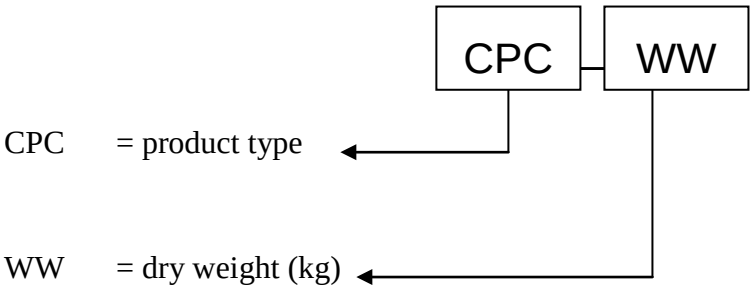
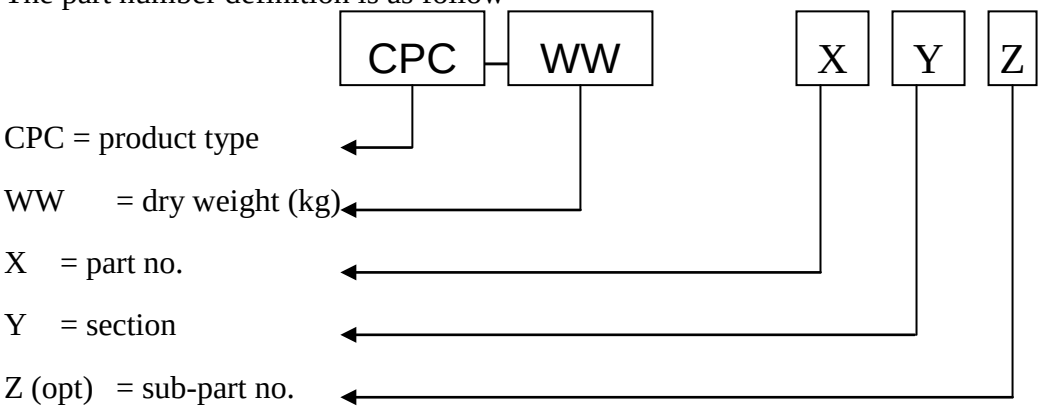
HOW TO READ PRODUCT CALL NUMBER AND PART NUMBER

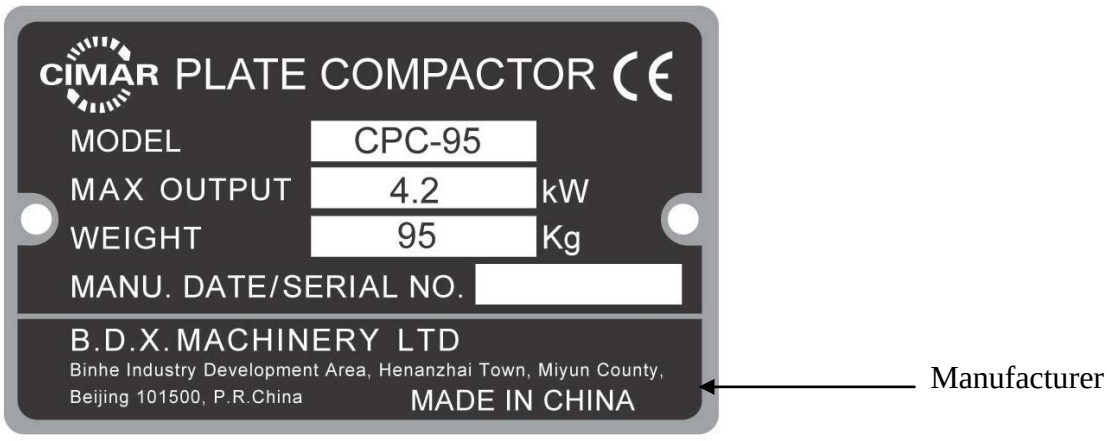
The product model number definition is as follow



The part number definition is as follow



NAMEPLATE



CONTENTS

1. INTRODUCTION

Application

Plate compactor is the machine that compacts the ground and it intends to make the surface smooth, by transmitting vibration through vibrating plate, which power generated from single rotor in vibrator case. This machine is suitable for making the ground surface smooth, such as leveling the soil and beaching, finishing the asphalt paving.

