



REVERSIBLE PLATE COMPACTOR

OPERATOR'S MANUAL

MODEL

MODEL NUMBER : 29195
SKU 101155

SERIAL NUMBER

PURCHASE DATE

Both model number and serial number may be found on the main label. You should record both of them in a safe place for future use.

FOR YOUR SAFETY

READ AND UNDERSTAND THE ENTIRE MANUAL BEFORE OPERATING MACHINE



Save This Manual for Future Reference
Original Instructions

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INTRODUCTION

Your new reversible plate compactor will more than satisfy your expectations. It has been manufactured under stringent quality standards to meet superior performance criteria. You will find it easy and safe to operate, and with proper care, it will give you many years of dependable service.



Carefully read through this entire operator's manual before using your new unit. Take special care to heed the cautions and warnings.

The commitment to quality has been designed into details: reinforced self-cleaning base plate, engine oil drain hose, closed V-belt guard, self-adjusting centrifugal clutch and a sturdy protection frame are characteristics that indicate optimum operational safety. It ensures a quick job, easy handling, and optimum compaction results with their infinitely variable shifting control. A range of useful accessories enables use in all kinds of applications.

The plate compactor, for forward or reverse compaction, applies energy to the loose soil or other materials to increase its density and load bearing capacity, mainly used for general road building projects, the landscaping sector and in structural engineering. The loose soil or particles are moved or rearranged in a particular manner close to each other to avoid any trapped air or voids. It increases the load bearing capacity, decreases water seepage, prevents soil settlement, reduces swelling, contraction of the soil and prevents frost damage. It is ideal for compaction of interlocking paving stones, trenches, landscaping and maintenance.



The compactor is not intended to be used on cohesive soils such as clay or hard surfaces like concrete.

The **Engine manufacturer** is responsible for all engine-related issues with regards to performance, power rating, specifications, warranty and service. Please refer to the **Engine Manufacturer's** owners/operator's manual, packed separately with your unit, for more information.

Specifications

Item No.	29195
Plate Size	870x670mm
Compaction Depth	90 cm
Centrifugal Force	39000 N
Exciter Speed	3750 vpm
Travel Speed	21 m/min
Engine	389 cc, 9.6 kW
Operation Weight	255.5 kg

RECYCLING AND DISPOSAL



This marking indicates that this product should not be disposed with other household wastes. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or check with your local authority or local stores for advice of environmental safe recycling.

SYMBOLS

The rating plate on your machine may show symbols. These represent important information about the product or instructions on its use.



Read these instructions for use carefully.



Use safety equipment. Always wear eye and hearing protection, safety footwear, gloves and helmets.



It is forbidden to remove or tamper with the protection devices and safety devices.



Keep away from rotating parts.



Do not touch parts which are hot from operation. Serious burns may result.



Do not smoke or have open flames.



Use extreme caution when storing, handling and using fuels, as they are highly volatile and explosive in vapour state.



Keep children and bystanders off and away.

SAFETY

General Safety Rules

Understand your machine

Read and understand the operator's manual and labels affixed to the machine. Learn its application and limitations as well as the specific potential hazards peculiar to it.

Be thoroughly familiar with the controls and their proper operation. Know how to stop the machine and disengage the controls quickly.

Make sure to read and understand all the instructions and safety precautions as outlined in the **Engine Manual**, packed separately with your unit. Do not attempt to operate the machine until you fully understand how to properly operate and maintain the **Engine** and how to avoid accidental injuries and/or property damage.

Work area

Never start or run the engine inside a closed area. The exhaust fumes are dangerous, containing carbon monoxide, an odourless and deadly gas. Operate this unit only in a well ventilated outdoor area.

Never operate the machine without good visibility or light.

Personal safety

Do not operate the machine while under the influence of drugs, alcohol, or any medication that could affect your ability to use it properly.

Dress properly. Wear heavy long pants, boots and gloves. Do not wear loose clothing, short pants, and jewellery of any kind. Secure long hair so it is above shoulder level. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewellery or long hair can be caught in moving parts.

Check your machine before starting it. Keep guards in place and in working order. Make sure all nuts, bolts, etc. are securely tightened.

Never operate the machine when it is in need of repair or is in poor mechanical condition. Replace damaged, missing or failed parts before using it. Check for fuel leaks. Keep the machine in safe working condition.

Do not use the machine if the engine's switch does not turn it on or off. Any gasoline powered machine that can not be controlled with the engine switch is dangerous and must be replaced.

Form a habit of checking to see that keys and adjusting wrenches are removed from machine area before starting it. A wrench or a key that is left attached to a rotating part of the machine may result in personal injury.

Stay alert, watch what you are doing and use common sense when operating the machine.

Do not overreach. Do not operate the machine while barefoot or when wearing sandals or similar lightweight footwear. Wear protective footwear that will protect your feet and improve your footing on slippery surfaces. Keep proper footing and balance at all times. This enables better control of the machine in unexpected situations.

Avoid accidental starting. Be sure the engine switch is off before transporting the machine or performing any maintenance or service on the unit. Transporting or performing maintenance or service on a machine with its switch on invites accidents.

Fuel safety

Fuel is highly flammable, and its vapours can explode if ignited. Take precautions when using to reduce the chance of serious personal injury.

When refilling or draining the fuel tank, use an approved fuel storage container while in a clean, well-ventilated outdoor. Do not smoke, or allow sparks, open flames or other sources of ignition near the area while adding fuel or operating the unit. Never fill fuel tank indoors.

Keep grounded conductive objects, such as tools, away from exposed, live electrical parts and connections to avoid sparking or arcing. These events could ignite fumes or vapours.

Always stop the engine and allow it to cool before filling the fuel tank. Never remove the cap of the fuel tank or add fuel while the engine is running or when the engine is hot. Do not operate the machine with known leaks in the fuel system.

Loose the fuel tank cap slowly to relieve any pressure in the tank.

Never overfill fuel tank (there should be no fuel above the upper limit mark)

Replace all fuel tank and container caps securely and wipe up spilled fuel. Never operate the unit without the fuel cap securely in place.

Avoid creating a source of ignition for spilled fuel. If fuel is spilled, do not attempt to start the engine but move the machine away from the area of spillage and avoid creating any source of ignition until fuel vapours have dissipated.

Store fuel in containers specifically designed and approved for this purpose.

Store fuel in a cool, well-ventilated area, safely away from sparks, open flames or other sources of ignition.

Never store fuel or machine with fuel in the tank inside a building where fumes may reach a spark, open flame, or other sources of ignition, such as a water heater, furnace, clothes dryer and the like. Allow the engine to cool before storing in any enclosure.

Machine use and care

Never pick up or carry a machine while the engine is running.

Do not force the machine. Use the correct machine for your application. The correct machine will do the job better and safer at the rate for which it was designed.

Do not change the engine governor settings or over-speed the engine. The governor controls the maximum safe operating speed of the engine.

Do not run the engine at a high speed when you are not compacting.

Do not put hands or feet near rotating parts.

