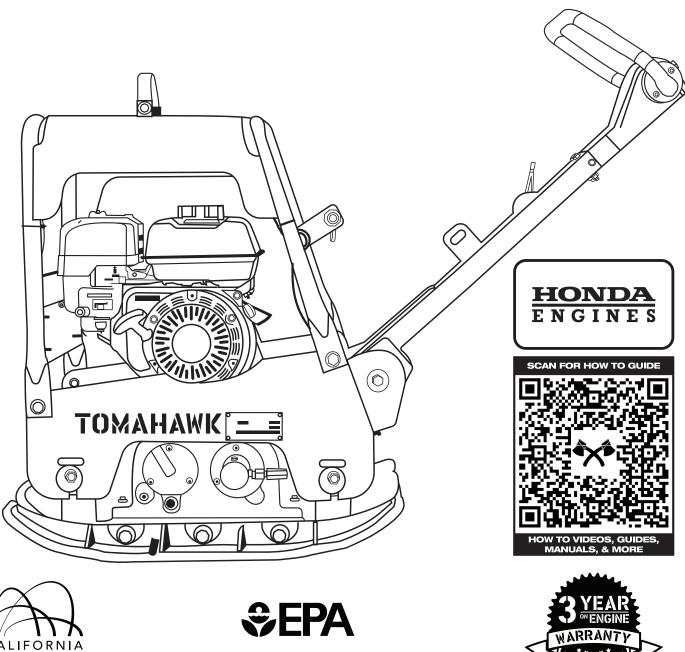
# TOMAHAWK

**TPC170H REVERSE HYDRAULIC PLATE COMPACTOR** 

**Operation Manual** 







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# Register Your Equipment

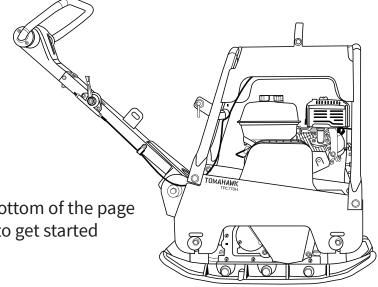
Thank you for purchasing TOMAHAWK equipment! Your product is covered by the TOMAHAWK Warranty policy, but in order to activate your warranty, we need you to register your product. In addition to activating your equipment warranty, product registration will grant you access to important product updates, streamlined customer service and more.

#### **INCLUDED WITH YOUR REGISTRATION**

- ☑ Equipment Warranty Activation
- ✓ Product Updates
- ☑ Streamlined Customer Service
- ☑ Excusive Discounts and Sales

#### STEPS TO REGISTER YOUR EQUIPMENT

- 1. Visit www.tomahawk-power.com
- 2. Choose "Product Registration" at the bottom of the page
- 3. Enter your equipment's serial number to get started
- 4. Provide all required information
- 5. Submit Registration



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Tomahawk Customer Service doesn't stop at checkout. We understand to keep a job-site running smoothly - the proper equipment, spare parts, instruction manuals, and more are needed at the drop of a hat. Visit www.tomahawk-power.com to gain access to the incredible resources below.

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This manual provides information and procedures to safely operate and maintain this equipment. For your own safety and protection from injury, carefully read, understand and observe the safety instructions described in this manual.

Keep this manual or a copy of it with the equipment. If you lose this manual or need an additional copy, please contact Tomahawk Power LLC or visit <a href="www.tomahawk-power.com">www.tomahawk-power.com</a>
This equipment is built with user safety in mind; however, it can present hazards if improperly operated and serviced. Follow operating instructions carefully. If you have questions about operating or servicing this equipment, contact Tomahawk Power.

The information contained in this manual is based on equipment's production at the time of publication. Tomahawk Power reserves the right to change any portion of this information without notice.

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#### 1. SAFETY INFORMATION

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.



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** indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



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



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

**CAUTION**: Used without the safety alert symbol, **CAUTION** indicates a potentially hazardous situation which, if not avoided, may result in property damage.

#### 1.1 Laws Pertaining to Spark Arresters

Notice: State Health Safety Codes and Public Resources Codes specify that in certain locations spark arresters be used on internal combustion engines that use hydrocarbon fuels. A spark arrester is a device designed to prevent accidental discharge of sparks or flames from the engine exhaust. Spark arresters are qualified and rated by the United States Forest Service for this purpose.

In order to comply with local laws regarding spark arresters, consult the engine distributor or the local Health and Safety Administrator.

## 1.2 Operating Safety

Familiarity and proper training are required for the safe operation of equipment! Equipment operated improperly or by untrained personnel can be dangerous! Read the operating instructions contained in both this manual and the engine manual and familiarize yourself with the location and proper use of all controls. Inexperienced operators should receive instruction from someone familiar with the equipment before being allowed to operate the machine.

