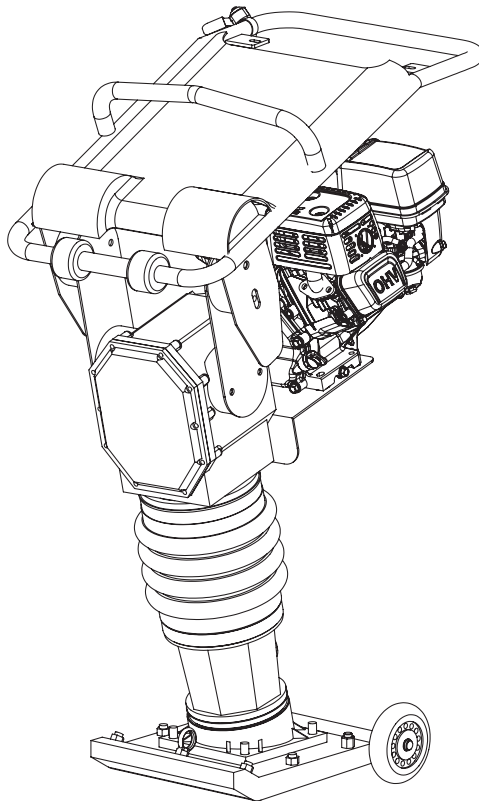




# Tamping Rammer Operator's Manual

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**WARNING:**

Carefully review and understand all **INSTRUCTIONS** prior to operating this device. Failure to follow the safety rules and other basic safety precautions may result in serious personal injury. Keep these instructions in a safe place and accessible so that they can be reviewed as required. Keep these instructions to assist in future servicing needs.

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# SAFETY AND WARNING

## 1. Symbols Index

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



Indicates a potentially hazardous condition/situation. Failure to follow designated procedures, will result in death or serious injury.



Indicates a potentially hazardous condition/situation. Failure to follow designated procedures, can cause either personal injury, component damage, or malfunction.



Indicates a potentially hazardous condition/situation. Failure to follow designated procedures, can cause personal minor or moderate injury and/or equipment damage.



Indicates information considered important, but not hazard-related. (e.g. messages relating to property damage).



**Safety Alert Symbol.** This symbol is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible serious injury or death.



**Read Operator's Manual in its entirety.** To reduce the risk of injury, user must read and understand operator's manual before using this product.

## 2. Operating Safety Warning

Familiarity and proper training are required for the safe operation of this equipment. Equipment operated improperly or by untrained personnel can be dangerous!

Read the operating instructions and familiarize yourself with the location and proper use of all instruments and controls. Inexperienced operators should receive instruction from someone familiar with the equipment before being allowed to operate the rammer.

- NEVER operate rammer in applications for which it is not intended.
- NEVER allow improperly trained personnel to operate rammer.
- NEVER touch hot muffler, engine cylinders, or cooling fins.
- NEVER use accessories or attachments for the rammer, which are not recommended by manufacture. Damage to the rammer and/or injury to user may occur.
- NEVER leave a running machine unattended.
- NEVER run machine indoors or in an enclosed area such as a deep trench unless adequate ventilation is provided. Exhaust gas from the engine contains poisonous carbon monoxide gas; exposure to carbon monoxide can cause loss of consciousness and may lead to death.
- NEVER tamper with or disable the function of operating controls.
- NEVER use choke to stop the engine.
- NEVER operate the machine in areas where explosions may occur.
- ALWAYS remove or disconnect engine spark plug before servicing rammer, to avoid accidental start-up.
- ALWAYS be sure that all other persons are at a safe distance away from the rammer. Stop the machine if people step into the working area of the machine.

