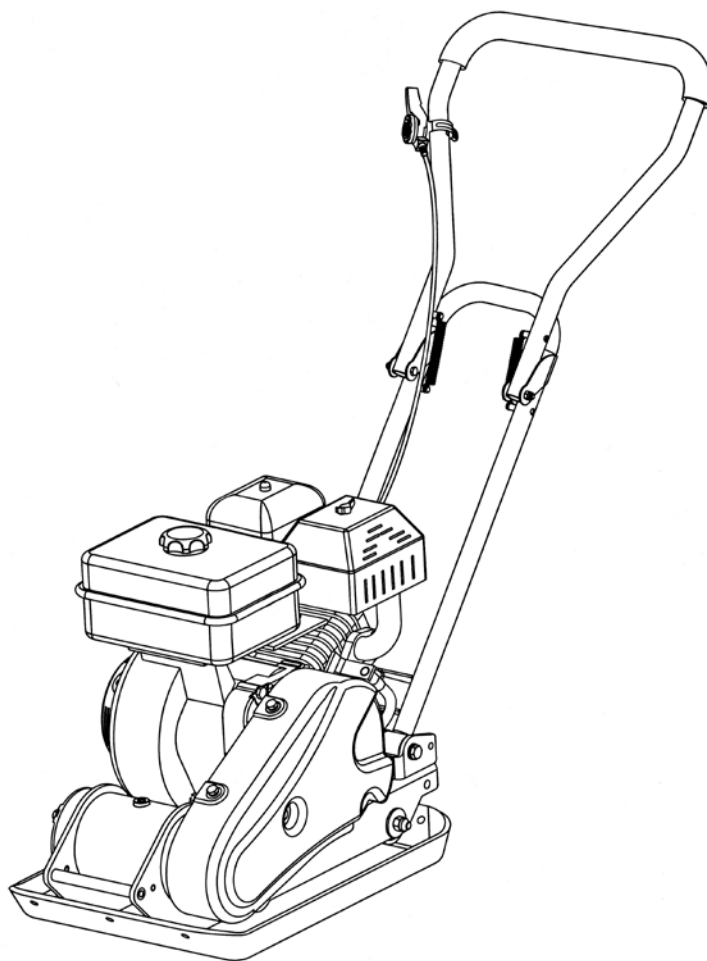




**DIRTY HAND  
TOOLS**

# Vibratory Plate Compactor



**MODELS # 104001 and #104950**

## Operation Manual



**This safety alert symbol identifies important safety messages in this manual. Failure to follow this important safety information may result in serious injury or death.**

Part # 104951 Rev. D



For Service or Questions

***Call 1-877-487-8275***

***720-287-5182***

***[www.dirtyhandtools.com](http://www.dirtyhandtools.com)***

Dirty Hand Tools® is a brand of



**FrictionlessWorld**

1100 W 120th Ave, Suite 600  
Westminster, CO 80234 • 720-287-5182

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## Important Safety Information



### WARNING

**WARNING:** Read and thoroughly understand all instructions and safety information before assembling or operating this equipment. Failure to do so may cause serious injury or death. Do not allow anyone to operate this equipment who has not read this manual. As with all power equipment, a vibratory plate compactor can be dangerous if assembled or used improperly. Do not operate this plate compactor if you have doubts or questions concerning safe operation.



Call our customer service department at **720-287-5182**, **1-877-487-8275**, or visit [www.dirtyhandtools.com](http://www.dirtyhandtools.com) if you have any questions or concerns about the safe operation of this equipment.

### Intended Use

Do Not Use the plate compactor for any purpose other than compacting soil, gravel, sand or other crushed aggregate for which it was specifically designed. Any other use is unauthorized and may result in serious injury or death.



### CAUTION

**This compactor is not intended for use on cohesive soils such as clay or hard surfaces such as concrete.**

### Personal Protective Equipment

When operating this plate compactor it is essential that you wear safety gear including goggles or safety glasses, steel toed shoes and tight fitting gloves (no loose cuffs or draw strings). Always wear ear plugs or sound deafening headphones to protect against hearing loss when operating this equipment. Always wear sturdy footwear. Never wear sandals, sneakers or open shoes, and never operate the plate compactor with bare feet. Do not wear loose clothing that might get caught in moving parts. Do not operate near bystanders.

### CALIFORNIA PROPOSITION 65 WARNING

Engine exhaust, some of its constituents and certain product components contain or emit chemicals known to the state of California to cause cancer and birth defects or other reproductive harm.



# Important Safety Information

## General Safety

Failure to follow warnings, cautions, assembly and operation instructions in the Operation Manual may result in serious injury or death.



DANGER

### READ THE OPERATION MANUAL BEFORE OPERATION.

- **Do not** permit children to operate this equipment at any time.
- **Do not** permit others that have not read and understood the complete Operation Manual to operate this equipment.
- Keep all people and pets a minimum of 10 feet away from the work area when operating this plate compactor.
- **Do not** operate the plate compactor when under the influence of alcohol, drugs or medication.
- **Do not** allow a person who is tired or otherwise impaired or not completely alert to operate the plate compactor.



DANGER

### CAREFULLY INSPECT THE AREA TO BE COMPACTED AND REMOVE ALL FOREIGN OBJECTS.

Do not use above underground water lines, gas lines, electric cables, or pipes. Do not operate the plate compactor in soil with large rocks and foreign objects which can damage the equipment.



- Handle fuel with care; it is highly flammable. Use an approved fuel container. **Never add fuel to a running engine or hot engine.**
- Fill fuel tank outdoors with extreme care. **Never fill fuel tank indoors.**
- Replace gasoline cap securely and clean up spilled fuel before restarting.
- Never attempt to make any adjustments while the engine is running.

