

OPERATOR'S MANUAL

ECHO HEDGE TRIMMER HC-140



898 561-0136 0

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 are any questions, 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 an 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 three meters (10 feet) away from the fueling point before starting engine.
 - Do not remove 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 areas. Exhaust gas is highly poisonous.
7. Use only the cutter blade designated by the manufacturer for this model. Make sure that the blade is correctly attached. When crack is noticed on the cutter blade, never use it, but replace with a new one.
8. Before starting up the engine, make sure that the cutter blade is not touching anything.
9. Always wear safety footwear, safety goggles, gloves and ear protectors where possible.
10. Do not allow either people or animals into the work area.
 - When two or more operators are working together, a safe distance should be kept between them.
11. Do not smoke when operating.
12. Be sure of your footing when operating.
13. Always hold the unit firmly with both hands with the thumb and fingers encircling the handles.
14. To avoid hitting small stones or other debris, do not cut too close to the ground.
15. Before setting down the trimmer, switch off the engine.

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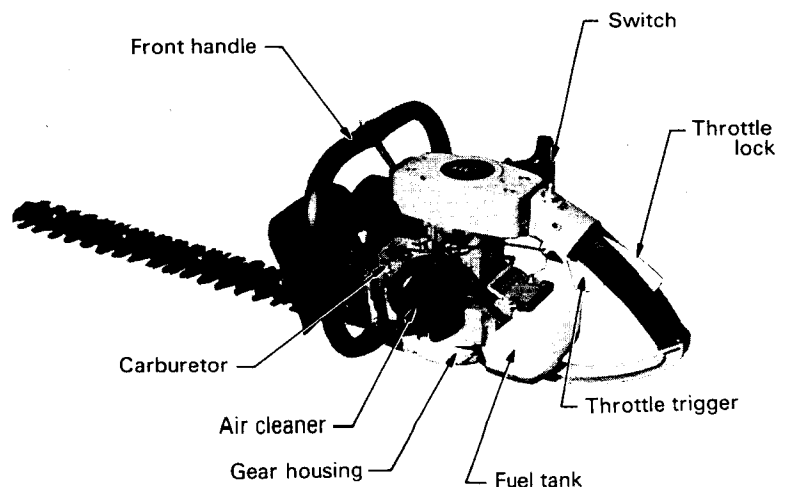
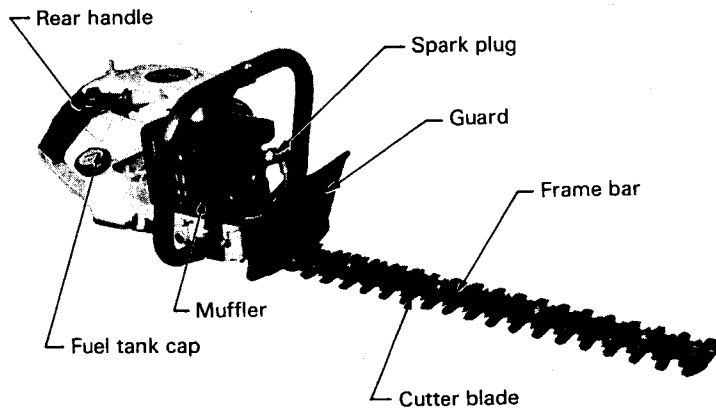
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TECHNICAL DATA

Dimension	L x W x H	cm (in.)	80 x 25 x 22 (31.5 x 9.8 x 8.6)
Weight		kg (lbs)	4.7 (10.3)
Engine	Type Displacement Max. revolution Carburetor Ignition Spark plug Starter Clutch	cc (cu.in.) rpm	Air cooled two stroke single cylinder 13.8 (0.84) 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 two stroke engine oil of a reputable brand name) 1 part 0.2 (6.76)
Blade	Action Length Gear Lubrication	cm (in.)	Reciprocating type (Single-action blade) 42 (17.3) Ratio 1 : 3.1 Reduction "SHELL" ALVANIA EP-2 or a equivalent grade of grease

Technical data subject to change without notice.

NOMENCLATURE OF PARTS

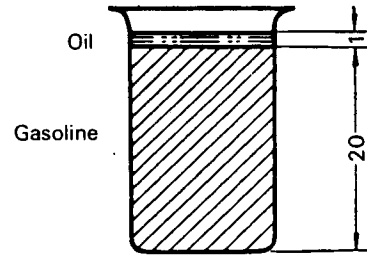


OPERATION

- Check for loose nuts, bolts and screws each time before using the unit.

