

# Operator's Safety and Service Manual

## Plate Compactor



**MVP-90**



It is the OWNER'S RESPONSABILITY to communicate information on the  
SAFE USE and OPERATION of this machine to the operators.

**27112013**

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# 1. SERIAL NUMBER LOCATION

The model/serial number decal is located on the shroud assembly (black).

**(Write model number)**



**(Write serial number)**


The unit's year of manufacture can be determined by the serial number. Contact your nearest sales branch or  for more information.

This Unit warranty is stated in this Operational and Safety manual on page 16. Failure to return warranty registration card renders the warranty null and void.

An engine owner's manual is also attached to every unit. Engine parts may order from any authorized dealer. Refer to the engine owner's manual to learn about specifications and part identification.


## 2. PARTS ORDERING PROCEDURE:

 Parts are available worldwide and must be ordered through your local distributor. If you can't locate the  distributor in your area refer to page 17 of this manual to locate the nearest branch and contact numbers for assistance.


 Grinders are intended for use in several applications. They are powered by four stroke gas engines or electric motors and are available in different sizes and manufacturers.

This Operation manual contains only standard parts. Variations of these parts as well as other special parts are not included. Contact your local  distributor for assistance in identifying parts not included in this manual.

### ALWAYS HAVE READY:

1. Model and serial number of machine when ordering  parts.
2. Model and serial number of engine when ordering engine parts.
3. Item part number(S), description, and quantity.
4. Company name, address, zip code, and purchase order number.

5. Preferred method of shipping.


**REMEMBER – You own the best. If repairs are needed, use only purchased parts from authorized  distributors.**

### 3. ASSEMBLING INSTRUCTIONS

#### UNPACKING

1. Remove the unit and all components from its shipping crate. You will see:
  - Preassembled Plate Compactor

#### FINAL ASSEMBLING

 Plate Compactors are shipped completely assembled almost for immediate use, just lubricants and oil are needed to start the engine.

**Note: All installation hardware must be inserted into its respective location on the equipment, see parts explosion for more details.**

1. Using appropriated equipment, bring the unit to the ground from its shipping pallet.



**Warning: failure to use proper lifting equipment could cause the equipment to fall and cause serious injury.**



### 4. SAFETY PRECAUTIONS



**READ AND STUDY THE FOLLOWING SAFETY INFORMATION BEFORE ATTEMPTING TO OPERATE THIS EQUIPMENT. IN ADDITION, ENSURE THAT EVERY INDIVIDUAL WHO OPERATES OR WORKS WITH THIS EQUIPMENT IS FAMILIAR WITH THESE SAFETY PRECAUTIONS.**

#### **WARNING - LETHAL EXHAUST GAS!**

An internal combustion engine discharges carbon monoxide, which is a poisonous and odorless invisible gas. Death or serious illness may result if inhaled. Operate only in an area with good ventilation, **NEVER IN A CONFINED AREA!**

#### **WARNING - DANGEROUS FUELS!**

Use extreme caution when storing, handling and using fuels - they are highly volatile and explosive in the vapor state. Do not add fuel while engine is running. Stop and cool the engine before adding fuel.

#### **DO NOT SMOKE WHEN REFUELING!**

#### **SAFETY GUARDS**

It is the owner's responsibility to ensure **ALL GUARDS AND SHIELDS** are in place and in working order.

## **IGNITION SYSTEMS**

Breakerless magneto and batteries ignition systems **CAN CAUSE SEVERE ELECTRICAL SHOCKS**, avoid contact with these components or their wiring.

## **SAFE DRESS**

**DO NOT WEAR** loose clothing, rings, wristwatches, etc., near machinery.

## **NOISE PROTECTION**

Wear O.S.H.A. specified hearing protection devices.

## **FOOT PROTECTION**

Wear O.S.H.A. specified steel tip safety shoes.

## **HEAD PROTECTION**

Wear O.S.H.A. specified safety helmets.

## **EYE PROTECTION**


Wear O.S.H.A. specified eyes shields, safety glasses, and sweat bands.

## **DUST PROTECTION**

Wear O.S.H.A. specified dust mask or respirator.