- **1.2.1 NEVER** allow anyone to operate this equipment without proper training. People operating this equipment must be familiar with the risks and hazards associated with it.
- **1.2.2 NEVER** touch the engine or muffler while the engine is on or immediately after it has been turned off. These areas get hot and may cause burns.
- **1.2.3 NEVER** use accessories or attachments that are not recommended by Tomahawk Power. Damage to equipment and injury to the user may result.
- **1.2.4 NEVER** leave machine running unattended.
- **1.2.5 ALWAYS** be sure operator is familiar with proper safety precautions and operation techniques before using machine.
- **1.2.6 ALWAYS** wear approved safety goggles or safety glasses with side shields, or when needed, a face shield. Use a dust mask in dusty work conditions. Also use non-skid safety shoes, hardhat, gloves, dust collection systems, and hearing protection when appropriate. This applies to all persons in the work area.
- **1.2.7 ALWAYS** close fuel valve on engines equipped with one when machine is not being operated.
- **1.2.8 ALWAYS** store equipment properly when it is not being used. Equipment should be stored in a clean, dry location out of the reach of children.

- **1.2.9 ALWAYS** operate machine with all safety devices and guards in place and in working order. DO NOT modify or remove safety devices. DO NOT operate machine if any safety devices or guards are missing or inoperative.
- **1.2.10 ALWAYS** read, understand, and follow procedures in Operator's Manual before attempting to operate equipment.

## 1.3 Safety While Using Combustion Engines

Internal combustion engines present special hazards during operation and fueling!

DANGER Read and follow warning instructions in engine owner's manual and safety guidelines below. Failure to follow warnings and DANGER safety guidelines could result in severe injury or death.

- **1.3.1 DO NOT** run machine indoors or in an enclosed area such as a deep trenches unless there is adequate ventilation, through such items as exhaust fans or hoses are provided. Gasoline exhaust from the engine contains poisonous carbon monoxide gas; exposure to carbon monoxide can cause loss of consciousness and may lead to death.
- **1.3.2 DO NOT** smoke while operating machine.
- **1.3.3 DO NOT** smoke when refueling engine.
- 1.3.4 DO NOT refuel hot or running engine.
- **1.3.5 DO NOT** refuel engine near open flame.
- **1.3.6 DO NOT** spill fuel when refueling engine.
- **1.3.7 DO NOT** run engine near open flames.
- 1.3.8 ALWAYS refill fuel tank in well-ventilated area.
- **1.3.9 ALWAYS** replace fuel tank cap after refueling.
- **1.3.10 ALWAYS** check fuel lines and fuel tank for leaks and cracks before starting engine.
- **1.3.11 DO NOT** run machine if fuel leaks are present or fuel lines are loose.

#### 1.4 Service Safety

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

- **1.4.1 DO NOT** attempt to clean or service machine while it is running. Rotating parts can cause severe injury.
- **1.4.2 DO NOT** crank a flooded engine with the spark plug removed on gasoline-powered engines. Fuel trapped in the cylinder will squirt out the spark plug opening.

- **1.4.3 DO NOT** test for spark on gasoline-powered engines, if engine is flooded or the smell of gasoline is present. A stray spark could ignite fumes.
- **1.4.4 DO NOT** use gasoline or other types of fuels or flammable solvents to clean parts, especially in enclosed areas. Fumes from fuels and solvents can become explosive.
- **1.4.5 ALWAYS** keep area around muffler free of debris such as leaves, paper, cartons, etc. A hot muffler could ignite them, starting a fire.
- **1.4.6 ALWAYS** replace worn or damaged components with spare parts designed and recommended by Tomahawk Power.
- **1.4.7 ALWAYS** disconnect spark plug on machines equipped with gasoline engines, before servicing, to avoid accidental start-up.
- **1.4.8 ALWAYS** keep machine clean and labels legible. Replace all missing and hard-to-read labels. Labels provide important operating instructions and warn of dangers and hazards.
- **1.4.9 ALWAYS** check for damaged parts before each use. Carefully check that the equipment will operate properly and perform its intended function. Replace damaged or worn parts immediately. Never operate the screed with a damaged part.
- **1.4.10 ALWAYS** inspect the machine prior to placing in storage and before re-use. Store the machine in a dry, secure place out of the reach of children when not in use.
- **1.4.11 ALWAYS** use only accessories that are recommended by the manufacturer for use with the machine. Accessories that may be suitable for one machine may create a risk of injury when used with the machine.

