









# RAMMER INSTRUCTION MANUAL

- operation. Pregnant women or infirm persons should consult physician before use.
4. Keep children away during use. Store out of reach of children with engine switch and fuel lever turned off.
  5. Wear steel-toed work boots, ANSI-approved safety goggles, dust mask, ear protection, and heavy-duty work gloves during use.
  6. Keep out from under base.
  7. Move carefully and securely in upright position. Refer to manual for details. Rammer extremely top heavy.
  8. Maintain labels and nameplates on the tool. These carry important safety information.
  9. The Spring Retaining Base Plate retains heavy springs under compression. When removing the Base Plate, follow the instructions in the "Maintenance" section of this manual carefully to avoid serious personal injury.
  10. Never perform service or repairs on the Rammer while it is running. Always stop the engine and remove the spark plug to prevent accidental starting.
  11. Make sure all safety guards are in place and in proper working condition.
  12. People with pacemakers should consult their physician(s) before use. Electromagnetic fields in close proximity to heart pacemaker could cause pacemaker interference or pacemaker failure. In addition, people with pacemakers should adhere to the following: Caution is necessary when near the magneto, spark plug, and park plug wire or a running engine. The engine should always be off if adjustments are to be made.
  13. The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

## SAVE THESE INSTRUCTIONS.

### SPECIFICATIONS

Impact Force	3900 Pounds Maximum
Impact Blows Per Minute	660 < > 700
Shoe Size	14 3/4" x 11"
Rammer Section Oil Capacity & Type	27 Ounces / S.A.E. 20W50
Engine Specifications	4 HP Robin® Engine Recoil Start / Air Cooled / 4 Cycle Powered with Unleaded Gasoline Fuel Tank Capacity: 3/4 Gallon Oil Capacity/Type: 20 Ounces / S.A.E. 10W30 Engine Displacement: 121 CM <sup>3</sup> Engine Model Number: EH12 20 Engine Production Number: EH122YD45007051 Engine Approvals: 2006 U.S. E.P.A. Phase II
Overall Dimensions	41 3/4" H x 15 5/8" W x 26 7/8" L
Net Weight	160 Pounds

#### IMPORTANT!

**This product requires oil and fuel to be added before starting. Attempting to start the Engine without oil WILL ruin the Engine and void the Warranty.**

#### NOTE:

**The Engine's carburetor may need to be adjusted by a qualified mechanic for high-altitude use.**

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**WARNING!** Risk of accidental starting; resulting in serious personal injury. Turn the Power Switch of the tool to its “OFF” position and remove the spark plug before making any adjustments to the tool.

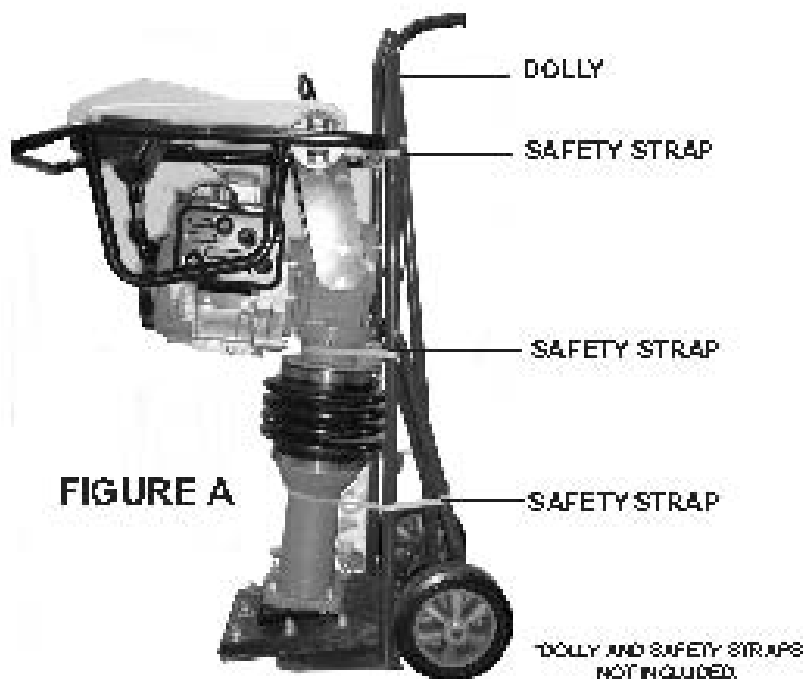
**NOTE:** For additional information regarding the parts listed in the following pages, refer to the Assembly Diagram near the end of this manual.

