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OWNER'S MANUAL

HYDRAULIC REVERSIBLE PLATE COMPACTOR

B1728R
B2027R
B2435DR



**ORIGINAL
LANGUAGE**

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SAFETY INFORMATION

1. SAFETY INFORMATION

1.1 Safety Precautions

Before operating the machine, read both the manual and the engine manual carefully to become familiar with the location and proper use of all controls. Do not allow untrained or unauthorized personnel, especially children, to operate the machine. Use only the parts authorized by the factory for service.

This manual contains DANGER, WARNING, CAUTION callouts which must be followed to reduce the possibility of personal injury, damage to the equipment, or improper service.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



DANGER

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.



WARNING

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION

CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

1.2 Operating Safety

- I DO NOT modify the machine without the prior consent of the manufacturer. We don't assume responsibility for any accident due to equipment modification.
- I NEVER operate the machine in purpose for which it is not intended.
- I Slip/Trip/Fall is a major cause of serious injury or death. Beware of uneven or slippery work surface. Make sure of a firm stand when operating under such condition.
- I Especially care when working in the vicinity of unprotected holes or excavations.
- I NEVER allow any person to operate the machine without adequate instruction.
- I ENSURE all operators read, understand and follow the operation instructions.
- I Serious injury could result from improper or careless use of the machine.
- I Plate compactor are heavy units and should be positioned by two people of appropriate strength. Using the lifting handle provided with the machine, according to the correct lifting techniques.
- I Plate Compactor may only be used for compaction jobs.
- I DO NOT operate the machine unless all protective guards are in place.
- I ENSURE that the engine switch is in OFF position and the spark plug ignition lead is disconnected before removing the guards or making adjustments.
- I ENSURE both the machine and the operator are stable by setting up on level terrain and the machine will not tip over, slide or fall while in operation or unattended.
- I DO NOT leave the machine in operation while it is unattended.
- I DO NOT pull the machine backward with transportation wheels, it only could be pushed forward.
- I ENSURE that the soil or subsoil to be compacted has a enough load carrying capacity.
- I ENSURE that the area to be compacted does not contain any "live" electrical cables, gas, water or communication services which may be damaged by the action of vibration.
- I Exposure to vibration or repetitive work actions may be harmful to hands and arms.
- I NEVER stand on the machine while it is operating.
- I Be careful and DO NOT come in contact with the muffler when the engine is hot, it can cause severe burns.
- I ENSURE that the repairs to the engine and machine are carried out by competent personnel.
- I DO NOT use the machine near flammable material or in explosive environments.

SAFETY INFORMATION

- I Petrol is extremely flammable and explosive under certain conditions.
- I ENSURE that the petrol is only stored in an approved storage container.
- I DO NOT refuel the engine while it is in operation or hot.
- I DO NOT operate or refuel the engine in a confined area without adequate ventilation.
- I DO NOT refuel the engine in the vicinity of sparks, a naked flame or smoking.
- I DO NOT overfill the fuel tank and avoid spilling petrol when refueling. Spilled petrol or petrol vapour may ignite. If spillage occurs, ensure that the area is dry before starting the motor.
- I ENSURE that the fuel tank cap is securely fitted after refueling.
- I Carbon monoxide exhaust gases from engine driven units can cause death in confined spaces.
- I ALWAYS wear an approved hearing protection, Excessive noise can lead to temporary or permanent loss of hearing.
- I Protective goggles and a dust mask should be worn when working in a dusty environment. Protective clothing and footwear may also be desirable when working with hot mix bitumen.
- I Store the machine properly in a clean, dry place.

1.3 Operator Safety while using Internal Combustion Engines

- I DO NOT smoke when refueling the engine or operating the machine.
- I DO NOT refuel a hot or running engine.
- I ALWAYS keep away from all hot or spark-generating objects when refuel the engine.
- I ALWAYS refill the fuel tank until the machine has cooled, and in a well-ventilated environments.
- I DO NOT spill fuel when refueling the engine.
- I ALWAYS take care to use the right type of fuel.
- I ALWAYS inspect the fuel leakage regularly.
- I NEVER perform any work on the machine while it is running. Before working on it, stop the engine and disconnect the spark plug wire to prevent accidental starting.
- I Avoid prolonged breathing of exhaust gases.
- I ALWAYS transport and handle fuel only when contained in approved safety containers.
- I Avoid touch or lean against hot exhaust pipes.
- I Allow engine to cool before performing any repairs or service.
- I ALWAYS keep the area around the muffler free of debris such as leaves, paper, cartons, etc. A hot muffler could ignite the debris and start a fire.
- I NEVER run the engine without air filter.