Avoid contact with hot fuel, oil, exhaust fumes and hot surfaces. Do not touch the engine or muffler. These parts get extremely hot from operation. They remain hot for a short time after you turn off the unit. Allow the engine to cool before doing maintenance or making adjustments.

If the machine should start to make an unusual noise or vibration, immediately shut off the engine, disconnect the spark plug wire, and check for the cause. Unusual noise or vibration is generally warning of trouble.

Use only attachments and accessories approved by the manufacturer. Failure to do so can result in personal injury.

Maintain the machine. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the machine's operation. If damaged, have the machine repaired before use. Many accidents are caused by poorly maintained equipment.

Keep the engine and muffler free of grass, leaves, excessive grease or carbon build up to reduce the chance of a fire hazard.

Never douse or squirt the unit with water or any other liquid. Keep handles dry, clean and free from debris. Clean after each use.

Observe proper disposal laws and regulations for gas, oil, etc. to protect the environment.

Store idle machine out of the reach of children and do not allow persons unfamiliar with the machine or these instructions to operate it. Machine is dangerous in the hands of untrained users.

Service

Before cleaning, repair, inspecting, or adjusting shut off the engine and make certain all moving parts have stopped. Always make sure the engine

switch is in its "OFF" position. Disconnect the spark plug wire, and keep the wire away from the plug to prevent accidental starting.

Have your machine serviced by qualified repair personnel using only identical replacement parts. This will ensure that the safety of the machine maintained.

Specific Safety Rules

To avoid injury, keep hands, fingers and feet away from the base plate. Grip the handle of the plate compactor firmly with both hands. If both hands are holding the handle and your feet are clear of the compactor base, your hands, fingers and feet can not be injured by the compactor base.

Always operate the machine from behind, never pass or stand in front of the machine when the engine is running.

Never place tools or any other item under the plate compactor.

If the unit strikes a foreign object, stop the engine, disconnect the spark plug, thoroughly inspect the machine for any damage, and repair the damage before restarting and operating the machine.

Do not overload the machine capacity by compacting too deep in a single pass or at too fast a rate.

Never operate the unit at high transport speeds on hard or slippery surfaces.

Exercise extreme caution when operating on or crossing gravel drives, walks, or roads. Stay alert for hidden hazards or traffic. Do not carry passengers.

Never leave the operating position and leave the plate compactor unattended when the engine is running.

Always stop the engine when compacting is delayed or when walking from one location to another.

Stay away from the edge of ditches and avoid actions that may cause the plate compactor to topple over.

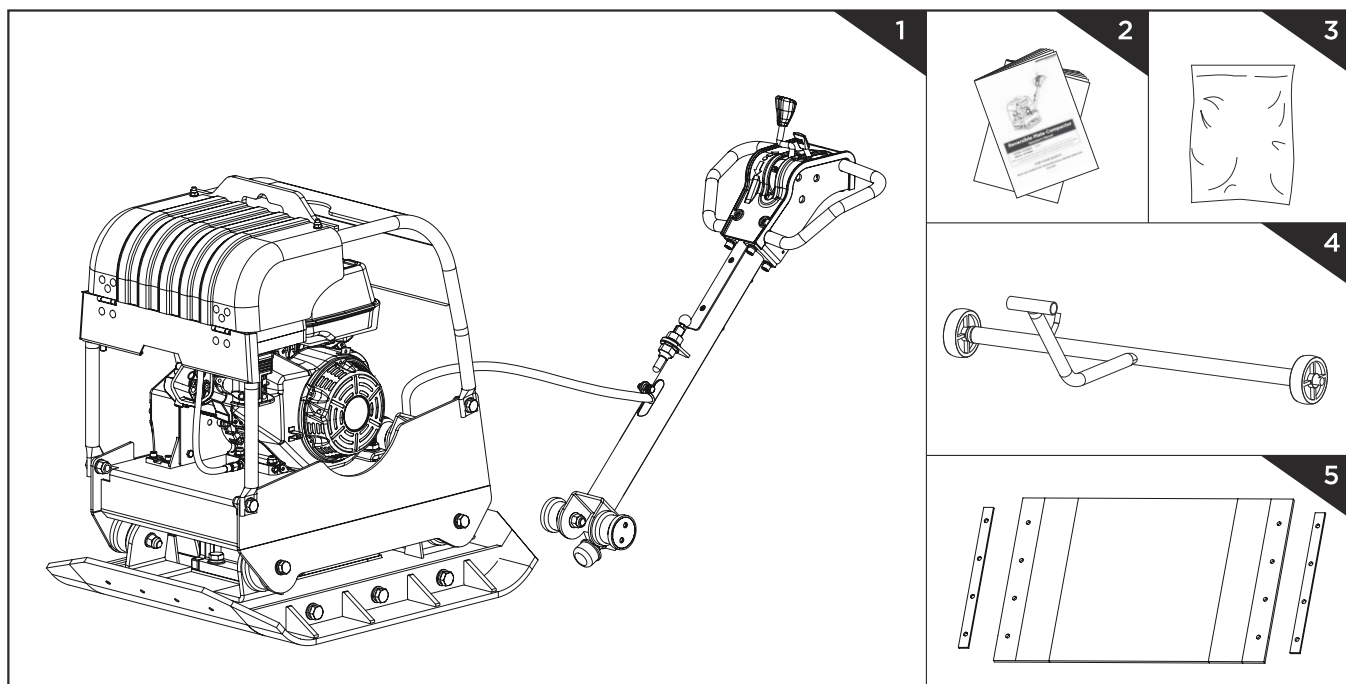
Always ascend slopes carefully, in a direct path and in reverse to prevent the plate compactor from toppling over onto the operator.

Always park the unit on a firm and level surface and shut the tool off.

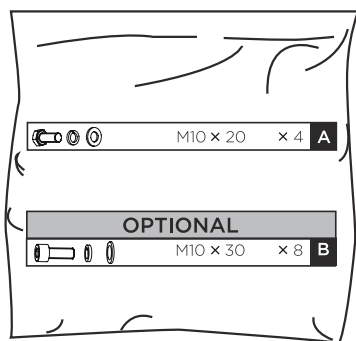
To reduce exposure to vibration, limit the hours of operation and take periodic breaks to minimise repetition and rest your hand. Reduce the speed and force in which you do the repetitive movement. Try to fill each day with jobs where operating hand-held power equipment is not required.