## OPERATING INSTRUCTIONS

Read the **ENTIRE IMPORTANT SAFETY INFORMATION** section at the beginning of this manual including all text subheadings therein before set-up or use of this product.

### To Transport the Upright Rammer

1. **CAUTION!** The Upright Rammer is extremely top heavy. Move carefully and securely in an upright position. With additional assistance, strap the Rammer to a dolly capable of supporting the weight of the Rammer. Then carefully move the Rammer to the work location. (See Figure A).

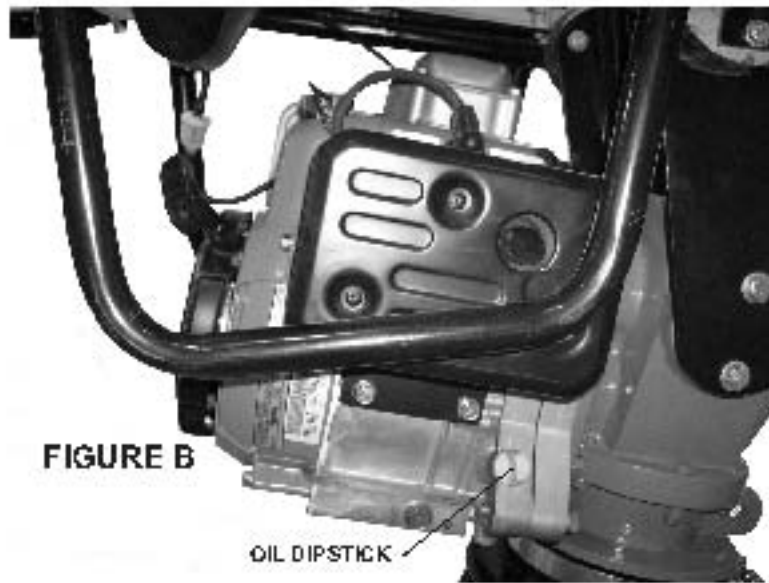


### Pre-start instructions

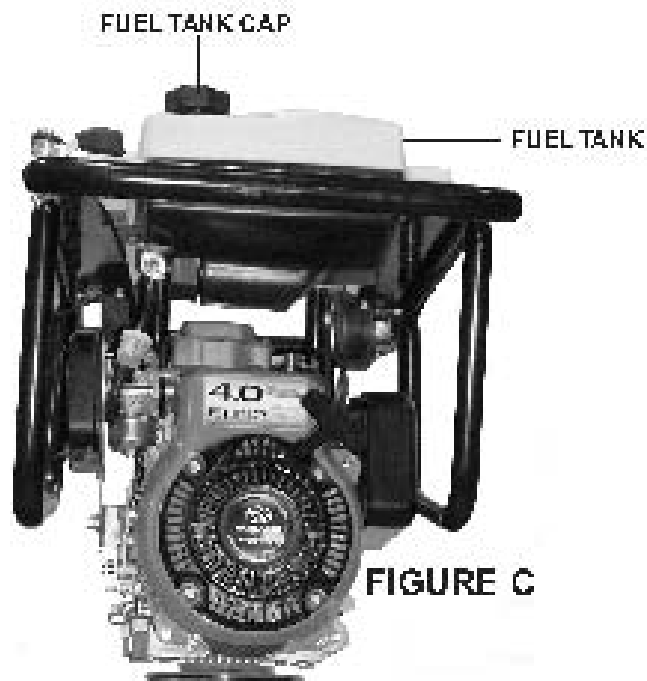
1. **IMPORTANT!** Your Warranty is voided if you do not put engine oil in the Engine's crankcase prior to its first use. Before each use, check the oil level. Never run the Engine with low or no engine oil. Running the Engine with low or no engine oil **WILL** permanently damage the Engine and void the Warranty.
2. The Engine **MUST** be filled with a high quality, 10W/30 grade engine oil.