## **OPERATOR**

Keep children and bystanders off and away from the equipment. Only trained Operators who fully understand its safety operation must use this equipment.

For details on safety rules and regulations in the United States, contact your local Occupational Safety and Health Administration (O.S.H.A.) office. Equipment operated in other countries must be operated and serviced in accordance and compliance with any and all safety requirements of such country. The publication of these safety precautions is done for your information does not by the publication of these precautions, imply or in any way represent that these are the sum of all dangers present near equipment. If you are operating a  unit it is your responsibility to insure that such operation is in full accordance with all applicable safety requirements and codes. All requirements of the United States Federal Occupational Safety and Health Administration Act must be met when operated in areas that are under the jurisdiction of that United States Department.

## **5. SAFETY NOTICE & DECALS**




### **IMPORTANT NOTICE**



The "**SAFETY ALERT SYMBOL**" is used to call attention to items or operations that may be dangerous to those operating or working with this equipment. These symbols can be found throughout the manual and on the unit itself. Please read these warnings and cautions carefully.

## READ SAFETY DECALS CAREFULLY

Carefully read and follow all safety decals. Keep them in good conditions. If they become aged, replace as required. If repainting, **REPLACE ALL** decals. Decals are available from your authorized  Distributors. Decals are not shown to scale.





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201003 (x2)



201005



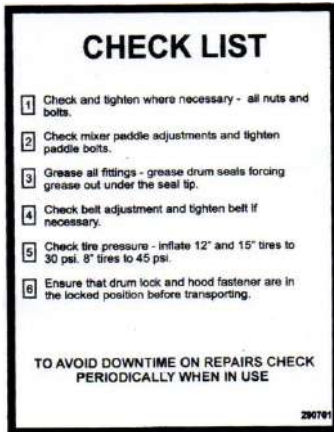
201152



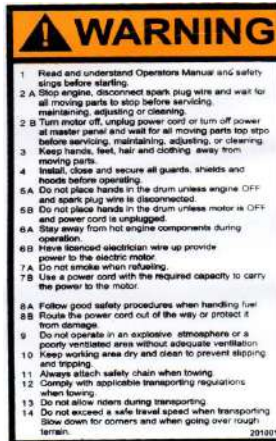
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201005



290791



201001 SMALL

201006








201001 BIG



201154




201004

<b>SAFETY PRECAUTIONS</b>	
	<p style="text-align: center;"><b>! DANGER</b></p> <p><b>EXPLOSION HAZARD</b> Never operate the machine in an explosive atmosphere, near combustible materials or where ventilation does not clear exhaust fumes.</p>
	<p style="text-align: center;"><b>! WARNING</b></p> <p><b>BURN HAZARD</b> Never come into contact with the engine or muffler when engine is operating or shortly after it is turned off. Serious burns may occur</p>
	<p style="text-align: center;"><b>! CAUTION</b></p> <p><b>MOVING PARTS</b> Before starting the machine ensure that all guards and safety devices are in place and functioning properly.</p>
	<p style="text-align: center;"><b>! CAUTION</b></p> <p><b>MACHINE DAMAGE</b> Advance cutter depth in small increments to avoid premature wear or damage.</p>
	<p style="text-align: center;"><b>! ATTENTION</b></p> <p><b>READ OWNERS MANUAL</b> Read and understand operator's manual before using this machine. Failure to follow operating instructions could result in serious injury or death.</p>



