



MODEL PB78E

110v Electric Tamping Rammer

⚠ WARNING

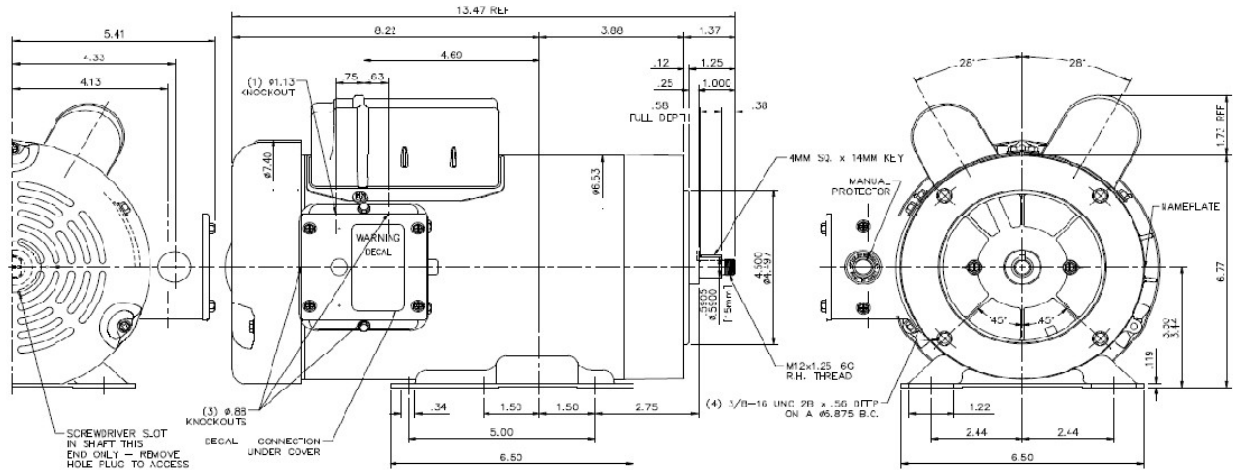
To reduce the risk of injury, all operators and maintenance personnel must read and understand these instructions before operating, changing accessories, or performing maintenance on power equipment. All possible situations cannot be covered in these instructions. Care must be exercised by everyone using, maintaining or working near this equipment.



PARTS & OPERATION MANUAL

The P78 Tamping Rammer is a compacting machine, capable of working by applying consecutive impacts to the surface of soil in order to level the uneven soil surface, to compact the soil uniformly so that the void among soil particles are minimized and to increase the dry density with moisture in the soil removed. 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.

