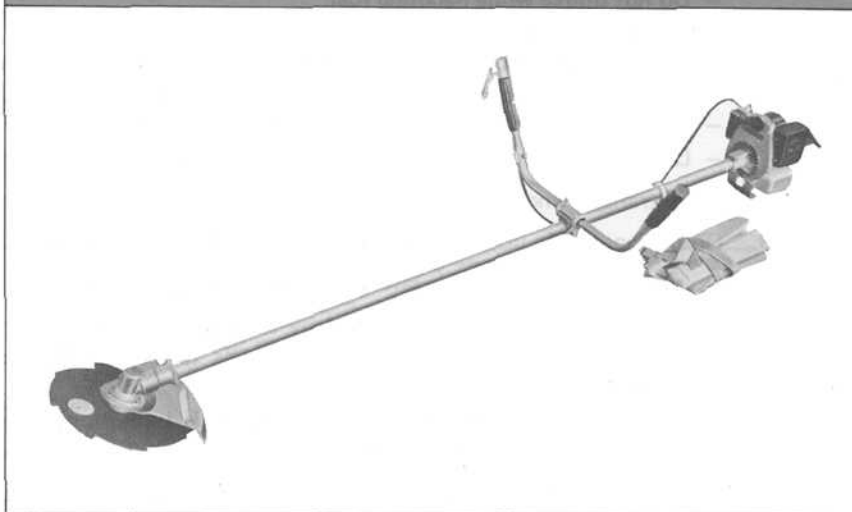


ECHO

WEED AND GRASS TRIMMER

OPERATOR'S MANUAL

SRM-200DB



898 571-0803 3

CAUTION

Read Rules for Safe Operation
and Instructions Carefully

IMPORTANT

RULES FOR SAFE OPERATION

1. Obey Rules and/or Regulations in your area.
2. Read this Operator's Manual well to acquaint yourself with how to handle the unit safely and effectively before use.
 - Before starting operation, study the working procedures well.
 - If there is anything doubtful, contact and inquire with an Echo distributor or dealer.
3. Never operate the unit when you are fatigued.
 - Fatigue causes carelessness.
 - Keep sufficient rest periods and breaks when operating the unit.
 - Be more cautious before rest periods and before the end of your shift.
4. Handle gasoline with care. It is highly inflammable.
 - Always store gasoline in approved container.
 - Handle at a clean and cleared place and away from fire.
 - Do not smoke while handling fuel.
 - Always stop the engine to refuel the tank.
 - Do not refuel a hot engine. Wait until the engine has cooled down.
 - Avoid spilling fuel or oil. Spilled fuel should always be wiped up.
 - Move at least 3 meters (10 feet) away from the fueling point before starting engine.
 - Do not move the fuel tank cap when engine is still warm or running.
5. When transporting, checking or adjusting the unit be sure the engine is stopped.
6. Do not operate in unventilated area. Exhaust gas is highly poisonous.
7. Do not operate without the safety guard in correct position.
8. Use only the cutter blade designated by the manufacturer for this model. Make sure that the cutter is correctly fixed according to the instruction. Blade has to be well leveled and sharpened, teeth bottom must be well rounded.

Levelling should not be adjusted while engine is in motion. When crack is noticed on the cutter blade, never use it, but replace with the new one.
9. Before starting up the engine, make sure that the cutter blade is not contacting anything.
10. Always wear safety footwear, eye protection goggles and ear protectors where possible.
11. Keep other persons or animals away from working area.
 - When 2 or more operators should work together, do keep a proper distance between them.
12. Do not smoke when operating.
13. Be sure of your footing when operating.
14. Always hold the unit firmly with both hands with the thumb and fingers encircling the handles.
15. Do not cut too close to the ground in order to avoid hitting small stones or other debris.
16. Before setting down the trimmer, switch off the engine.