- ALWAYS be sure the operator is familiar with proper safety precautions and operation techniques before using rammer.
- ALWAYS wear protective clothing when operating rammer. Wear goggles or safety glasses, hearing protection, and safety shoes.
- ALWAYS keep hands, feet, and loose clothing away from the moving parts of rammer.
- ALWAYS use common sense and caution when operating rammer.
- ALWAYS be sure rammer will not tip over, roll slide, or fall when not being operated.
- ALWAYS turn engine OFF when rammer is not being operated.
- ALWAYS guide the rammer in such a way that the operator is not squeezed between the rammer and solid objects. Special care is required when working on uneven ground or when compacting coarse material. Make sure to stand firmly when operating the machine under such conditions.
- ALWAYS operate the rammer in such a way that there is no danger of it turning over or falling in, when working near the edges of breaks, pits, slopes, trenches and platforms.

### **3. Safety Warning while Using Gas Engines**

- DO NOT smoke when refueling the engine or operating the machine.
- DO NOT refuel a hot or running engine.
- DO NOT refuel the engine near an open flame.
- DO NOT smoke while operating the rammer.
- DO NOT operate the rammer near open flames.
- ALWAYS refill fuel tank in a well-ventilated area.
- ALWAYS replace fuel tank cap after refueling.
- ALWAYS check fuel lines, fuel cap, and fuel tank for leaks and cracks before starting engine. Do not run machine if fuel leaks are present, or fuel cap or fuel lines are loose.
- If fuel is spilled during refueling, wipe it off from the engine immediately and discard the rag in a safe place. Do not operate the unit if fuel or oil leaks remain.
- NEVER operate any gas powered equipment in a poorly ventilated or enclosed area.
- NEVER perform any work on the unit while it is running. Before working on it, stop the engine and disconnect the spark plug wire to prevent accidental starting.
- Avoid prolonged breathing of exhaust gases.
- Avoid contact with hot exhaust systems and engine parts.
- Allow engine to cool before performing any repairs or service.
- ALWAYS transport and handle fuel only when contained in approved safety containers.
- 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.

### **4. Service Safety Warning**

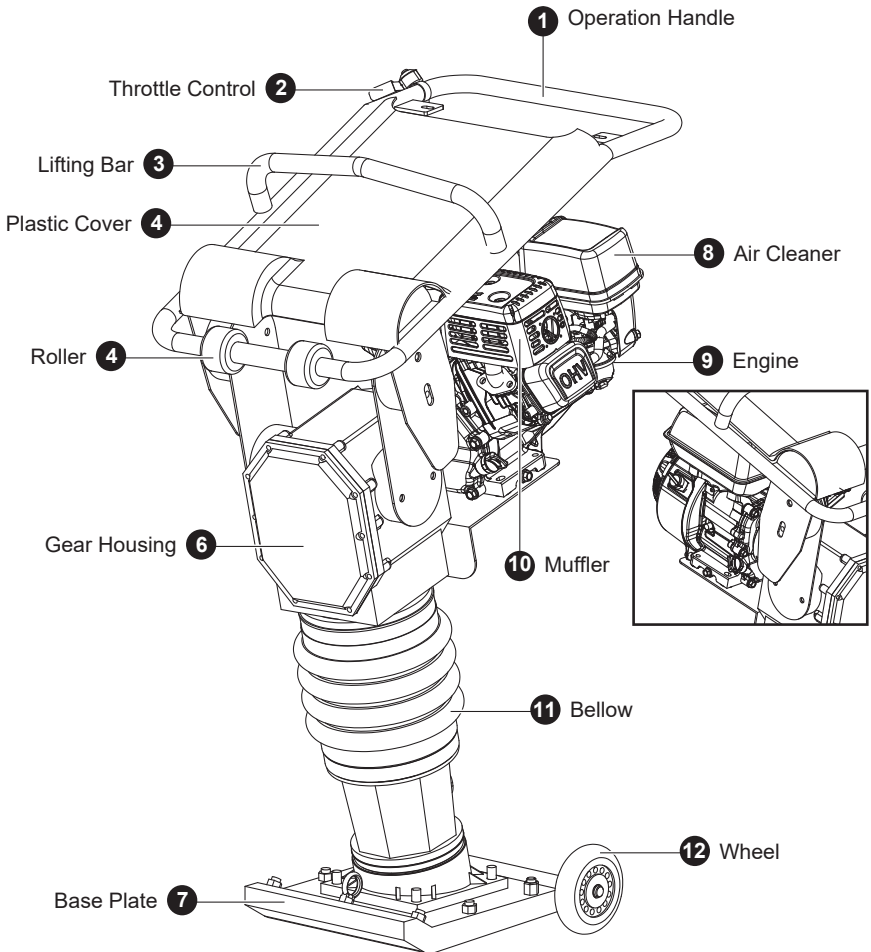
Poorly maintained equipment can become a safety hazard! In order to operate safely and properly over a long period of time, periodic maintenance and occasional repairs are necessary.

