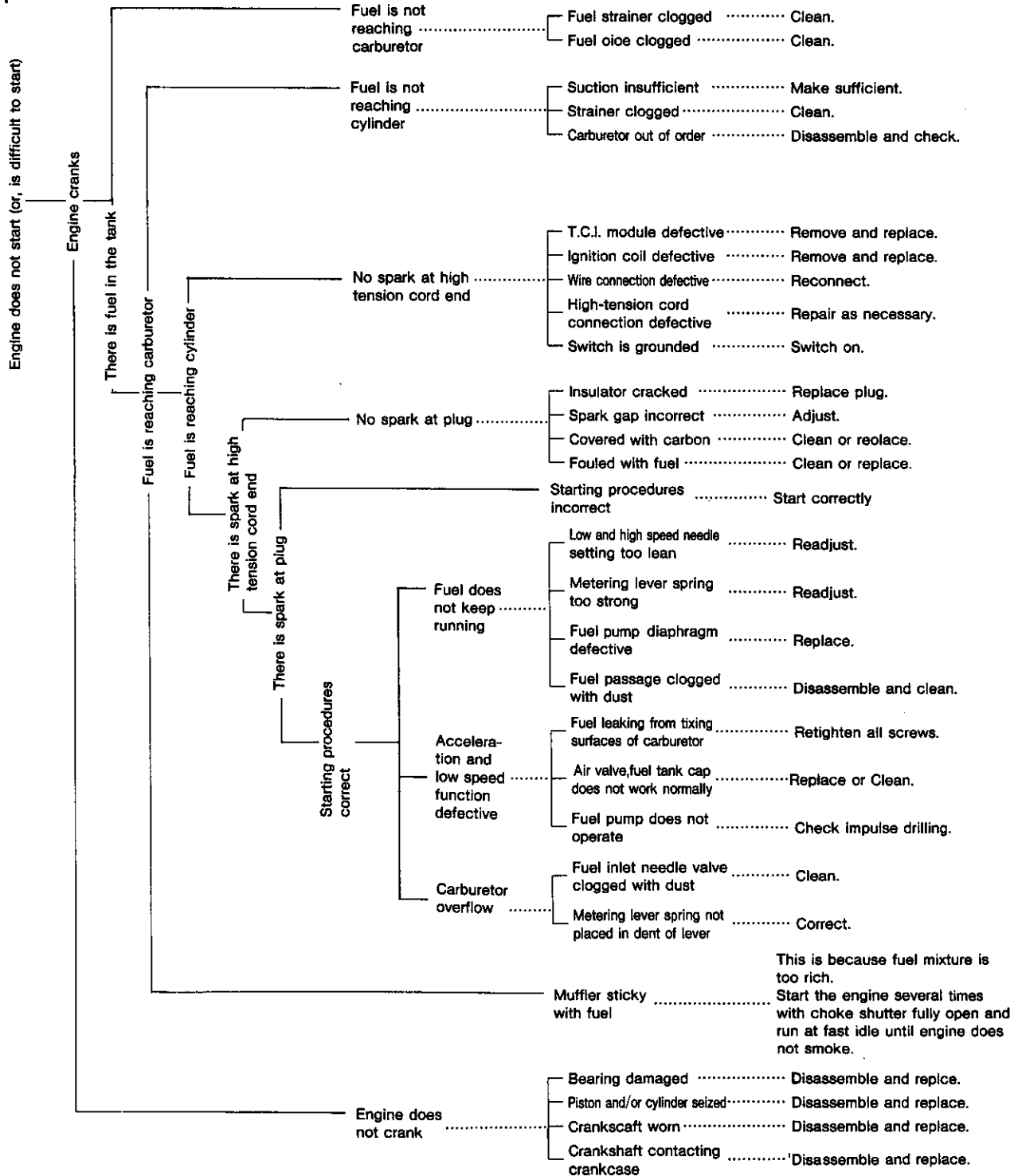
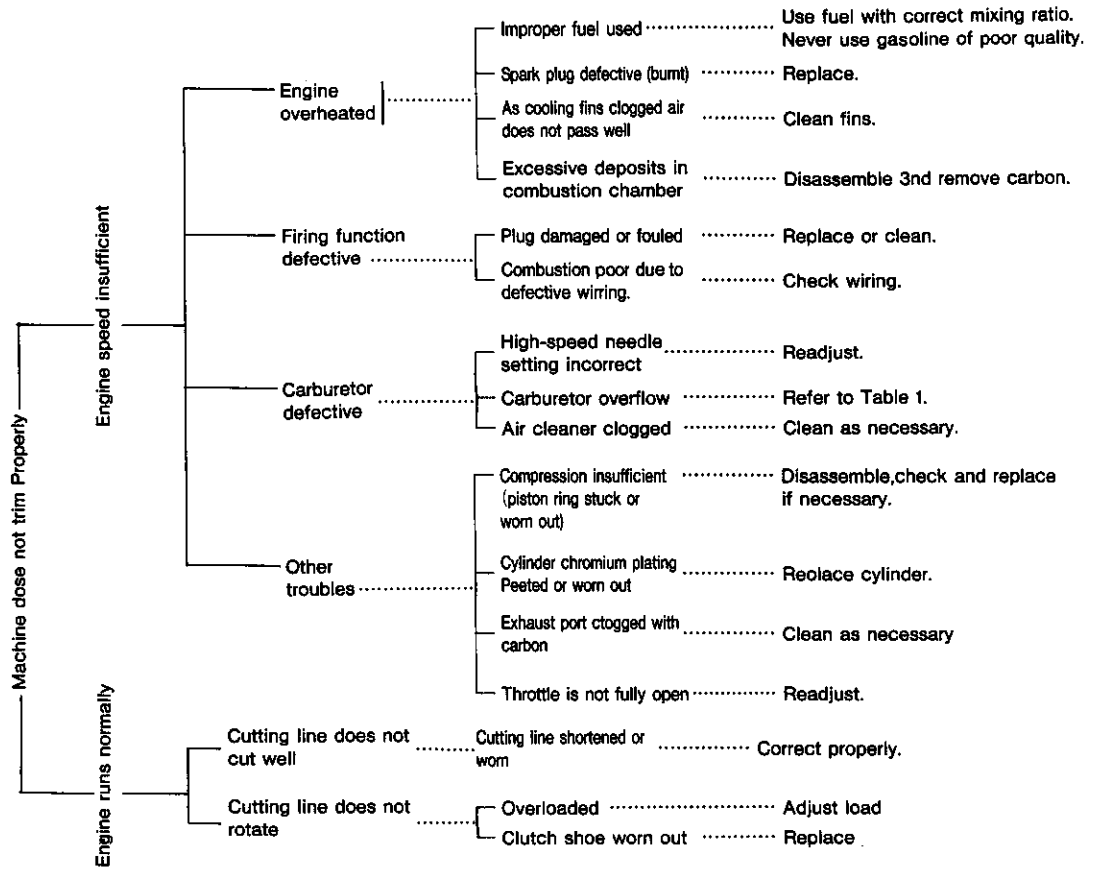


Table 2



LONG TERM STORAGE

- Inspect and adjust every part of the unit.
 - Completely clean every part, and repair, if necessary.
 - Apply thin coating of oil on metal parts to prevent rust.
 - Remove the cutter head, apply sufficient oil coating and wrap up in plastic.
- Drain fuel tank, pull starter handle slowly a few times to drain fuel from carburetor.
- Pour a small amount of clean motor oil into spark plug hole, pull starter handle and then crank the engine until TOP DEAD CENTER.
- Store in a dry area, free from dust.