Noise emission:

A- weight sound pressure level at work station: 102dB
Working Station: 84dB
The sound power level: 3333333333
Note: the measurement is according to EN500-1:2006

Vibration emission:

Measured vibration emission value a: 888888
Arm Vibration: 79 m/s^2
Uncertainty K: 789
Note: the measurement is according to EN ISO 20643:2005

Warnings for incorrect application and abuse

This machine is hard to move forward on a soil with much water (especially clay soil). It is not suitable for such application. This machine is difficult to level a ground include big stones due to insufficient compacting force. Plate compactor is mainly applied for compacting surface smooth and it is nor effective for jobs that requires heavy compaction. In case of compacting ground deeply into lower layer, it is recommended to use Tamping Rammer, Vibro Compactor and Vibration Roller which compacting force is rather effective. Please use this compactor for compacting surface on soil, sediment, sand, beaching and asphalt. It is not recommended for use this machine for the other applications.

Structure

The upper part is made up of Power source, Handle, Belt Cover, Water Tank for sprinkling and Guard hook which are fixed by Engine base. The Engine base is fixed on Vibrating Plate by Shock absorbing Rubber. The lower part is made up of Vibrating plate and Vibrator unit that has an Eccentric rotary shaft built in. The power source is transmitted from the centrifugal clutch on engine output shaft to the Eccentric rotary shaft via V-belt.

Power Transfer

Air-cooled Single cylinder Engine is amounted as power source and Centrifugal Clutch is fixed on engine output shaft. Petrol Engine and Diesel Engine can be mounted as option.

Centrifugal Clutch engages by running up the engine and engine R.P.M. is reduced to suitable number for compacting. The rotation of engine is transmitted form V-pulley integrated with Clutch drum to Vibrator pulley through V-belt.

Vibrator Pulley rotates Eccentric rotor shaft that is contained in Vibrator case. The generated vibration created from eccentric rotor is transmitted to Compacting plate. Vibration of Vibrating Plate carries the machine forward; the vibration with the weight of the machine makes the compaction of the ground possible.

2. SPECIFICATION

Model	CPC-60	CPC-E60	CPC-E90	CPC-95	CPC-160	CPC-240	CPC-350	CPC-405
Dimensions								
Overall Length mm	886	1,050	1,100	1,100	1,130	1,340	1,570	1,610
Overall Width mm	350	360	460	500	430	450	485	500
Overall Height mm	880	800	825	825	920	960	930	930
Plate Size (W×L) mm	480×350			525×500	700×430	700×450	860×485	900×500
Weight								
Net Weight kg	80	60	90	95	160	240	350	450
Operating Weight kg	85	65	95	100	168	250	360	460
Performance								
Traveling Speed m/min	forward: 0~25	20~25			forward: 0~25	forward: 0~25	forward: 0~23	forward: 0~23
	backward: 0~25				backward: 0~25	backward: 0~25	backward: 0~23	backward: 0~23
Vibrating Frequency Hz (vpm)	100 (6000)	100 (6000)			90 (5400)	87 (5200)	73 (4400)	73 (4400)
Centrifugal Force kN (kgf)	15.0 (1570)	10.5 (1050)	15.0 (1570)		27.0 (2750)	35.0 (3570)	45.0 (4600)	50.0 (5100)
Water tank capacity L	15	15			～	～	～	～
Power Source								
Manufacturer	HONDA	HONDA			HONDA	HONDA	YANMAR	YANMAR
Model	GX160	GX160			GX200	GX270	L100AE	L100AE
Max. Output	4.2kW (5.5PS) 4000min^{-1}	4.2kW (5.5PS) 4000min^{-1}			4.8kW (6.5PS) 4000min^{-1}	6.5kW (9.0PS) 4000min^{-1}	7.4kW (10.0PS) 3800min^{-1}	7.4kW (10.0PS) 3800min^{-1}
Fuel Tank Capacity L	3.6	3.6			3.6	3.6	4.7	4.7
Starting system	Recoil starting	Recoil starting			Recoil starting	Recoil starting	Electric starting	Electric starting
Set R.P.M rpm	3600	3600			3600	3600	3600	3600