FUEL

- Fuel used for this model is a mixture of regular grade gasoline and ECHO brand motor oil or an aircooled two stroke 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.
 - Ensure mixture ratio is correct.
 - 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 away all spilled fuel with a dry cloth.



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)

STARTING COLD ENGINE

- Turn switch to START/RUN position as shown.
Turn choke lever to START (Close) position.
- Pull recoil starter until the engine fires.
Now, turn choke lever to RUN (Open) position, 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 blade will start to operate as the engine attains clutch engagement speed of 3000~3400 RPM approx.

(NOTE)

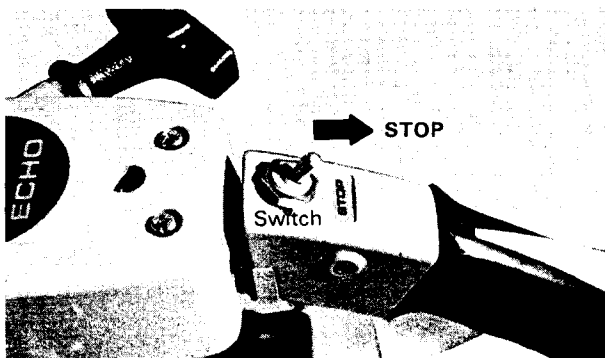
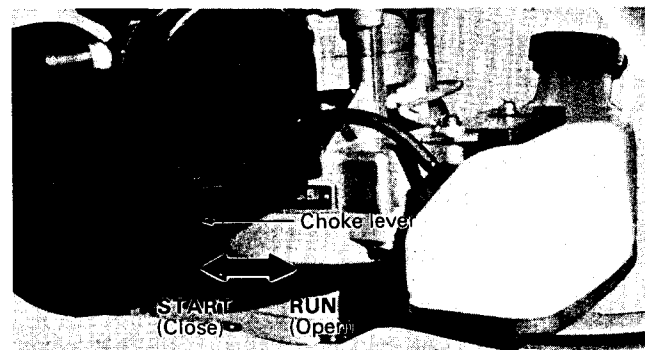
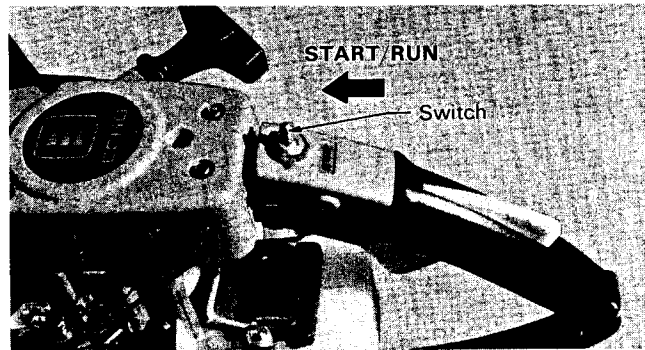
Recoil starter: Use short pulls—only 1/2—2/3 of starter rope for starting.
Always hold the unit firmly.

STARTING WARM ENGINE

- When engine is warm, start it by pulling recoil starter rope with switch positioned at START/RUN.
(Keep choke lever in RUN (Open) position.)
- If engine does not start in a few tries, follow same procedures as to start cold engine.

STOPPING ENGINE

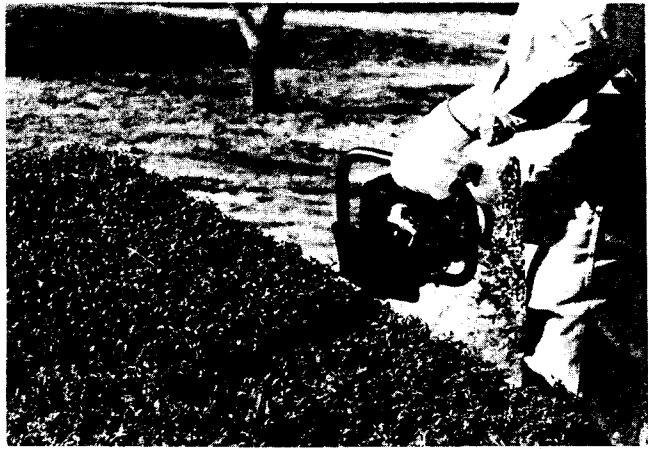
- Release throttle trigger and allow to run at idle speed.
- Turn ignition switch to "STOP" position.