- DO NOT attempt to clean or service rammer while it is running.
- DO NOT operate rammer with safety devices or guards removed or that are not in working order.
- DO NOT operate rammer without air cleaner.
- DO NOT remove air cleaner paper component, pre-cleaner, or air cleaner cover while operating rammer.
- DO NOT alter engine speeds. Run engine only at speeds specified in Technical Data Section.
- ALWAYS replace safety devices and guards after repairs and maintenance.
- ALWAYS keep area around muffler free of debris in order to reduce to chance of an accidental fire.
- ALWAYS do Periodic Maintenance as recommended in Operation Manual.
- ALWAYS clean debris from engine cooling fins.
- ALWAYS replace worn or damaged components with spare parts designed and recommended by manufacturer for servicing this rammer.

# TECHNICAL SPECIFICATIONS

<b>SKU#</b>	<b>GU0117</b>
<b>Engine Power</b>	209cc (7HP)
<b>Engine Speed</b>	3600rpm
<b>Impact Force</b>	3500Lbs
<b>Compaction Depth</b>	26" (660mm)
<b>Stroke Height</b>	1.6-2.6" (40-66mm)
<b>Plate Size</b>	13x11" (330x280mm)
<b>Travel Speed</b>	42ft./min (13m/min)
<b>Assembled Dimension</b>	18"x28.3"x42" (460x720x1060mm)
<b>Net Weight</b>	137Lbs (62.3Kgs)