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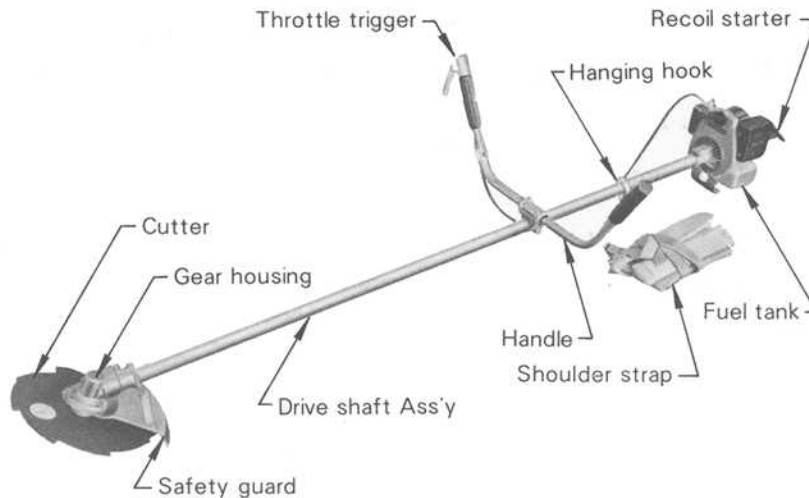
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TECHNICAL DATA

Dimension	L x W x H	cm (in.)	175 x 60 x 35 (68.9 x 23.6 x 13.7)
Weight		kg (lbs)	6 (13.2): w/o shoulder harness and cutter head
Engine	Type Displacement Max revolution Carburetor Ignition Spark plug Starter Clutch	cc (cu.in.) rpm	Air cooled 2 cycle single cylinder 21.2 (1.29) 8,000 Walbro diaphragm type WA Flywheel magneto: contact breaker point system NGK-BM6A or CHAMPION CJ-8 Recoil starter Automatic centrifugal clutch
Fuel	Mixing ratio Tank capacity	 litre (FL.OZ.US)	Regular grade gasoline 20 parts: ECHO brand motor oil (or an air cooled 2-cycle engine oil of a reputable brand name) 1 part 0.5 (16.9)
Drive shaft ass'y	Cutter Cutter Cutter (option) Gear housing Lubrication Drive shaft Safety guard		8 cutter blade, 10 in. Circular saw, 10 in. Nylon cord cutter head 60 degree spur bevel gears, ratio 1:1.18 Reduction Shell Delpena or good quality lithium grease High tensile solid steel, 4 bearings Steel plate mounted on the drive shaft housing

Technical data subject to change without notice.

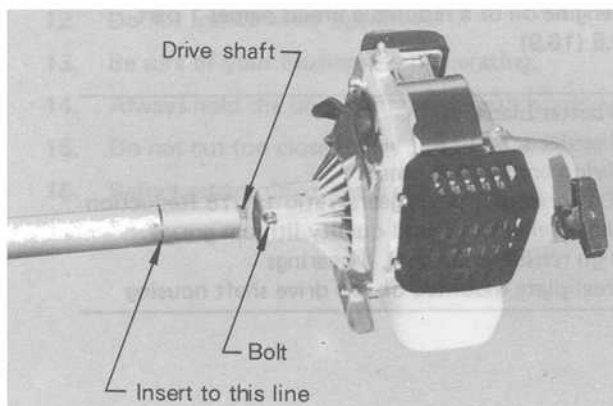
NOMENCLATURE OF PARTS



ASSEMBLING

DRIVE SHAFT

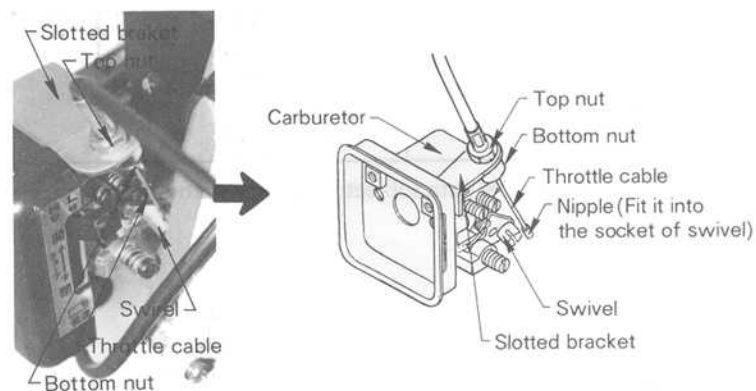
- Stand engine upright on a level floor.
- Loosen bolt at drive shaft end of the engine.
- Fit drive shaft assembly ensuring that the drive shaft is correctly engaged.
- The line on drive shaft housing must be in contact with the engine.
- Rotate drive shaft housing until gear housing is in line with the engine.
- Tighten bolt to fasten drive shaft ass'y.