3. FOR SAFETY OPERATION

Foreword:

It is important to read this manual carefully so that you will fully understand the operational characteristics and performance of the plate compactor. Proper maintenance procedures will insure long life and top performance of the unit.

Safety:

This section outlines basic safety procedures that apply to the operation, maintenance and adjustment of the CIMAR plate compactor. This unit is designed as a powerful, productive machine that should be operated with respect and caution.

Misuse or carelessness can result in serious injury or property damage, or both. Safety precautions must be observed at all times.

This safety alert symbol identifies important safety messages throughout this manual and on the machine.

When you see the symbol, carefully read the message that follows. Yours safety is at stake!

Operator Qualifications:

Before operating this equipment, an individual should read this manual. Whenever possible, he should be shown how to operate the unit by an experienced operator. Inexperience is hazardous in operating any machine or attachment. Trial and error is not the way to become familiar with a piece of equipment. This is expensive, cuts equipment life and can create machine downtime. Inexperience can cause injury or death. The machine should not be left unattended when operating.

General Safety:

WARMING

- Refrain from working in such cases as below:
- When not feeling well due to fatigue or disease.
- When taking medicine.
- Under the influence of alcohol.

CAUTION

- Read the instruction manual carefully and operate the machine properly to work safely.
- With respect to engine, read the separate engine manual.
- Understand the mechanism of the machine sufficiently.
- Wear protectors (hard hat, safety shoes, ear plugs, etc.) and proper clothing for working safety.
- Always check the machine for loosened threads or any other abnormality before starting your work.
- Whenever affixed name plate (such as operating directions and warnings) become difficult to read, replace it with new one.

- Machine is hazardous for children to tamper with. Pay enough caution for how and where to store it. Particularly in case of the machine equipped with starting motor, remove starting key to store at designated location.
- Be sure to shutdown engine for servicing. If equipped with starter motor, disconnect battery wiring.
- Manufacturer does not assume responsibility for any accident arising from modification.

Refueling Safety:


WARMING

- Before refueling, be sure to shutdown engine and wait for it to cool.
- Select location where there is no inflammable matter and be careful not to spill fuel. When spilled however, wipe it off thoroughly.
- Never use fire in the vicinity while refueling. (Definitely no smoking!)
- Topping up to filler port is dangerous as it tends to spill fuel.

Starting Safety:


CAUTION

- Before starting and operating your machine, check for safety of personnel or obstacle around.
- Always pay attention to ground so you can work in stable position.
- Whenever machine fails to work properly or any abnormality is noticed during work, suspend your work immediately.
- Do not touch engine body or muffler as they are hot in operation.
- Be sure to stop engine whenever you leave the machine. Also, do not forget to stop the engine when you move the machine as well.
- Poisonous fumes. Start and operate only in well ventilated area. Breathing exhaust gases can result in sickness or death.

Servicing Safety:


CAUTION

- Before lifting, make sure that machine parts (hook and vibration insulator in particular) are not damaged and screws are not loosened or lost.
- Stop the engine before lifting your machine. Contact with moving parts can cause serious injury.
- Allow machine and engine to cool before performing service or maintenance. Contact with hot components can cause serious burns.
- Use wire rope which has sufficient strength.
- Use one point suspension hook and lift strait upward without giving any shock.
- Be sure not to allow any person or animal to enter underneath the lifted machine.
- For safety, try not to lift to unnecessary height.

Engine:

See engine operations manual

SHUTDOWN:

EMERGENCY SHUTDOWN

Move throttle lever to “OFF” position and also turn stop switch to “OFF”.