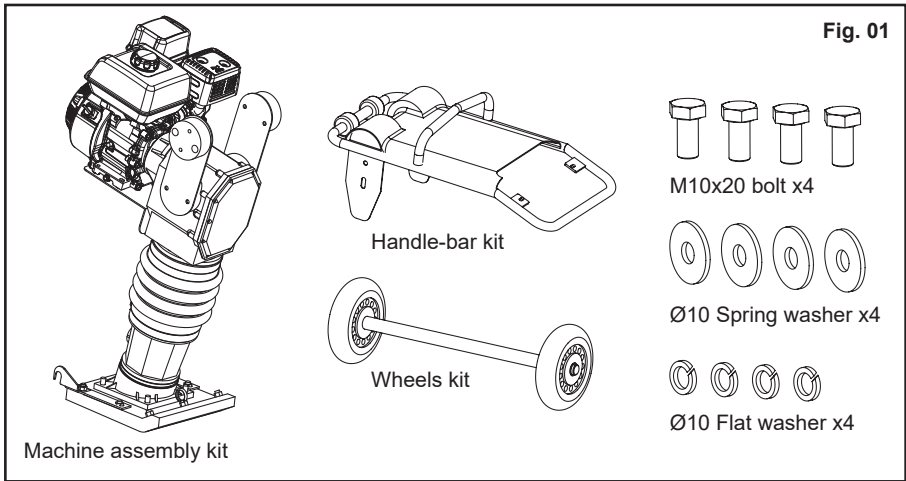
# MAIN COMPONENTS



# ASSEMBLY

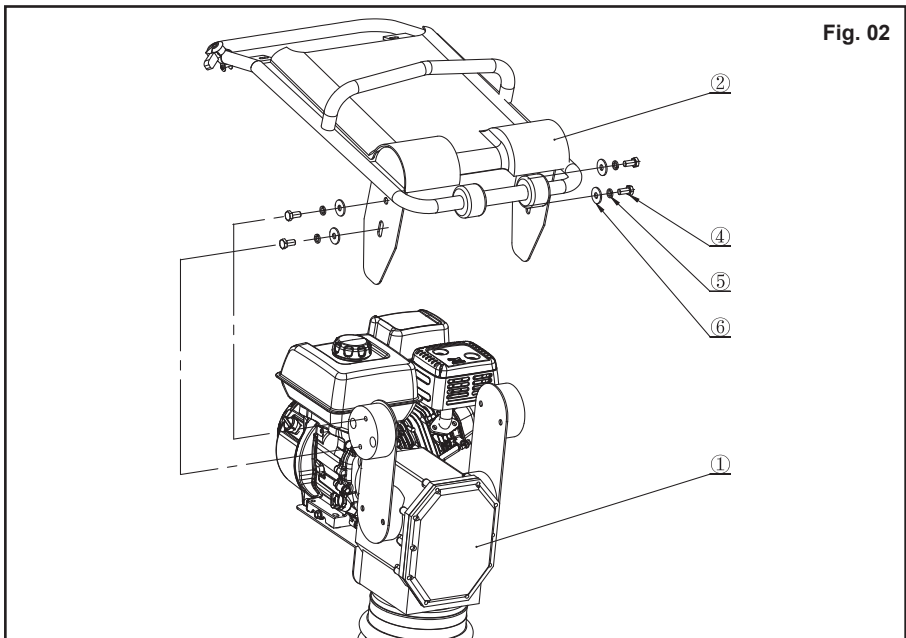
## 1. Out of Package

The tamping rammer comes partially assembled and is shipped in carefully packed carton. After all the parts have been taken out of the carton, you should have below components (Fig.01).



## 2. Assemble Handle-bar Kit

Assemble the handle-bar kit (2) to the machine assembly kit (1), which fixed by 4pcs M10x20 bolts (4), 4pcs Ø10 Spring washer (5) and 4pcs Ø10 Flat washer (6), as shown (Fig.02).

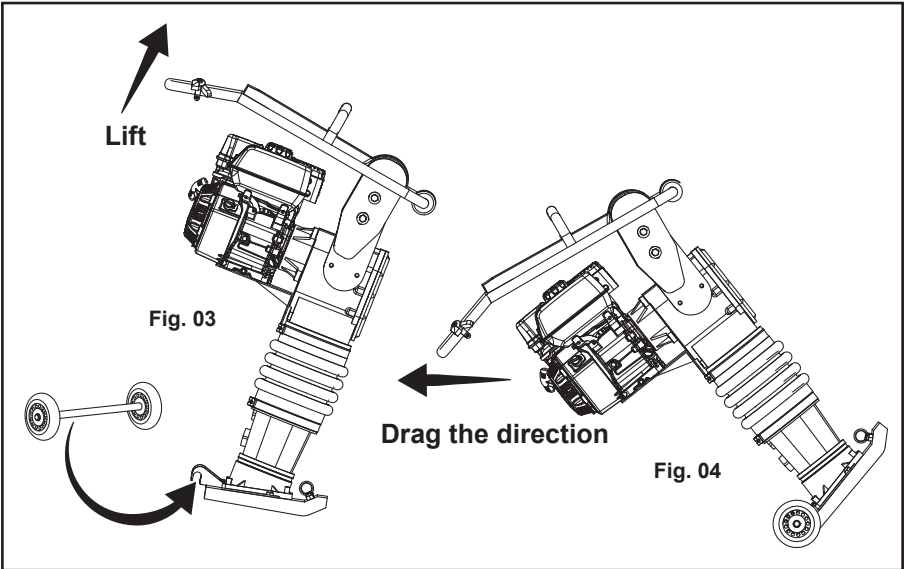


### 3. Assemble Wheel Kit

- 1) Tamper rammer can be towed for a short distance by the wheels.
- 2) Raise up the rammer by raising the operation handle, and put the wheel kit (2) into the hook on the base plate. Put down the rammer (Fig.03).
- 3) Tilt the rammer to make the wheel supporting on the ground. Hold the operation handle by both hands and move rammer for a short distance (Fig.04).

