

OPERATOR'S MANUAL

**ECHO
POWER BLOWER
PB-400**



898 561-0076 0

CAUTION

Read Rules for Safe Operation
and Instructions Carefully

IMPORTANT
RULES FOR SAFE OPERATION

1. Handle gasoline with care. It is highly inflammable.
 - Refuel before starting work.
 - Do not smoke while handling fuel.
 - Do not refuel a hot engine.
 - Avoid spilling fuel or oil. Always wipe unit dry before using.
 - Move at least 10 feet away from the fueling point before starting engine.
 - Always store gasoline in approved container.
2. Do not operate in unventilated area.
3. Do not allow bystanders in work area.
4. Do not point the blower in the direction of people.
5. Always wear safety glasses.
6. Always wear ear protectors where possible.
7. Avoid wearing loose clothing or loose scarf.
8. Always use a face filter mask to avoid breathing dust.
9. Do not block blower pipe in order to avoid engine damage due to over revolution.

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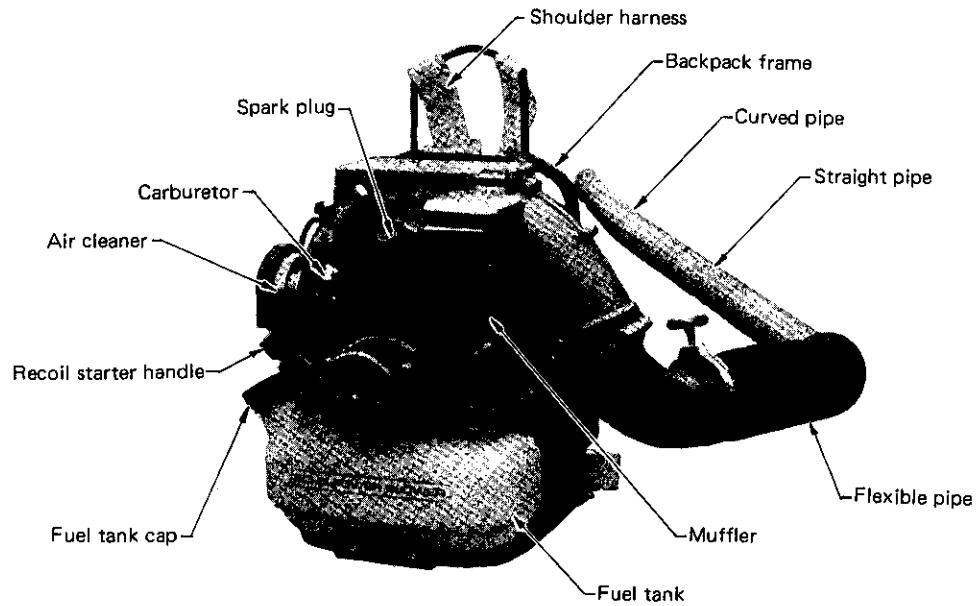
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TECHNICAL DATA

Dimension	L x W x H	cm (in)	34x42.5x45.5x (13.4x16.7x17.9)
Weight		kg (lbs)	10.2 (22.5)
Engine	Type Displacement Carburetor Ignition Spark plug Starter	cc	Air cooled 2 stroke single cylinder 40 Walbro diaphragm type WA Flywheel magneto: contact breaker point system NGK BM-6A or equivalent Recoil starter
Fuel	Mixing ratio Tank capacity	litre (FL.OZ.US)	Mixture of regular grade gasoline and air cooled two stroke engine oil [20:1 Ratio or 32:1 Ratio with special oil approved by ECHO] 2.0 (67.6)
Blower	Air speed (Max.) Air volume (Max.)	m/sec (MPH) m ³ /min (Cu.ft./min)	80 (180) 11 (380)

* Technical data subject to change without notice.