# Important Safety Information

## Safety Decals

Safety labels on the plate compactor are to remind you of important information while you are operating the unit. Make sure all safety warning decals are attached and in readable condition. Replace missing or defaced decals. Contact Dirty Hand Tools at **1-877-487-8275** for replacement decals.

### VIBRATORY PLATE COMPACTOR

Model No. 104001  
Plate Size: 21.3" x 16.5"  
Exciter Speed: 5500vpm  
Centrifugal Force: 2,922 Lbs  
Travel Speed: 49 ft/min  
Engine: 196cc  
Weight: 191.8 Lbs.



104963



READ MANUAL  
BEFORE OPERATING  
WEAR GOGGLES,  
BOOTS & GLOVES  
KEEP PEOPLE AWAY



#### WARNING

This product can expose you to chemicals including CARBON MONOXIDE, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

108275

### VIBRATORY PLATE COMPACTOR

Model No. 104950  
Plate Size: 19.5" x 12.6"  
Exciter Speed: 5900vpm  
Centrifugal Force: 1,843 Lbs  
Travel Speed: 82 ft/min  
Engine: 79cc  
Weight: 108 Lbs.



104964



READ MANUAL  
BEFORE OPERATING  
WEAR GOGGLES,  
BOOTS & GLOVES  
KEEP PEOPLE AWAY



#### WARNING

This product can expose you to chemicals including CARBON MONOXIDE, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

108276

104897



**CAUTION !**  
**HOT SURFACE**  
**DO NOT TOUCH**  
**MUFFLER !**

# Unpacking and Assembly

Your plate compactor will require some assembly. The following instructions will help you unpack and assemble your plate compactor, and adjust the tensioning on the v-belts.

## Unpacking

Open top of carton and remove the plate compactor components.

Plate Compactor Components:

- Plate Compactor chassis with engine assembly
- Handlebar assembly
- Folding wheel kit
- Paving pad kit (Model 104001)
- Air Filter, Air Filter Cover and Retaining Knob (Model 104950)
- Hardware bag
- Operation Manual



CAUTION

### DO NOT ATTEMPT TO START ENGINE BEFORE ADDING OIL TO ENGINE

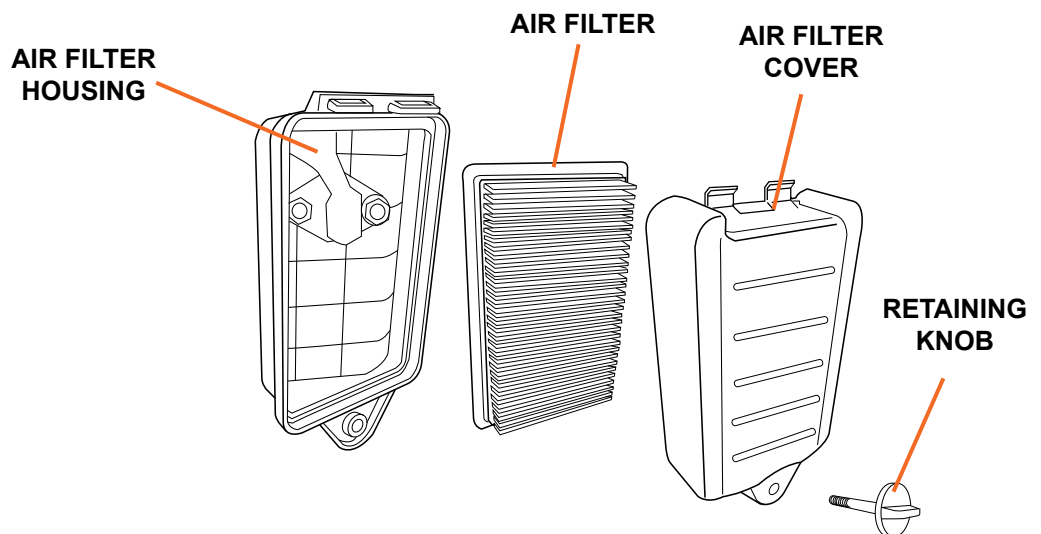
The engine is shipped from the factory without oil.

You must add engine oil before starting the engine.