#### **WARNING**

MUST remove the wheels before starting to use the rammer.



## **OPERATION**

### **1. Application Scenarios**

Rammers are designed to compact loose soils and gravel to prevent settling and to provide a firm, solid base for the placement of footings, concrete slabs, foundations, gas piping works, water pipe works, and cable backfill works, etc.

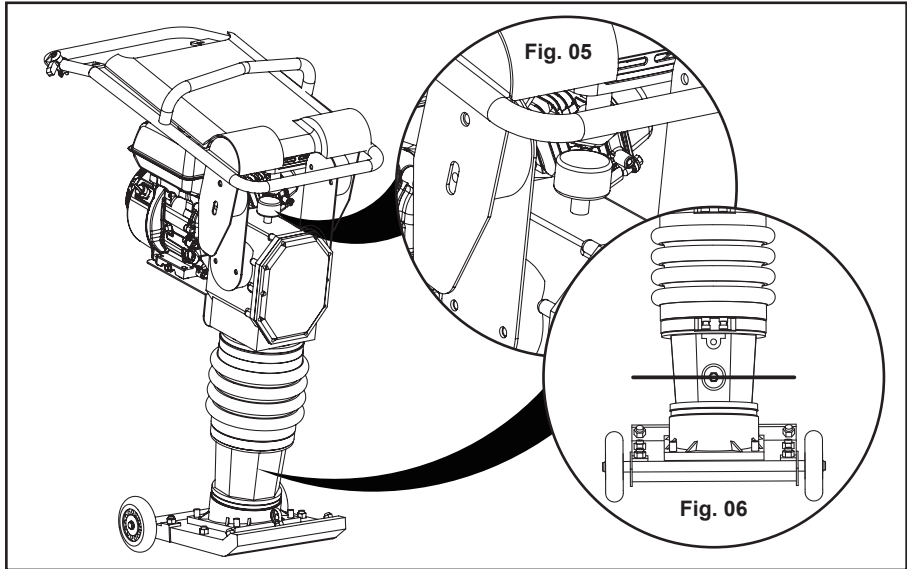
DO NOT use in the following cases as it may cause damage because machine being unbalanced.

- Pile foundation
- Hard soil excessively compacted over normal condition
- Steep bank slope

The Tamping Rammer is to be used for compacting cohesive clay, gravels, and patching work on asphalt, etc.

## 2. Before Starting

- This machine is oil bath lubrication system. MUST fill the oil in the gear system before first starting.
- For lubrication, use automobile engine oil of SJ or SAE 10W-30, or better grade.
- Open the plug at top of gear box. Fill the oil from it (Fig.05).
- Check the oil level through a window at rear end of the foot. Once the oil level reaches the middle of window, and then stop filling (Fig.06).



- Replenish oil if oil is not visible at the window.
- Fill the fuel tank with regular gasoline (unleaded). Simultaneously, check engine oil and make it a habit to replenish on the earlier side. Low lubrication oil level may result in engine seizure due to consumption during operation. Nevertheless, oil level should be checked prior to start up without fail. For lubrication, use automobile engine oil of SAE 10W-30, or better grade. See Engine Operating Manual for further detail.
- Check every bolt, nut or screwed area for tightness. These may have become loosened due to vibrations from previous use.
- Remove dirt and dust. Particularly clean the vicinity of recoil starter and foot.

## 3. Start Rammer

- Open the fuel shut-off valve by moving the fuel cock level to the open position.
- Set the engine ON/OFF switch to the "ON" position.
- Grip the recoil starter handle and pull it until you feel slight resistance. Then pull sharply and quickly. Return the recoil starter handle to the starter case before releasing.
- Grip the recoil starter handle and pull it a little to feel slight resistance. Then pull powerfully. To release the handle, do not release at the position where it has been pulled to, but release after returning closely to the starter case.
- If the engine has started, return the choke lever slowly to the full-open position. Be sure to perform a warm-up run for a period 3 to 5 minutes at low speed, while paying careful attention to gas leakage or abnormal sound.