NORMAL SHUTDOWN

Move throttle lever quickly form “ON” to “OFF” and run engine for 3 to 5 minutes at low speed. After engine cools, turn stop switch to “OFF” position. Close fuel shutoff valve.

4. PRIOR TO OPERATION

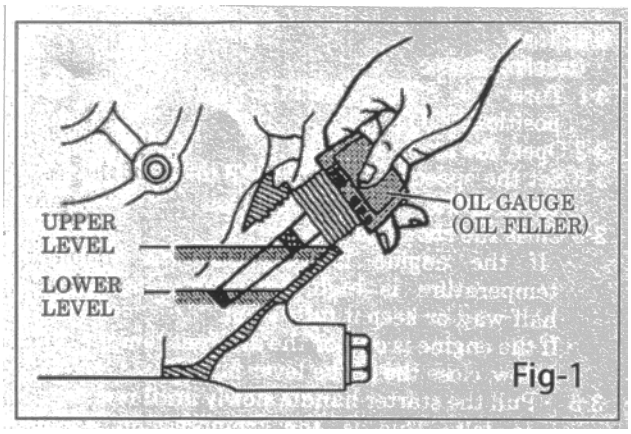
1. Make sure that all dirt, mud, etc., are thoroughly removed from the unit prior to operation. Special effort should be given to the bottom face of the vibrating plate and those areas adjacent to the cooling air inlet of engine, carburetor, and air cleaner.
2. Check all bolts and screws for tightness and make sure all bolts and screws are securely tightened. Loose bolts and screws may cause damage to the unit.
3. Check the V-belt for tightness. The normal slack should be approximately 10-15mm (1/2") when the belts are forcibly depressed in the middle position between the two sheaves. If there is excess belt play, there could be a decrease in the impact force or erratic vibration, causing machine damage.
4. Check the engine oil level and if the engine oil level is low, it should be refilled. Use the proper motor oil as suggested in the table below. (Fig-1)
5. Remove the oil plug in the vibrator assembly and check the oil level. Make sure the compactor is level when checking. The oil level should be up to the oil plug. Every month or every 200 hours of operation, replace the oil. (Fig-2.1 & Fig-2.2)

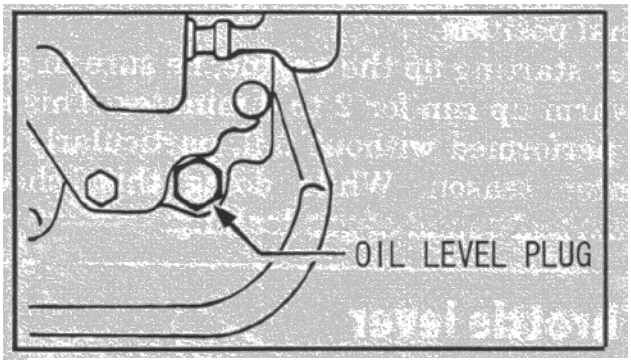
IMPORTANT:

Use the Motor oil SAE

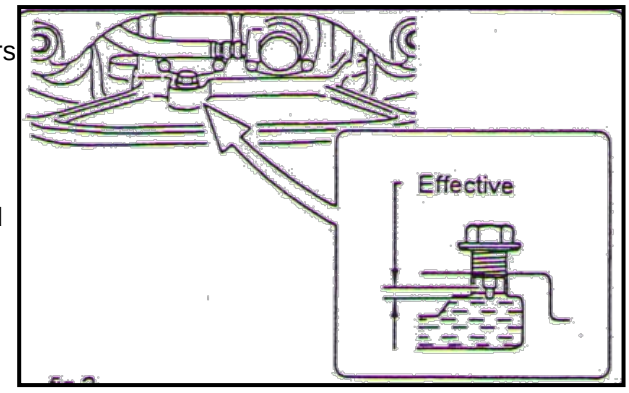
When changing the oil, the old oil can be drained by tipping the unit.The oil will drain easily while it is hot