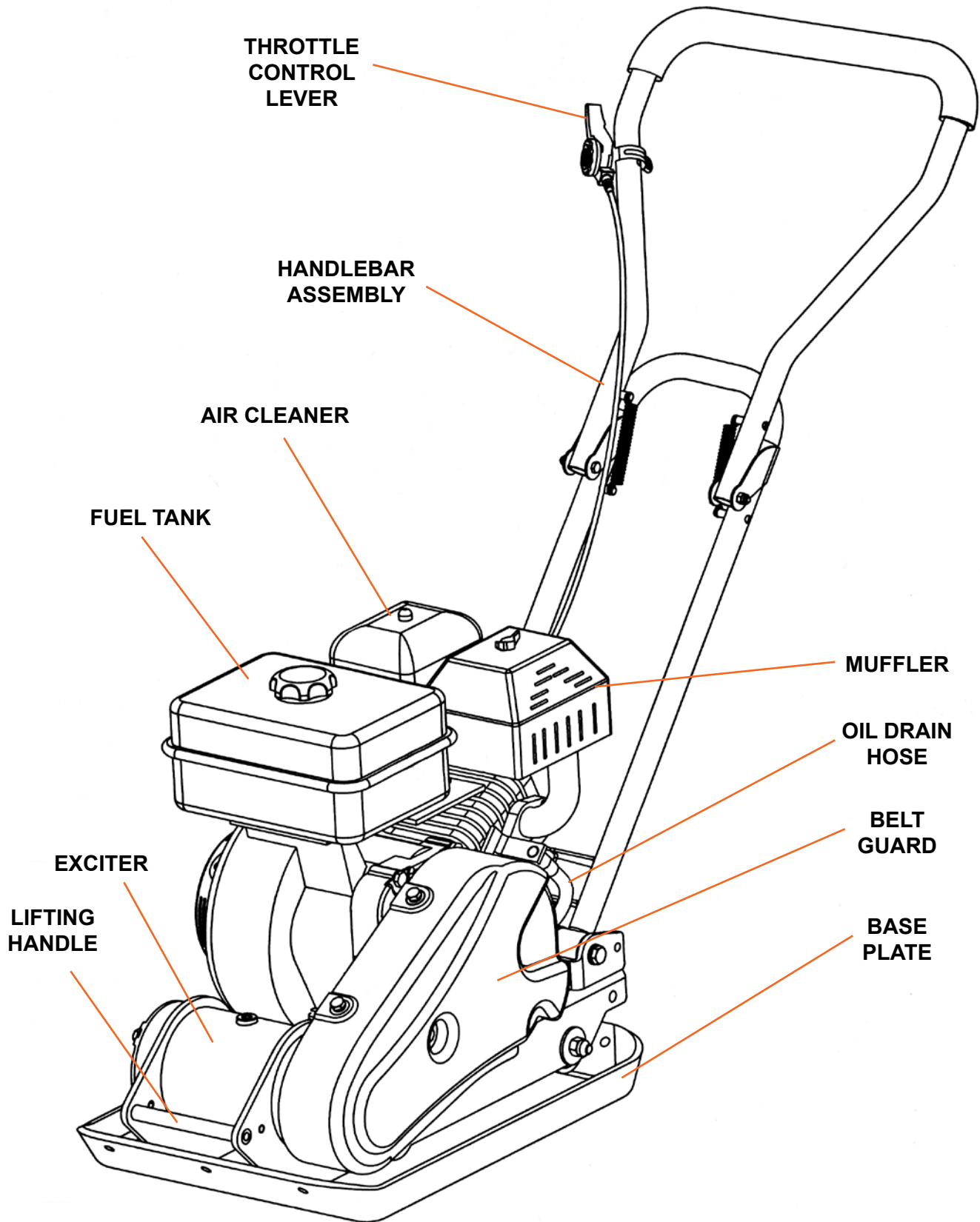
Use only 10/30W oil for a 4-cycle engine.

## Installing The Air Filter (Model 104950)

Place the air filter in the air filter housing, with the ribbed side facing the inside of the cover. Align the two tabs at the top of the air filter cover with the two slots at the top of the housing and close. Insert the retaining knob into the hole at the bottom of the cover and thread into the housing until the cover is secured tightly.



## Overview of Components



# Handlebar and Wheel Assembly

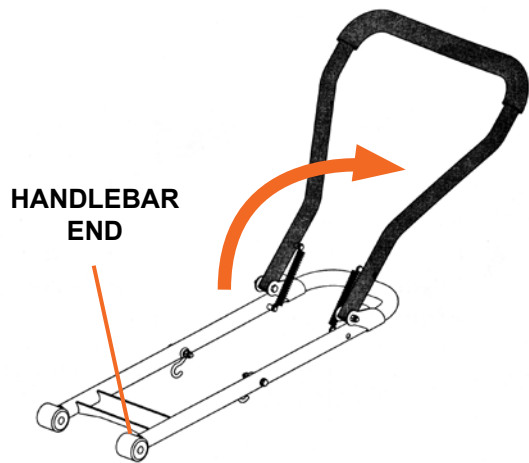


Figure 1

## Mounting the Handlebar Assembly

1. Unfold the handlebars (see Figure 1).
2. Place the handlebar ends into the mounting channels on the engine's deck, carefully aligning the holes in each side (see Figure 2). Secure the handlebar ends to the channel with a hex bolt (M10x65mm), flat washer and locknut.
3. Position the throttle control onto the upper portion of the handlebar and secure with a flat washer and hex bolt (M5x25mm).

## Mounting the Folding Wheel Assembly

1. Position the folding wheel assembly at the rear of the plate compactor. Line up the holes in the mounting links with the holes in the engine deck and secure with hex bolt (M10x30mm), flat washer and lock nut on each side (see Figure 3).