CONTENTS SUPPLIED

The plate compactor comes partially assembled and is shipped in carefully packed wooden case. After all the parts have been removed from the wooden case, you should have:



1. Plate Compactor
2. Operator's Manual & Engine Manual
3. Hardware Bag, including

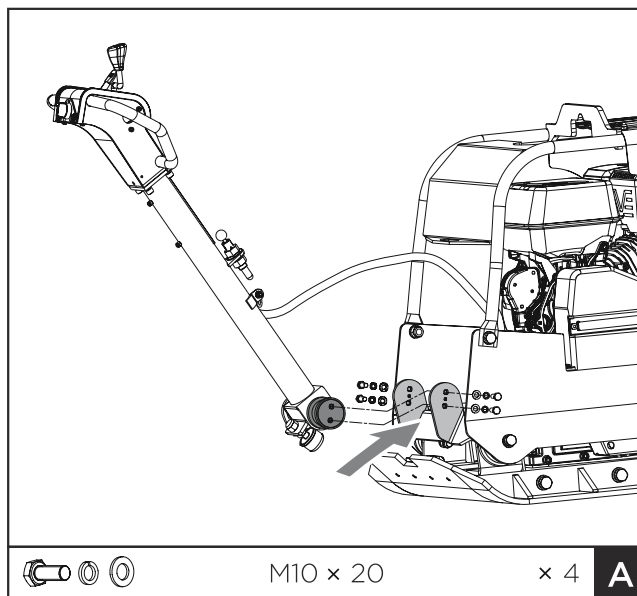


4. Adjustable Wheels Kit (Optional)
5. Paving Pad Kit (Optional)

ASSEMBLY

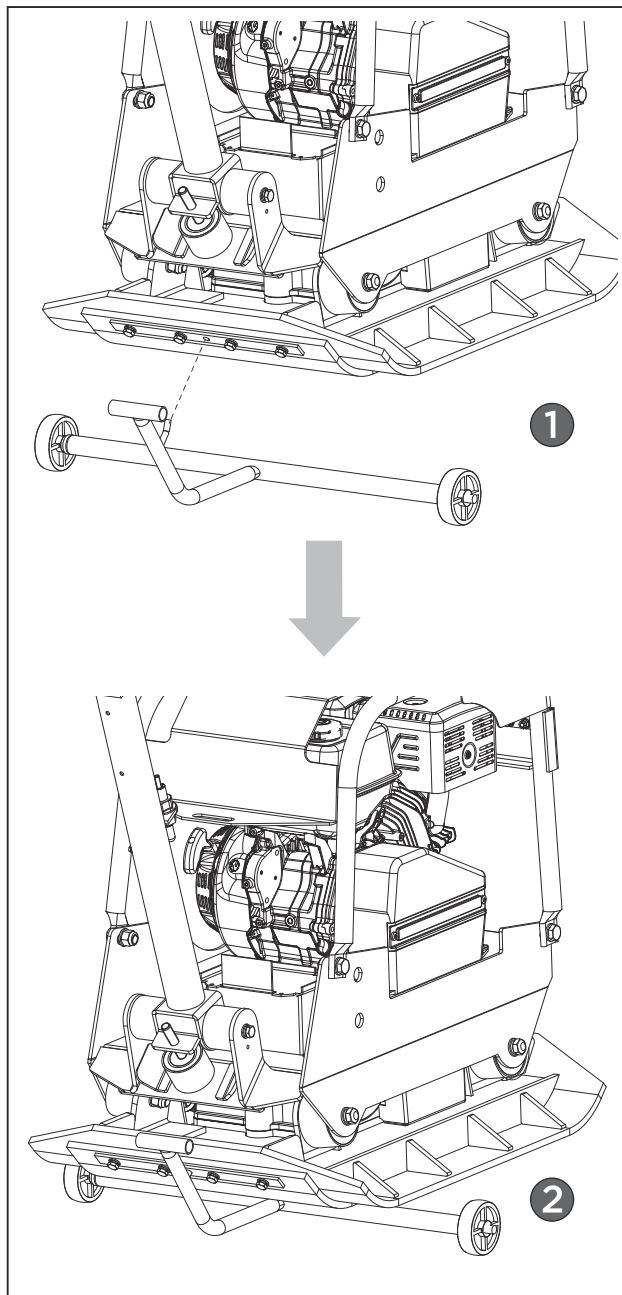
Following the assembly directions below, you will assemble the plate compactor in a few minutes.

Handlebar



Make the handlebar end slots into the channel provided by engine deck and secure with M10X20 hex bolts, spring washers and flat washers.

Adjustable Wheels Kit (Optional)

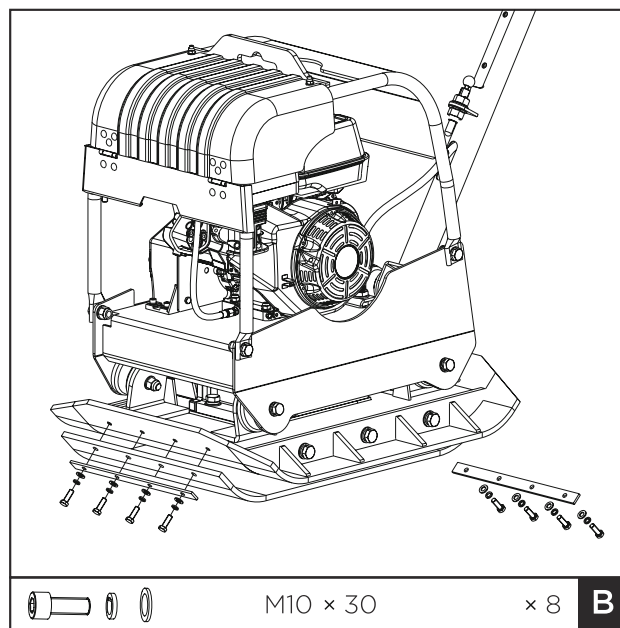


Attach the pre-assembled wheel kit to plate compactor as shown.

Before compacting, remove the wheel kit.

Paving Pad Kit (Optional)

The transparent rubber paving pad allows to compact concrete slabs, stones, bricks and blocks silently and gently.



Attach the paving pad onto the base plate as shown. Align the holes in the base plate, paving pad and clamp plate, and secure it with M10x30 bolts, spring washers and flat washers.