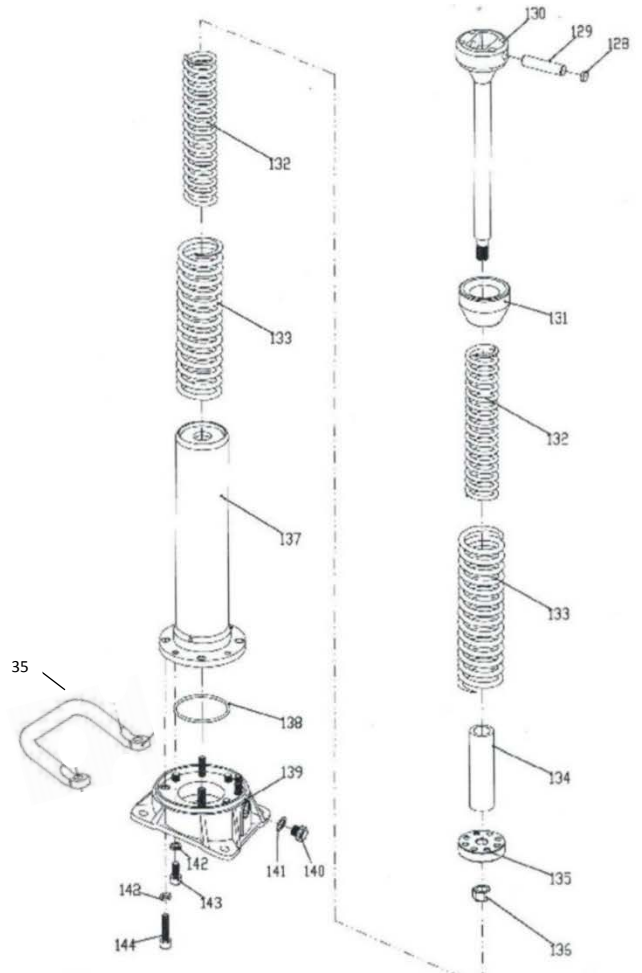
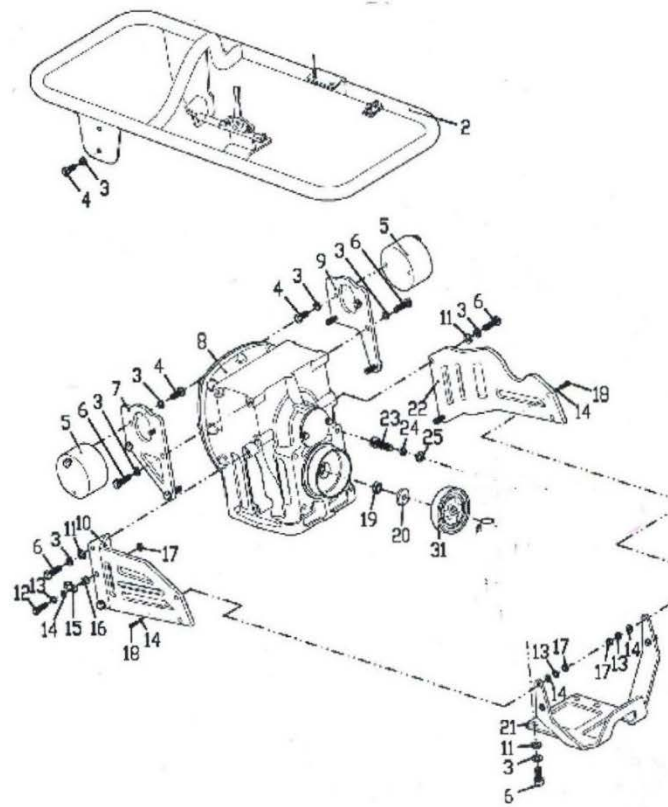
Be cautious not to use: to drive pile foundations, on soil already excessively compacted, or steep inclines. An unbalanced rammer can be hazardous to operate. Tamping Rammers are suitable for compacting cohesive clay, gravels, and for patching work on asphalt, etc.