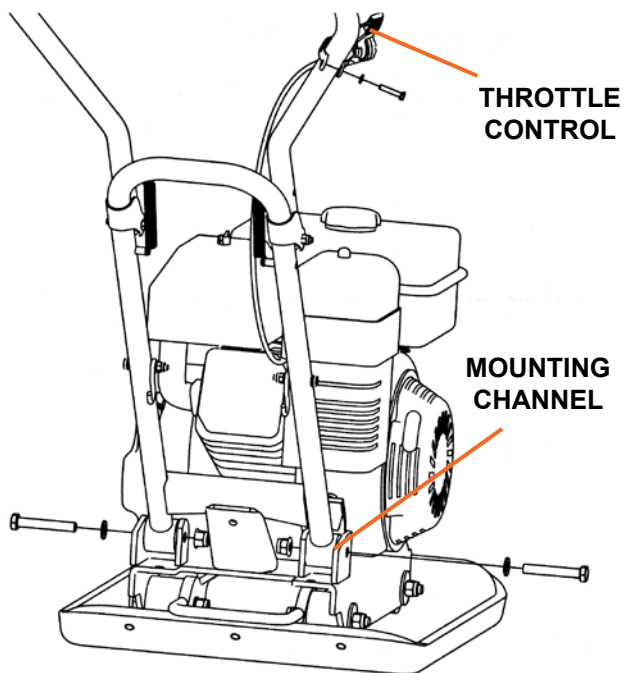


Figure 2

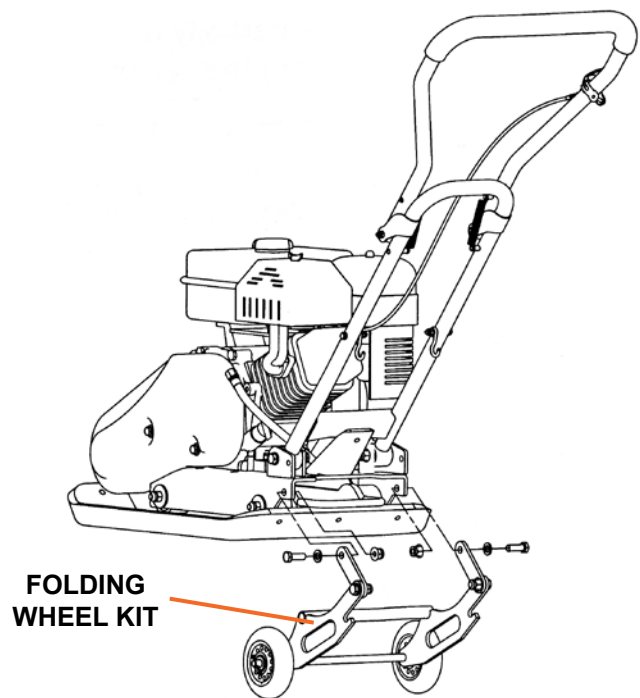


Figure 3

# Paving Pad Assembly (Model 104001)

## Paving Pad Kit

The paving pad kit should be used when compacting on concrete paving slabs, decorative stone, brick or other material to reduce noise and prevent scratching. (*The paving pad is included with Model 104001 only*).

## Attaching the Paving Pad

1. Align the holes in the paving pad with the holes in the clamp plate on the compactor's base plate. Secure with hex bolts (M10x30mm) and flat washers in three places (see Figure 4).

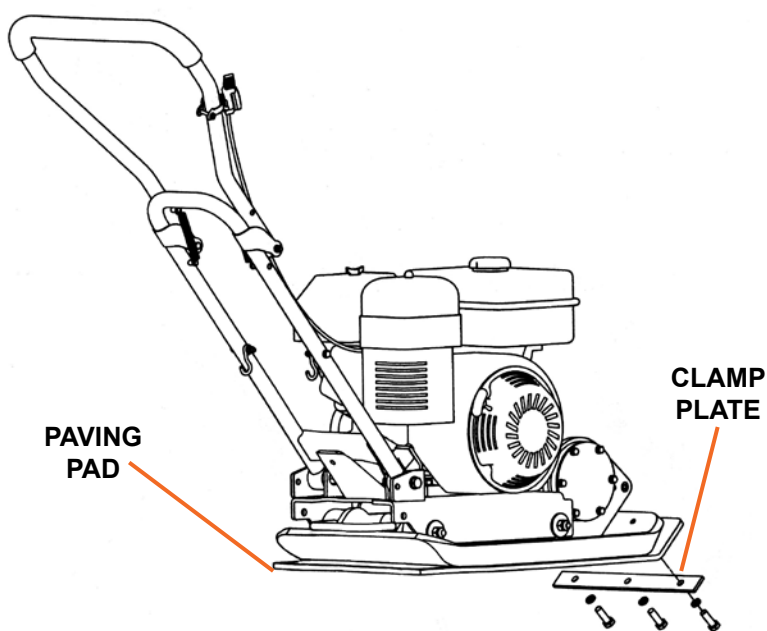


Figure 4

## Operating Precautions



CAUTION

**READ, UNDERSTAND AND FOLLOW ALL OF THE PRECAUTIONS BELOW.**

**Always check equipment condition before starting the engine.**

- **Never** start or run the plate compactor in an enclosed area.
- **Keep hands and feet away from the base plate during operation.**
- **Always** operate the plate compactor from the rear gripping the handlebars with both hands.
- **Never** lift or carry the plate compactor with the engine running.
- **Engine muffler will be hot** from operation. Do not touch it with bare skin or a severe burn may result.
- If the unit vibrates abnormally, stop the engine and check immediately for the cause. *Abnormal vibration is an indication of a potential problem.*
- **Never** operate the machine on slippery surfaces.
- Use only attachments and accessories approved by the manufacturer.
- **Never** operate the plate compactor without good visibility or adequate light.
- **Take precautions when leaving the machine unattended.** Disengage all control levers, stop the engine, wait for all moving parts to stop.
- **Shut off the engine when leaving the operating position** for any reason. Wait for all moving parts to stop.



WARNING

**OPERATION OF A PLATE COMPACTOR CAN RESULT IN FOREIGN OBJECTS BEING THROWN. ALWAYS WEAR SAFETY GLASSES DURING OPERATION.**

# Operating Instructions

## Preparation for Operation



**UNIT IS SHIPPED WITHOUT OIL IN THE ENGINE.  
ADD OIL BEFORE STARTING THE ENGINE  
Check the oil level before each operation.**

### Fill Engine with Oil

1. Add oil according to engine manual. Do not overfill. Use SAE30 engine oil. **Do not mix oil with gasoline.** Oil level must be full. Check the oil level by removing the dipstick (see Figure 5).

### Pre-Start Inspection

1. Make sure all nuts, bolts and hardware are in place and secure.
2. Check oil level.
3. Inspect air cleaner (see engine manual). Clean or replace as needed.
4. Check fuel supply. Fill the fuel tank no closer than 1 inch from top of tank to provide space for expansion.
5. Examine underneath and around engine for oil or fuel leaks.
6. Inspect fuel hoses for tightness and fuel seepage.
7. Look for signs of engine damage.
8. Remove excessive debris from muffler area and recoil starter.