Engine oil



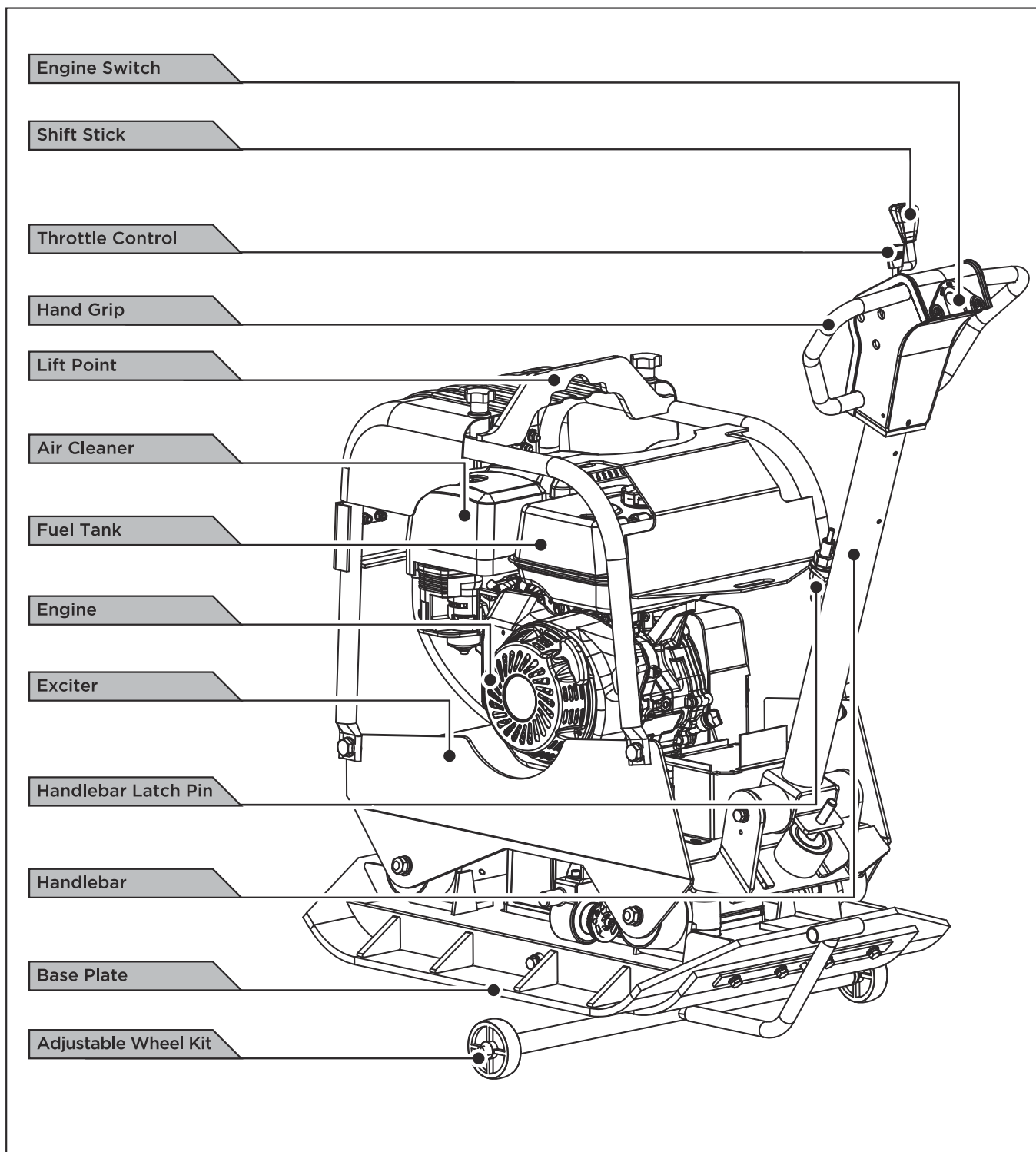
Oil has been drained for shipping.

Failure to fill engine sump with oil before starting engine will result in permanent damage and will void engine warranty.

Add oil according to **Engine** Manual packed separately with your compactor.

KNOW YOUR COMPACTOR

Features and Controls



Hand Grip

When operating the compactor, use this hand grip to maneuver the compactor.

Shift Stick

Push the stick forward, the compactor will move in a forward direction. Pull the stick backwards, the compactor will move in reverse direction. Placing the stick in the middle will cause the compactor not to move (neutral).

Throttle Control

The throttle lever controls engine speed. Moving the throttle lever in the directions shown makes the engine run faster or slower.

Handlebar

When operating the compactor, this handle is to be in the downward position. When the compactor is to be stored, move the handlebar to the upright position.

Handlebar Latch Pin

Used to lock the handlebar in place in the upward position for transporting and stowing.

Lift Point

Used to lift the machine with crane or other lifting device.

Belt Guard

Remove this guard to gain access to the V-belt. Never run the compactor without the V-belt guard. If the V-belt guard is not installed, the possibility exists that your hand may get caught between the V-belt and clutch, thus causing serious injury and bodily harm.

Exciter

The eccentric shaft contained within exciter housing is driven at high speed by a clutch and belt drive system. This high speed shaft revolution causes the rapid lifting and downward ramming motion of the machine as well as imparting a forward motion.

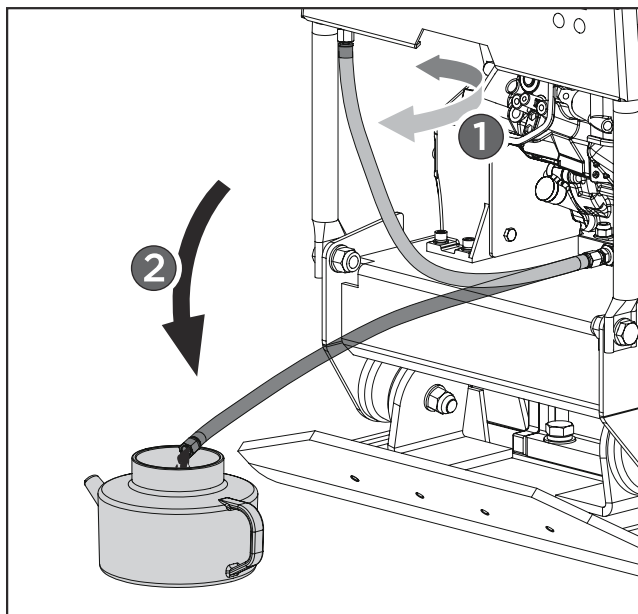
Engine switch

The engine switch enables and disables the ignition system.

The engine switch must be in the ON position for the engine to run.

Turning the engine switch to the OFF position stops the engine.

Oil Drain Hose



Running the engine with dirty oil can cause premature engine wear and failure. Changing oil regularly is extremely important. The flexible oil drain hose is equipped to drain oil into appropriate receptacle.

Compactor Operation

Adding fuel

Fill the fuel tank as instructed in the separate Engine Manual packed with the plate compactor.

A more detailed description of the engine operation and all related precautions and procedures can be found in the Engine Manual packed separately with the unit.

Starting engine

1. Move the fuel valve lever to the ON position
2. To start a cold engine, move the choke to the CLOSE position.
3. To restart a warm engine, leave the choke lever in the OPEN position.
4. Move the throttle lever away from the SLOW position, about 1/3 of the way toward the FAST position.
5. Place the shift stick in the neutral position.
6. Turn the engine switch to the ON position.
7. Operate the starter.