6. A regular grade gasoline should be used in the engine. When filling the fuel tank, make sure the fuel filter is used.





CPC-E60,CPC-E90,CPC-95 Fig-2.1



CPC-60,CPC-160,CPC-240,CPC-350,CPC-405 Fig-2.2

Season	Temperature	Oil to be used
Summer	25℃ or higher	SAE#30
Spring/Fall	25℃～10℃	SAE#30, #20
Winter	0℃ or lower	SAE#10

5. STARTING-UP

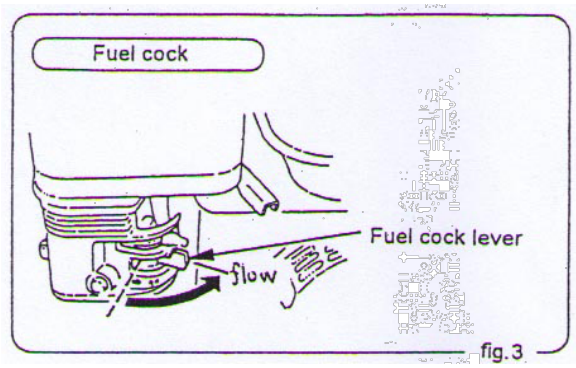
Gasoline Engine (FOR CPC-60, CPC-E60, CPC-E90, CPC-95, CPC-160 & CPC-240)

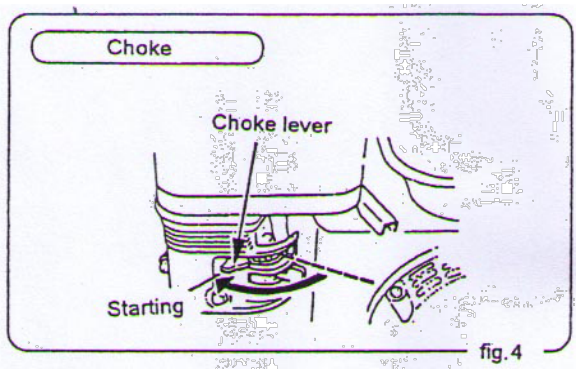
1. Align fuel cock lever with FLOW position (Fig.3)
2. When cold or somehow starting is difficult, turn choke lever to START position. This is not necessary when engine is warm. (Fig.4)
3. Turn governor lever slightly to high speed side. (Fig.5)
4. Turn engine start switch to ON position. (Fig.6)
5. Hold recoil starter grip and pull it slightly until you feel light resistance. Pull it strongly there. Be careful not to pull it too hard however because it may come off. Do not release the grip from the pulled position but return it to starter case before releasing. (Fig.6)
6. If engine has started, while listening to explosion sound, slowly return the choke lever to OPERATION position. (Fig.7)

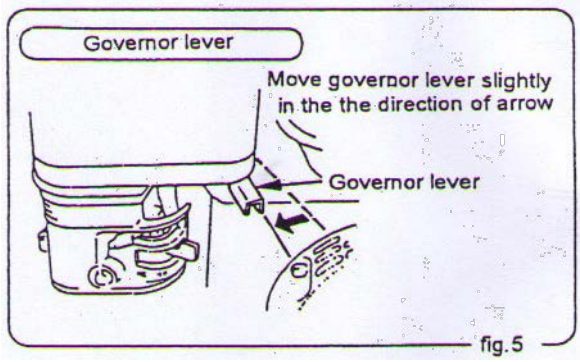
   After started, be sure to run the engine at low speed for a few minutes.

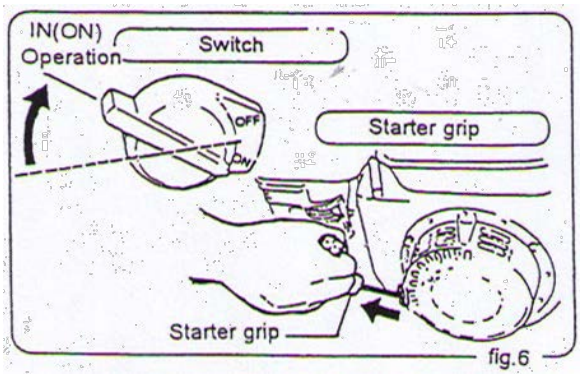
   It must be done in cold climate in particular.