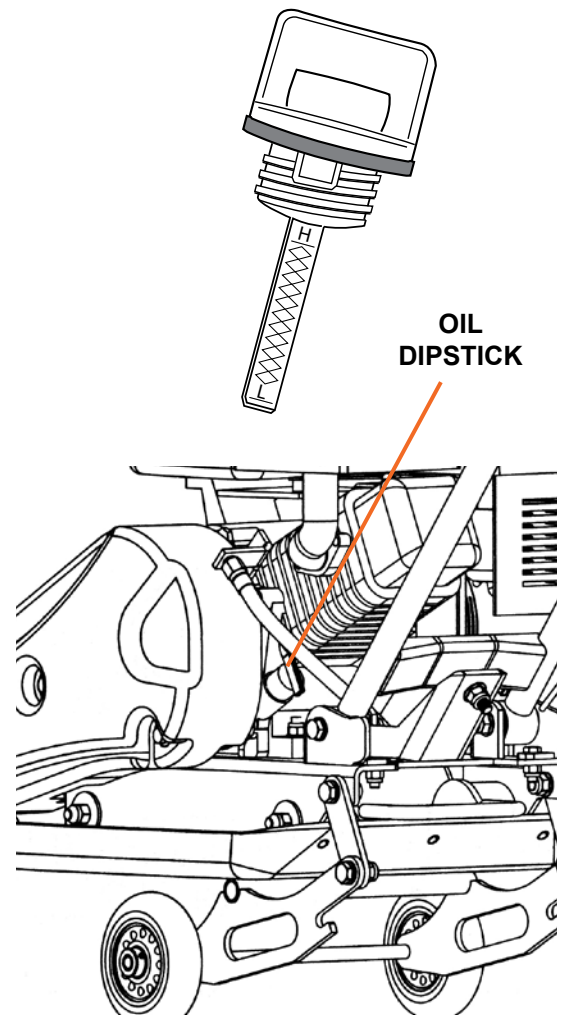


Figure 5

# Starting the Engine



## NEVER FILL THE FUEL TANK ON A HOT ENGINE

### Start-Up

The controls required to start and run the plate compactor are located on the engine and the handlebars. A detailed description of engine operation and precautions is available in the engine operation manual.

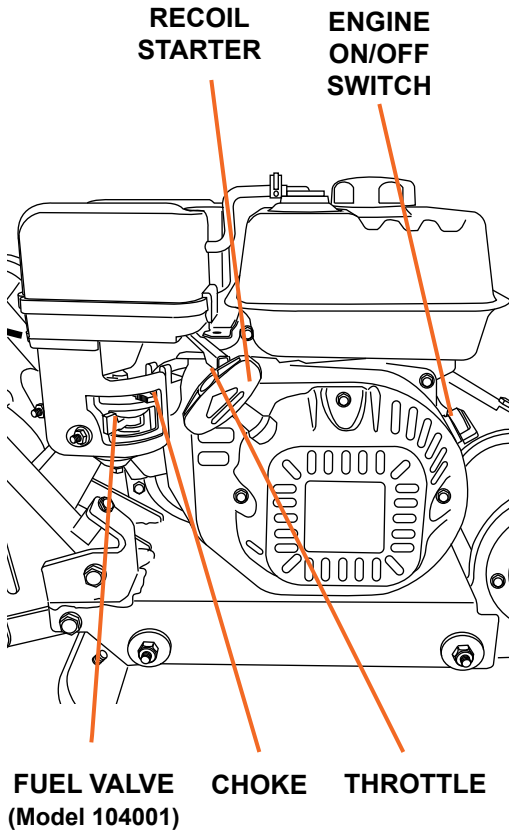


Figure 6



### Starting a Cold Engine

1. Turn the engine ON/OFF switch to ON (see Figure 6).
2. Move choke lever to the closed (full choke) position.
3. Move fuel valve to open position (Model 104001).
4. Move throttle control lever to low (see Figure 7).
5. Pull recoil handle slowly one time and allow to return normally.
6. Pull recoil handle out rapidly, and allow rope to return normally.
7. When engine starts, gradually move choke lever to “no choke” position and increase throttle speed towards full throttle.

### Restarting A Warm Engine

Restarting an engine that is already warm from previous running does not normally require use of the choke. Adjust throttle speed to “high” for best plate compactor action.

### Idle Speed

Use the “low” position on the throttle lever to reduce stress on the engine when compacting is not being performed. Lowering the engine speed to “idle” will help extend the life of the engine as well as conserve fuel and reduce the noise level of the equipment.

### Operating Speed

For normal compacting, set the throttle lever to “fast”.

### Shutting Down

To stop the engine move the engine ON/OFF switch to the OFF position.

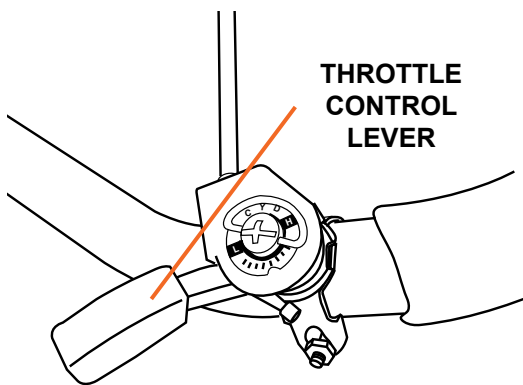


Figure 7



WARNING

**DO NOT OPERATE ON CONCRETE OR EXTREMELY COMPACTED SURFACES WHICH CAUSE THE COMPACTOR TO JUMP RATHER THAN VIBRATE CAUSING POTENTIAL DAMAGE TO THE PLATE OR ENGINE.**

1. Start the engine.
2. Move the throttle control to fast.
3. The plate compactor will vibrate and move forwards.
4. Set the throttle to the slow or idle position when not compacting to reduce equipment stress and preserve machine life.
5. To turn the plate compactor off, move the throttle lever to the slow position, allowing the engine to idle for a few seconds and then switch the engine to off.