SAFETY INFORMATION






1.4 Label Locations







SAFETY INFORMATION

1.5 Safety and Operating Labels

BARTELL machines use international pictorial labels where needed. These labels are described below:

Label	Meaning
	<p>DANGER! Engines emit carbon monoxide; operate only in well-ventilate area. Read the Operator's Manual for machine information. No sparks, flames, or burning objects near the machine. Shut off the engine before refueling. Use only clean, filtered unleaded gasoline.</p>
	<p>WARNING! Always wear hearing and eye protection when operating this machine.</p>
	<p>CAUTION! Read and understand the supplied Operator's Manual before operating the machine. Failure to do so increase the risk of injury to yourself or others.</p>
	<p>CAUTION Lifting point.</p>
	<p>WARNING! Hand injury if caught in moving belt. Always replace belt guard.</p>

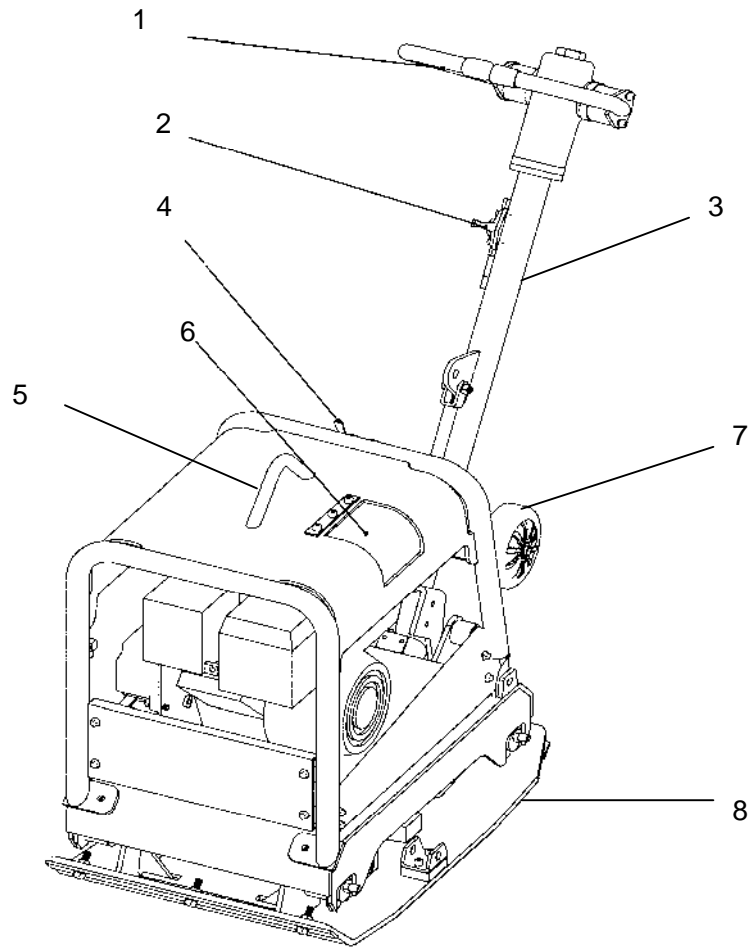
SAFETY INFORMATION

Label	Meaning
 <p>A rectangular warning label with a black border. On the left, there is a graphic of a hand touching a hot surface with a red arrow pointing down. On the right, the word 'WARNING' is written in four different languages: English, German, Spanish, and French, each preceded by a small triangle icon. The label number 'PC226' is visible in the bottom right corner.</p>	<p>WARNING! Hot surface!</p>
 <p>A vertical rectangular notice label with a black border. It features a large exclamation mark in the center. Above the exclamation mark is a small icon of a hand on a lever. Below the exclamation mark is a small icon of a car. The label number '1000' is visible at the bottom.</p>	<p>NOTICE! Throttle control lever: Turtle=Idle or slow, Rabbit=Full or fast.</p>
 <p>A blue nameplate with white text. At the top, the 'Bartell Morrison' logo is displayed. Below it, the text reads 'MODEL/MODELE', 'SERIAL NO./NO. DE SERIE', and the serial number '109514'. It also states 'MADE IN / ASSEMBLÉ EN CANADA', includes the CE mark, and provides contact information for Bartell Morrison Inc. in Brampton, Ontario, Canada.</p>	<p>A nameplate listing the model number and serial number is attached to each unit. Please record the information found on this plate so it will be available if the nameplate lost or damaged. When requesting service information, the serial number should be specified of the unit.</p>