## 6. BEFORE OPERATING

- ✚ **REMEMBER!** It is the owner's responsibility to communicate information on the safe use and proper operation of this unit to the operators.
- ✚ Before operating, review SAFETY PRECAUTIONS listed on page 6 of this manual.
- ✚ Familiarize yourself with the operation of the unit and confirm that all controls function properly BEFORE starting engine.
- ✚ Locate the killing switch and assure you know how to **STOP** the unit.
- ✚ Make sure hands, feet, and clothing are at a safe distance from any moveable parts prior to starting.
- ✚ Shrouds and guards are provided to protect the operator or structures in close proximity to rotating hot engine parts. It is the **RESPONSABILITY OF THE OPERATOR** to see that they are properly in place. **NEVER** operate this equipment without a guard.
- ✚ OIL LEVEL - Check the oil level in the engine. For more information see "Lubrication" under the engine "Owner's Manual" the "Maintenance" section of this manual. **All Equipment come without oil, running an engine without lubrication may damage the engine.**
- ✚ AIR CLEANER - Check to ensure elements are in good condition and properly installed.
- ✚ Review every decal with the OPERATOR.
- ✚ FUEL SUPPLY - Engines on  equipment require an automotive grade of clean, fresh, unleaded or regular gasoline. **All equipment's come without gasoline and oil.**
- ✚ FUEL FILTER - Check to ensure element is in good condition... Replace if it is clogged or damaged.
- ✚ SPARK PLUG (GAS UNIT) – Check and clean spark plugs regularly. A fouled, dirty or carbonated spark plug may cause difficulties starting and poor engine performance. Set spark plug gap to recommended clearance. Refer to engine manual.
- ✚ POSITION – The only operating position for this grinder is at the rear of the equipment. If the operator must leave this position the engine must be shut down.
- ✚ SPECTATORS – Keep all personnel/spectators away from the Grinder while running. This spinning equipment can throw segments and can cause injuries.

## 7. STARTING ENGINE/AIR

**IMPORTANT**  
Engine warranty is void if the engine is run without oil.

### GAS ENGINE

1. With the Plate Compactor engine level in the ground check oil level and add oil and fuel as required.
2. Pull the stop switch on the unit to its "Out" position.
3. Move the engine throttle control to the "FAST" position.
4. Choke the engine if necessary. (You may not need to choke a warm engine)



### **BEFORE STARTING ENGINE MAKE SURE ALL GUARDS ARE IN PLACE.**

5. Pull the starter string.
6. After the engine starts, move the choke lever to the open position, move the throttle level to the "IDLE" position and let the engine warm-up for one or two minutes.

To stop the engine, make sure to let the engine idle before stopping by using the crank lift handle to raise the grinder cutters height.

7. Push in the engine stop switch on the equipment.
8. Close the fuel valve.

### ELECTRIC MOTOR

1. With the cage in maximum raised position, plug the motor into a suitable power source.
2. Move the switch on the motor to the "ON" position.



### **STOP THE ENGINE OR ELECTRIC MOTOR BEFORE:**

- + Adding fuel.
- + Leaving equipment unattended for any amount of time.
- + Making any repairs or adjustments to the unit.
- + Lifting/Transportation.

## 8. OPERATION INSTRUCTIONS

1. Once the engine has started, move the engine throttle lever quickly to the FAST position. With the throttle lever in the fast position, the engine speed should be around 2,300 RPM, which engages the centrifugal clutch.
2. Firmly grasp the compactor's handle bar with both hands as the compactor begins moving forward.
3. Slowly walk behind the compactor and be on the lookout for any large objects or foreign matter that might cause damage to the compactor or bodily injury.
4. Compactor traveling speed may drop on soils which contain clay, or other types of soil. Soil with high moisture content can cause the compaction plate to "stick" to the ground (not lifting up off the ground very fast or high). To rectify this problem, consider the following:
  - Check the bottom plate to see if clay or equivalent material has been lodged in the plate mechanism. If so, wash with water and remove.
  - Remember the compactor does not work as efficiently on clay or soils that have a high moisture content level.
  - If the soil has a high moisture level, dry soil to appropriate moisture content level or carry out compaction twice.
5. The MVC-90H is equipped with a watering system that can be used to wet the ground during compaction to keep dust levels down.



**NEVER FORCE THIS EQUIPMENT INTO THE SURFACE TO A POINT WHERE THE EQUIPMENT STARTS BOUNCING**

6. If the power source fails, raise the compactor off of the floor. Disconnect power source, inspect accessories for damage. Replace damage (or questionable) accessories before re-starting the equipment.
7. When transporting the compactor, disconnect the power source before lifting or removing any guard.
8. When hoisting or lifting grinder, always inspect frame and attaching hardware for damage before lifting. Use proper safer hoisting and lifting equipment to prevent injuries.