**Running the engine at lower speeds results in decreased compaction, wear to the machine and operator fatigue.**

### Compacting Tips

The key to successful compacting is to allow the machine to do the work. The operator should guide the machine, but not bear down on the handlebar or use unnecessary force.

- Compacting will vary with ground conditions, material being compacted and slope of surface.
- On uneven surfaces it may be necessary to apply light forward pressure on the handlebars in order to help propel the machine forward.
- Hold on firmly to the handlebars to control sudden lurches.
- Attach the plate pad when compacting paving stones or similar material to avoid chipping or grinding of the surface.
- Soil conditions may be damp, but allow wet soil to dry out before compacting. If soil is excessively dry, raising dust clouds when compacting, sprinkle surface with water before compacting.
- A number of passes may be necessary to reach the desired compaction level. Maximum compaction will be reached when the machine constantly kicks back.

Do not stop the machine by moving the choke, which can cause engine backfire or damage.

# Maintenance



WARNING

## **BEFORE PERFORMING ANY MAINTENANCE TURN OFF ENGINE, DETACH SPARK PLUG WIRE AND ALLOW ENGINE TO COOL DOWN**

- Keep plate compactor, safety shields and covers, attachments, and accessories in safe working condition.
- To prevent accidental starting, always disconnect and secure the spark plug wire from the spark plug before maintenance.
- Never run the engine indoors. Exhaust fumes are toxic.
- Always allow muffler to cool before filling fuel tank.

### **Engine Maintenance**

Refer to the engine manual included in your parts packet for detailed information on engine maintenance. Your engine manual provides detailed information and a schedule for performing the following:

1. Check oil level before each use and after 8 hours of operation.
2. Change oil after first 5-8 hours of operation. Change oil while engine is warm. Refill with new oil of recommended grade.
4. Check spark plug yearly or every 100 hours of operation.
5. Service air cleaner.
6. Keep engine and parts clean.
7. Check engine and equipment often for loose nuts and bolts.

# Maintenance

## Checking the V-Belts

V-Belts must be in good condition and tensioned properly to ensure maximum performance of the plate compactor.

1. Remove the 4 hex bolts that secure the belt guard to access the v-belts (see Figure 8).
2. Check the condition of the v-belts. If there is signs of cracking, fraying or glazing, replace the belts as soon as possible.
3. Check the belt tension by pressing on the center of the belt length. The normal deflection on each side should be  $\frac{3}{8}$ " (9mm) -  $\frac{1}{2}$ " (13mm) while applying moderate pressure with thumb or finger.

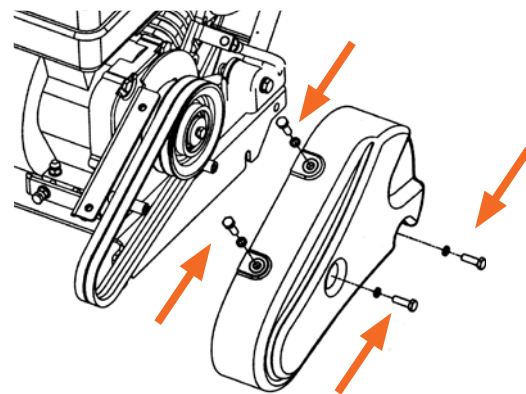


Figure 8

## Tensioning the V-Belts

1. Loosen 4 engine mount bolts, 2 on each end of the engine block, just enough to move the engine slightly, but do not remove the bolts entirely (see Figure 9).
2. Loosen the jam nuts leaving enough space between the nut and the bracket (see Figure 10).
3. Push the engine toward the back of the plate by turning the adjustment bolts to remove any slack in the v-belts.
4. When the v-belts are tensioned correctly, there should be  $\frac{3}{8}$ " (9mm) to  $\frac{1}{2}$ " (13mm) of movement when the belt is pressed firmly in the center of the belt length. If the adjustment bolts can not be adjusted enough to increase the belt tension, then the belts should be replaced.
5. Tighten the jam nuts against the bracket and tighten the engine bolts.
6. Replace the belt guard.