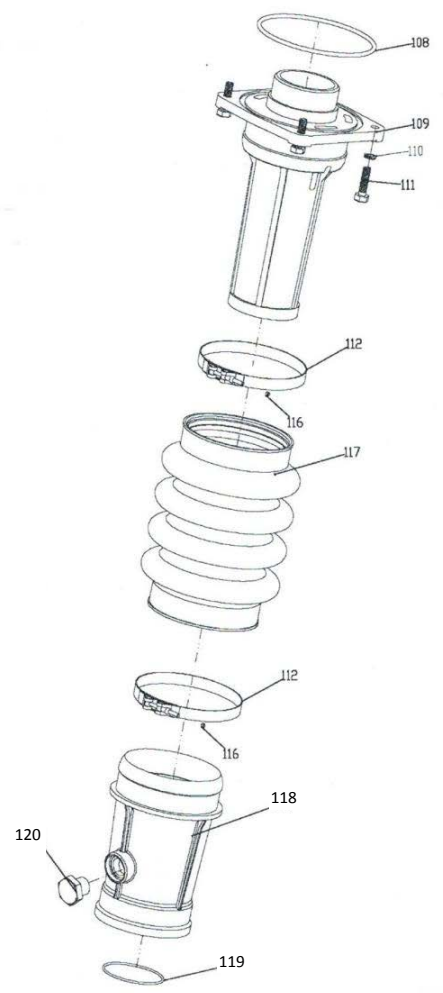
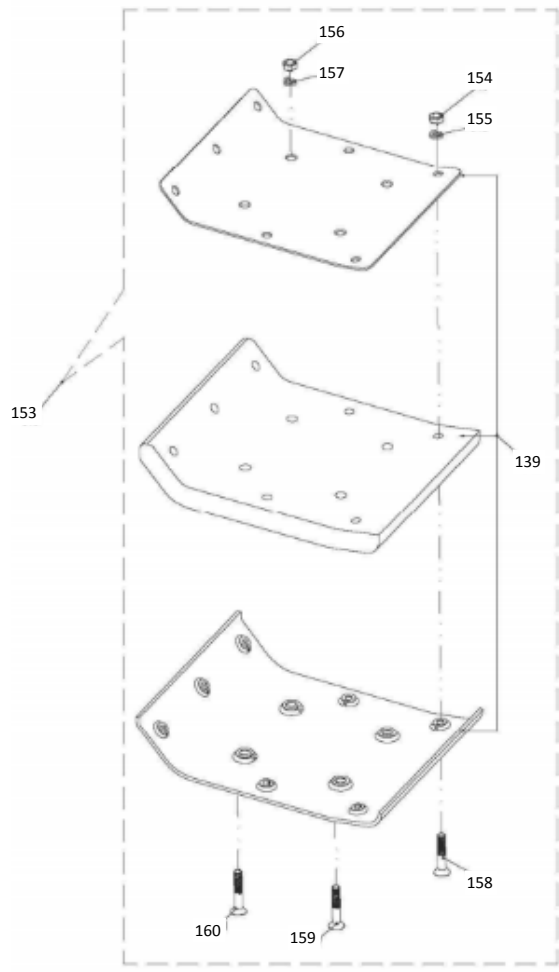
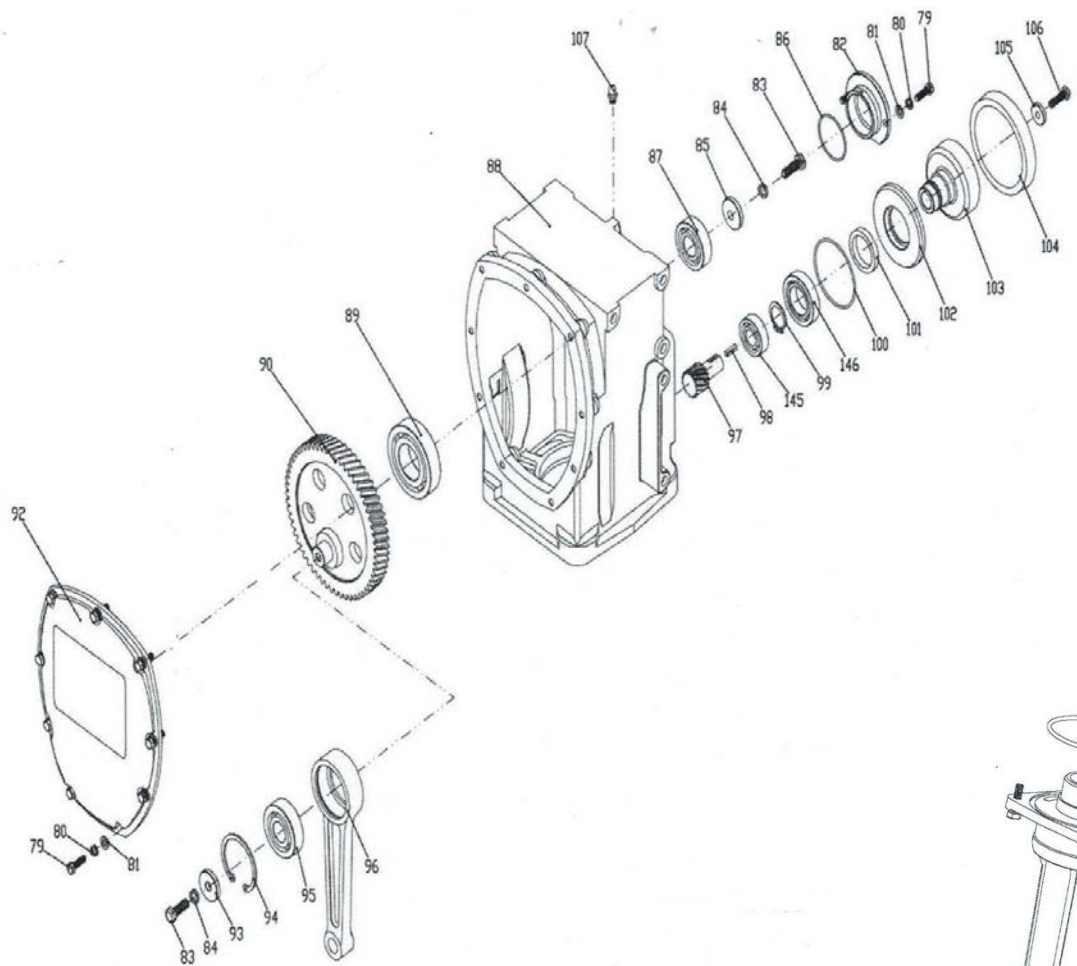