THROTTLE CABLE ASS'Y

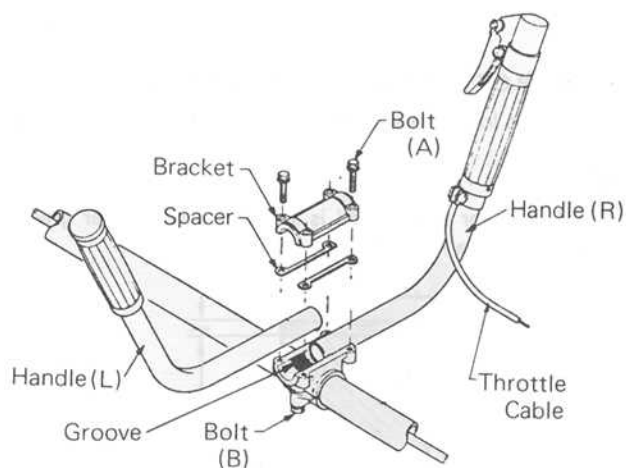
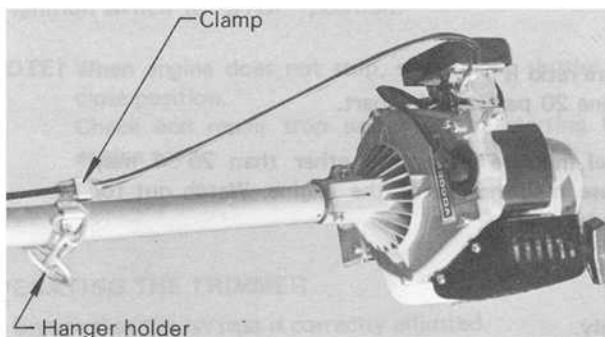
As the engine delivered with throttle cable (engine side) separated, assemble the cable to carburetor as follows.

- Attach the inner cable to swivel on throttle lever ensuring that the nipple fits into socket provided on one side of slot.
- Attach the cable adjuster to slotted bracket with bottom nut fitting into slot as illustrated.
- Tighten top hexagon nut and washer to secure in this position.
- Connect the other end of the cable to the throttle control lever.
- Check that throttle operates freely and returns to idle position.
- Do not loosen bottom nut unnecessary, as it is located properly at the factory.



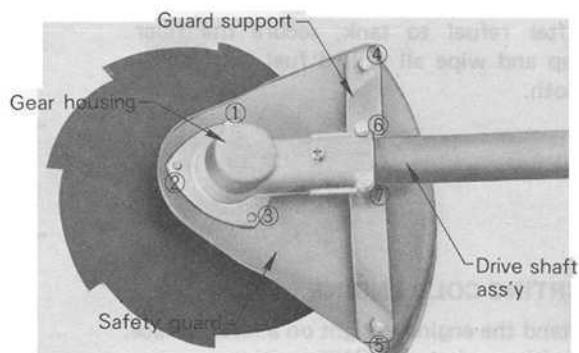
HANDLE

- Assemble handles (L&R) on drive shaft Ass'y as shown.
 - Unscrew four bolts (A) and two bolts (B), and adjust handles to a convenient position.
 - Tighten bolts securely.
- Fix throttle cable to drive shaft Ass'y with clamp of swivel hook.



SAFETY GUARD

- Fit the safety guard on the gear housing and tighten the screws or nuts using the spring washers. (Seven points)
- For safe operation, never use the trimmer without safety guard.

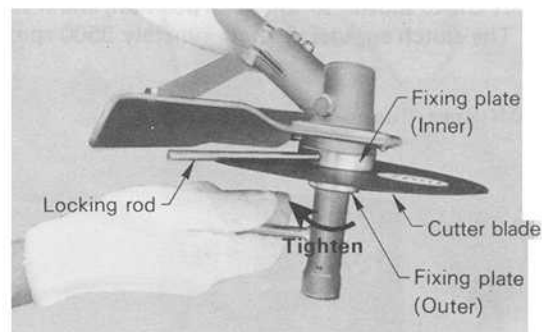


CUTTER BLADE

- After fixing the safety guard, assemble inner blade fixing plate, blade and outer blade fixing plate to the PTO shaft. Then secure the nut finger tight.
- Lock the gear housing with the locking rod and tighten the nut with the box wrench w/handle rod.
- Fit the split pin in the P.T.O. shaft.