Recoil starter

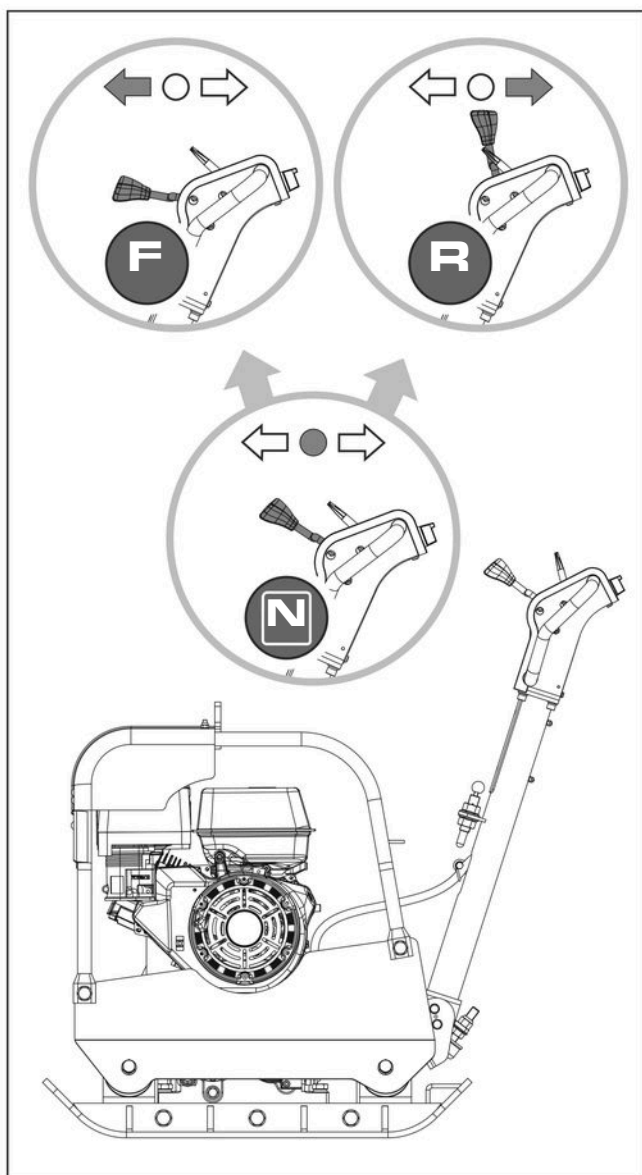
Pull the starter grip lightly until you feel resistance, then pull briskly, return the starter grip gently.

If the choke lever has been moved to the CLOSE position to start the engine, gradually move it to the OPEN position as the engine warms up.

After engine warms up, pull throttle lever to accelerate engine speed and place the shift stick at the desired position. Plate will begin vibrating and proceed with compacting.

Forward and reverse motion

The direction of travel is determined with the operating control shifter. Depending on the position of the control shifter, the plate compacts in forward direction, on the spot or in reverse direction.



1. To make the compactor move in the forward direction, push the shift stick forward.
2. If shift stick is placed in the neutral position, the compactor will vibrate on the spot.
3. To make the compactor move in the reverse direction, pull the shift stick backwards.

Compaction



Do not operate plate on concrete or on extremely hard, dry, compacted surfaces. The plate will jump rather than vibrate and could damage both plate and engine.

The number of passes required to reach a desired compaction level will depend on the type and moisture content of soil. Maximum soil compaction has been reached when excessive kickback is noticed.

When travelling backwards, the operator has to guide the vibration plate laterally by its guide handle so that you will not be squeezed between the handle and a possible obstacle. Special care is required when working on uneven ground or when compacting coarse material. Make sure of a firm stand when operating the machine under such conditions.

In operation, guide the machine, but let the compactor do the work. Bearing down on the handle is unnecessary and causes shock absorber wear.

On level surface, the compactor moves forward rapidly. On uneven surfaces or inclines, light forward pressure on handle may be required to assist the compactor in moving forward.

When using plate on paving stones, attach a pad to the bottom of the plate to prevent chipping or grinding surface of the stones. A special urethane pad designed for this purpose is available as an optional accessory.

While a certain amount of moisture in the soil is necessary, excessive moisture may cause soil particles to stick together and prevent good compaction. If soil is extremely wet, allow it to dry somewhat before compacting.

If soil is so dry as to create dust clouds while operating plate, some moisture should be added to the ground material to improve compacting. This will also reduce service to the air filter.

The following points are to be observed when compacting on sloped surfaces (slopes, embankments):

1. Only approach gradients from the bottom (a gradient which can be easily overcome upwards can also be compacted downwards without any risk).
2. The operator must never stand in the direction of descent.
3. The max. gradient of 20° must not be exceeded.



If this gradient were exceeded, this would result in a failure of the engine lubrication system (splash lubrication) and thus inevitably lead to a breakdown of important engine components.

Stopping engine

To stop the engine in an emergency, simply turn the engine switch to the OFF position. Under normal conditions, use the following procedure.

1. To stop the compactor from travelling, return the engine throttle lever to idle position.
2. Allow engine to cool down for one or two minutes before stopping.
3. Turn the engine switch to "OFF" position.
4. Turn off the fuel valve where applicable.



Do not move choke control to CLOSE to stop engine. Backfire or engine damage may occur.

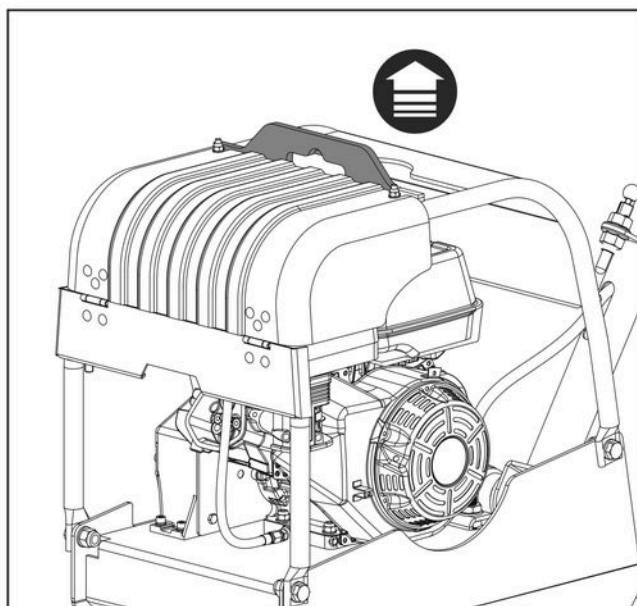
Idle speed

Set throttle control lever to its SLOW position to reduce stress on the engine when compacting is not being performed. Lowering the engine speed to idle the engine will help extend the life of the engine, as well as conserve fuel and reduce the noise level of the machine.

LIFTING / TRANSPORTING

See technical data for the weight of the machine.