MAXIMUM FACE RUNOUT TO BE .004 T.I.R.
 MAXIMUM PILOT ECCENTRICITY TO BE .004 T.I.R.
 PERMISSIBLE SHAFT RUNOUT TO BE .002 T.I.R.

CASNET THROUGHOUT

UNITS				INCHES		MILLIMETERS		DRAWN	DATE
CONVERSION		CONVERSION		CONVERSION					
INCHES	MILLIMETERS	MILLIMETERS	INCHES	MILLIMETERS	INCHES	MILLIMETERS	VS 04/10/14		
1	25.4	25.4	1	25.4	1	25.4	TRB		
1	25.4	25.4	1	25.4	1	25.4	APP		
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1	25.4	25.4	1	25.4	1	25.4	PRE	04PK2008	
NO.	REVISION	BY & DATE	CHK	AND	SI/2	FINISH	PACKER BROTHERS		





Item No.	Part No.	Description	QTY	Remark
1	MRS62-1000	FUEL TANK ASSY.	1	
2	MRS62-5001-A	HANDLE ASSY.	1	
3	GB93-8	SPRING WASHER 8	18	
4	GB5783-M8x20	HEX BOLT M8x20	8	
5	MRS62-6000	VIBRATION DAMPER	2	
6	GB5783-M8x30	HEX BOLT M8x30	14	
7	MRS62-5003L	BRACKET SET LEFT	1	
8	MRS62-4000	CRANK CASE ASSY	1	
9	MRS62-5003R	BRACKET SET RIGHT	1	
10	MRS62-5104HL	GUARD FRAME - L HONDA	1	
11	GB97.1-8	FLAT WASHER 8	4	
12	GB5783-M6*45	HEX BOLT M6x45	1	
13	GB93-6	SPRING WASHER 6	5	
14	GB97.1-6	FLATWASHER 6	5	
15	100005-06	CLAMP	1	
16	MRS62-5101	WASHER	1	
17	GB889-M6	HEX NUT M6	5	
18	GB818-M6x20	BOLT M6X20	4	
19	MRS80-811101	NUT	1	
20	MRS80-809006	WASHER	1	
21	MRS62-5105H	SIDE COVER FOR HONDA	1	
22	MRS62-5104H	GUARD FRAME - R HONDA	1	
23	GB5783-M8*40	HEX BOLT M8x40 FOR HONDA	4	
24	GB93-8	SPRING WASHER FOR HONDA	4	
25	GB97.1-8	FLAT WASHER FOR HONDA	4	
31	MRS80-809000	CLUTCH	1	
32	GX100	HONDA ENGINE	1	
33	MRS62-3200	GUIDE CYLINDER ASSY.	1	
34	MRS62-3100	SPRING CYLINDER ASSY.	1	
35	MRS62-2006	MANUAL LIFTING HOOK	1	
36	GB889-M12	HEX NUT M12	4	
37	GB93-12	SPRING WASHER 12	4	
38	MRS62-2000	SHOE PLATE ASSY.	1	
39	MRS80-802004-70	BOLT	2	
40	MRS80-802004-75	BOLT	2	
79	GB5783-M6x20	HEX BOLT M6x20	11	
80	GB93-6	SPRING WASHER 6	11	
81	GB97.1-6	FLAT WASHER 6	11	
82	MRS80-804004B	BEARING COVER FOR HONDA	1	
83	GB5783-M8x25	HEX BOLT M8x25	2	
84	GB93-8	SPRING WASHER 8	2	
85	MRS80-804102	WASHER	1	
86	60CLX-OXQ-1	O-RING	1	
87	60CLX-ZC-1	BEARING	1	