Do not leave engine running while gear housing with blade in unattended.

HEDGE TRIMMING

- To operate, after idling hold trimmer firmly, squeeze throttle trigger to accelerate engine, tilt trimmer so cutting teeth are angled slightly toward the hedge or shrub and proceed to cut. The unit is designed to cut any type of hedge or shrub; however, **thickness of branches should not exceed 1/4 inch in diameter.**
- Be careful of hidden metallic objects in the hedge or shrubbery which may damage trimmer.
- The engine continues running even when the blade has stopped due to an excessive load. In such cases, stop the engine and remove the cause of overload before again starting the engine and resuming the job.



CAUTION

USE TRIMMER PROPERLY—Use only for trimming the types of shrub, growth, etc. described above.

DO NOT OVERREACH OR STAND ON UNSTABLE SUPPORT—Keep good footing and balance at all times.

MULTIPLE OPERATORS—When two or more operators are working together, ensure that a safe distance is kept between them.

Do not allow either people or animals into work area.
In an emergency should the switch fail to stop the engine, pull the choke out to the closed position and the engine will slowly come to a stand-still.

DRESS PROPERLY—Do not wear loose clothing or jewelry. They can be caught in moving parts. Use of sturdy gloves, non-skid footwear and safety glasses is recommended.

CUTTING HAZARD — KEEP HANDS AWAY FROM BLADE—Keep both hands on handles when power is on.

Do not attempt to remove cut material nor hold material to be cut when blade is moving. Make sure engine switch is off when clearing jammed material from blade. Never grasp the exposed cutting blade on cutting edges of trimmer.

READ CAREFULLY SAFETY PRECAUTIONS (Page 1)

MAINTENANCE AND CARE

=ALWAYS KEEP THE UNIT CLEAN=

AIR FILTER

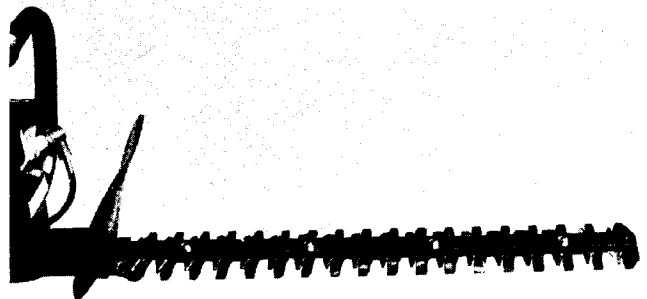
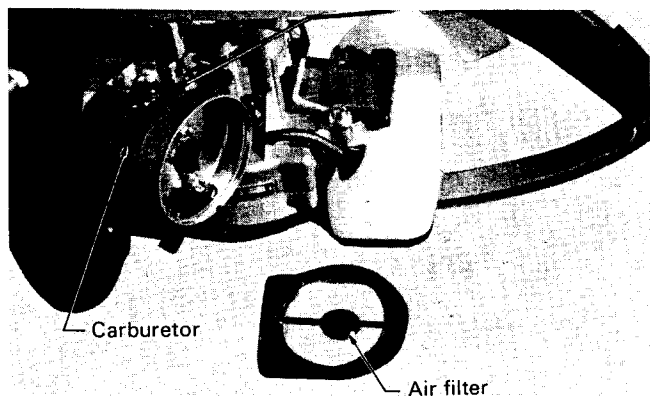
- Check before every use.
Remove air cleaner cover with filter.
- Brush off dust lightly or wash it in a non-inflammable solvent if necessary.
- Dry it completely before installation.

FUEL STRAINER

- Check periodically, inside of fuel tank.
- Do not allow dust to enter fuel tank.
- Clogged strainer will cause difficulty in starting engine or abnormalities in engine performance.
- When the insides of fuel tank or strainer is dirty, they can be cleaned by rinsing the tank out with gasoline.

BLADE LUBRICATION

- Small amount of oil should be put into space between frame bar and cutter blade, approximately every four hours of normal operation.
- To obtain trouble free trimming, it is necessary to remove gum that collects on the blades. This should be done with a 50—50 mixture of kerosene and machine oil, after each use.