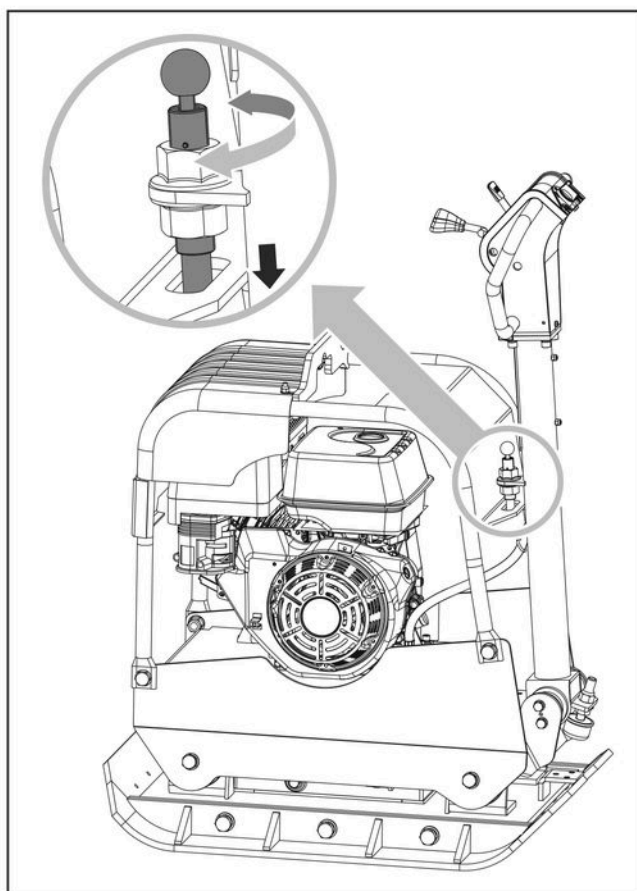
To avoid burns or fire hazards, let engine cool before lifting/transporting machine or storing indoors.



Lift unit by lift hook on roll cage.

Use a reliable chain, cable or strap of adequate lifting capacity.

The unit must be transported in the upright position to prevent fuel from spilling. Do not lay machine on its side or top.



Latch the handlebar in place with the lock pin during lifting/transporting.

Secure or tie down unit using lift hook or roll cage when transporting.



Machine may fall and cause damage or injury if lifted incorrectly. Lift by lift hook only.

MAINTENANCE

Maintaining your compactor will insure long life to the machine and its components.

Preventive Maintenance

1. Turn off engine. Engine must be cool.
2. Keep the engine's throttle lever in its SLOW position, and remove spark plug wire from spark plug and secure.
3. Inspect the general condition of the plate compactor. Check for loose screws, misalignment or binding of moving parts, cracked or broken parts, and any other condition that may affect its safe operation.
4. Remove all debris from the plate compactor with a soft brush, vacuum, or compressed air. Then use a premium quality lightweight machine oil to lubricate all moving parts.
5. Clean the bottom of the compactor base as soon as it begins to pick up soil being compacted. The unit can not do a good job if the bottom surface is not smooth and clean.
6. Replace spark plug wire.



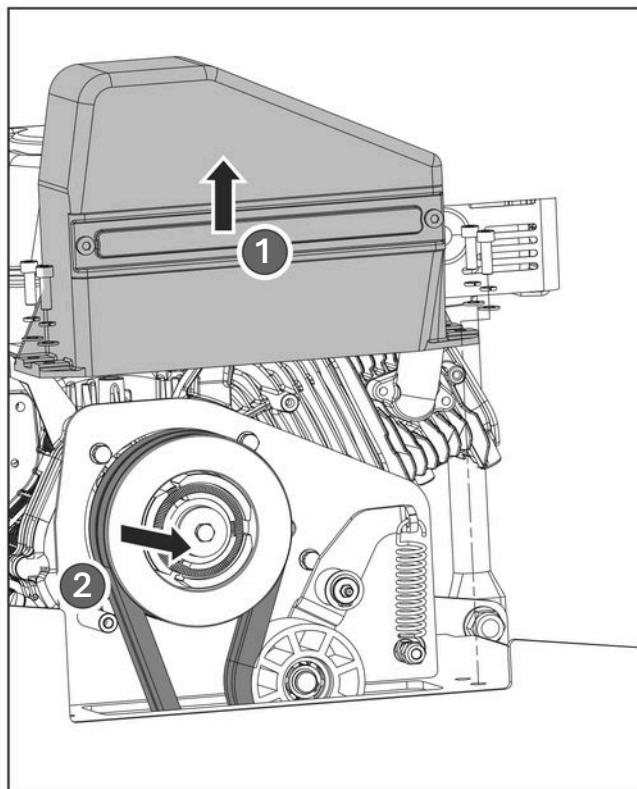
Never use a "pressure washer" to clean your plate compactor. Water can penetrate tight areas of the unit and cause damage to spindles, pulleys, bearings, or the engine. The use of pressure washers will result in shortened life and reduce serviceability.

Checking V-belt

To ensure optimum power transmission from the engine to the eccentric shaft, the V-belt must be in good condition.

1. Turn off engine. Engine must be cool.
2. Remove the belt guard to access the V-belt.
3. Check the condition of the V-belt. If any V-belt is cracked, frayed, or glazed, it should be replaced as soon as convenient.

Replacing V-belt



1. Remove the four bolts securing the belt guard.
2. Release the spring from tension pulley hook to void the belt tension.
3. Slip the old V-belts off of the wheel pulley and install the new V-belts in their place.



As the clearance between exciter pulley and engine deck is small, a spark plug sleeve is helpful for installing the new V-belt.

4. Position the V-belts over the engine pulley.
5. Hook the released spring securing the tension pulley to its original position and check if the V-belt tension is correct.
6. Replace the belt guard.

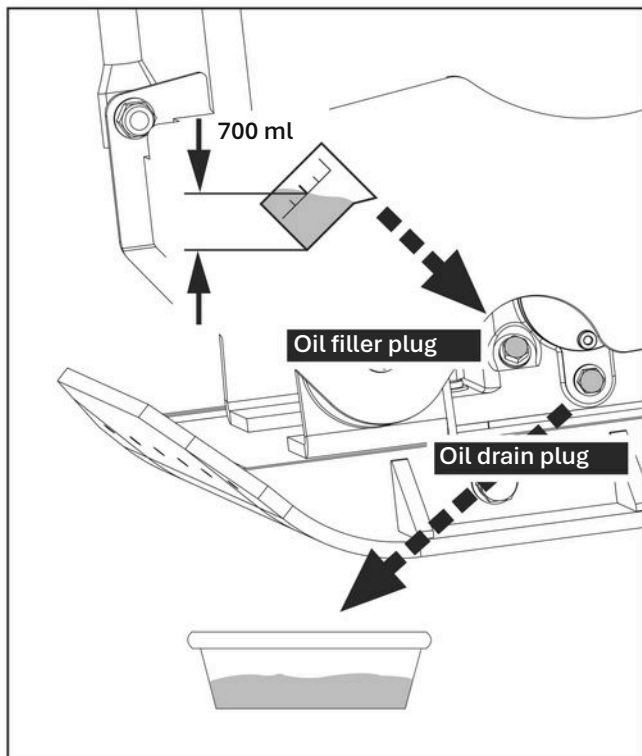


When removing or installing the drive belt, be careful not to get your fingers caught between the belt and pulley.

Exciter oil change

The exciter housing is pre-serviced with vehicle gear oil API GL-4 80W-90 or 75W-90. Change oil with equivalent grade after 200 hours of operation.