 <p>A blue nameplate with white text, similar to the previous one. It features the 'Bartell Morrison' logo, 'MODEL/MODELE', 'SERIAL NO./NO. DE SERIE', and the serial number '111012'. It also states 'ASSEMBLED IN / ASSEMBLÉ EN CANADA', includes the CE mark, and provides contact information for Bartell Morrison Inc. in Brampton, Ontario, Canada.</p>	<p>A nameplate listing the model number and serial number is attached to each unit. Please record the information found on this plate so it will be available if the nameplate lost or damaged. When requesting service information, the serial number should be specified of the unit.</p>

OPERATION

2. OPERATION

2.1 Controls



Ref.	Description	Ref.	Description
1	Lever for Forward/Reverse Operation	5	Lifting Point
2	Throttle Control	6	Refueling
3	Handle	7	Transport Wheel
4	Locking Device	8	Base Plate

OPERATION

2.2 Operating Principle

The following instructions were compiled to provide you information on how to obtain long and trouble free use of the unit. Periodic maintenance of this unit is essential. Read the manual in its entirety and follow the instructions carefully. Failure to do so may injure yourself or a bystander.

2.3 Delivery Checks

Immediately on taking delivery of your new machine and before putting it into service.

- I Read the handbook completely—it could save a great deal of unnecessary expense.
- I Read the engine manual supplied.
- I Check the general condition of the equipment –has it been damaged during delivery?
- I Check engine oil level.
- I Check fuel levels.
- I Hydraulic fluid level

Recommended lubricants are detailed in the Care and Maintenance section.

2.4 Before Starting

Before starting the machine, check the following items:

- I All handles are free from grease, oil and dirt.
- I All control levers are in the neutral position.
- I All bolted joints are tightened.
- I Fuel level.
- I The tension in the V-belt.
- I Oil level in the engine.
- I The state of air filter..
- I Hydraulic fluid level.

NOTICE: Check the hydraulic fluid level and the oil level in the engine and exciter.

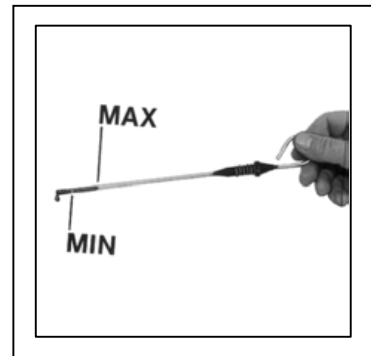
The warranties are VOID if the machine run without oil and hydraulic fluid.

OPERATION

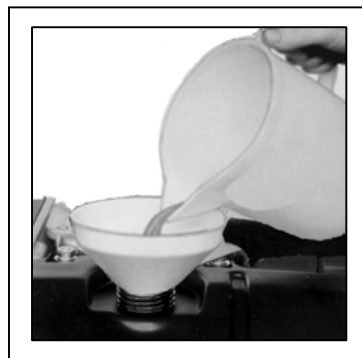
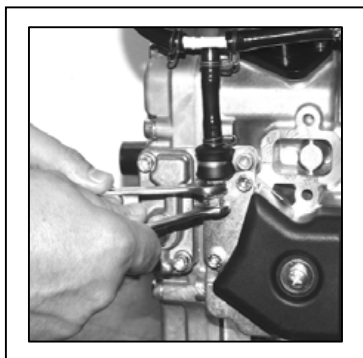
2.5 To Start

2.5.1 Diesel Engine

1. Oil filling and level inspections must be carried out with the engine on a flat surface.
2. Remove oil filter cap, pour the oil in and reassemble oil cap.
3. Make sure that is nearly at max., fit the dipstick correctly back in place
4. Check and refill oil up to the maximum level.