## 9. SERVICE INSTRUCTIONS

- ✚ Never service or lubricate the unit engine while running.
- ✚ After servicing the unit, restore and fasten all guards, shields, and covers to their original positions.
- ✚ Never drain oil into the ground, into open streams, or down sewage drains.
- ✚ Keep air filter clean at all times. Wash away dust and debris using anon-oil based cleaning solvent. Let the filter dry before re- installing.

### **WHEN LIFTING/LOWERING ALWAYS:**

1. Set the machine in an upright position.
2. Stop the engine or electric motor.
3. Secure hardware on the machine.
4. Make sure you use appropriated lifting equipment to lift equipment.
5. Do not position yourself where you could possibly be pinched / caught between the equipment and some other obstacle.

### **TOWING**

1. Do not tow the unit with another vehicle. The grinder may be damage if towed.

### **STORING**

1. Drain fuel tank.
2. Run the engine until the fuel in the injection system is completely consumed.
3. Clean drive shaft, threats. Coat parts with grease.
4. Lube all bearings
5. Empty water system
6. Clean all moving parts with WD-40 lubricant.
7. Lower unit completely.
8. Cover unit for protection.

### **ENGINE**

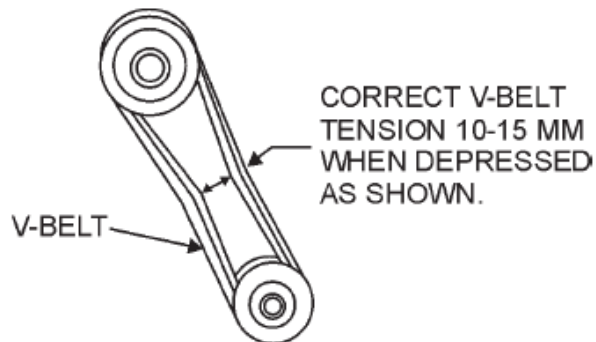
**See engine owner's manual maintenance schedule.**

### **SPARK PLUG**

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

## BELT TENSION

1. If there is excessive belt play, there will be a decrease in the grinding action, which could cause cage and machine damage. The normal belt play should be 3/8" to 1/2" which is attained by depressing the top section of the belt at the belt guard mounting bracket location. When adjusting the belt make sure that the drive pulley is in alignment with cage pulley. Tighten all engine mount bolts, adjust the two engine-stop bolts, and tighten lock nuts.



V-Belt Tension

## REPLACING V-BELT/CLUTCH

1. Remove the belt cover.
2. Place an offset wrench (13 mm) or the like on the vibrator pulley (lower) Fastening bolt.
3. Using a waste cloth or the like, pull the V-belt back strongly at midway of the belt on the left side and rotate the offset wrench clockwise so that the V-belt will come off.
4. Check the clutch and replace as necessary, following the procedures listed in Checking the Clutch.
5. Place the V-belt on the lower vibrator pulley. Push the V-belt to the left side of the upper clutch and rotate the offset wrench clockwise so that the V-belt moves onto the pulley.

## REPLACING CLUTCH

6. With belt cover removed, visually check outer drum of the clutch for seizure and "V" groove for wear or damage.
7. Clean the "V" groove as necessary.
8. Check the clutch lining and shoe for signs of wear. If the shoe is worn, replace the clutch to prevent deficient power transmission and slippage.
9. If Clutch must be replaced, first remove V-belt.
10. Remove bolt at engine power output by tapping an engaged wrench (e.g. tapping with hammer) and rotate the bolt counterclockwise.
11. Remove clutch with a pulley extractor.
12. To install a new clutch, reverse steps 1-3.