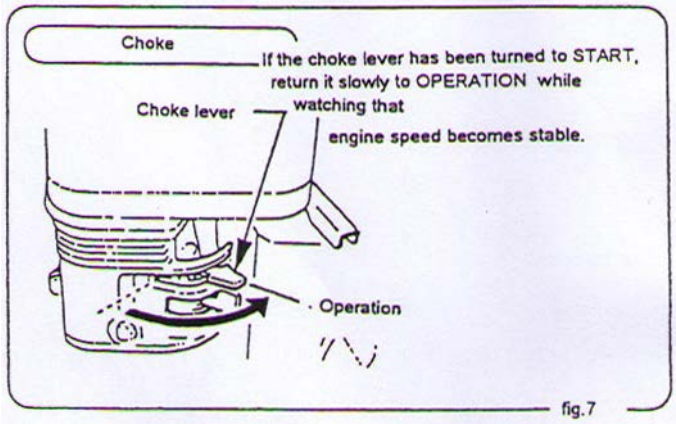
   Check for abnormal noise of gas leak in the meantime.





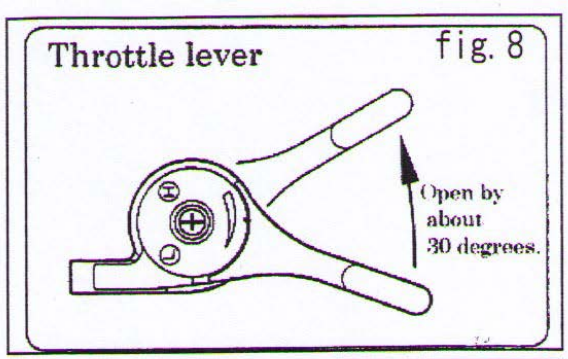


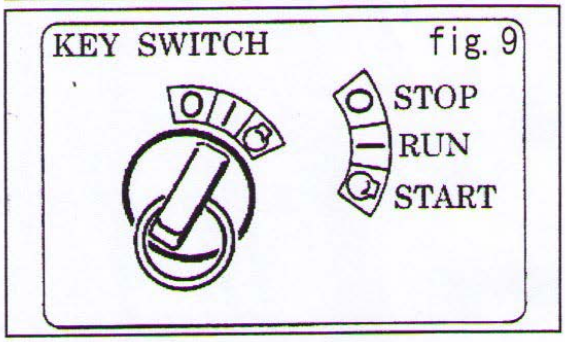


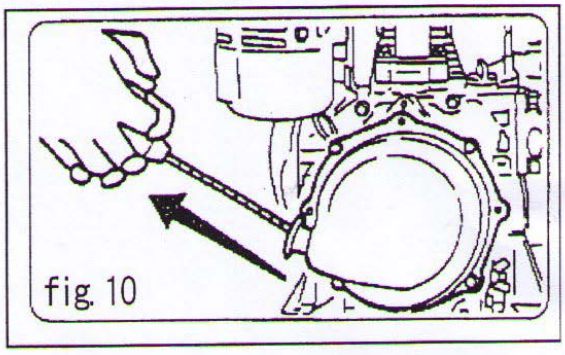


Diesel Engine (FOR CPC-350 & CPC-405)

1. Turn the throttle lever to START position (open by about 30 degrees) (Fig.8)
2. Operate Starter
   In cast of self starter
   A. Insert the key into starter switch
   B. Turn the key to I (Run) mark.
   C. Turn the key further clockwise to (Start) mark and the engine will start. (Fig.9)
3. After starting up the engine, be sure to perform a warm up run for 2 to 3 minutes. This should be performed without fail, particularly during winter season. While doing this, check for abnormal sound of gas leaking.