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3. To add engine oil, unscrew and remove the Oil Dipstick. Pour approximately **20 ounces** of engine oil into the Oil Receptacle. **Do not overfill**. Then screw the Oil Dipstick back into the Oil Receptacle. (See Figure B).



4. To fill the Fuel Tank, unscrew and remove the Fuel Tank Cap. Fill the Fuel Tank with approximately  $\frac{3}{4}$  gallon of unleaded gasoline. **Avoid fuel spills**. Wipe off any spilled fuel. Then replace the Fuel Tank Cap. **WARNING!** NEVER attempt to fill the Fuel Tank when the Engine is running or hot. (See Figure C).







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3. **EVERY 300 OPERATING HOURS OR 6 MONTHS**, drain the old oil from the Transmission Housing (3A) and refill with approximately **27 ounces** of clean, new S.A.E. 20W/50 oil. To do so, unscrew and remove the Hex Bolt (1A) located at the top of the Transmission Housing. Unscrew and remove the Hex Bolt (23B) located at the bottom of the Cylinder Cover Body (21B) and allow the old oil to drain into a proper container. Allow the old oil to completely drain. Replace the Hex Bolt at the bottom of the Cylinder Cover Body. Refill the Transmission Housing with new oil. Then replace the Hex Bolt at the top of the Transmission Housing. **(See Figure G)**.
4. **AFTER USE**, clean external surfaces of the tool with a garden hose. Do not spray the Engine with water or other liquids.
5. **WHEN STORING**, drain all fuel out of the Engine's Fuel Tank **(See Engine manufacturer's manual)**. If this is not done, old fuel in the Engine's Fuel Tank and Carburetor may become contaminated (average "fuel life" is approximately 90 days) and prevent the Engine from starting until cleaned out. Do not drain the oil. Always store the Upright Rammer in a clean, dry, safe location out of reach of children and other unauthorized people.
6. **ENGINE MAINTENANCE**: Refer to the Engine manufacturer's manual (included) for complete Engine maintenance instructions.
7. **CAUTION!** All maintenance, service, and repairs not mentioned in this manual must only be performed by a qualified service technician.

PROBLEM	POSSIBLE CAUSES	PROBABLE SOLUTIONS
Engine will not start	<ol style="list-style-type: none"> <li>1. Power Switch is in "OFF" position.</li> <li>2. Low on fuel or oil.</li> <li>3. Faulty Spark Plug.</li> <li>4. Throttle Lever in wrong position.</li> <li>5. Fuel Valve in "CLOSED" position.</li> <li>6. Spark Plug Wire loose.</li> <li>7. Fuel Line clogged.</li> <li>8. Air Filter clogged.</li> <li>9. Fuel contaminated.</li> <li>10. Faulty ignition system.</li> </ol>	<ol style="list-style-type: none"> <li>1. Turn Power Switch to "ON" position.</li> <li>2. Add fuel or oil.</li> <li>3. Clean or replace Spark Plug.</li> <li>4. Properly adjust Throttle Lever.</li> <li>5. Open Fuel Valve.</li> <li>6. Attach Wire to Spark Plug.</li> <li>7. Clean Fuel Line.</li> <li>8. Clean Air Filter.</li> <li>9. Drain fuel and replace with new fuel.</li> <li>10. Have a qualified technician check ignition system.</li> </ol>
Rammer not compacting properly.	<ol style="list-style-type: none"> <li>1. Improper use of machine.</li> </ol>	<ol style="list-style-type: none"> <li>1. Refer to "Machine Operation" section.</li> </ol>