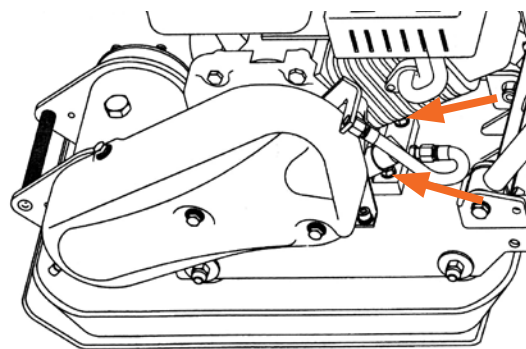


Figure 9

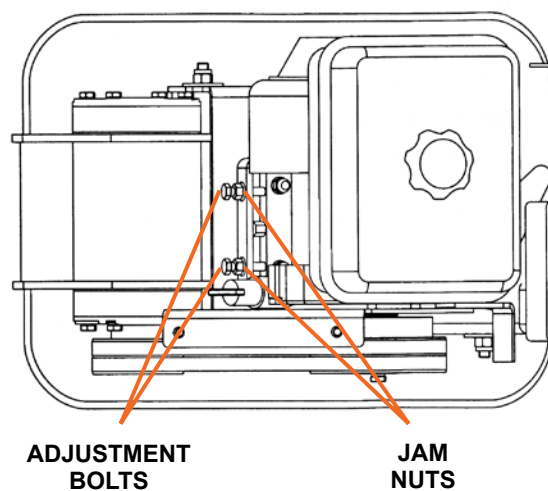


Figure 10

**Note:** When adjusting the belts, make sure that the clutch pulley and the exciter pulley are in alignment.

# Maintenance

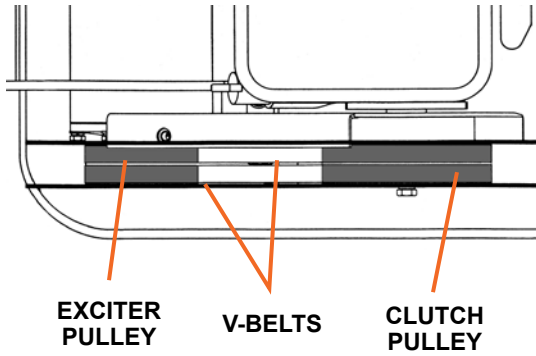


Figure 11

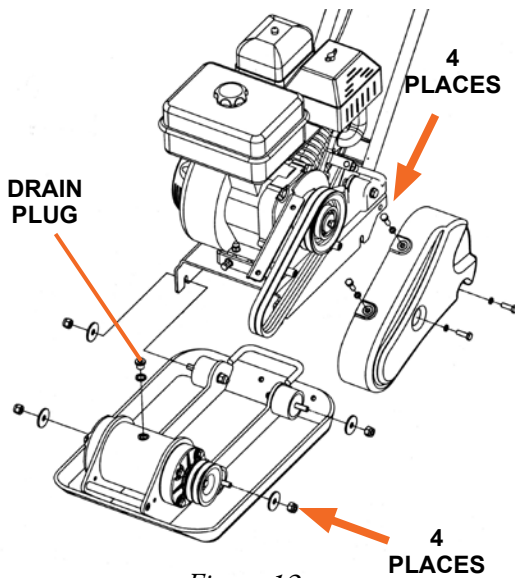


Figure 12

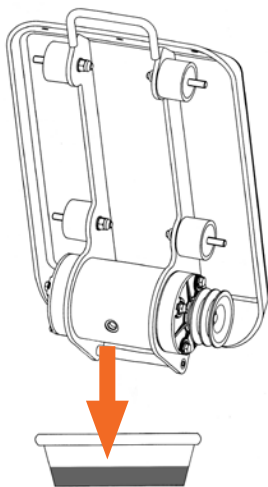


Figure 13

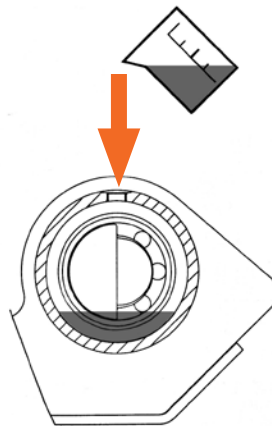


Figure 14

## Replacing the V-Belts

1. Loosen 4 engine mount bolts on the plate compactor just enough to move the engine slightly, but do not remove the bolts entirely (see Figure 9).
2. Loosen the jam nuts and bolts (see Figure 10).
3. Push the engine toward the front of the plate and slip the v-belts off of the pulleys (see Figure 11).
4. Install new belts. It is best to replace both belts even if only one shows wear.
5. Move the engine back and test the belt tension.
5. Tighten the jam nuts against the bracket and tighten the engine bolts.
6. Replace the belt guard.

## Exciter Lubrication

The exciter housing is pre-filled with automatic transmission fluid (Dextron III or equivalent) by the manufacturer. The fluid should be changed every 200 hours of operation.

1. Let the exciter cool before attempting to change the fluid.
2. Remove the belt guard and v-belts (see Figures 8, 9 & 11).
3. Remove bolts that secure the deck to the housing (see Figure 12).
4. Lift the deck and engine up and detach from the housing.
5. Remove the drain plug from the top of the exciter housing. Tilt upside down so fluid drains (see Figure 13).
6. Return plate to upright position.
7. Fill exciter with 2.70 fluid ounces/80ml (2.0 fluid ounces/60ml for the Model 104950) of automatic transmission fluid, Dextron III or equivalent, (see Figure 14).
8. Apply pipe sealant to drain plug and reinstall.
9. Reattach the deck and engine to the plate housing. Reattach the v-belts and belt cover.

## Storage



WARNING

### DRAIN FLUIDS BEFORE LONG TERM STORAGE

**Drain fuel outdoors away from any ignition sources.**

Use only approved fuel containers.

**Never store equipment with gasoline in the tank** inside of a closed building where fumes may reach an open flame or spark. Allow the engine to cool before storing in any building.

### Prepare for Storage

Follow the steps below to prepare your plate compactor for storage. Read your engine manual for detailed instructions on preparing the engine for storage.

1. Run the engine until the fuel is consumed.
2. Allow the engine to cool down. While the engine is still warm, drain the oil by detaching the flexible oil line hose, tipping the plate compactor slightly on its side and draining the oil into an approved container (see Figure 15).
3. Detach the spark plug wire.
4. For more compact storage, fold the upper handlebars assembly down (see Figure 16).

### For Lifting and Transporting

1. Always allow the engine to cool down before transporting or before short term storage. Use the handles on the front and rear of the plate compactor to lift (see Figure 15).