5. Should start-up be difficult, purge air from union as indicated in the figure.
6. Do not fill the fuel tank completely, but just up to 1 cm (0.39 in) from the top of the tank, to provide space for fuel movement. Wipe any fuel spillage from engine before starting.
7. Remove fuel tank cap. Pour the fuel and reassemble fuel tank cap. With low ambient temperatures (-10°C) add specific additives to diesel fuel, to avoid paraffine crystals solidification.



8. To eliminate any possible water and dirt residue from the tank bottom, remove the plug (A) and open the cock (B) to enable discharging. Once the operation is over, close the cock and screw back the protecting plug.
9. Accelerator at 50 % speed.

OPERATION

10. Take the handle and pull softly the rope until it is extended to its full limit. Let the rope rewind completely. Start the engine pulling strongly the rope.
11. To stop the engine, lever and/or key in stop position, accelerator lever in stop position.



2.5.2 Diesel Engine with Electric Starter

1. Do not actuate starter for more than 20 seconds at a time. If engine does not start, wait 1 minute before repeating attempt. If engine does not start after two attempts, trace the cause according to Diagnosis Chart.
2. Key always in on (1st) position when engine is running. Make sure that all the warning lights are off when the engine is running. For engines with starting panel equipped with engine protection, make sure the OK light only keeps ON.



1st position - Warning light on.



2nd Position - Starting.

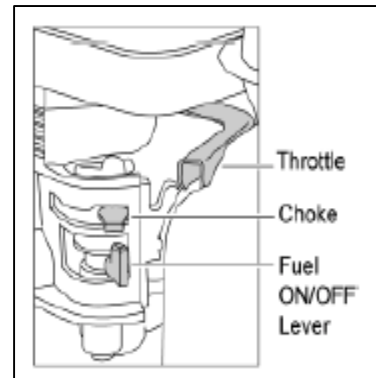
3. After starting, at idle speed for a few minutes according to table:

Temperature	Time
8 - 20° C	5'
- 20° C / - 10° C	2'
- 10° C - 5° C	1'

OPERATION

2.5.3 Petrol Engine

1. Open the fuel tap by moving the fuel ON/OFF lever fully to the right.
2. If starting the engine from cold, set the choke ON by moving the choke lever fully to the left. If restarting a warm engine, the choke is usually not required. However, if the engine has cooled to a degree, partial choke may be required.
3. Turn the engine ON/OFF switch clockwise to the "1" position.
4. Set the throttle to the idle position by moving the throttle lever fully to the right. Do not start the engine on full throttle, as the compactor will vibrate as soon as the engine starts.
5. Taking a firm hold of the control handle with one hand, grasp the recoil starter handle with the other. Pull the recoil starter until engine resistance is felt, then let starter return.
6. Taking care not to pull the starter's cope fully out, pull the starter handle briskly.
7. Repeat until the engine fires.
8. Once the engine fires gradually, set the choke lever to the OFF position by moving it to the right.
9. If the engine fails to fire after several attempts, follow the trouble-shooting guide on page 9.
10. To stop the engine, set the throttle to idle and turn the engine ON /OFF switch anticlockwise to the "0" position.
11. Turn the fuel off.



2.6 To Stop

1. Push the throttle lever to "O" position.
2. Turn the key switch to "O" (off).
3. Close the fuel valve.

2.7 Application

Trench compaction	Earthworks
Road maintenance	Landscaping
Brick paving	Driveway topping

OPERATION

2.8 Operation

Run engine at full throttle and allow plate to pull itself along at its normal speed. Depending on the material being compacted, three or four passes are recommended to achieve the best compaction.

The machine is best suited to the compaction of bituminous and granular materials e.g. granular soils such as silt and clay are best compacted using the impact force produced by a vibrating rammer. Where possible the site should be graded and leveled before commencing compaction.

Correct moisture content in soil is vital to proper compaction. Water acts as a lubricant to help slide soil particles together. Too little moisture means inadequate compaction; too much moisture leaves water-filled voids that weaken the soil's load-bearing ability. Compaction of dry materials will be facilitated by moistening with a water hose fitted with a sprinkler. Excessive watering or water content will cause the machine to stall.