# RAMMER INSTRUCTION MANUAL

## PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER OR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT, OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS, AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

## PARTS LIST - CRANK CASE & ENGINE

ITEM	PART #	Description	QTY	ITEM	PART #	Description	QTY
1	31360	Crank Case	1	28	31377	Spacer	1
2	31438	Bearing 6207	1	29	31378	Clutch Drum	1
3	31361	Crank Gear	1	30	31379	Retaining Ring	1
4	31437	Bearing 6304	1	31	11614	Lock Washer, M8	1
5	31362	Connecting Rod	1	32	11731	HHCS, M8-1.25x30mm	1
6	31363	Retaining Ring	1	33	31369	Bearing 6204	1
7	31364	Gasket, Front Cover	1	34	31380	Retaining Ring	1
8	31365	Retaining Ring	1	35	11614	Lockwasher, M8	1
9	11614	Lock Washer, M8	1	36	31381	O-Ring 43.7x1.8	1
10	11619	HHCS, M8-1.25x25mm	1	37	11619	HHCS, M8-1.25x25mm	1
11	31366	Gear Cover	1	38	31382	Bearing Cover	1
12	14447	Flat Washer, M6	9	39	14448	Lock Washer, M6	2
13	14448	Lock Washer, M6	9	40	51098	HHCS, M6-1.0x20mm	2
14	51058	HHCS, M6-1.0x20mm	9	41	31372	Protection Frame, Left	1
15	31367	Key	1	42	10066	Hex Nut, M12-1.25	1
16	31368	Gear Shaft	1	43	10993	Flat Washer 12	1
17	31369	Bearing 6204	1	49	31383	Clutch Assembly	1
18	31370	Vibration Damper	2	50	31384	Key 4x12	1
19	11621	Lock Washer, M10	4	51	31385	Element	1
20	14082	HHCS, M10-1.25x20mm	4	52	31386	Hose Clamp 25-38 (3.0HP)	2
21	10999	HHCS, M8-1.25x20mm	4	53	31387	Intake Pipe	1
22	11614	Lock Washer, M8-1.25x20mm	4	54	31388	Air Cleaner Element	1
23	31371	Protection Frame, Right	1	55	31389	Packing, Air Cleaner	1
24	31373	Retaining Ring 35mm	1	56	31390	O-Ring 7.5x1.8	1
25	31374	Bearing 60072	1	57	31391	Air Cleaner Cover	1
26	31375	Seal 40x52x8	1	58	31392	Knob	1
27	31376	O-Ring 95x2.65	1	59	31393	Air Cleaner Assembly	1