Blade lubrication

GEAR HOUSING

- The gear housing has been lubricated with a specific grease.
- Supply grease approximately every ten hours under normal operation.
 - Remove bolt of cover plate and grease up using grease gun as provided.(Screw the tip of gun into the hole of gear housing.)
- When blades are replaced, or any other time that the bottom cover plate is removed, check for * proper amount of grease in gear housing and use a new gasket to insure proper seating of cover plate.
 - * A half amount of gun capacity; 70 g (2.5oz) approximately.

(NOTE)

"SHELL ALVANIA EP-2", "SHELL MP" or a equivalent grease is recommended.

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.

CARBURETOR (Fuel feed adjuster)

Normally, do not adjust the fuel adjusting needle valve. The needle is set at the optimum position at the time of shipment.

To adjust the carburetor, proceed as follows:

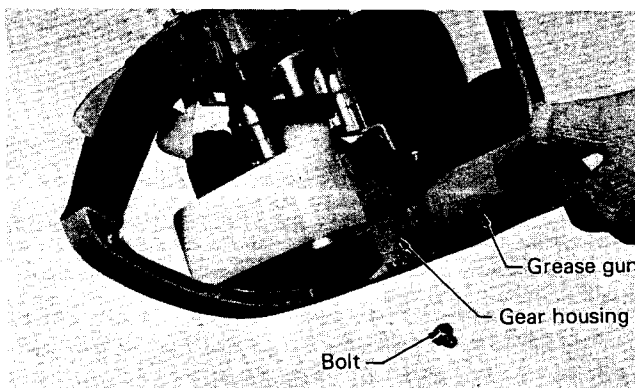
- Low-speed needle valve (L) $1\frac{1}{8} \pm \frac{1}{4}$ turn
 - High-speed needle valve (H) $1\frac{1}{4} \pm \frac{1}{4}$ turn
- Turn the corresponding adjusting needle lightly clockwise to fully closed position and return the needle by the number of turns indicated above.
- Turn idle adjust screw clockwise until chain begins to turn, then back screw $\frac{1}{2}$ turn.
- Engine must be at normal operating temperature.

CYLINDER FINS

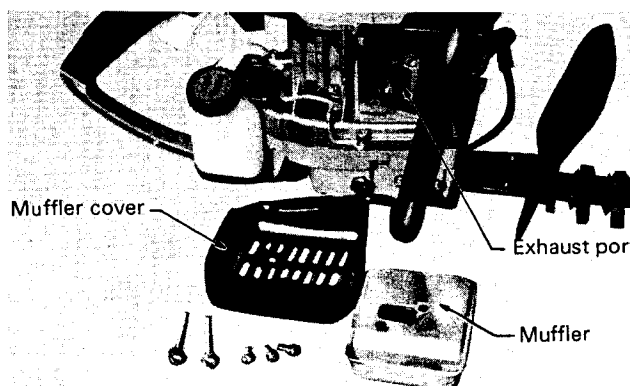
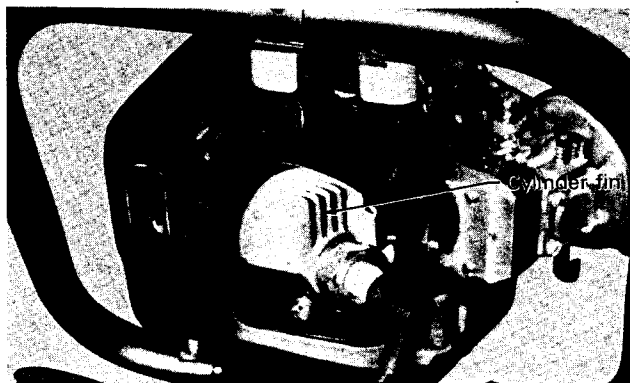
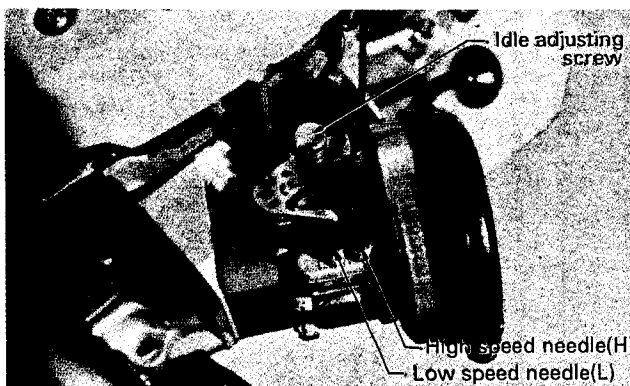
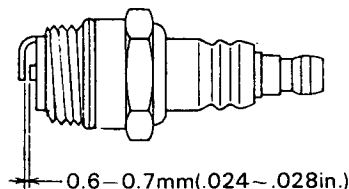
- Check periodically.
- Clogged fins will result in poor engine cooling.
- Remove dirt and dust from between fins to let cooling air pass easily.