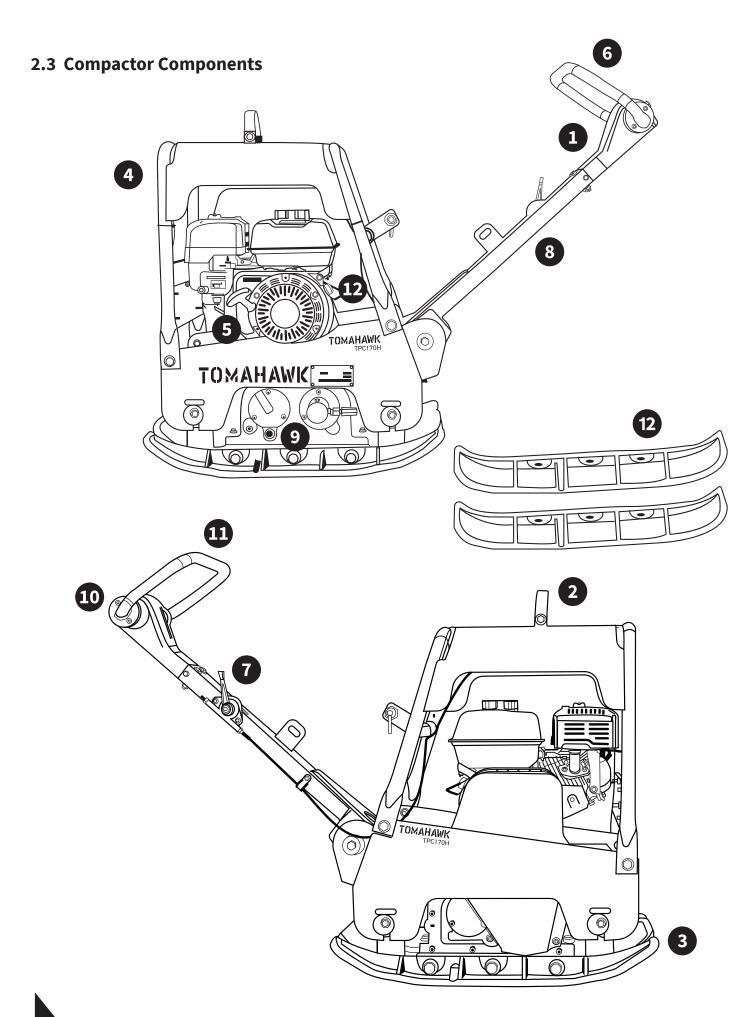
#### 2. PRODUCT DETAILS

#### 2.1 Compactor Description

Powered by a 6.5HP Honda Engine, the TPC170H reverse plate compactor is perfect for retaining walls, trenchwork, and more. Designed with a 28 in. x 24 in. plate. Operating at 7000 lbs/ft, the TPC170H compacts cohesive and granular soils up to 20 inches!

## 2.2 Specifications

MODEL	TPC170H		
Engine	Honda GX200		
Power	6.5 HP		
Plate Size	28" × 20"		
Plate Size with Extension	28" × 24"		
Compaction Force	7,000 lbs/ft		
Centrifugal Force	30 kn		
Vibration Frequency	90 hz		
Travel Speed	66 ft/min		
Drive	Hydraulic		
Fuel Tank Capacity	3.1 Liter		
Oil Capacity	0.6 Liter		
Oil Type	SAE10W-30		
Hydraulic Oil Type	Shell Tellus Oil #32 or Equivalent		
Packaged Dimensions	32" x 20" x 50"		
Packaged Weight	385 lbs		



- **1. Hydraulic Pump (Oil Reservoir):** Regulates hydraulic oil flow produced by the direction of the control lever.
- **2. Lifting Hook:** When lifting of the compactor is required either by forklift, crane, etc., tie rope or chain around this lifting spot.
- **3. Vibrating Plate:** A flat, open plate made of durable cast iron construction used in the compacting of soil.
- **4. Front Cover:** Open to access engine and other components.
- **5. Engine:** This plate compactor uses a 4-sroke series gasoline engine. Refer to the owner's manual for engine information.
- **6. Direction Control Lever:** Push the lever forward to move compactor in a forward direction.

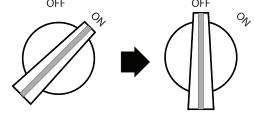
Pull the lever backwards to move compactor in backwards direction. Placing the lever in the middle (midway) will cause the compactor not to move (neutral).

- **7. Throttle Lever:** Controls speed of the plate compactor. Place straight vertically to start, push fully counterclockwise for full throttle and fully clockwise to stop plate compactor.
- **8. Handle Bar:** When operating the compactor, this handle is to be in the downward position.

When the compactor is to be stored, move the handle bar to the upright position.

- 9. Vibration Case Oil Filter: Used to add oil to the vibration case.
- 10. Breather Plug: Allow pressure to escape to the air in the form of a gas from heat.
- **11. Hand Grip:** When operating the compactor use this hand grip to maneuver the compactor.

  OFF
  OFF
- **12. Engine ON-OFF Switch:** Used to turn the engine on or off.
- **13. Extension Plates:** The extension plates add an additional 2" on either side of the plate
- **14. Tachometer (Optional):** Enhance your plate compactor experience with the optional tachometer, providing real-time RPM readings for precise control and performance monitoring. Call the Tomahawk Support Team at (866) 577-4476 for more information.