# 10. MAINTENANCE SCHEDULE

1. Check all hardware after the first 5 hours of use, the follow the maintenance schedule.

<b>Maintenance Services Intervals</b>		<i>After every use</i>	<i>After 45 days or 50 hrs.</i>	<i>Every 3 months or 100 hrs.</i>	<i>Every 6 months or 200 hrs.</i>	<i>Every 9 months or 300 hrs.</i>	<i>Every 12 months or 400 hrs.</i>
<b>General Inspection:</b>							
Guards	Check		X	X	X	X	X
Warning stickers	Check		X	X	X	X	X
Test run	Check operation		X	X	X	X	X
V-belt & Clutch	Check				X	X	X
<b>Engine:</b>							
Engine oil	Check level	X	X	X	X	X	X
	Change		X		X		X
Engine oil filter	Replace				X		X
Oil cooler	Clean			X	X	X	X
Cooling Fins	Clean		X	X	X	X	X
Air cleaner	Check - clean	X	X	X	X	X	X
	Replace						X
Air Intake Line	Check				X		
	Replace						2 years
Fan Belt	Check tightness				X		X
	Replace						500 hrs.
Valve clearance	Check-adjust				X		X
Fuel filter	Check & clean			X	X	X	X
	Replace				X		X
Fuel Tank	Clean						500 hrs.
Engine wiring	Check						X

# 11. REPLACEMENTS

## Parts

## Tolerance or Replacement Cycle

### Engine Components

✓ Refer to your engine manufacturer’s Owner’s Manual

### V-Belts

✓ Replace if stretched to the point that the idler does not work properly. Replace the V-belts if they are cracked or torn.

### Hardware

✓ Re-torque all bolts after the first eight hours of operation and check hardware every 25 hours. Replace any worn or damaged hardware as needed. Replacement hardware should be grade 5 and zinc plated.

### Safety Decals

✓ Replace if they become aged, damaged or cannot be easily read.

# 12. TORQUE CHART

## APROXIMATE TIGHTENING TORQUE

<u>SIZE</u>	<u>GRADE 2</u>	<u>GRADE 5</u>	<u>GRADE 8</u>
# 10-24	21 in-lbs	32 in-lbs	45 in-lbs
# 10-32	23 in-lbs	36 in-lbs	51 in-lbs
1/4-20	49 in-lbs	76 in-lbs	9 in-lbs
1/4-28	56 in-lbs	87 in-lbs	10 in-lbs
5/16-18	8 in-lbs	13 in-lbs	18 in-lbs
5/16-24	9 in-lbs	14 in-lbs	20 in-lbs
3/8-16	15 in-lbs	23 in-lbs	33 in-lbs
3/8-24	17 in-lbs	26 in-lbs	37 in-lbs
7/16-14	24 in-lbs	37 in-lbs	52 in-lbs
7/16-20	27 in-lbs	41 in-lbs	58 in-lbs
1/2-13	37 in-lbs	57 in-lbs	80 in-lbs
1/2-20	41 in-lbs	64 in-lbs	90 in-lbs
9/16-12	53 in-lbs	82 in-lbs	115 in-lbs
9/16-18	59 in-lbs	82 in-lbs	129 in-lbs
5/8-11	73 in-lbs	112 in-lbs	159 in-lbs
5/8-18	83 in-lbs	112 in-lbs	180 in-lbs
3/4-10	129 in-lbs	223 in-lbs	282 in-lbs
3/4-16	144 in-lbs	200 in-lbs	315 in-lbs
7/8-9	125 in-lbs	322 in-lbs	454 in-lbs
7/8-14	138 in-lbs	355 in-lbs	501 in-lbs

## APROXIMATE TIGHTENING TORQUE

<u>SIZE</u>	<u>GRADE 2</u>	<u>GRADE 5</u>	<u>GRADE 8</u>
1-8	188 ft-lbs	483 ft-lbs	682 ft-lbs
1-12	205 ft-lbs	529 ft-lbs	746 ft-lbs
1-14	210 ft-lbs	541 ft-lbs	764 ft-lbs
1-1/8-7	266 ft-lbs	596 ft-lbs	966 ft-lbs
1-1/8-12	297 ft-lbs	668 ft-lbs	1083 ft-lbs
1-1/4-7	375 ft-lbs	840 ft-lbs	1363 ft-lbs
1-1/4-12	415 ft-lbs	930 ft-lbs	1509 ft-lbs
1-3/8-6	491 ft-lbs	1102 ft-lbs	1787 ft-lbs
1-3/8-12	559 ft-lbs	1254ft-lbs	2034 ft-lbs
1-1/2-6	652 ft-lbs	1462ft-lbs	2371 ft-lbs
1-1/2-12	734 ft-lbs	1645ft-lbs	2668 ft-lbs
M 6	3 ft-lbs	4 ft-lbs	7 ft-lbs
M 8	6 ft-lbs	10 ft-lbs	18 ft-lbs
M 10	10 ft-lbs	20 ft-lbs	30 ft-lbs