The optional water tank kit is recommended when the machine is used on bituminous surfaces as the water film prevents a build up of material on the underside of the plate.

2.9 Operation – Driving

1. Forward Operation:

Move the forward /reverse lever forwards.

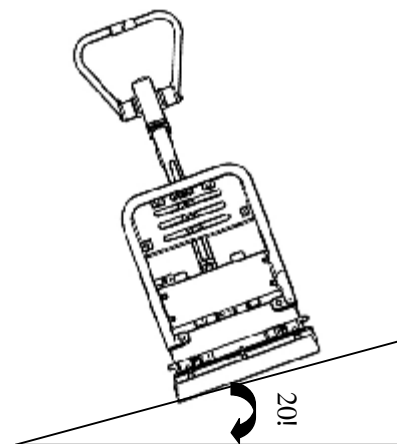
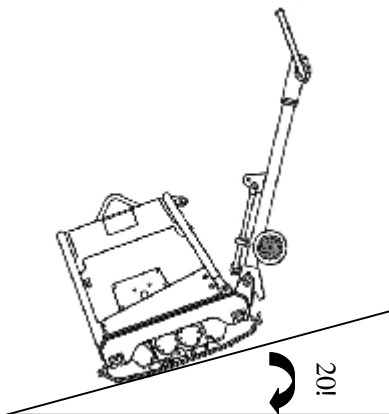
2. Reverse Operation:

Move the forward/reverse lever backwards.

2.10 Operation on Slope

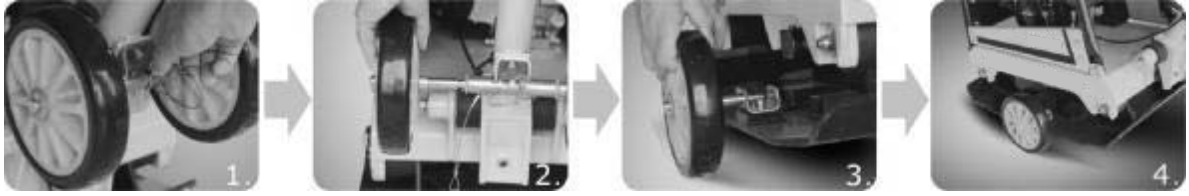
1. The operator must never stand in the direction of descent.
2. Must never exceed the Max. gradient of 20° .

Max. Admissible Inclination



OPERATION

2.11 How to Assemble Transport Wheel



MAINTENANCE

3. MAINTENANCE

3.1 Periodic Maintenance Schedule

Refer to engine manufacturer's Operation Manual for additional information on engine maintenance. A copy of the engine Operation Manual was supplied with the machine.

	Daily	At first 20 hours	Every 50 hours	Every 100 hours	Every 250 hours	Every 500 hours	Every 1000 hours
Check oil level	●						
Check air filter	●						
Check for damage and leaks	●						
Change engine oil		●					
Clean air filter		●					
Check V-belt		●					
Clean cooling system			●				
Check exciter oil			●				
Check hydraulic oil lever				●			
Change exciter oil					●		
Change engine oil					●		
Change oil filter					●		
Check valve clearance					●		
Change fuel filter						●	
Change hydraulic fluid filter						●	
Change hydraulic oil							●



These inspection intervals are for operation under normal conditions. Adjust your inspection intervals based on the number hours plate compactor is in use, and particular working conditions.

MAINTENANCE

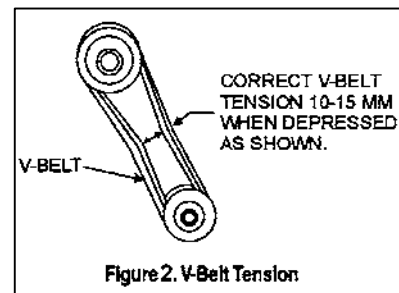
3.2 Exciter Oil

When changing the exciter oil, place the exciter on a flat, horizontal surface, remove the drain plug located at the bottom-right of the vibrator, and simply tip the compactor to drain the oil. Note that the oil will drain more easily while it is hot. **DO NOT** pour in too much oil.

3.3 V-belt and Clutch

3.3.1 Checking the V-belt

After 200 hours of operation, remove the upper belt cover to check the V-belt tension (Figure 2). Tension is proper if the belt bends about 10mm when depressed strongly with finger between shafts. Loose or worn V-belts reduces power transmission efficiency, causing weak compaction and reduces the life of the belt itself.