- If it is difficult to start the engine by repeatedly pulling the starter rope, remove ignition plug and check the sparking performance. If the plug is wet due to excessive fuel intake or soiled, replace the coil or clean sufficiently. With the ignition plug removed, pull the recoil starter handle 2-3 times to discharge excessive gas.

#### 4. Operate Rammer

- Turn the choke lever to open the choke. Run the engine for 5 minutes at low speed to warm the engine.
- Move the throttle lever quickly to the "FULL OPEN" position. DO NOT move the throttle lever slowly as this may cause damage to the clutch or spring.

**CAUTION:**

**Make sure that the throttle lever is moved to the FULL OPEN position. Operating the rammer at less than full speeds can result in damage to the clutch springs or foot.**

- After starting the tamping action, adjust the jumping motion to suit the particular soil condition by lightly controlling the throttle lever. When the engine speed falls between the set values shown on the engine, your work can be carried out at the best efficiency. Increasing the engine speed does not cause the compaction force to increase. On the contrary, a resultant resonance causes the compaction force to decrease, damaging the machine.
- Under cold weather, the oil in the machine may become viscous, causing the tamping rammer to perform somewhat irregular movement. It is recommended to perform a warm-up run while moving the throttle lever repeatedly between ON and OFF positions, before beginning to work.
- Soil contacting surface of the foot is lined with heat-treated metal sheet for extra strength. However, for compacting cobblestone, use the filling-up soil for example so that the foot hits the soil uniformly.
- The tamping rammer has been designed to advance while jumping. For quicker advance, erect the machine by pushing its handle down slightly so that flat surface of the foot at its rear-end contacts the ground.
- To stop the tamping action, move throttle lever quickly from the FULL OPEN to IDLE position.

#### 5. Stop Rammer

##### 1) Normal Shutdown

- With the throttle lever closed from ON to OFF, run the engine for 3-5 minutes at low speed, and after the temperature is lowered, turn the switch to the "OFF" position.
- Close the fuel shut-off valve by moving the fuel cock lever to the CLOSED position.

##### 2) Emergency Shutdown

- Move the throttle lever quickly to the IDLE position, and turn the engine's ON/OFF switch to the OFF position.



# MAINTENANCE AND STORAGE

## 1. Maintenance

	Daily before starting	After first 5 hours	Every week or 25 hours	Every month or 100 hour
Check fuel level	√			
Check oil level of machine	√			
Check fuel line and fittings for cracks or leaks	√			
Tighten ramming shoe hardware	√	√	√	
Check and tighten engine cylinder screws		√	√	
Check and tighten external hardware		√	√	
Clean engine cooling fins			√	
Clean and check spark plug gap			√	
Replace spark plug				√
Clean recoil starter				√
Change ramming system oil				√
Clean engine muffler and exhaust port				√

\* It's better that changing ramming system oil after first 3 days of use.

Note: If engine performance is poor, check, clean, and replace air filter elements as needed.

## 2. Transportation

- Shut down engine for transportation.
- For transportation, tighten fuel tank cap securely and close fuel cock to prevent fuel from spilling.
- Drain fuel for transportation over long distances or poor roads.
- Secure machine firmly to prevent it from moving or tipping.
- When lifting rammer, make sure lifting device has enough capacity to hold machine (see identification plate on machine for weight). Use central lifting bar (A) when lifting machine (Fig.07).
- The rammer should be transported in the same position as if it is placed on level ground. In case the rammer must be laid down for transportation, drain the fuel tank as well as the carburetor and make sure that the oil plug is tightened securely, then tie the rammer to the vehicle at roller (B). It will help to move the rammer easily when lay down.