(CAUTION)

- The nut is left hand thread but must always be secured by a split pin as provided.
- When crack is noticed on the blade, never use it. Replace with new one at once.
- Always prepare genuine parts.



- Nylon cord cutter head is available as option. Follow the instructions attached to each cutter head package.

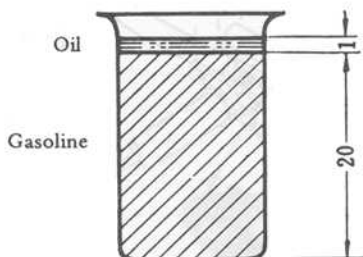
OPERATION

CHECK UP OF NUTS AND OTHER HARDWARES

- Check up loose nuts, bolts and screws before using the unit every day.

FUEL

- Fuel used for this model is a mixture of regular grade gasoline and ECHO brand motor oil or an air cooled 2 cycle engine oil of a reputable brand name.



- Mixture ratio is
Gasoline 20 parts: Oil 1 part.

— Fuel mixture at a rate other than 20 : 1 may cause malfunction of the engine. Watch out for mixture ratio.

- Pour 1/2 gasoline into safe container, add oil and mix thoroughly.
- Now add the remainder of gasoline and mix again.
- Do not use motor oil at random choice.
- Do not mix directly in engine fuel tank.

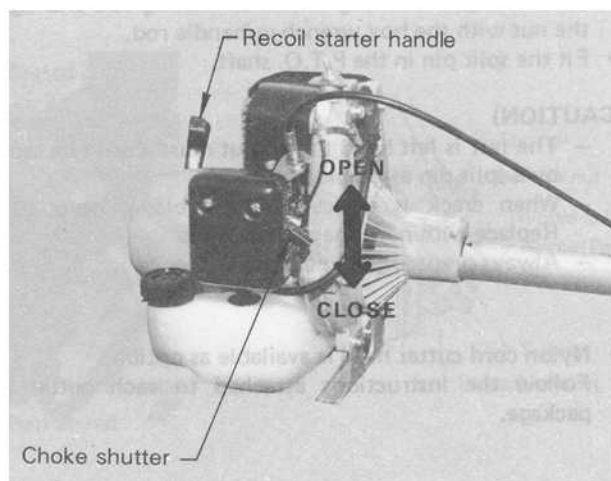
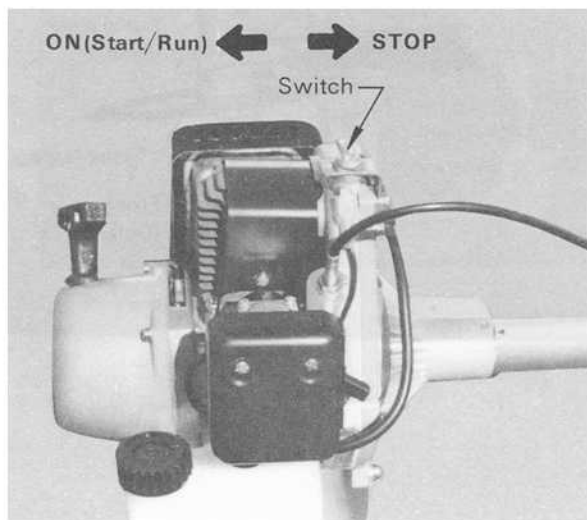
Fuel mix chart

US		IMPERIAL		METRIC	
GAS	OIL	GAS	OIL	GAS	OIL
GAL.	FL.OZ.	GAL.	FL.OZ.	LITERS	C.C.
1	6.4	1	8	4	200
2	12.8	2	16	8	400
5	32.0	5	40	20	1,000 (1 Liter)

- After refuel to tank, secure the filler cap and wipe all spilled fuel with a dry cloth.

STARTING COLD ENGINE

- Stand the engine upright on a level surface.
- Ignition switch to "ON" position.
- Shift choke shutter to close position.
- Open throttle trigger to a fast idle.
- Pull recoil starter until the engine fires.
- Shift choke shutter to full open position, and if necessary, start the engine again and allow to warm up before using.
 - The clutch engages at approximately 3500 rpm. Therefore the cutter may rotate at fast idle engine speed.



STARTING WARM ENGINE

- Ignition switch to "ON" position.
- Pull starter handle until the engine fires.
 - Do not use the choke.