NOMENCLATURE OF PARTS



ASSEMBLING

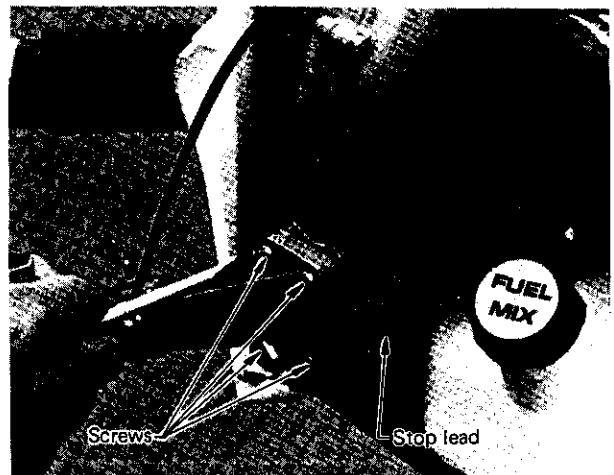
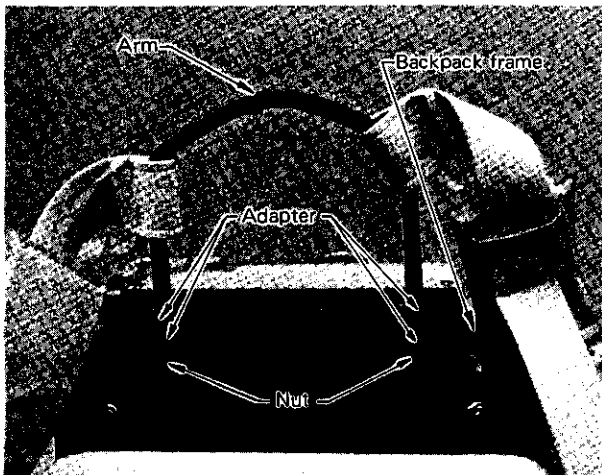
THROTTLE BRACKET AND ARM (Backpack frame)

Tighten throttle bracket and arm which are separated from the unit on the backpack frame to the fan case and backpack frame securely as shown.

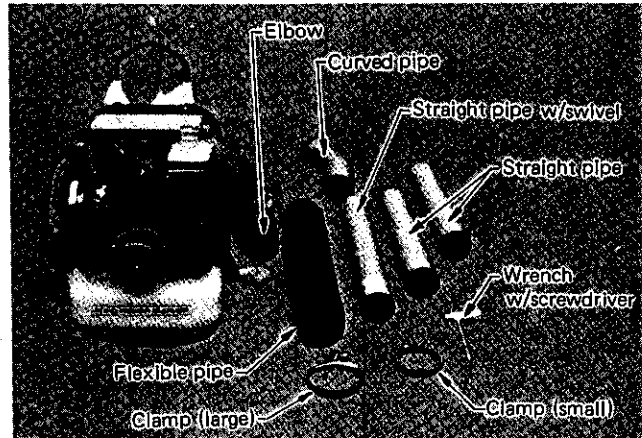
Throttle bracket: Use four screws

— Set stop lead into the recess of bracket.

Arm: Use four adapters and both bolts.



- Assemble throttle lever bracket to the fan case using four screws.
- Assemble the flexible pipe thru elbow to the blower and tighten the clamp.
- Assemble the flexible pipe and the straight pipe w/swivel and tighten the clamp.
- Assemble the straight section of the pipe to the other end of the pipe.
- Assemble the curved pipe and rotate the desired angle.
- Shoulder harness is adjustable to fit any operator.
- Adjust the length of strap for easier operation.



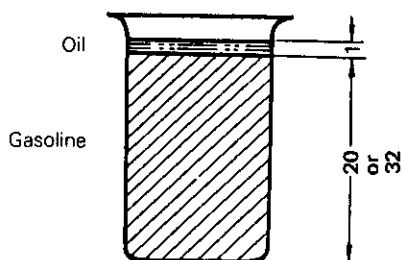
OPERATION

BLOWING PIPES

- Ensure that all nuts, screws and bolts installed are properly tightened.