#### 2.4 Understanding The Control Lever

The direction control handles allows the machine to be moved either backward or forward. When the direction control lever is pushed forward, the machine moves forward. When pulled backward,

the machine moves backward.

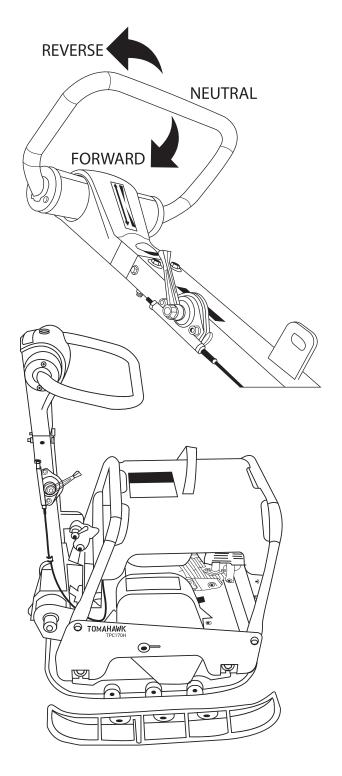
## 2.5 Connecting the Extension Plates

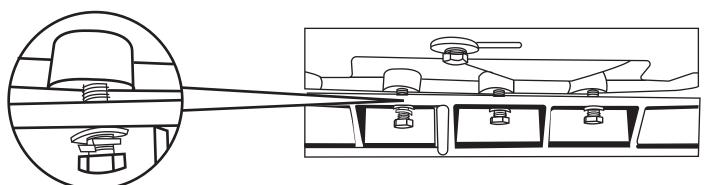
The extension plates add an additional 2" on either side of the plate, extending the working width of the compactor.

#### **Installing the Extension Plates**

A)Start by aligning the extension plates next to the compactor.

- B) Place the split lock washer and washer around the bolt.
- C) To fasten the bolts, use a 22mm torque wrench and set to 136ft/lbs. (185Nm).
- D) We recommend using Loctite if you intend to leave the extension plates on the reverse plate compactor.





#### 3. OPERATION

#### 3.1 Recommended Fuel

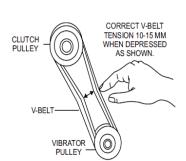
The engine requires regular grade unleaded gasoline, 87 octane or higher. Use only fresh, clean gasoline. Gasoline containing water or dirt will damage fuel system. Consult engine owner's manual for complete fuel specifications.

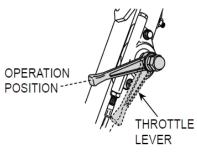
#### 3.2 Before Starting

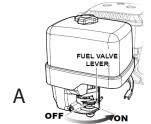
Read and understand safety and operating instructions at beginning of this manual.

#### 3.2.2 Check:

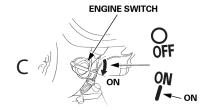
- Oil level and fuel levels
- V-Belt tension
- Handles / Control Lever
- Tightness of external fasteners
- Condition of fuel lines
- Condition of air filter

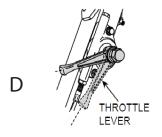














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#### 3.3 Starting the Engine

**3.3.1** Open fuel valve by moving lever to the "ON" position (A).

**NOTE:** If engine is cold, move choke lever to close position. If engine is hot, set choke to open position (B).

- **3.3.2** Move the engine switch to the "ON" position (C).
- **3.3.3** Move the throttle lever to the run position (D).
- **3.3.4** Pull starter rope (E).

**NOTE:** If the oil level in the engine is low, the engine will not start. If this happens, add oil to engine. Some engines are equipped with an oil alert light that will come on while pulling the starter rope.

**3.3.5** Open throttle fully to operate.

## 3.4 Stopping the Engine

- **3.4.1** Move the throttle lever to the MIN. position (D).
- **3.4.2** Turn the engine switch to the OFF position (C).
- **3.4.3** Turn the fuel valve lever to the OFF position (A).

#### 3.5 Application

This plate is designed for compacting patchwork on asphalt, cohesive soils, granular soils, sticky soils (clay or slit), gravel, sand, or mixed soils. It is designed to specifically maeuver narrow, cramped spaces, the TPC100H compacts cohesive and granual soils up to 15 inches, while its self-cleaning, open base plate minimizes rock and dirt build up.

#### 3.6 Operation

**3.6.1** Run engine at full throttle and allow plate to pull itself along at its normal speed. When operating on an incline it may be necessary to assist plate by pushing it forward slightly. Depending on the material being compacted, three or four passes are recommended to achieve the best compaction.

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.

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

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



**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.

#### 4. MAINTENANCE

#### 4.1 Cleaning the Plate

Clean the plate after use to remove dirt, stones, and mud caught under the engine console. If plate is being used in a dusty area, check engine cylinder cooling fins for heavy dirt accumulation. Keep engine cylinder fins clean to prevent engine from overheating.