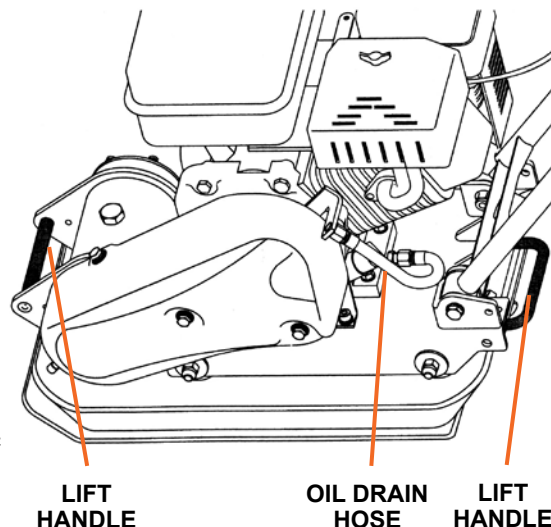


Figure 15

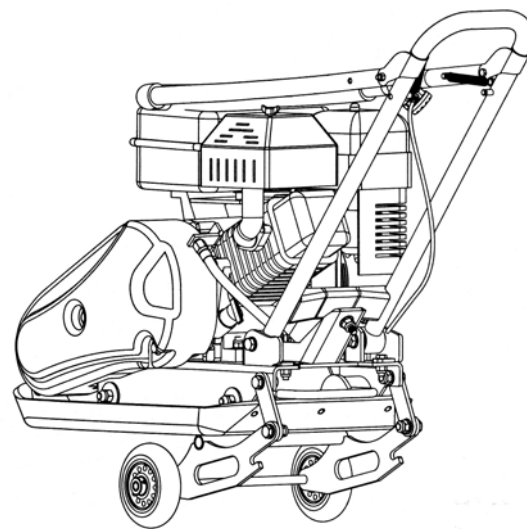


Figure 16

# Troubleshooting

PROBLEM	SOLUTION
Engine will not start	<ul style="list-style-type: none"> <li>• Add gas to gas tank.</li> <li>• Connect spark plug wire to spark plug</li> <li>• Fuel valve must be open</li> <li>• Throttle must be positioned at choke for a cold start</li> </ul>
Engine runs rough, floods during operation	<ul style="list-style-type: none"> <li>• Clean or replace air cleaner</li> </ul>
Engine is hard to start	<ul style="list-style-type: none"> <li>• Drain old fuel and replace with fresh. Use gas stabilizer at end of season</li> <li>• Make sure spark plug wire is securely attached to spark plug</li> <li>• Throttle is not in proper start position</li> </ul>
Engine misses or lacks power	<ul style="list-style-type: none"> <li>• Remove and clean fuel tank</li> <li>• Clean or replace air cleaner</li> <li>• Improper carburetor adjustment, take to authorized engine service center</li> <li>• Check and replace spark plug and adjust gap</li> <li>• Drain and refill gas tank and carburetor</li> </ul>
Engine will not stop when throttle control is positioned at stop	<ul style="list-style-type: none"> <li>• See engine manual to check and adjust the throttle or remove any debris blocking the linkage</li> </ul>
Soil is difficult to compact	<ul style="list-style-type: none"> <li>• Soil is too dry. Add moisture to the ground by lightly sprinkling water with garden hose, then allow the surface to dry</li> </ul>
Plate compactor is difficult to control when running (machine jumps or kicks back)	<ul style="list-style-type: none"> <li>• Engine speed is too high. Adjust the engine's throttle</li> <li>• The material to be compacted is too hard or dense</li> <li>• The material that is being compacted has reached maximum level of compactness</li> </ul>
Poor compaction of material	<ul style="list-style-type: none"> <li>• The engine throttle is set too low. Adjust the throttle and allow several passes to reach maximum level of compactness</li> </ul>

# Warranty & Specifications

## IMPORTANT NOTICE

We, the manufacturer, reserve the right to change the product and/or specifications in this manual without notification. The manual is for information usage only and the pictures and drawings depicted herein are for reference only.

## Warranty Repair and Service

Do not return this product to the store for warranty issues or repair. Call our customer service department at **720-287-5182, 1-877-487-8275**, or visit [www.dirtyhandtools.com](http://www.dirtyhandtools.com) for the location of the nearest service center.

**Record the information below for future reference.**

**Model No.** \_\_\_\_\_

**Serial No.** \_\_\_\_\_

**Date of Purchase** \_\_\_\_\_

**Place of Purchase** \_\_\_\_\_

## Specifications

SKU/Part No.	104001	104950
Description	Vibratory Plate Compactor	Vibratory Plate Compactor
Engine	196cc Engine*, EPA/50 State Approved	79cc Engine*, EPA/50 State Approved
Engine Oil Capacity**	0.63 quarts (0.6 liters)	0.37 quarts (0.35 liters)
Operating Speed	3600 RPM	3600 RPM
Plate Size	21.26" L x 16".54 W (540mm x 420mm)	19.5" L x 12.6" W (495mm x 320mm)
Exciter Speed	5500 VPM	5900 VPM
Exciter Capacity	2.70 fluid ounces (80ml) transmission fluid	2.0 fluid ounces (60ml) transmission fluid
Centrifugal Force	2,922 Lbs.	1,843 Lbs.
Travel Speed	49 feet/minute (15m/min)	82 feet/minute (25m/min)
Dimensions	48"L x 21.25"W x 42.25"H (including handlebar)	48"L x 21.25"W x 42.25"H (including handlebar)
Shipping Weight	191.8 Lbs. (87kg)	108 Lbs. (49kg)
Warranty	2 Year Limited Warranty	2 Year Limited Warranty

\*As rated by engine manufacturer

\*\* Not included, shipped without engine oil

Dirty Hand Tools® is a brand of  
 **FrictionlessWorld**  
1100 W 120th Ave., Suite 600  
Westminster, CO 80234 • 720-287-5182

For Service or Questions  
**Call 1-877-487-8275**  
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[www.dirtyhandtools.com](http://www.dirtyhandtools.com)