FUEL

- Fuel used for this model is a mixture of Regular grade gasoline and ECHO brand motor oil or an aircooled 2 stroke engine oil of a reputable brand name.



Pour 1/2 the gasoline into the safe container, add the oil and mix thoroughly.

Now add the remainder of gasoline and mix again.

Disregard instruction on oil container.

Do not use motor oil other than that recommended above.

Do not mix directly in engine fuel tank.

- Mixture ratio is Gasoline 20 part : oil 1 part.
— Fuel mixture at the rate other than 20:1 may cause malfunction of the engine.

Ensure mixture ratio is correct.

(NOTE)

32:1 Ratio is applicable with special oil approved by ECHO.

Fuel mix chart
(20:1)

US		METRIC	
GAS	OIL	GAS	OIL
GAL.	FL. OZ.	LITERS	CC
1	6.4	4	200
2	12.8	8	400
5	32.0	20	1000

(32:1)

US		METRIC	
GAS	OIL	GAS	OIL
GAL.	FL. OZ.	LITERS	CC
1	4	4	125
2	8	8	250
5	20	20	625

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

STARTING THE ENGINE

- Close the choke by moving the lever as shown.
- Set the throttle lever in partially open and the the switch to "on". (START/RUN position)
- Pull the starter handle until the engine starts.
 - Excessive cranking with the choke closed can cause flooding of the engine resulting in the accumulation of fuel in the crankcase.
 - In that case, remove the spark plug and pull starter handle several times. After replacing spark plug start the engine with choke lever fully open and run at fast idle until engine does not smoke.
- Open the choke gradually after the engine runs continuously.
- Allow the engine to warm up at a fast idle before reducing to idle speed.
- A warm engine can be started without using the choke.



STOPPING THE ENGINE

- Set the throttle lever in the idle position for a few minutes to cool down.
- Switch the ignition to "stop" position.

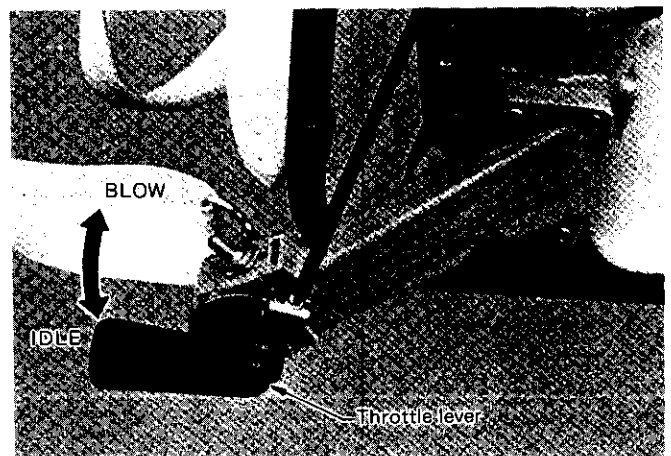
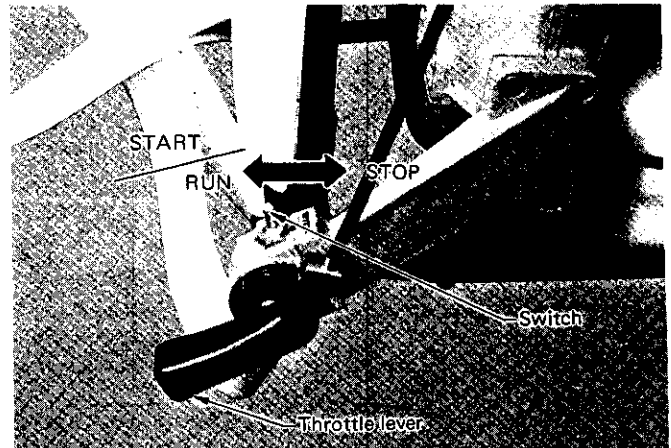
OPERATION OF THE POWER BLOWER