STOPPING ENGINE

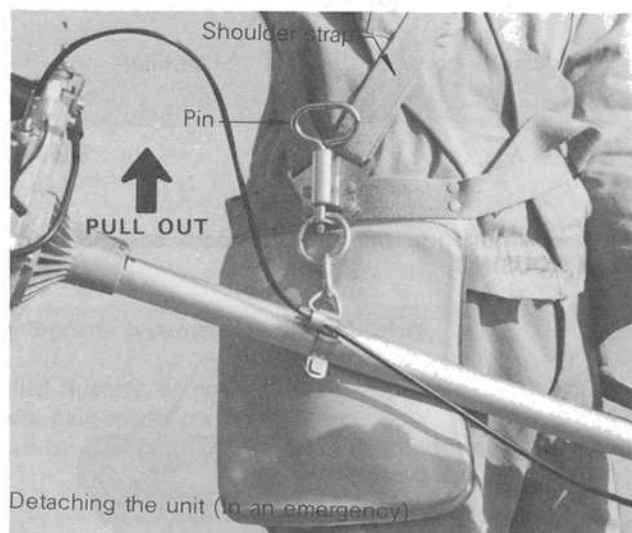
- Set throttle trigger in idle position.
- Ignition switch to "STOP" position.

(NOTE) When engine does not stop, shift choke shutter to close position.
Check and repair stop switch before starting the engine again.

OPERATING THE TRIMMER

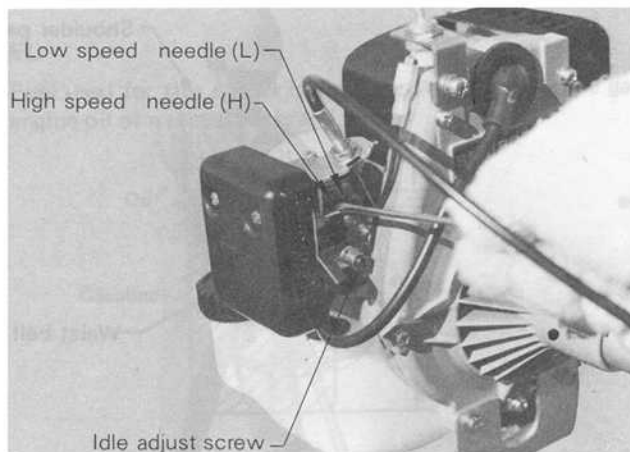
- Ensure that the harness is correctly adjusted.
- Allow the engine to warm up at a fast idle for a few minutes.
- Increase engine speed as necessary. Heavy weeds will require more power than trimming grass.
- In the event that the cutter strikes an obstruction, stop the engine and check cutter, then start operation again.
- Should the trimmer be operated for an extended period of time in high temperatures, gear housing may become very hot. If it is too hot to touch, allow the unit to cool down, check the lubricant as the instruction and continue to operate if in order.
- In an emergency, pull out pin of shoulder strap to detach the unit.

(CAUTION) Keep other persons or animals away from working area.
Always wear eye protection goggles.