#### **4.2 Periodic Maintenance**

The chart below lists basic engine maintenance. Refer to engine manufacturer's Operation Manual for additional information on engine maintenance.

	Daily before starting	After first 20 hours	Every 2 weeks or 50 hours	Every month or 100 hours	Every year or 300 hours
Check fuel level.	•				
Check engine oil level.					
Inspect fuel lines.					
Inspect air filter. Replace as needed.	•				
Check and tighten external hardware.	•				
Check and adjust drive belt.			•		
Clean air cleaner elements.			•		
Inspect shockmounts for damage.			•		
Change engine oil.		•		•	
Clean engine cooling fins.					
Clean sediment cup / fuel filter.				•	
Check and clean spark plug.				•	
Check and adjust valve clearance.					•
Change exciter oil.					•

## 4.3 Adding Exciter Box Oil

Vibrator oil should be inspected after every 100 hours of operation and should be replaced either every 300 hours or at least once annually. To check and/or replace oil, follow these steps.

- **4.3.1** Remove the plug on the exciter box.
- **4.3.2** Check that the oil level reaches the bottom thread on the oil plug hole.
- **4.3.3** Top off the oil as necessary. Tomahawk recommends Shell Tellus Oil #32 or equivalent oil.
- **4.3.4** Return the plug and fasten it tightly.

#### **4.4 Spark Plug** (Fig. 5)

Clean or replace the spark plug as needed to ensure proper operation. Refer to the engine owner's manual.

The muffler becomes very hot during operation and remains hot for a while after stopping the engine. Do not touch the muffler while it is hot.

**NOTE:** Refer to the Technical Data for the recommended spark plug type and the electrode gap setting (page 6).

- **4.4.1** Remove spark plug and inspect it.
- **4.4.2** Replace plug if the insulator is cracked or chipped.
- **4.4.3** Clean spark plug electrodes with a wire brush.
- **4.4.4** Set the electrode gap (a).
- **4.4.5** Tighten spark plug securely.

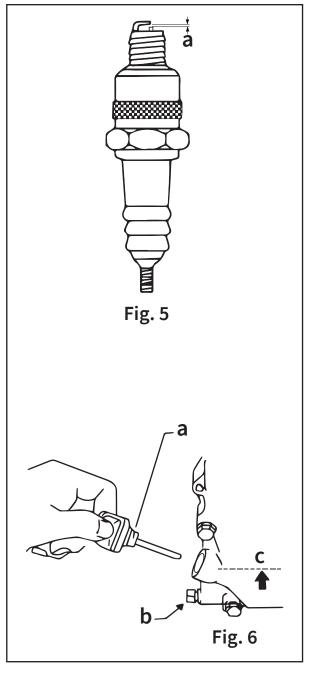


A loose spark plug can become very hot and may cause engine damage.

## **4.5 Engine Oil** (Fig. 6)

- **4.5.1** Drain oil while the engine is still warm.
- **4.5.2** Remove the oil fill plug (a) and drain plug (b) to drain oil.
- **4.5.3** Install drain plug.
- **4.5.3** Fill the engine crankcase through the oil opening (b), to the upper mark on the dipstick (c). Do not thread in the dipstick to check the level. See Technical Data for oil quantity and type (page 6).
- **4.5.4** When the crankcase is full, reinstall the dipstick.

**NOTE:** In the interests of environmental protection, place a plastic sheet and a container under the machine to collect any liquid which drains off. Dispose of this liquid in accordance with environmental protection legislation.



## **4.6 Air Filter** (Fig. 7)



**NEVER** use gasoline or other types of low flash point solvents for cleaning the air filter. A fire or explosion could result.



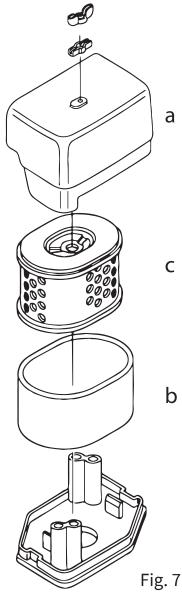
**NEVER** run engine without air filter: Severe engine damage will occur and a fire or explosion could result.

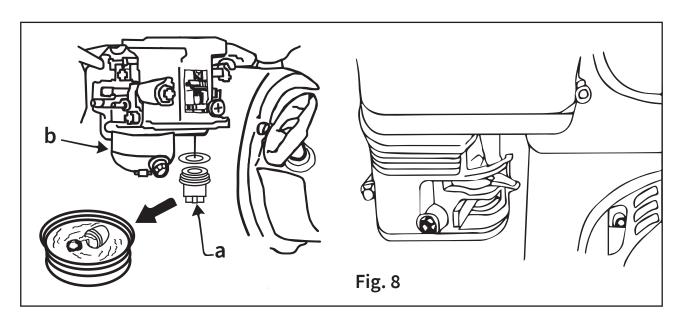
The engine is equipped with a dual element air cleaner. Under normal operating conditions, elements should be cleaned once every week. Under severe, dry and dusty conditions, the elements should be maintained daily. Replace an element when saturated with dirt that cannot be removed.