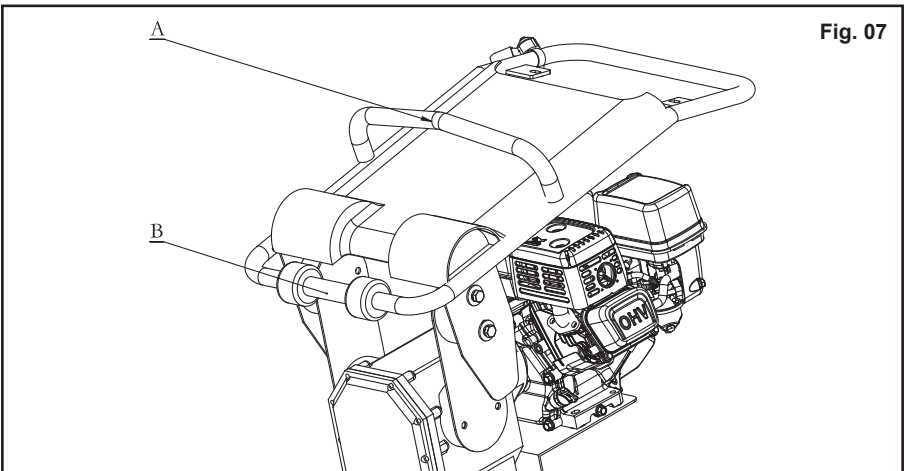


Fig. 07

### 3. Storage

The rammer should be stored on level ground, after the engine and machine have cooled down. Be sure to secure the rammer as necessary to avoid it from falling. If the rammer has to be laid down, tighten fuel tank cap and engine oil plug securely and wait until the engine and machine are cooled down. After laying it down, make sure that there is no fuel or oil leak (if fuel leaks, drain the tank).

#### 3.1 Long-Term Storage

- Drain fuel from fuel tank, fuel line and carburetor.
- Remove spark plug and pour a few drops of motor oil into cylinder. Crank engine 3 to 4 times so that oil reaches all internal parts.
- Clean exterior with a cloth soaked in clean oil.
- Store unit covered with plastic sheet in moisture free and dust free location out of direct sunlight.

## TROUBLE SHOOTING

Issues	Possible root cause	Solution
Engine rotates but amplitude not uniform or does not strike.	Operating speed of throttle lever is incorrectly set?	Set throttle lever to correct position.
	Oil in excess?	Drain excess oil. Bring to correct level.
	Clutch slips?	Replace or adjust clutch.
	Improper engine speed?	Adjust engine speed to correct operating RPM setting.
Difficult to start, fuel is available, but spark plug will not ignite.	Ignition plug not properly connected?	Check ignition system.
	Carbon deposit at ignition?	Clean or replace ignition.
	Short circuit due to deficient insulator?	Replace insulators.
	Improper spark plug gap?	Set spark plug gap to the correct gap.
	Short circuit at stop switch?	Check stop switch circuit.
	Ignition coil defective.	Replace stop switch if defective.
Engine overheats.	Mixed fuel quality is inadequate?	Replace ignition coil.
	Excessive carbon deposition in combustion chamber?	Check fuel to oil mixture.
	Exhaust or muffler clogged with carbon?	Clean or replace crankcase.
	Spark plug heat value incorrect?	Clean or replace muffler.
Rotational speed fluctuates.	Governor adjustment improper?	Replace spark plug with correct type spark plug.
	Governor spring defective?	Adjust governor to correct lever. Clean or replace ignition.
	Fuel flow restricted?	Check entire fuel system for leaks or clogs.
	Air taken in through suction line?	Check suction line.
Recoil starter malfunction.	Debris in recoil starter track?	Clean recoil starter assembly.
	Spiral spring loose?	Replace spiral spring.

## WARRANTY

Twelve (12) months for workmanship of the product, except for wearing parts. Warranty period starts from the product purchase date.

Warranty covers material quality and workmanship only. Warranty does not cover product for issues caused by improper usage or any operation not in accordance with the specifications of this manual.

Any modification or tampering with the product in any way voids the warranty.



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