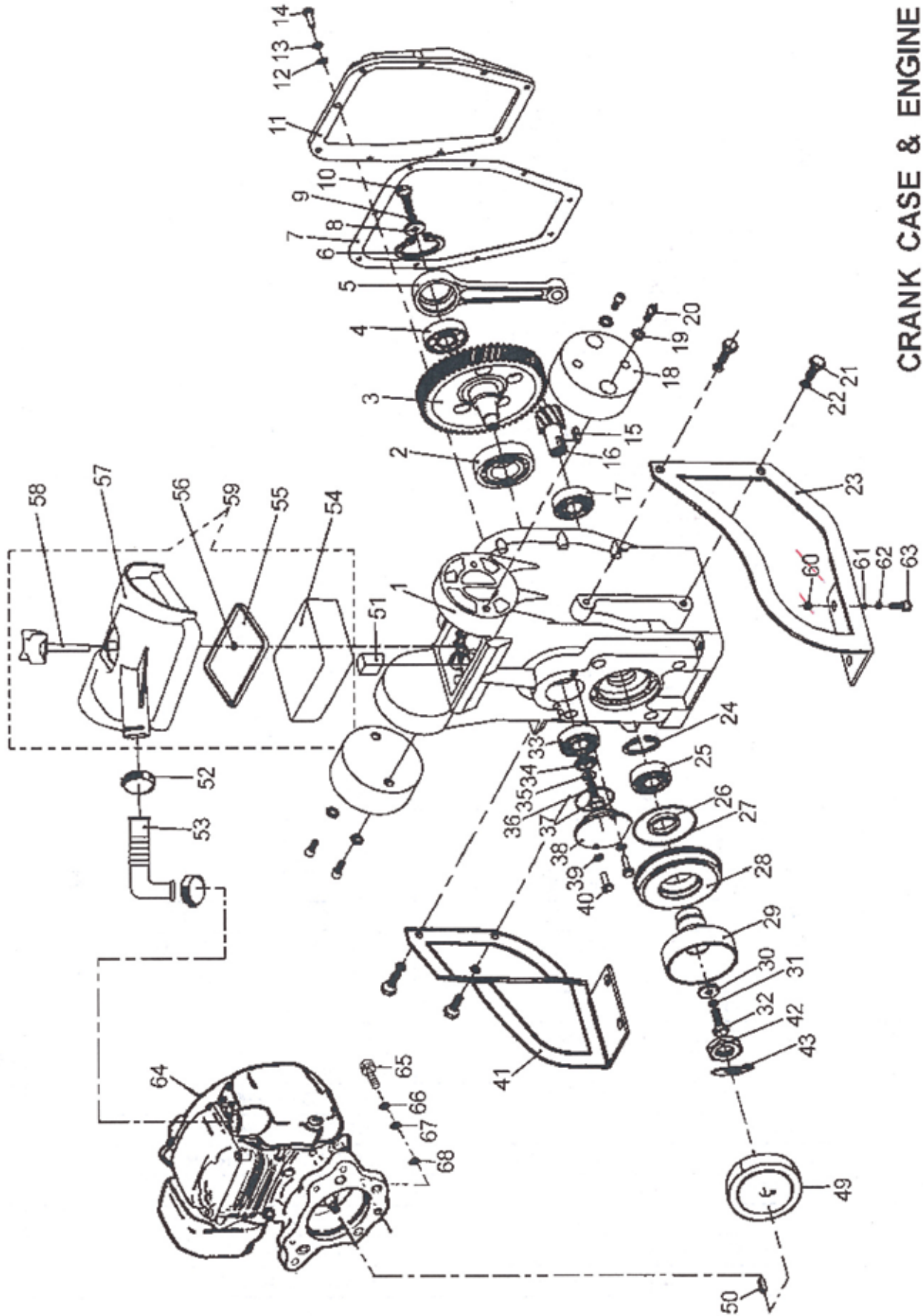
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## CRANK CASE & ENGINE