### CONVERSIONS

in - lbs x 0.083 = ft-lbs

ft - lbs x 12 = in-lbs

ft - lbs x 0.1383 = kg-m

ft - lbs x 1.3558 = N-m

# 13. WARRANTY

## THIS IS YOUR WARRANTY – PLEASE READ AND SAVE

- 1. TK Equip** warrants each new machine against any manufacturing defect in material and workmanship under normal use and service for a period of (1) one year. Warranty period begins on first day of use by end user. This first day of use is established by the date of a completed warranty card or a bill of sale to the end user.
- 2.** The obligation under this warranty is limited to the replacement of parts at your **TK Equip** factory branch or on an authorized **TK Equip** distributor.
- 3.** Machines altered or modified without a **TK Equip** written consent may void this warranty policy immediately. Misuse, negligence, accidents or the operation of the machines in any other way that the recommended by **TK Equip** operation procedures, will void this warranty policy. This warranty shall not apply to machines repaired by other than authorized **TK Equip** branches or distributors.
- 4.** The cost of transportation and other expenses related are not covered by this warranty.
- 5.** Written authorization for the return of merchandise under warranty must be obtain from **TK Equip** customer service contact. All equipment & parts returned may be sent with a signed RGA (Return Goods Authorization) for its follow up.
- 6. TK Equip** reserves the right to inspect and render the final decision on each warranty case.
- 7. TK Equip** reserves the right to improve or make product changes without incurring any obligation to update, refit or install on machines previously sold.
- 8. TK Equip** is not responsible for any liability, damage or injury directly or indirectly from the design, material or operation of its product.
- 9.** The warranty letter must be returned to **TK Equip** within 10 days after purchase/acquire, for a first use failure warranty claim.
- 10.** Warranty request must be submitted in written within 30 days after machine failure to **TK Equip** customer service.
- 11.** THE FOREIGN WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANT ABILITY AND FITNESS FOR USE AND OF ALL OTHER OBLIGATION OR LIABILITIES ON OUR PART, AND WE NEITHER ASSUME NOR AUTHORIZE AINES, MOTOR AND THEIR COMPONENTS.NY OTHE RPERSON TO ASSUME FOR US ANY OF OUR PRODUCTS . LIKewise, THIS WARRANTY







## 14. WAREHOUSE LOCATIONS



**REMEMBER** - you own the best. If repairs are need use only parts purchased from a  authorized distributor.

 Has established a network of reputable distributors with trained mechanics and full facilities for maintenance and rebuilt, and to carry an adequate stock parts in all areas of the country, their sales reps & engineers are available for professional consultation. If you cannot locate your  distributor contact our sales branch listed below.

### UNITED STATES

TK CORPORATE OFFICE  
14419 ATLANTA DRIVE  
LAREDO, TX 78045  
TEL: (956) 796-9411  
FAX: (956) 462-2500

### CANADA

330 SALTEAUX CRES  
WINNIPEG, MANITOBA  
CANADA R3J 3T2  
TEL: (204) 831-8468  
FAX: (204) 831-8590

### MEXICO

CANATLAN #100 PARQUE  
INDUSTRIAL LAGUNERO  
GOMEZ PALACIO, DGO  
MEXICO 35070  
TEL: +52 (871) 290-7025

## TOLL FREE LINE

 **866 357 1664**

## CONTACT E-MAILS

### SALES

[sales@tkequip.com](mailto:sales@tkequip.com)

### PARTS & SERVICE

[parts@btmequipment.com](mailto:parts@btmequipment.com)  
[service@btmequipment.com](mailto:service@btmequipment.com)

### ACCOUNTING

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[accounts@btmequipment.com](mailto:accounts@btmequipment.com)

### MANAGEMENT

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