88	MRS62-4001	CRANK CASE	1	
89	60CLX-ZC-2	BEARING	1	
90	MRS80-804101A	CRANK GEAR	1	
92	MRS62-4002	GEAR COVER	1	
93	MRS80-804302	WASHER	1	
94	GB893.1-52	RETAINING RING 52	1	
95	60CLX-ZC-3	BEARING	1	
96	MRS80-804301B	CONNECTING ROD	1	
97	MRS80-804201B	GEAR SHAFT	1	
98	GB1096-4x12	KEY	1	
99	GB894.1-35	RETAINING RING 35	1	
100	60CLX-OXQ-2	O-RING	1	
101	60CLX-CXMFQ	GASKET	1	
102	MRS80-808000C	SPACER FOR HONDA	1	
103	MRS80-807000A	CLUTCH DRUM	1	
104	MRS80-808001	SPACER - HONDA KRB4	1	
105	MRS80-804202	WASHER	1	
106	GB5783-M8x30	HEX BOLT M8x30	1	

Item No.	Part No.	Description	QTY	Remark
107	GB1152-M6	EXHAUST	1	
108	60DXTT-OXQ-1	O-RING	1	
109	MRS62-3201	GUIDE CYLINDER	1	
110	GB93-10	SPRING WASHER 10	4	
111	GB5783-M10x35	HEX BOLT M10x35	4	
112	TJBC146-154	BELLOW CLAMP	2	
116	GB889-M6	HEX NUT M6	2	
117	MRS62-3203	BELLOW	1	
118	MRS62-3111	SPRING CYLINDER	1	
119	60GXTT-OXQ-2	O-RING	1	
120	GB1160.2-M24x1.5	OIL LEVEL GAUGE	1	
128	MRS62-3303	PLUG	2	
129	MRS62-3302	PISTON PIN	1	
130	MRS62-3301	PISTON ROD	1	
131	MRS62-3304	STOPPER - UPPER	1	
132	MRS62-3002	SPRING - INNER	2	
133	MRS62-3001	SPRING - OUTER	2	
134	MRS62-3305	STOPPER - LOWER	1	
135	MRS62-3104	PISTON END	1	
136	GB889-M16x1.5	HEX NUT M16	1	
137	MRS62-3102	SPRING CYLINDER	1	
138	60DXZH-OXQ	O-RING	1	
139	MRS62-3101	FOOT PLATE	1	
140	JN/ZQ4450-M14x1.5	PLUG - THREADED	1	
141	MRS80-803112	GASKET	1	
142	GB93-10	SPRING WASHER 10	8	
143	GB70.1-M10x20	HEX BOLT M10x20	4	
144	GB70.1-M10x40	HEX BOLT M10x40	4	
145	T276-6204	BEARING	1	
146	T278-6007Z	BEARING	1	
147	117804.00	Electric Motor	1	
148	BC78137184C	On/Off switch cover	1	
149	BS78137184S	On/Off switch	1	
150	B78137184	On/Off switch box w/ wires	1	
151	003025.16	Capacitor	1	
152	003014.29	Capacitor	1	
153		Foot assy	1	
154	GB889.1-M10	Hexagonal Nut M10-GB889.1	1	
155	GB93-10	Spring Washer 10		
156	GB93-12	Spring Washer 12		
157	GB889.1-M12	Hexagonal Nut M12-GB889.1		
158	MRS80-802005	Screw M10x52		
159	MRS80-802004-70	Screw M12x70		
160	MRS80-802004-75	Screw M12x75		