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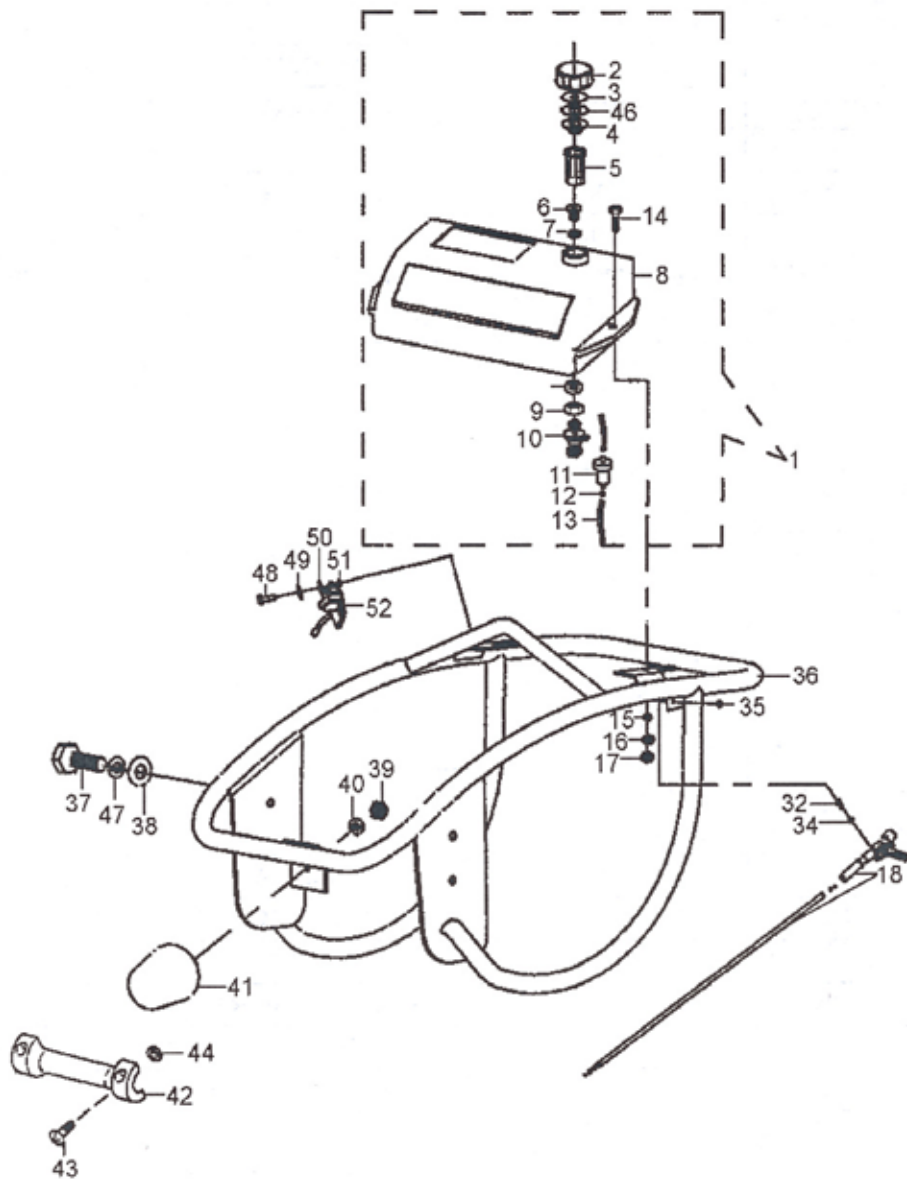
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## PARTS LIST - TANK & HANDLE

ITEM	PART #	Description	QTY	ITEM	PART #	Description	QTY
1	31394	Tank Assembly	1	34	14448	Lock Washer, M6	2
2	31365	Tank Cap	1	35	10069	Hex Nut, M6-1.0	2
3	31396	Packing, Fuel Tank	1	36	31407	Handle	1
4	31397	Holder, Cock	1	37	31008	HHCS, M10-1.5x20mm	4
5	31398	Oil Strainer	1	38	11621	Lock Washer, M10	4
6	31399	Connector	1	39	11615	Hex Nut, M8-1.25	1
7	31400	O-Ring 14x3.55	1	40	11618	Lock Washer, M8	1
8	31401	Tank	1	41	31408	Rubber	1
9	10067	Hex Nut M14-1.5	1	42	31409	Roller	1
10	31402	Fuel Cock	1	43	10070	SHCS, MS-0.8x16mm	1
11	31403	Fuel Filter	1	44	30843	Lock Nut, M5-0.8	1
12	31404	Hose Clamp	2	46	31410	Packing, Fuel Tank	1
13	31405	Fuel Hose	2	47	14447	Flat Washer	1
14	11731	HHCS, M8-1.25x30	2	48	10074	Screw, M4-0.7x14mm, ZP	2
15	11667	Flat Washer, M8	2	49	10075	Lock Washer, M4	2
16	11618	Lock Washer, M8	2	50	10076	Flat Washer, M4	2
17	11615	Hex Nut, M8	2	51	11036	Hex Nut, M4-0.7	1
18	31406	Throttle Control Assembly	1	52	11322	On-Off Switch	1
32	10068	FHSCS, M6-1.0x16	2				