- **4.6.1** Remove the air cleaner cover (a). Remove both elements and inspect them for holes or tears. Replace damaged elements.
- **4.6.2** Wash the foam element (b) in a solution of mild detergent and warm water. Rinse it thoroughly in clean water. Allow the element to dry thoroughly.
- **4.6.3** Tap the paper element (c) lightly to remove excess dirt or blow compressed air through the filter from the inside out. Replace the paper element if it appears heavily soiled.

## **4.7 Cleaning Ait Filter Cup (**Fig. 8)

- **4.7.1** Turn fuel valve off.
- **4.7.2** Remove sediment cup (a) and O-ring (b).
- **4.7.3** Wash both thoroughly in a nonflammable solvent. Dry and reinstall them.
- **4.7.4** Turn fuel valve on and check for leaks.

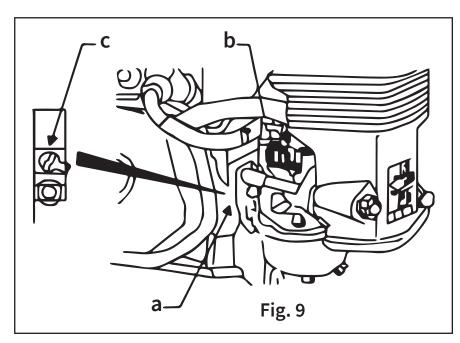




#### **4.8 Carburetor Adjustment** (Fig. 9)

- **4.8.1** Start the engine and allow it to warm up to operating temperature.
- **4.8.2** Set the pilot screw (a) 2 turns out. See Note.
- **4.8.3** With the engine idling, turn the pilot screw (a) in or out to the setting that produces the highest rpm.
- **4.8.4** After the pilot screw is adjusted, turn the throttle stop screw (b) to obtain the standard idle speed. See Technical Data.

**NOTE:** On some engines the pilot screw is fitted with a limiter cap (c) to prevent excessive enrichment of the air-fuel mixture in order to comply with emission regulations. The mixture is set at the factory and no adjustment should be necessary. Do not attempt to remove the limiter cap. The limiter cap cannot be removed without breaking the pilot screw.



#### 4.9 Hydraulic Oil

- **4.9.1** To refill or replace the hydraulic oil, start with the handle in vertical position, remove the plug cap with a 17mm wrench at the top.
- **4.9.2** Drain the hydraulic oil.
- **4.9.3** Once the oil has been drained, add 300cc of hydraulic oil.
- **4.9.4** Remove the air releasing plug from the vibrator cylinder. As you do so, oil will start coming out of the air releasing plug. Wait until the air bubbles cease, then reattach and tighten the plug securely.

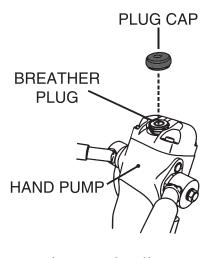
**4.9.5** Before attaching the breather plug, ensure that the hydraulic oil in the pump is at the appropriate oil level.

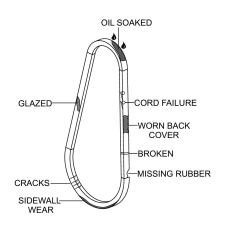


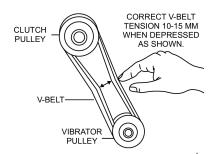
**DO NOT** exceed OIL LEVEL of hydraulic oil. If the level is higher, oil will burst out from the breather plug.

## 4.10 Tightening the V-Belt

- **4.10.1** To examine the V-Belt, detach the bolts that fasten the belt cover to the frame.
- **4.10.2** Visually inspect the V-Belt for signs of cracks, fraying, missing rubber, peeling, or any other damage. Check if the belt appears oil soaked or has a glazed appearance (hard and shiny on the sides). These conditions can cause the belt to overheat, weaken, and increase the risk of breakage. If any of these wear conditions are present, promptly replace the V-Belt.
- **4.10.3** The V-belt tension is correct if, when pressed with a finger at the midpoint between the clutch and vibrator pulleys, it bends approximately 10 to 15 mm.