NEVER attempt to check the V-belt with the engine is running. Severe injury can occur if your hand get caught between the V-belt and the clutch. Always use safety gloves.

3.3.2 Checking the Clutch

Check the clutch simultaneously with V-belt checking. With belt removed, check outer drum of the clutch for seizure and "V" groove for wear or damage with your eyes. Clean the "V" groove as necessary. Wear of lining or shoe should be checked with running check. If the shoe is worn, power transmission becomes deficient and slipping will result.

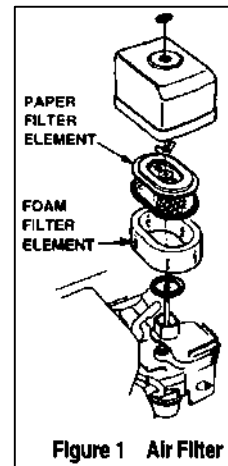


Whenever the compactor's vibration becomes weak or lost during normal operation regardless of operation hours, check the V-belt and clutch immediately.

MAINTENANCE

3.4 Air Cleaner

1. The air filter element should be cleaned because a clogged air cleaner can cause poor engine starting, lack of power and shorten engine life substantially.
2. To clean or replace air filter loosen the wing nut on the air filter housing (Figure 1), remove the cover and take out air filter cartridge. If only cleaning of the air filter is desired blow through the air filter cartridge from the inside, moving a jet of dry compressed air up and down until all dust is removed.



3.5 Spark Plug

Check and clean spark plugs regularly. A fouled, dirty spark plug may cause hard starting and poor engine performance. Set spark plug gap to recommended clearance. Refer to engine manual.



The muffler and engine cylinder become very hot during operation and remain hot for a while after stopping the engine. Allow engine to cool before removing spark plug.

NOTICE: A loose spark plug can become very hot and may cause engine damage.

3.6 Transport

1. Always shut off engine before transporting the machine.
2. Make sure lifting device has enough capacity to hold machine (see nameplate on machine for weight).
3. Use lifting point when lifting the machine.
4. NEVER stand underneath the machine while lifting.
5. Trolley wheel as optional is used for short distance transportation.

MAINTENANCE

3.7 Troubleshooting

3.7.1 Machine Troubleshooting

SYMPTOM	POSSIBLE CAUSES	SOLUTION
It does not advance.	The V-belt slipping.	Adjust or change the V-belt.
	The clutch is slipping.	Check or change the clutch.
It vibrates, but does not move.	The vibrator maybe on a slippery surface.	Try on the right surface.
Travels reverse very slowly.	Lack of hydraulic oil.	Top up the oil.
	Air in the circuit.	Check and purge the circuit.
Travels forward very Slowly.	Too much hydraulic oil.	Drain the excess oil.
Hydraulic oil Leaks.	Loss of oil-tightness, Hydraulic hose defective.	Change the defective parts .

MAINTENANCE

3.7.2 Engine Troubleshooting

SYMPTOM	POSSIBLE CAUSE	SOLUTION
Difficult to start, "fuel is available, but no SPARK at spark plug".	Spark plug bridging.	Check gap, insulation or replace spark plug.
	Carbon deposit on spark plug.	Clean or replace spark plug.
	Short circuit due to deficient.	Check spark plug insulation, replace if worn.
	Improper spark plug gap.	Set to proper gap.
Difficult to start, "fuel is available, and SPARK is present at spark plug.	ON/OFF switch is shorted.	Check switch wiring, replace switch.
	Ignition coil defective.	Replace ignition coil.
	Improper spark gap, points dirty.	Set correct spark gap and clean points.
	Condenser insulation worn or short circuiting.	Replace condenser.
Difficult to start, "fuel is available, spark is present and compression is normal".	Spark plug wire broken or short circuiting.	Replace defective spark plug wiring
	Wrong fuel type.	Flush fuel system, and replace
	Water or dust in fuel system?	Flush fuel system.
Difficult to start, "fuel is available, spark is present and compression is low.	Air cleaner dirty.	Clean or replace air cleaner.
	Suction/exhaust valve stuck . or protruded?	Re-seat valves.
	Piston ring and/or cylinder worn.	Replace piston rings and or piston.
	Cylinder head and/or spark plug not tightened properly.	Torque cylinder head bolts and spark plug.
	Head gasket and/or spark plug gasket damaged.	Replace head and spark plug gaskets.