- Allow the engine to warm up at a fast idle for a few minutes.
- ECHO PB-400 can be run at any speed between an idle of 2000–2500 RPM and maximum load speed of 7500 RPM. The velocity of the air stream can therefore readily be controlled from a gentle breeze to a high speed blast moving at approximately 180 MPH (80 m/sec) which will move debris ranging from garden leaves to bottles and can accumulated in sports stadiums.
 - Use a low speed to blow dry leaves from a lawn or flower bed.
 - Use a medium to high speed to clean grass and leaves from walks, patios and drives.
 - Use a high speed to move gravel, dirt, snow, bottles or cans from a driveway, street, parking lot, or stadium.

(Caution)

Do not point the blower pipe in the direction of people or pets.

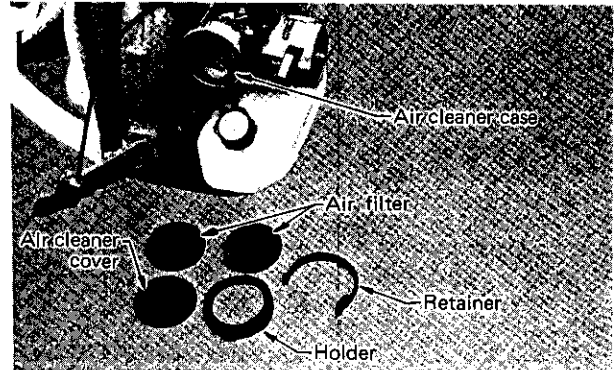
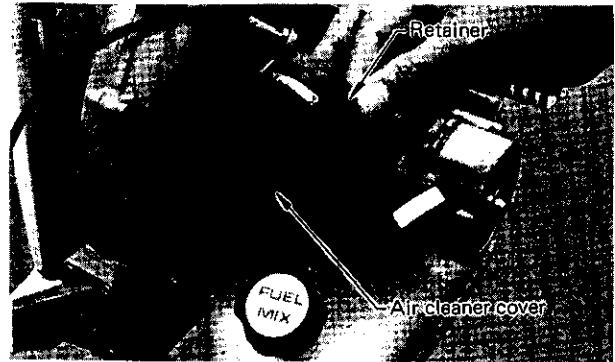
Always wear safety glasses and use a face filter mask.
Read carefully "Rules for safe operation" on page 1.



MAINTENANCE AND CARE

AIR CLEANER

- Accumulated dust on the air filter will reduce engine efficiency, increase fuel consumption and allow abrasive particles to pass into the engine. Remove the air filter as often as necessary to maintain in a clean condition.
- Light surface dust can readily be removed by tapping the filter. Heavy deposits should be washed out in clean fuel mixture and squeezed dry.
 - Do not use high pressure air to clean the filter.
- To take out a air filter, loosen both clamps of air cleaner and remove filter cover as shown.



CARBURETOR (Type WALBRO WA)

- Do not adjust the carburetor unless necessary.
- To adjust the carburetor, proceed as follows:
 - Idle needle: 1.0—1 1/4
 - High speed needle: 1.0—1 1/2
 - Turn the corresponding adjustment screw lightly clockwise to the fully closed position and return the screw by the number of turns indicated above.
- Idle adjustment: 2000 — 2500 rpm.
Turn the idle adjustment screw to such a degree.
- If you have trouble with carburetor, we recommend you to see your distributor/dealer.



FUEL STRAINER

- Fuel tank is fitted with a strainer.
 - Strainer is situated at the free end of fuel pipe and can be picked out through fuel inlet port with piece of steel wire or the like.
- Check the fuel strainer periodically.
 - Do not allow dust to enter into fuel tank.
 - Clogged strainer will cause difficulty in starting engine or abnormalities in engine performance.
 - When the strainer is dirty, wash it in gasoline. Dry it completely to remove moisture.
- When the inside of the fuel tank dirty, it can be cleaned by rinsing the tank out with gasoline.