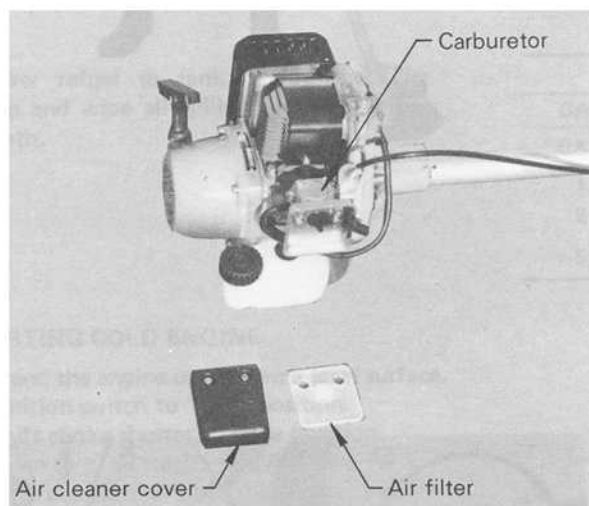
MAINTENANCE AND CARE

CARBURETOR



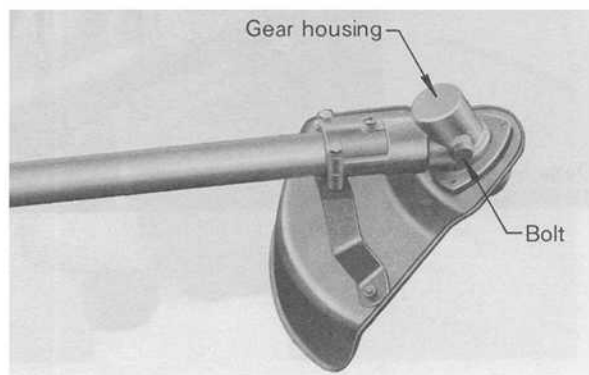
- Do not adjust the carburetor unless necessary.
- To adjust the carburetor, proceed as follows:
 - Low speed needle: $3/4 \sim 1-1/4$
 - High speed needle: $1 \sim 1-1/2$
 - Turn the corresponding needle clockwise until lightly seated and return the screw by the number of turns indicated above.
- Idle adjustment: (2,500 – 3,000 rpm.)
Turn idle adjust screw clockwise until cutter head/blade begins to turn, then back screw $1-1/2$ turn.
- If you have trouble with carburetor, see your distributor/dealer.

AIR FILTER



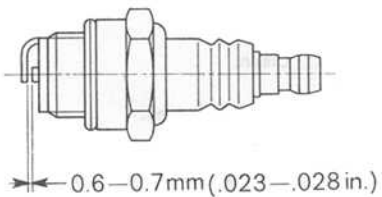
- Clean every day.
 - Take off air cleaner cover and pull up air filter to remove.
 - Brush off dust lightly or wash it in gasoline.
 - When you wash it in gasoline, dry completely before put it back in place.

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.

SPARK PLUG

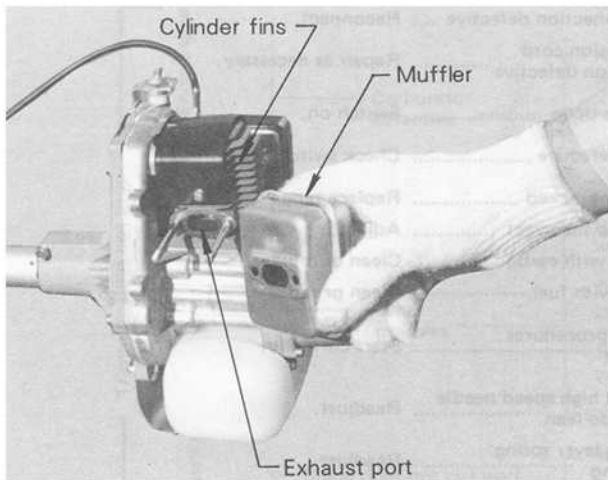


- Check periodically.
 - The standard spark gap is 0.6—0.7 mm (0.023—0.028 in.).
 - Correct spark gap if it is wider or narrower than the standard gap.
 - When it is deposited with carbon or stained, clean it before fitting to the engine.

- Fastening torque = 145—155 kg-cm (125—135 in-lb)

(CAUTION) Do not over tighten plug.

MUFFLER AND EXHAUST PORT



- Clean at need.

Carbon deposit in the cylinder exhaust port and muffler will cause the drop of engine output and sparking from muffler.

 - Muffler can be removed by taking off muffler cover.
 - Be careful not to scratch cylinder or piston when cleaning the cylinder exhaust port.

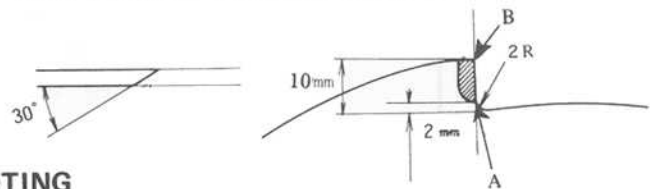
SHAPENING 8 CUTTER BLADE

When sharpening it, follow the instructions and illustration as shown.

Replace the blade if cracked, bent or discolored due to overheating.

Cutting teeth are properly sharpened as shown in illustration. Maintain the radius (or curved section) as shown at "A" to avoid cracking of the blade at this point.

- Sharpen cutter section "B" leaving section "A" untouched.
- Do not overheat the cutter if using a power grinder. Never quench a hot blade in cold water.