CAUTON

If your engine fails to start, do not rotate Starter motor for more than 5 seconds Continuously, but return the key to (Run) mark and wait for 10 seconds or so, before attempting again.

CAUTON

While your engine is running, never turn the key switch to (Star) Mark

CAUTON

In case you start with recoil starter or cranking, the key should be placed in I (Run) position as well.

In case of recoil starter

By pulling the starter knob slowly, you will reach such point where resistance becomes strong (compression point). By pulling it further, you will find a point where resistance is reduced. Return the knob but slowly return it original position. (Fig. 10)

CAUTON

Don’t pull the rop al the way and don’t take your hand off the pulled knob but slowly return it original position.

6. OPERATION

Single Plate Compactor (For CPC-E60, CPC-E90, CPC-95):

1. As the engine warms up, gradually move the chock lever to the OPEN position.
2. Move the speed control lever from the LOW to the HIGH position. When the engine speed reaches approximately 2300-2600 RPM, the centrifugal clutch engages. If the engine speed increased very slowly, it is possible that the clutch can slip. Do not operate the speed control lever slowly.

Reversible Plate Compactor (For CPC-60, CPC-160, CPC-240, CPC-350 & CPC-405):

1. Opening the governor lever sharply causes the compactor to start working (Fig. 5)
   When the engine speed reaches around 2300rpm, centrifugal clutch will be engaged.
   The lever should be operated quickly without hesitation, because increasing the engine speed slowly causes the clutch to slip.
2. Operate travel lever to have compactor travel forward or reverse. Push the lever forward for forward travel, pull it back for reverse and place it in neutral for vibration in place. (Fig.11)
3. When you work on soil which contains clay, there may be cases where traveling speed drops because compaction plate does not leave ground surface as easily. Check the bottom of plate to see if clay has not stuck there. Incidentally, because compactor can not be as efficient on clayey or high moisture containing soil, dry such soil to appropriate moisture content level or carry out compaction twice.
4. To discontinue your work, contrary to the starting time, return the governor lever quickly to LOW position. Do not move it slowly. (Fig. 5)

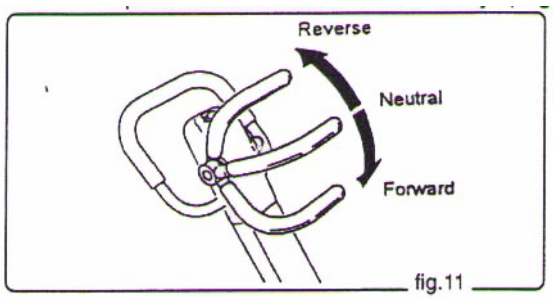


fig.11

CAUTION

While engine is stopped, operating travel lever back and forth a few times causes the lever to be locked at forward position.

This does not mean it is in trouble but the check valve within hand pump is actuated. Do not try to operate the lever forcibly. The travel lever will operate normally when the engine is started and vibrator is in action.

7. STOPPING

For stopping the engine with your work discontinued, return the throttle lever to low position to be in idle state for 2-3 minutes. After cooling down engine, stop the engine completely.

Gasoline Engine (FOR CPC-60, CPC-E60, CPC-E90, CPC-95, CPC-160 & CPC-240)

a. Turn the engine switch to off (O) position to stop.
b. After stopping the engine, align the fuel cock lever to off (O) position.

 CAUTION

If the engine is stopped while it is still hot, it may hasten wear such as burn out of oil slick in cylinder.

Diesel Engine (FOR CPC-350 & CPC405)

a. Return the throttle lever forward original position to stop.
b. For electric start, turn around the key switch to off (O) position to stop.

8. TRANSPORTATION AND INSTALLATION

Transportation Safety:

 CAUTION

- Shutdown the engine during transport.
- Tighten fuel tank cap securely and close fuel cock to prevent fuel from spilling.
- Drain fuel before transporting over long distance or on poor road.
- Lock the machine securely so the machine does not move or topple over.
- Operators for movement and installation shall hold a qualification certificate.
- Please move the press with proper, safe and reliable tools.