MAINTENANCE

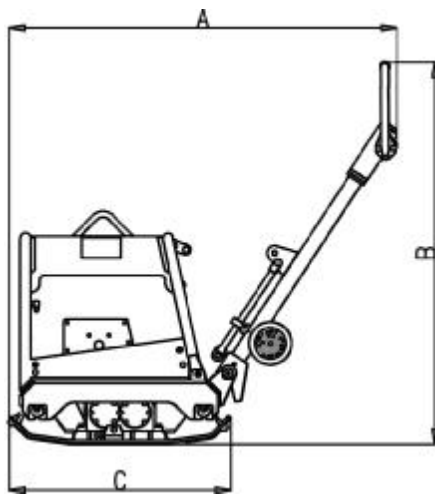
SYMPTOM	POSSIBLE CAUSE	SOLUTION
No fuel present at carburetor.	Fuel not available in fuel tank.	Fill with correct type of fuel.
	Fuel cock does not open properly.	Apply lubricant to loosen fuel cock level, replace if necessary.
	Fuel filter clogged.	Replace fuel filter.
	Fuel tank cap breather hole clogged.	Clean or replace fuel tank cap.
	Air in fuel line.	Bleed fuel line.
"Weak in power" compression is proper and does not mistire.	Air cleaner not clean.	Clean or replace air cleaner.
	Improper level in carburetor.	Check float adjustment, re-build carburetor.
	Defective Spark plug.	Clean or replace spark plug.
"Weak in power" compression is proper but mistires.	Water in fuel system.	Flush fuel system, and replace with correct type of fuel.
	Dirty spark plug.	Clean or replace spark plug.
	Ignition coil defective.	Replace ignition coil.
Engine overheats.	Spark plug heat value improper.	Replace with correct type of spark plug.
	Correct type of fuel.	Replace with correct type of fuel.
	Cooling fins dirty.	Clean cooling fins.
Rotational speed fluctuates.	Governor adjusted correctly.	Adjust governor.
	Governor spring defective.	Replace governor spring.
	Fuel flow restricted.	Check entire fuel system for leaks or clogs.
Recoil starter malfunction.	Recoil mechanism clogged with dust and dirt.	Clean recoil assembly with soap and water.
	Spiral spring loose.	Replace spiral spring.

TECHNICAL DATA

4. TECHNICAL DATA

Model	B1728R		B2027R	B2435DR
Engine type	Robin EX17	Honda GX160	Honda GX200	Kohler/Lombardini KD420/15LD440
Power hp(kw)	5.7(4.2)	4.8(3.6)	5.7(4.2)	9.8(7.3)
Operating weight lb(kg)	357 (162)	357 (162)	377(171)	825(375)
Plate size wxl in (cm)	17x28(43x71)		20x27(50x69)	24x35(60x90)
Centrifugal force kN	6050 (27)		7000 (31)	9000 (40)
Vibration Frequency vpm(hz)	5400(90)			
Travel Speed ft/min (m/min)	66-79 (20-24)			
Exciter Lubrication	SG15W-40			
Hydraulic oil	L-HM32			

Working Size (mm):



Model	A	B	C	D
B1728R	42.5 (1080)	36.5 (927)	28 (711)	17 (432)
B2027R	53.0 (1346)	43.0 (1092)	27 (686)	20 (508)
B2435DR	61.5 (1562)	42.5 (1080)	35 (889)	24 (610)

TECHNICAL DATA

Sound Specification (According to 2000/14/EC)

Model	Guaranteed sound power level
B1728R with Robin Gasoline/Petrol Engine	108dB(A)
B1728R with Honda Gasoline/Petrol Engine	108dB(A)
B2027R with Honda Gasoline/Petrol Engine	108dB(A)
B2435DR with Kohler/Lombardini Diesel Engine	108dB(A)

Vibration Specification (According to ISO 2631 and EN 1033) :

Model	
B1728R	4.0 m/s ²
B2027R	4.2 m/s ²
B2435DR	4.5 m/s ²



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