TROUBLE SHOOTING

- FAILURES such as difficulty in starting engine, irregularity in functions and abnormality in cutting performances can normally be prevented completely if a little attention is paid in advance.
- Such failures can be readily disposed of even by a beginner.
- When the engine does not function properly, check the following 3 points systematically in particular:
 - Whether compression of the engine is adequate or not.
 - Whether the fuel system is in good condition and fuel is supplied fluently, or not.
 - Whether the electrical system is in good condition and the spark plug sparks correctly, or not.
- When there is serious trouble with the unit, do not try to repair by yourself, but have your distributor or dealer do it for you.
- The details of TROUBLE SHOOTING refer to Table 1 and 2.
 - Refer to the chart to locate the problem and repair as necessary.

Table 1

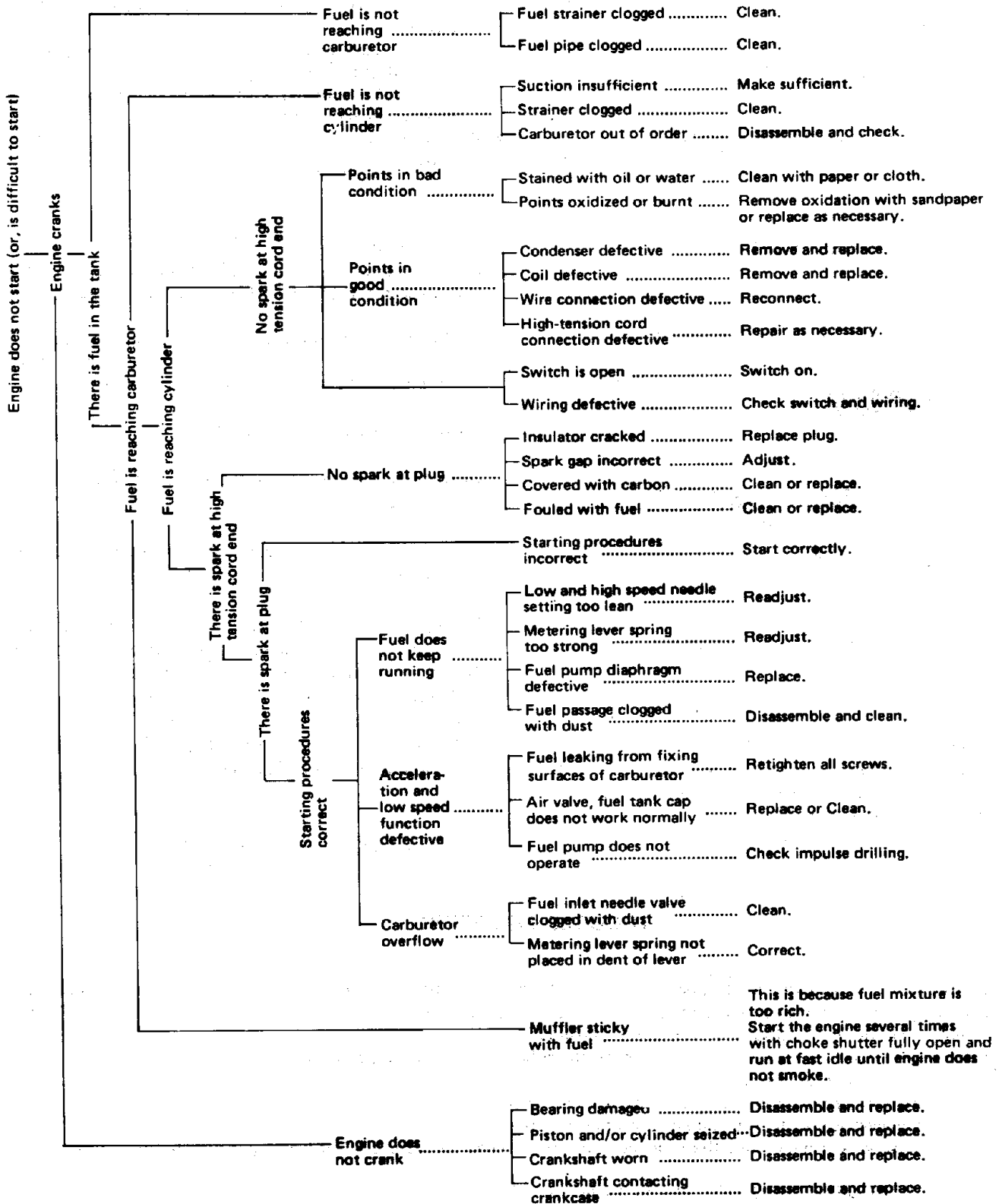
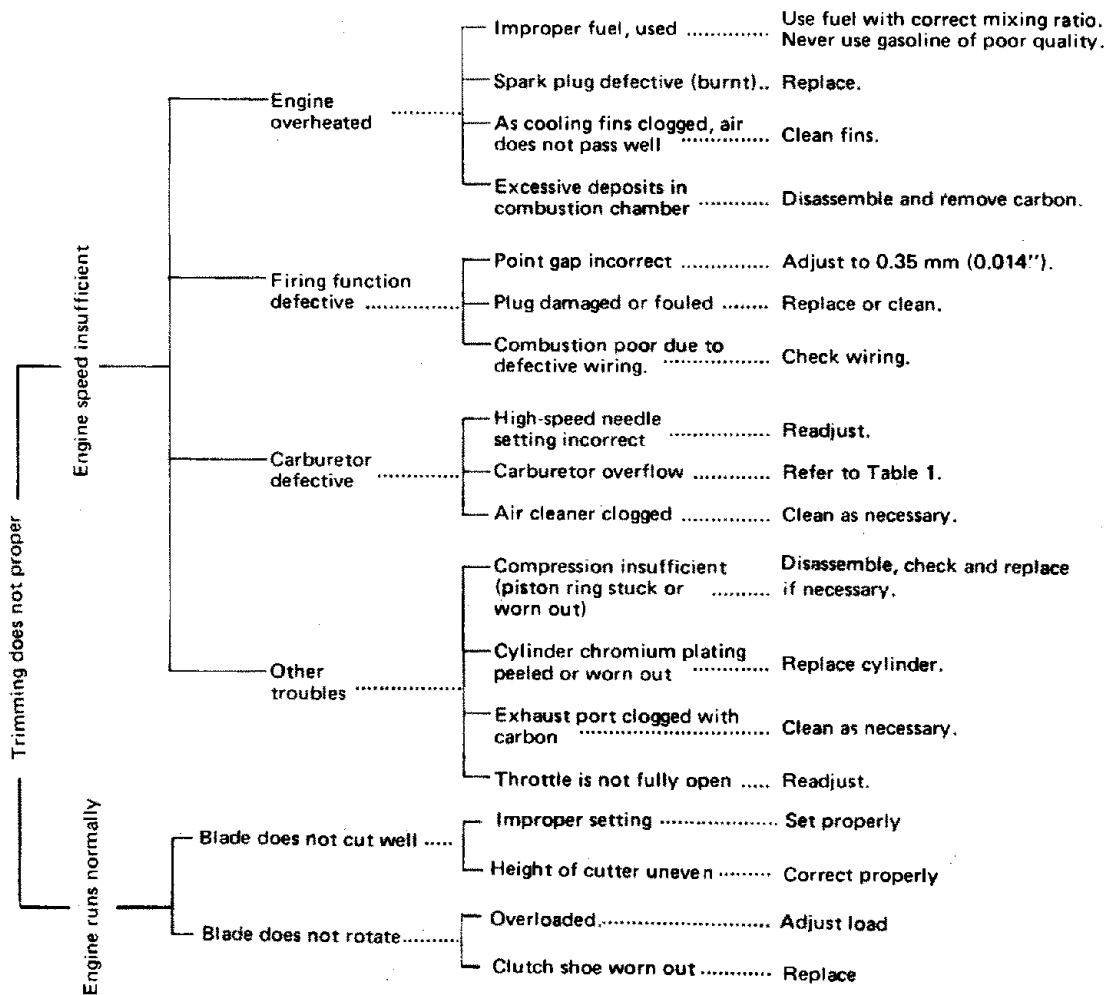


Table 2



STORAGE AFTER USE

- 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 them sufficient oil coating and wrap them up in plastic sheet.
- Drain fuel tank and pull starter handle slowly a few times to drain fuel from carburetor.
- Pour a little clean motor oil into spark plug hole and pull starter handle and then manually crank the engine until the TOP DEAD CENTER.
- Store in a dry area, free from dust.