1. Let exciter cool before changing exciter oil.



2. Tilt the plate toward a drain pan to aid in the removal of all used oil and particles.
3. Remove oil drain plug to drain oil from the exciter assembly. Examine oil for metal chips as a precaution to future problems.
4. After oil has been completely drained from the machine, reinstall drain plug.
5. Return plate housing to the upright position.
6. Add the exciter housing with exciter oil through filler plug opening.



Do not overfill – overfilling can result in excessive temperatures in the exciter.

7. Apply sealant to filler plug and reinstall it.

Engine maintenance

Refer to the **Engine Manual** included in your plate compactor for the information on engine maintenance. Your engine manual provides detailed information for performing the tasks.

STORAGE

If the plate compactor will not be used for a period longer than 30 days, follow the steps below to prepare your unit for storage.

1. Drain the fuel tank completely. Stored fuel containing ethanol or MTBE can start to go stale in 30 days. Stale fuel has high gum content and can clog the carburettor and restrict fuel flow.
2. Start the engine and allow it to run until it stops. This ensures no fuel is left in the carburettor. Run the engine until it stops. This helps prevent deposits from forming inside the carburettor and possible engine damage.
3. While the engine is still warm, drain the oil from the engine. Refill with fresh oil of the grade recommended in the Engine Manual.
4. Allow the engine to cool. Remove the spark plug and put 60 ml of SAE-30 of high quality engine oil into the cylinder. Pull the starter rope slowly to distribute the oil. Replace the spark plug.

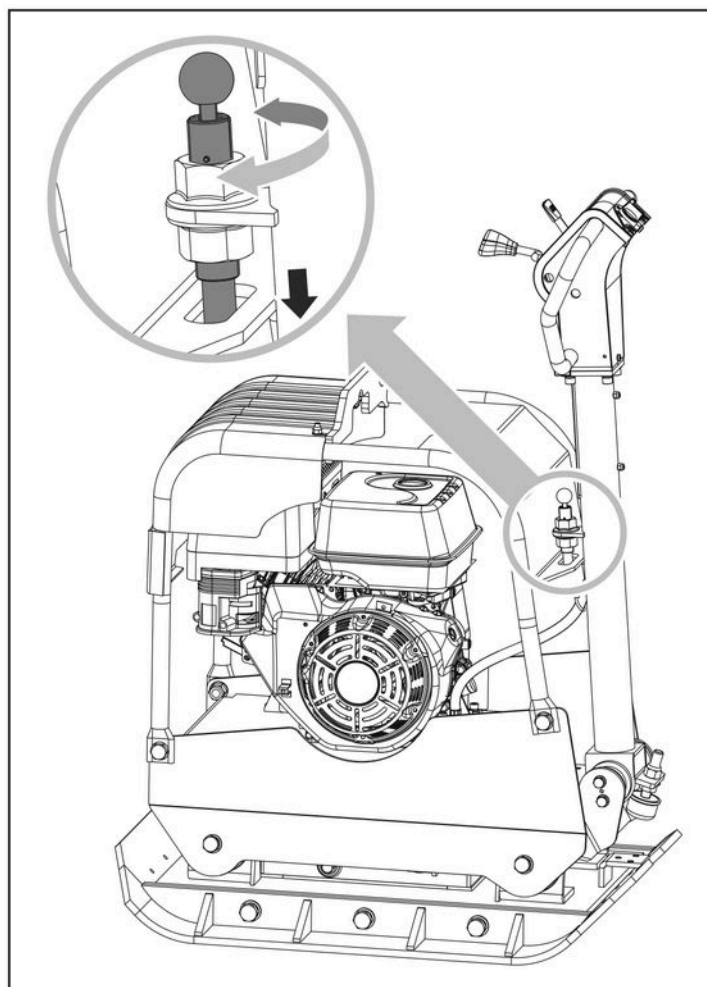


Remove the spark plug and drain all of the oil from the cylinder before attempting to start the unit after storage.

5. Use clean cloths to clean off the outside of the compactor and to keep the air vents free of obstructions.



Do not use strong detergents or petroleum based cleaners when cleaning plastic parts. Chemicals can damage plastics.



6. Secure the handle with the lock pin as shown.
7. Store your plate compactor in upright position in a clean, dry building that has good ventilation.



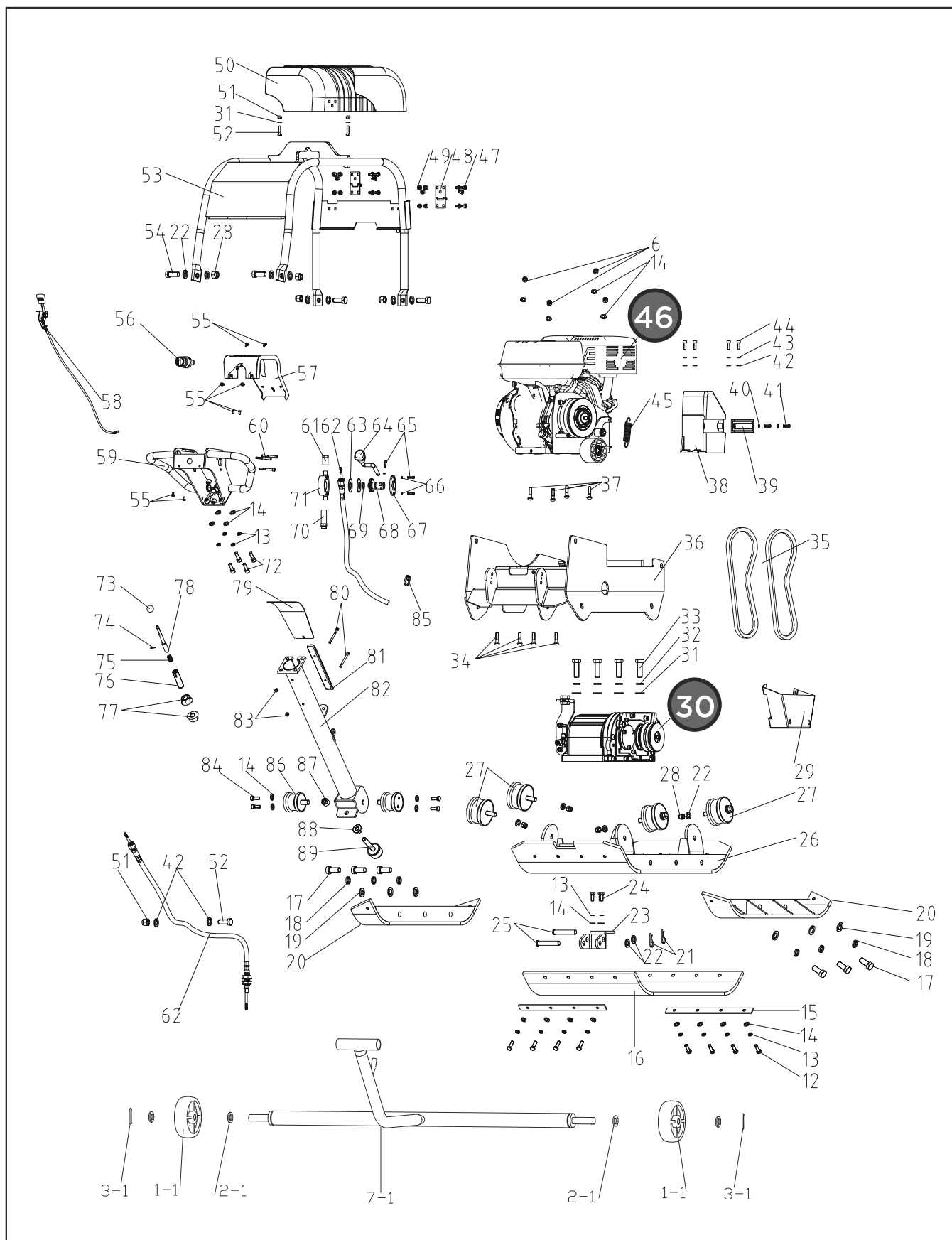
Do not store compactor with fuel in a non-ventilated area where fuel fumes may reach flame, sparks, pilot lights or any ignition sources.