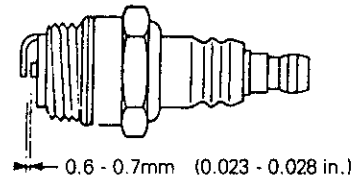


SPARK PLUG

- Do not attempt to remove the plug from a hot engine in order to avoid possible damage to the threads.
- Clean or replace the plug if fouled with heavy or oily deposits. Replace the plug if the center electrode is worn or rounded at the end.

Spark gap 0.6–0.7 mm (.023"–.028")

Fastening torque=145~155kg.cm (125~135 in. lb)

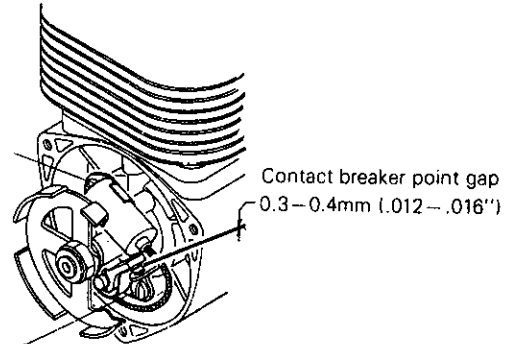


MAGNETO: CONTACT BREAKER POINTS

- The contact breaker points should be checked periodically.
- Remove the recoil starter ass'y and the pawl catcher.
- Check the points visually.

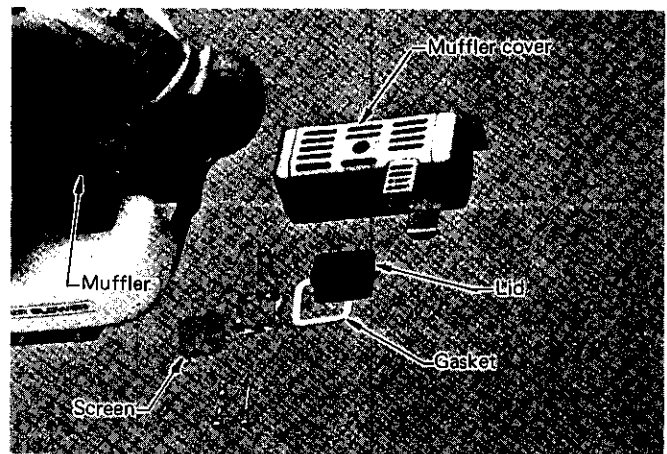
The surfaces should be oil free, not pitted and should have a gray frosted appearance.

- If necessary, clean the contact surfaces using a 600 grit sandpaper and ensure that all loose dirt is removed.
- Using a feeler gauge, set the points to 0.3–0.4mm (.012"–.016") fully open.



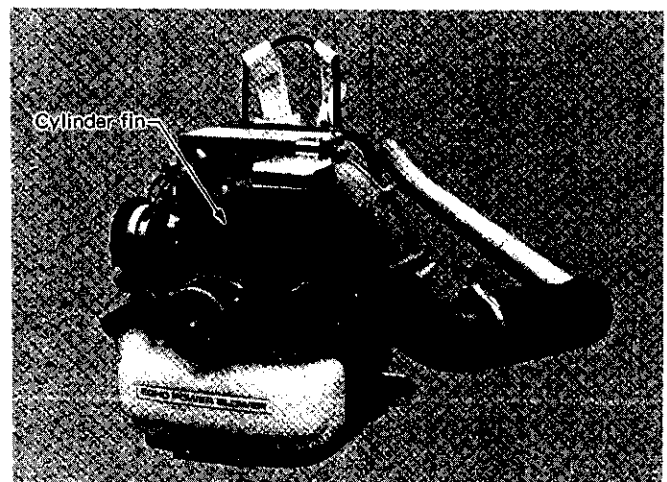
MUFFLER AND EXHAUST PORT

- In the event that the engine should lose power and overheat, the muffler should be removed and checked for excessive deposits. Carbon built up in the exhaust port should be removed with a piece of wood, ensuring that particles of carbon are not allowed to enter the cylinder. Remove all carbon deposits from the muffler flange area and wash the complete unit in a suitable solvent.