MUFFLER AND EXHAUST PORT

- Clean as necessary.
- Carbon deposit 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.



SPARK PLUG



TROUBLE SHOOTING

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

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

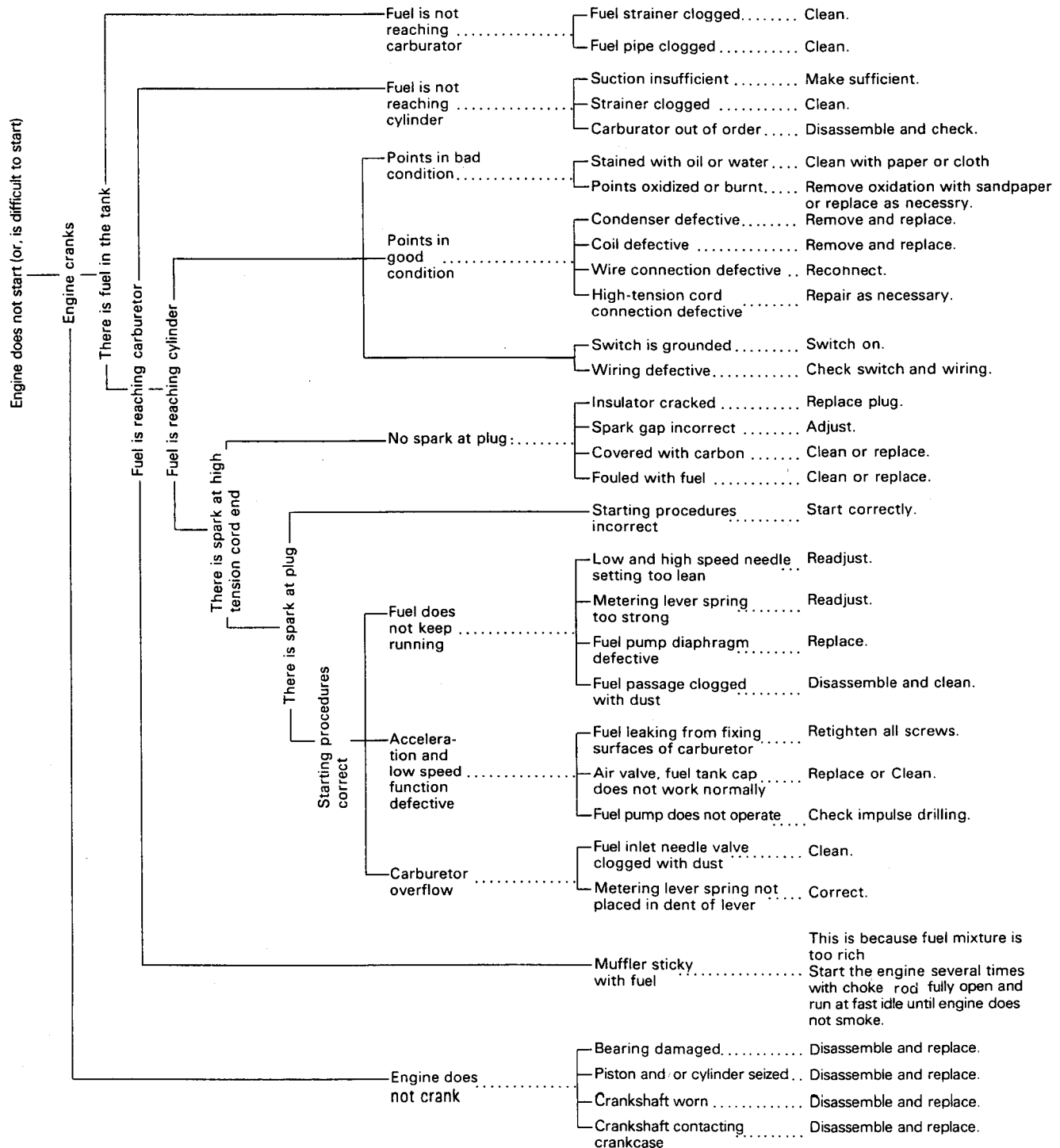
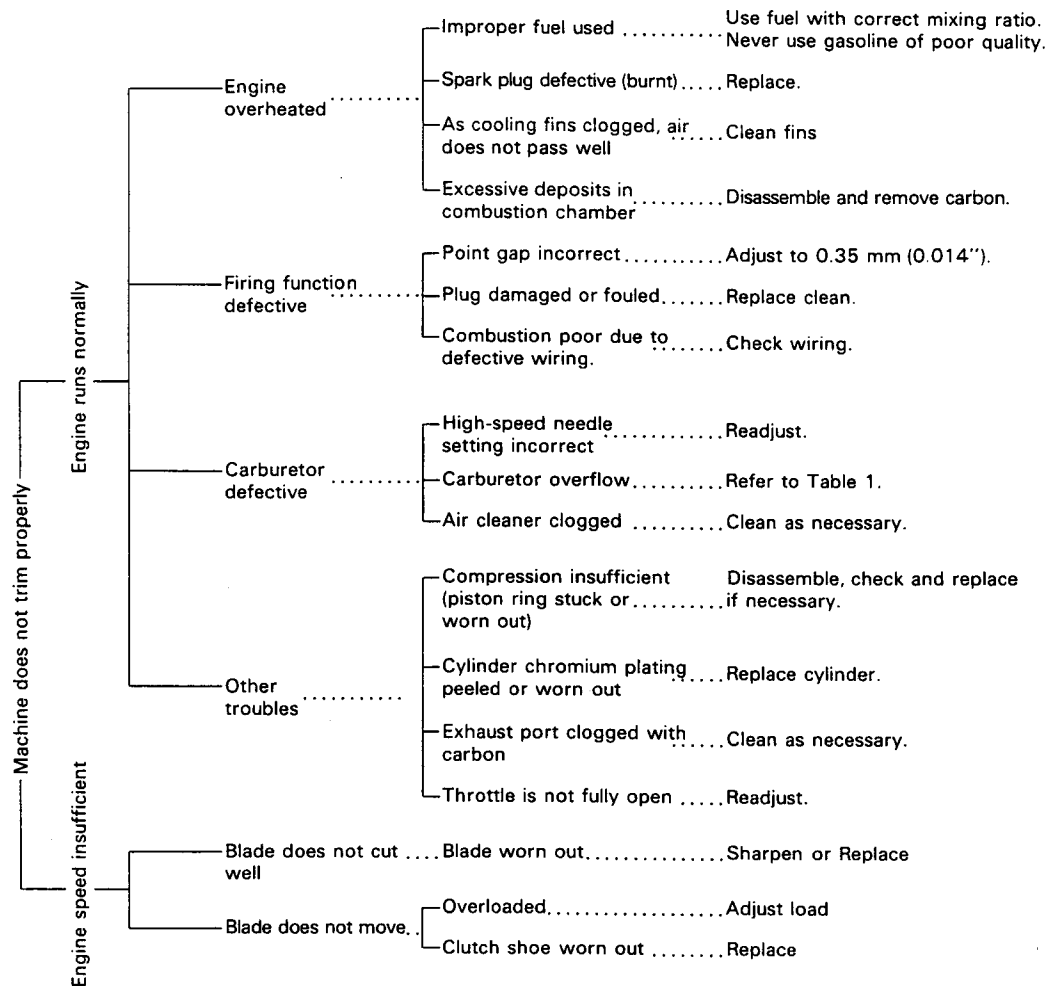


Table 2



STORAGE

- Inspect and adjust every part of the machine.
 - Completely clean every part, and repair, if necessary.
 - Apply thin coating of oil parts on metal to prevent rust.
- Drain fuel tank, pull starter slowly a few times to drain fuel from carburetor.
- Pour a small amount of clean motor oil into spark plug hole, pull starter and crank the engine until TOP DEAD CENTER.
- Store in a dry area, free from dust.
- Lubricate the cutter blade with a heavy coat of motor oil to avoid rusting.