#### 5. TROUBLESHOOTING

Problem / Symptom	Reason / Remedy
Plate does not develop full speed, not moving  Poor compaction	<ul> <li>A) Engine throttle control is not completely open.</li> <li>B) Throttle control is not adjusted correctly.</li> <li>C) Ground is too wet, plate sticking. Allow soil to dry before compacting.</li> <li>D) Drive belt is loose or worn, slipping on pulleys. Adjust or replace belt. Check that the engine mounting bolts are tight.</li> <li>E) Exciter bearings binding. Check condition and level of oil in exciter. Add or change oil.</li> <li>F) Air filter is clogged with dust, reducing engine performance. Clean or replace air filter.</li> <li>G) Engine speed is too low. Check the engine speed with tachometer. Adjust or repair engine to run at correct the speed. Refer to engine manual.</li> <li>H) Check hydraulic lines. Clear lines or air.</li> </ul>
Engine running, no vibration	Engine throttle is not open. Drive belt is loose or broken. Adjust or replace. Clutch is damaged. Inspect and replace clutch. Engine speed is low. Check engine speed. Too much oil in exciter. Adjust oil to the correct level.
Plate jumps or compacts unevenly	Ground surface is too hard. Shockmounts loose or damaged.

#### 6. STORAGE

If the plate compactor is being stored for more than 30 days:

## **6.1 Storage Tips**

- **6.1.1** Remove loose stones and dirt from plate.
- **6.1.2** Clean engine cylinder cooling fins.
- **6.1.3** Clean or replace air filter.
- **6.1.4** Change exciter oil.
- **6.1.5** Change engine oil and follow stroage procedures described in the engine manual.
- **6.1.6** Cover plate and engine and store in a clean, dry area.

#### 7. COMPACTION TIPS

- **7.1 Soil Drop Test:** Soil preparedness refers to the "wetness" of the dirt or soil. Soil needs to be 50% dry and 50% wet, before starting compaction. A simple "hand test" can determine this. Pick up a handful of soil with your hand and squeeze the dirt. Observe whether the soil is powdery or if it breaks apart when dropped. If the soil does break apart, it means that it is too dry. If the soil keeps together in one piece when dropped, it is ready for compaction.
- **7.2 Soil Testing**: The function of this step is to measure the density of an aggregate material to ensure the increase of density when driving out air. At a low moisture content level, there are more soil particles assembling together. In order to determine if the soil is compacted properly, there are several methods.
- **7.3 Test Strips:** Test strips are useful to determine the method of compaction and understand how many passes of your plate compactor are needed to achieve the optimum compaction. Every layer of compacted soil meets a specific percentage on the proctor curve. Through soil testing, it is possible to identify optimum moisture. Soil testing measures the soil density compared to the degree of compaction specifications, as well as the effect of the moisture.

A common laboratory method called the Proctor Compaction Test can be used to determine the optimal moisture content for a given soil type. The goal of this method is to understand the soil's maximum dry density. A second method of soil testing is known as the California Test 216 and is used to find the relative compaction of untreated and treated soils.

Four factors account for optimum compaction including lift thickness, pressure, and soil moisture content. During the compaction process, the soil's moisture adds density and lubricates soil particles, until there is a maximum dry unit weight without voids in the soil. The table below explains the different outcomes and properties of fill materials.

	Properties of Different Fill Materials			
	Foundation Support	Permeability	Compaction Difficulty	
Gravel	Excellent	Very High	Very Easy	
Sand	Good	Medium	Easy	
Silt	Poor	Medium Low	Somewhat Difficult	
Clay	Moderate	None	Very Difficult	

#### 7.4 Compaction Terms

**7.4.1 Cohesive Soils:** Clays and mixes have a particular particle size of less than .003" or .002" and are typically classified as cohesive soils. This type of soil is primarily used for retaining pond beds and mound fills. These soils are dense due to the strongly bound molecular attraction. Cohesive soils and water will not mix easily, but only once the soils are moist it will feel sticky.



**7.4.2 Granular Soils:** These soils have particle sizes of .003" or greater, like sand. Water drains easily through the soils particles of granular soils. The larger the particles, the larger the equipment needed to achieve lower frequencies and higher compaction force. Plate compactors are typically the best option for compacting granular soils - however, depending on the vibration frequency and particle size, reversible plate compactors and double drum rollers may be more appropriate for this type of work.



**7.4.3 Mixed Soils:** Sometimes soils can be a mixture of both types, cohesive and granular. Thus choosing the appropriate compaction equipment is more difficult. We recommend testing your equipment to match the best machine to the desired job.



- **7.4.4 Static Force:** Found in the deadweight of machines, static force applies pressure downward on soil surfaces. As a result, soil particles compress in the topsoil layer.
- **7.4.5 Vibratory Force:** This force is engine-driven, creating a downward force, in addition to the machine's static weight. Vibrations compress the soil material closer together to increase density.
- **7.4.6 Types of Compaction:** There are four types of compaction that can be applied to soils or asphalt. Each one takes place using one of the two types of the forces explained above (static or vibratory).
  - 1. Vibration: Periodic motion of particles with rotating weight in opposite directions from a position of equilibrium.
  - 2. Impact: An action of one object coming into contact with another.
  - 3. Kneading: Force is applied by alternating movement in adjacent positions.
  - 4. Pressure: The process of continuous physical force against solid materials.