Installation Safety:

 CAUTION

- The field installation after unpacking shall follow requirements in this manual.
- Installation conditions:
  Ambient temperature: 5℃～40℃; no rapid changes causing dew.
  Ambient humidity: 45%～65% (no dew)

9. TROUBLE SHOOTING

1. Engine

(1) Starting deficient

Fuel is available but spark plugs do not spark	Power available at high voltage cord	Spark plugs bridged.
		Carbon deposit on spark pulg.
		Short- circuit due to deficient spark plug insulation.
		Improper spark plug gap.
	Power not available at high voltage cord	ON-OFF switch short circuiting.
		Ignition coil defective.
		Point not clean or gap improper.
		Condenser insulation deficient or short – circuiting.
		Spark plug coil broken or short – circuiting.
Fuel available and spark plugs spark	Compression is proper	Wrong fuel in use.
		Water or dust entered.
		Air cleaner not clean.
	Compression deficient	Suction/exhaust valve stuck or protruded.
		Piston ring and/or cylinder worn.
		Cylinder head and/or spark plug not tightened properly.
		Head gasket and/or spark plug gasket damaged.
Fuel not available at carburetor	Fuel not available in fuel tank.	
	Fuel cock not opened properly.	
	Fuel filter clogged.	
	Tank cap bleed hole clogged.	
	Aeration in piping.	

(2) Operation deficient

Weak in power	Compression is proper and doesn't misfire.	Air cleaner not clean
		Carbon deposit in cylinder
		Improper oil level in carburetor
	Compression insufficient (See "Compression deficient" above)	
	Compression is proper yet misfires	Water in tank
		Spark plug not clean
		Ignition coil defective
		Spark plug occasionally short-circuits

Engine overheated	Carbon deposit in combustion chamber or around exhaust port
	Spark plug heat value improper
	Cooling fins not clean.
Rotational speed fluctuates	Governor adjustment deficient
	Governor spring defective
	Fuel flow deficient
	Air taken in through suction piping system

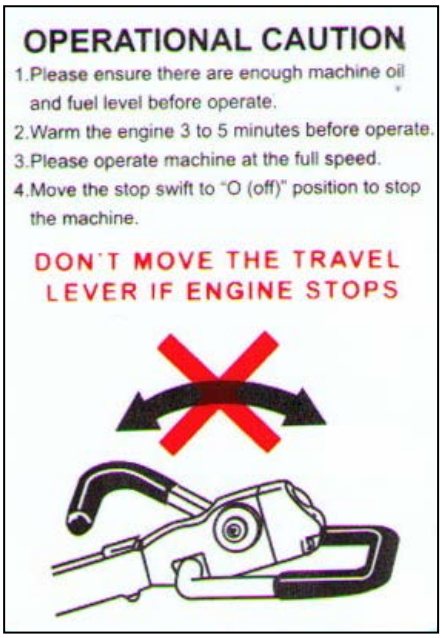
(3) Recoil starter function deficient

Recoil starter function deficient	Rotor clogged with dust
	Spiral spring failure due to fatigue

2. Machine

Travel speed slow and vibration weak	Engine output deficient and high speed revolution setting improper
	Clutch slips
	V-belts slips
	Excessive oil in vibrator
	Defect in vibrator internals
Travel forward or reverse but impossible to switch direction	Reversing parts defective
	Reversing lever installation deficient
	Oil hose broken
	Aeration in hydraulic oil for reversing system
	Check valve in hand pump clogged with dust
	Piston bearing in cylinder defective
Dows not travel either forward or reverse	V-belt disengaged or slips
	Clutch slips
	Vibrator locked
	Piston bearing in cylinder defective
Travel lever operating resistance great	Gall of hand pump piston
	Gall of vibrator cylinder piston

10. SAFETY LABELS



(Only for CPC-60, CPC-160, CPC-240, CPC-350 & CPC-405)