General Information & Specifications

Definition of Tamping Rammer

The PB78 model tamping rammer is a powerful compacting tool capable of applying a tremendous force in consecutive impacts to a soil surface. Its applications include soil compacting for road, embankments and reservoirs as well as backfilling for gas pipelines, water pipelines and cable installation work.

The impact force of the PB78 levels and uniformly compacts voids between soil particles to increase dry density.

Circular motion is converted to create impact force. The PB78 tamping rammer develops a powerful compacting force at the foot of the rammer. To maintain optimum performance, proper operation and service are essential.

Rammer Gearbox and Spring Cylinder

The PB 78 uses an oil bath lubrication system. Always check the oil level through the oil level sight glass at the rear of the tamping foot.

Controls

Before starting the PB 78 Tamping Rammer identify and understand the function of the controls.

200 - 300 HOURS (Oil Bath)

- Drain oil reservoir on foot housing (Figure 13). Refill with approximately 1.7 pt. (800cc) of 10W-30 motor oil. Oil should be midway in sight glass. Break in oil should be changed after first 50 hours.

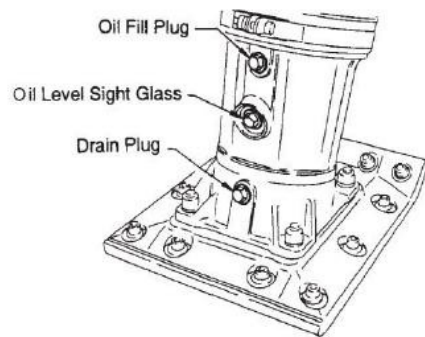


Figure 13. Foot Housing Drain Plug

- 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

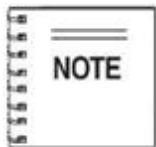
MODEL	PB 78
Overall Height	1055mm (41.5 inches)
Overall Width	440mm (17.3 inches)
Over Length	705mm (27.75 inches)
Shoe Size	335mm x 265mm (13.2 x 10.4 inches)
Stroke	50-85mm (2-3.4 inches)
Impact Force	2,400 lbs./blow
Clutch	Automatic Centrifugal
Operating Weight	148 lbs.

Max. Output	1.5 HP
Max. Governed Speed, No Load	3400 rpm
Cooling System	Air-Cooled
Lubrication System	Oil Bath---10W30 Motor Oil

Safety Message / Alert Symbols

FOR YOUR SAFETY AND THE SAFETY OF OTHERS!

Safety precautions should be followed at all times when operating this equipment. Failure to read and understand the Safety Messages and Operating Instructions could result in injury to yourself and others.



This Owner's Manual has been developed to provide complete instructions for the safe and efficient operation of the Packer Brothers PB78 Electric Tamping Rammer. Refer to the engine manufacturers instructions for data relative to its safe operation.

Before using this rammer, ensure that the operating individual has read and understands all instructions in this manual.

SAFETY MESSAGE ALERT SYMBOLS

The three (3) Safety Messages shown below will inform you about potential hazards that could injure you or others. The Safety Messages specifically address the level of exposure to the operator, and are preceded by one of three words:

DANGER - WARNING - CAUTION

DANGER

You **WILL** be **KILLED** or **SERIOUSLY INJURED** if you **DO NOT** follow these directions.