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#### 3,550 lbs/ft Vibratory Rammer Part#: TR68H

3.6 HP Honda GXR120 Engine Easily achieve a 100% compaction rating 3-in-One Fuel System with carburetor protection 13" x 11" plate for narrow trenches and corners 3 Year Engine Warranty & 1 Year Product Warranty



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#### 3,000 lbs/ft Plate Compactor Part#: TPC80 & TPC80H

6 HP Kohler CH260 & 5.5 HP Honda GX160 Engines Easily achieve a 100% compaction rating 16.5" x 21.5" plate for narrow trenches and corners Optional Honda Engine model: TPC80H 3 Year Engine Warranty & 1 Year Product Warranty



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Maintain constant, adjustable pressure up to 450 PSI Achieve superior concrete finishes with even spraying Spray 15,000 sq ft in less than 10 minutes Compatible with major manufacturer wands 1 Year Product Warranty



#### 1.6 HP Vibratory Concrete Screed Part#: TVSA-H

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Aluminum Magnesium blades available from 8ft - 14ft Finish concrete 4X faster than other screed methods 360° adjustable handle placement 3 Year Engine Warranty & 1 Year Product Warranty



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5.5 HP Honda GX160 Engine Maximum cutting depth of 1 3/16 inches OSHA compliant vacuum port for dust collection Includes 6" early entry concrete blade 3 Year Engine Warranty & 1 Year Product Warranty



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1.6 HP Honda GX35 engine Consolidation with speeds of 10,000-12,000 VPM Quick Connect centrifugal clutch vibrator 1" and 2" Diameter Whips Available in 10ft Length 3 Year Engine Warranty & 1 Year Product Warranty



## 36" & 46" Concrete Power Trowel Part#: TPT36H/K & TPT46H/K

6 HP/14HP Kohler & 5.5HP/8.5HP Honda Engines Adjust trowel blade pitch from 0-28° 60-115 RPM rotor speed for superior concrete finishes Includes float pan and trowel blades 3 Year Engine Warranty & 1 Year Product Warranty



## Part#: TSCAR8H

5.5 HP Honda GX160 Engine Remove traffic lines at 800 - 1,000 linear ft/hr Tungsten Carbide Blade Kit Available OSHA approved dust port for silica vacuum removal 3 Year Engine Warranty & 1 Year Product Warranty

## HAVE QUESTIONS?





2000 Watt Inverter Generator Part#: TG2000i

2000 Max Watts, 1600 Rated Watts Run Time of 8 hours on 1 gallon of gas OSHA and GFCI Compliant Parallel technology capable for double the power 2 Year Product Warranty



## 210 Amp Portable Welder Generator Part#: TWG135Ai

Steady 50 - 135 Amp DC welding output 3300 Watt Inverter Generator 60% Duty Cycle for extended use Suitable for welding rods from 6010 to 7024 2 Year Product Warranty



## 210 Amp Portable Welder Generator Part#: TWG210A

Steady 50 - 210 Amp DC welding output 2000 Watt Inverter Generator 60% Duty Cycle for extended use Suitable for welding rods from 6010 to 7024 2 Year Product Warranty



## 3.7 Gallon 3HP Backpack Fogger Part#: TMD14

Turbo Boosted Pump with 40ft + Horizontal Reach Sprays 1 acre in 30 minutes 10X Faster than Manual Pump Sprayers Converts to Leaf Blower with 200 MPH Air Velocity 1 Year Product Warranty



## 4.75 Gallon Battery Power Sprayer Part#: eTPS18

Reach Up to 30ft Horizontal Reach Sprays 6000 sq ft in 10 minutes 10X Faster than Manual Pump Sprayers 70 PSI Commercial Grade Pump 1 Year Product Warranty



## 5 Gallon Backpack Power Sprayer Part#: TPS25

Reach Up to 30ft Horizontal Reach Sprays acres in 10 minutes 10X Faster than Manual Pump Sprayers 50-435 Adjustable PSI Commercial Grade Pump 1 Year Product Warranty



## 4 Gal. Motorized Fertilizer Spreader Part#: TGS30

Reach up to 30ft Horizontally
Sprays 1 acre in 30 minutes
20X Faster than push spreaders
Converts to Leaf Blower with 200 MPH Air Velocity
1 Year Product Warranty



#### 3" Full Trash Water Pump Part#: TW3H

Moves liquids at a rate up to 375 gal/min Handle solids up to 1.5" Silicone carbide seals and a chrome plated volute 8 HP engine protected by rugged all purpose frame 3 Year Engine Warranty & 1 Year Product Warranty



## Commercial 38" Push Sweeper Part#: TOS38

Collect up to 14.5 gallons of dust and debris
Can be used indoors & outdoors on wet or dry surfaces
Includes integrated airflow control and fine dust filter
Lightweight design, capable of fitting through doorways
1 Year Product Warranty



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