CYLINDER FINS

- Check periodically.
 - Clogged fins result in poor engine cooling.Clean the passage of air between the cylinder fins to let cooling air pass easily.



TROUBLE SHOOTING

- FAILURES such as difficulty in starting engine, irregularity in functions and abnormality in performances can normally be prevented completely if careful attention is paid in advance.
- When the engine does not function properly, check the following 3 points 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 ignition system is in good condition and the spark plug sparks correctly, or not.
- When there is serious trouble with the init, do not try to repair it yourself, but have your distributor or dealer do it for you.
- For details of TROUBLE SHOOTING refer to Table 1 and 2.
 - Locate the problem on the following charts and repair as necessary.

Table 1

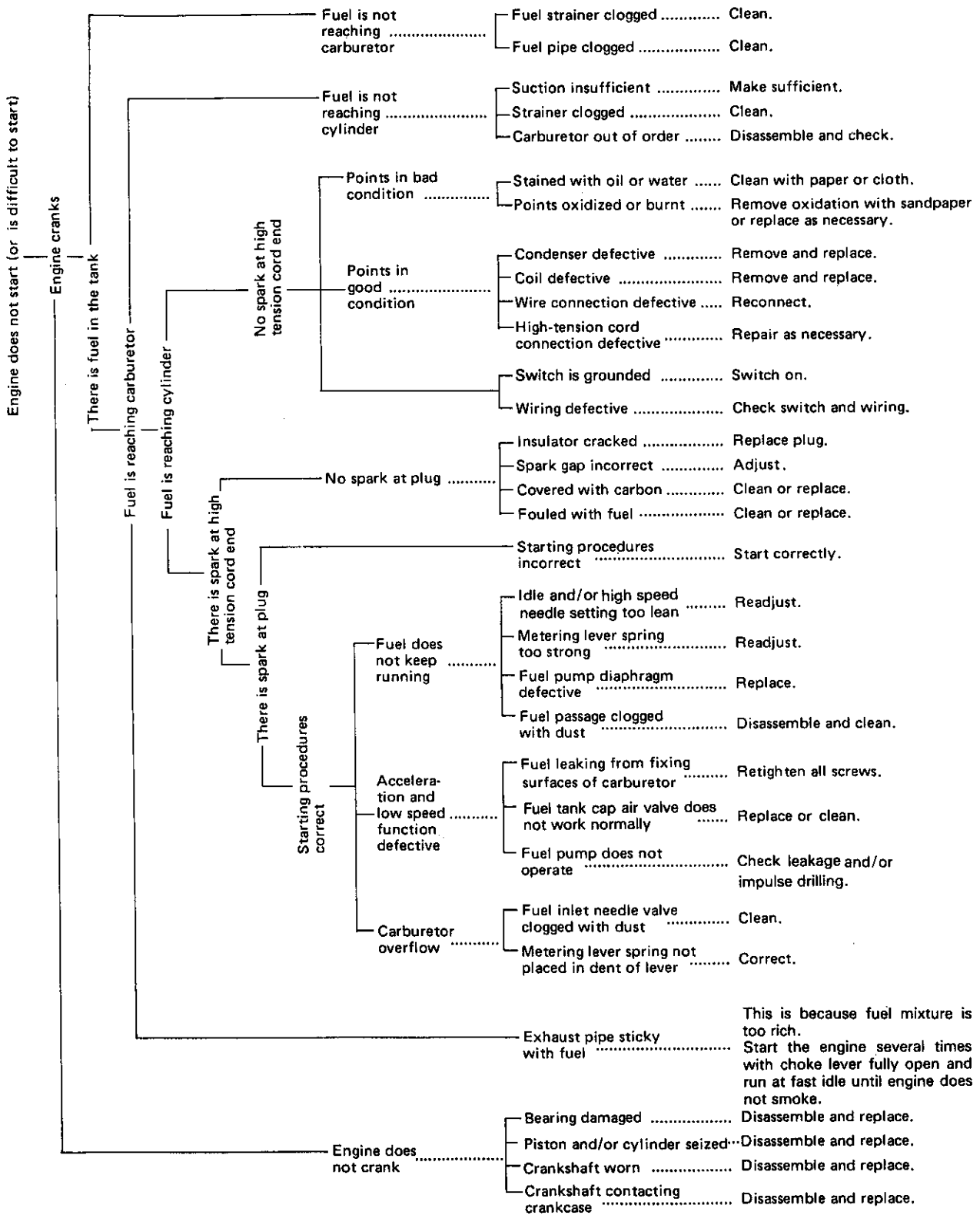
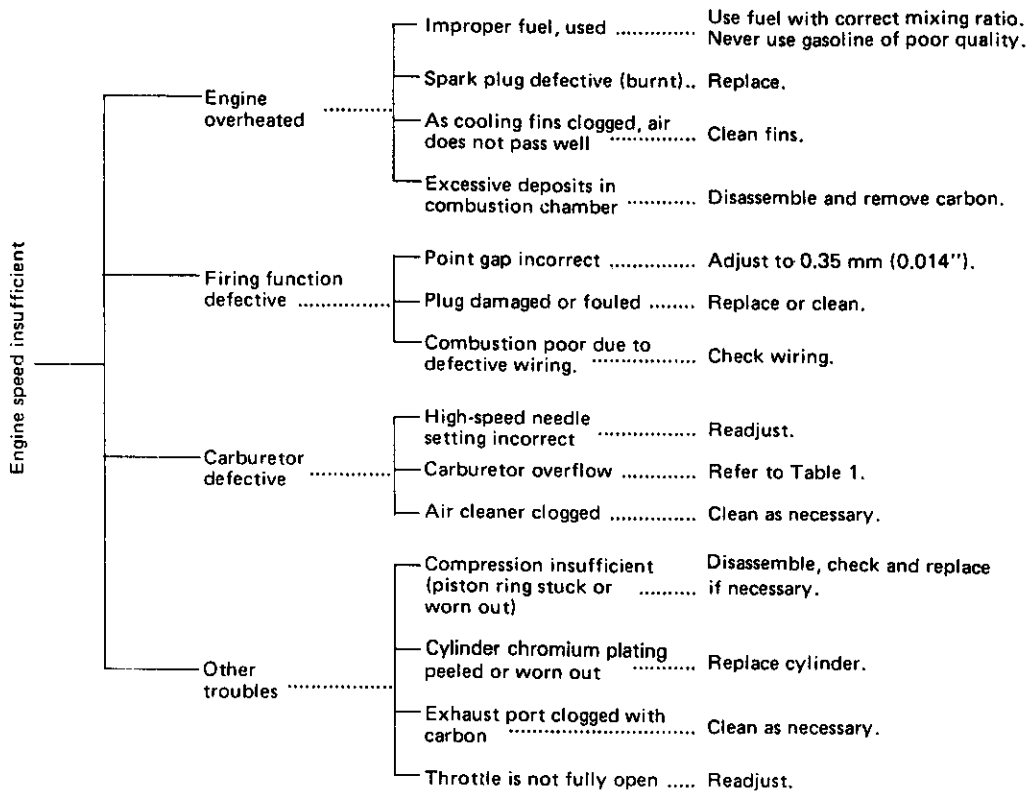


Table 2



STORAGE AFTER USE

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