Use only approved fuel containers.

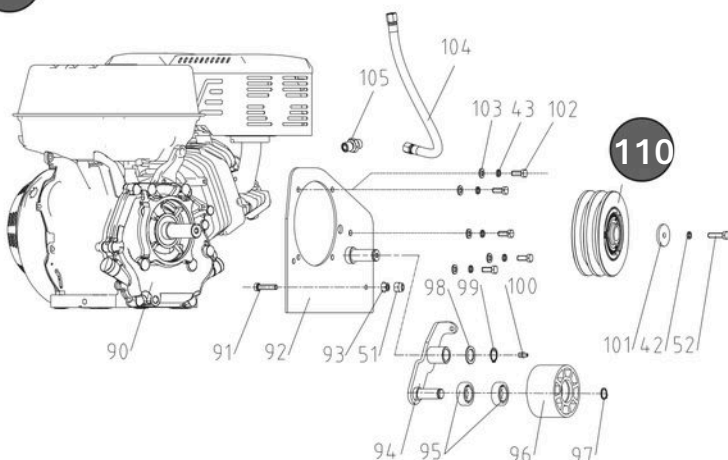
TROUBLE SHOOTING

Problem	Cause	Remedy
Engine fails to start.	1. Spark plug wire disconnected. 2. Out of fuel or stale fuel. 3. Throttle control lever not in correct starting position. 4. Choke not in ON Position. 5. Blocked fuel line. 6. Fouled spark plug. 7. Engine flooding.	1. Attach spark plug wire securely to spark plug. 2. Fill with clean, fresh gasoline. 3. Move throttle control lever to start position. 4. Throttle must be positioned at choke for a cold start. 5. Clean the fuel line. 6. Clean, adjust gap, or replace. 7. Wait a few minutes to restart, but do not prime.
Engine runs erratically.	1. Spark plug wire loose. 2. Unit running on CHOKE. 3. Blocked fuel line or stale fuel. 4. Vent plugged. 5. Water or dirt in fuel system. 6. Dirty air cleaner.	1. Connect and tighten spark plug wire. 2. Move choke lever to OFF. 3. Clean fuel line. Fill tank with clean, fresh gasoline. 4. Clear vent. 5. Drain fuel tank. Refill with fresh fuel. 6. Clean or replace air cleaner.
Engine overheats.	1. Engine oil level low. 2. Dirty air cleaner. 3. Air flow restricted.	1. Fill crankcase with proper oil. 2. Clean air cleaner. 3. Remove housing and clean.
Engine will not stop when throttle control is positioned at stop, or engine speed does not increase properly when throttle control is adjusted.	Debris interfering with throttle linkage.	Clean dirt and debris.
Compactor is difficult to control when pounding (machine jumps or lurches forward)	Too high engine speed on hard ground.	Set the throttle lever at lower speed.

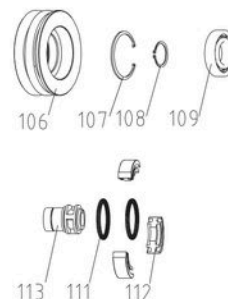
PARTS SCHEDULE



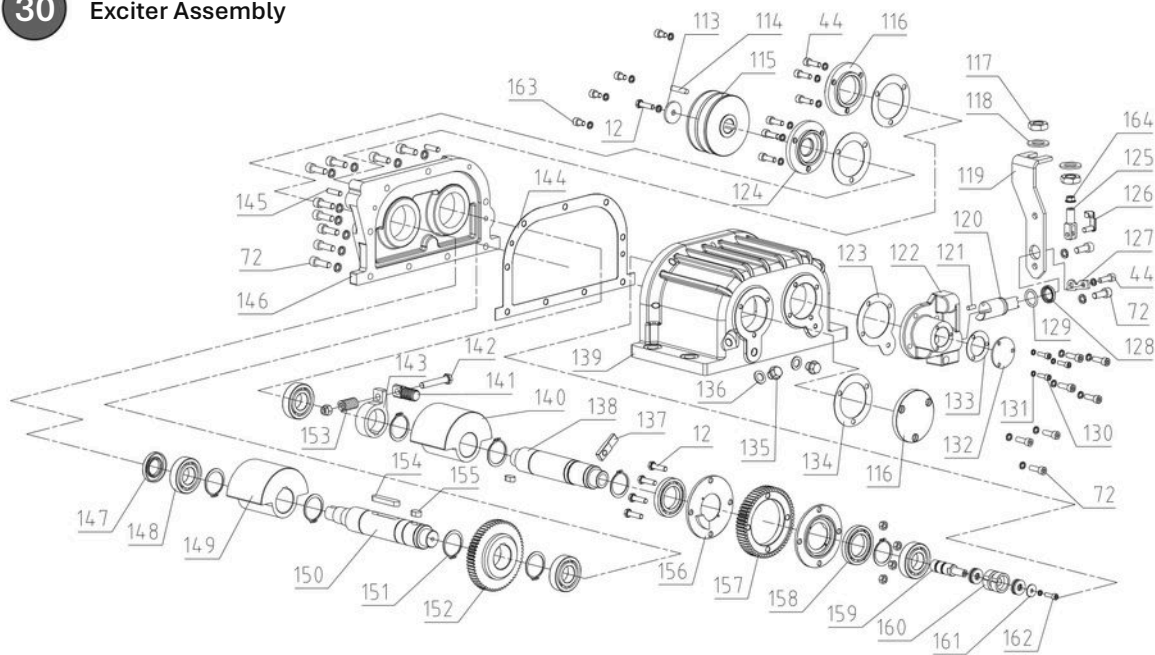
46 Clutch Pulley Assembly



110



30 Exciter Assembly





TOUGH TOOLS & EQUIPMENT

Bullmax Pty Ltd

917 Garland Avenue, Lavington NSW 2641

1300 797 675 | info@bullmax.com.au | www.bullmax.com.au

Bullmax SKU 101155 (BMRPC2500-BM400) - Model 29195