WARNING

You **CAN** be **KILLED** or **SERIOUSLY INJURED** if you **DO NOT** follow these directions.

CAUTION

You **CAN** be **INJURED** if you **DO NOT** follow these directions.

HAZARD SYMBOLS

Potential hazards associated with the operation of a **PB78 Tamping Rammer** will be referenced with Hazard Symbols which appear throughout this manual, and will be referenced in conjunction with Safety Message Alert Symbols.

WARNING

Burn Hazards

Engine components can generate extreme heat. To prevent burns, **DO NOT** touch these areas while the engine is running or immediately after operations. Never operate the engine with heat shields or heat guards removed.



CAUTION

Rotating Parts Hazards

NEVER operate equipment with covers, or guards removed. Keep fingers, hands, hair and clothing away from all moving parts to prevent injury.



CAUTION

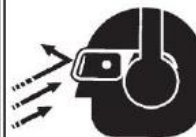
Accidental Starting Hazards

ALWAYS place the **ON/OFF** switch in the **OFF** position when the rammer is not in use.



CAUTION

Eye and Hearing Hazards



ALWAYS wear approved eye and hearing protection.

CAUTION

Electrical Shock Hazard

NEVER unplug by pulling on cord instead of plug or operate in standing water or in direct rainfall. Machine must *always* be operated within operation reach of the cord. **DO NOT** extend cord tightly.

Rules for Safe Operation

! DANGER Read this manual!

Failure to follow instructions in this manual may lead to serious injury or even death! This equipment is to be operated by trained and qualified personnel only! This equipment is for industrial use only.

The following safety guidelines should always be used when operating the PB78e Tamping Rammer:

GENERAL SAFETY

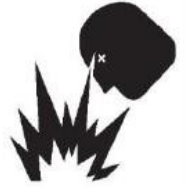
- **DO NOT** operate or service this equipment before reading this entire manual.
- This equipment should not be operated by persons under 18 years of age.
- **NEVER** operate this equipment without proper protective clothing, shatterproof glasses, steel-toed boots and other protective devices required by the job.



- **NEVER** operate this equipment when not feeling well due to fatigue, illness or taking medicine.
- **NEVER** operate this equipment under the influence of *drugs* or *alcohol*.



- **ALWAYS** wear proper respiratory (mask), hearing and eye protection equipment when operating the rammer.
- Whenever necessary, replace nameplate, operation and safety decals when they become difficult read.
- Manufacturer does not assume responsibility for any accident due to equipment modifications.



- **NEVER** operate the rammer in an explosive atmosphere or near combustible materials. An explosion or fire could result causing severe *bodily harm or even death*.
- **ALWAYS** check the machine for loosened threads or bolts before starting.
- **ALWAYS** be sure the operator is familiar with proper safety precautions and operations techniques before using rammer.
- **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.
- **DO NOT** operate this equipment unless all guards and safety devices are attached and in place.
- **CAUTION** must be exercised while servicing this equipment. Rotating and moving parts can cause injury if contacted.
- Keep all *inexperienced* and *unauthorized* people away from the equipment at all times.
- Unauthorized equipment modifications will void all warranties.
- **NEVER** pour or spray water over the engine.

MAINTENANCE

- **NEVER** lubricate components or attempt service on a running rammer.
- **ALWAYS** allow the rammer a proper amount of time to cool before servicing.
- Keep the rammer in proper running condition.
- Fix damage to the rammer immediately and always replace broken parts.
- Dispose of hazardous waste properly. Examples of potentially hazardous waste are used motor oil, fuel and fuel filters.
- **DO NOT** use food or plastic containers to dispose of hazardous waste.

EMERGENCIES

- **ALWAYS** know the location of the nearest *fire extinguisher* and *first aid kit*.