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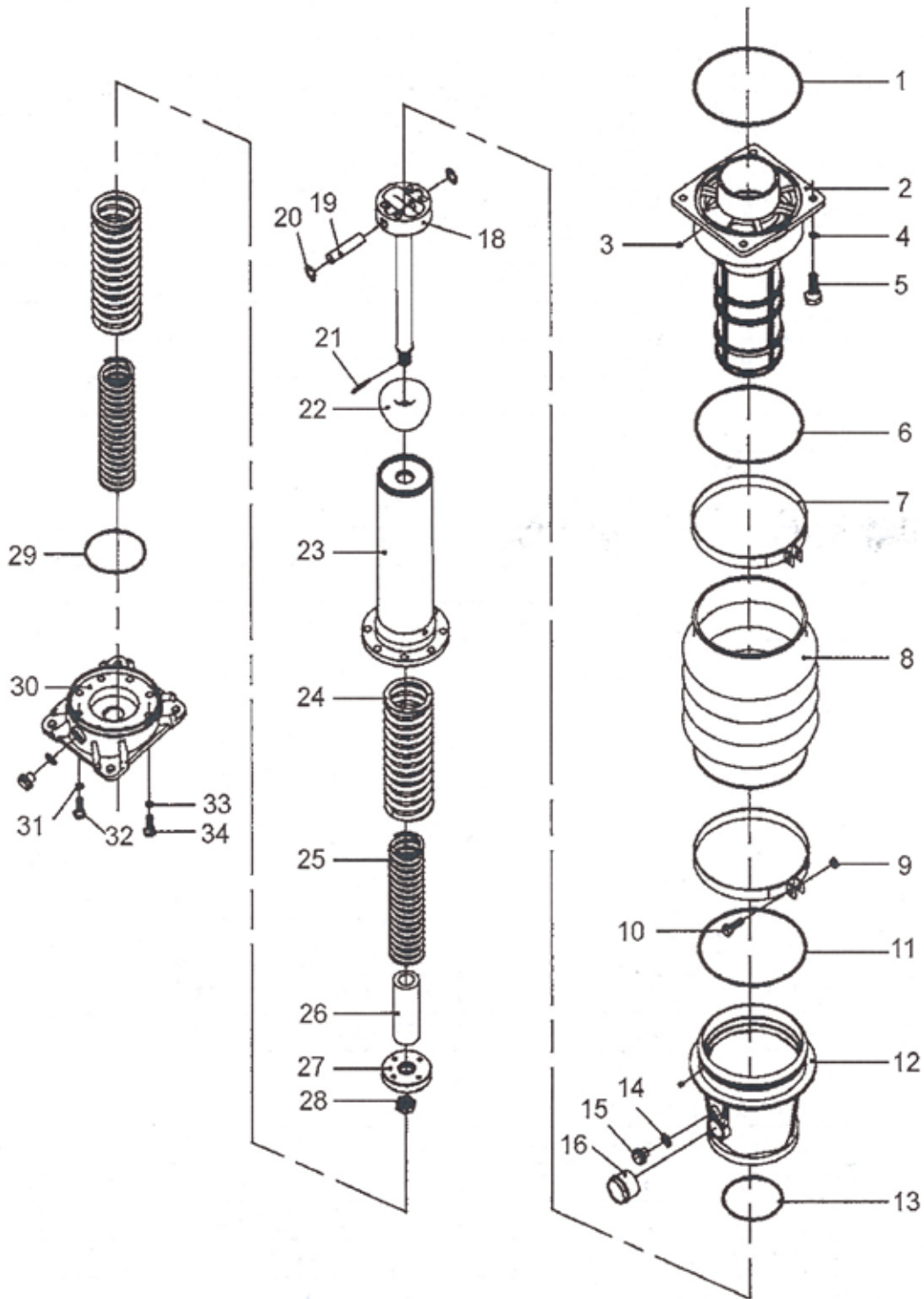
## TANK & HANDLE

# RAMMER INSTRUCTION MANUAL

## PARTS LIST - Guide Cylinder & Spring Assembly

ITEM	PART #	Description	QTY	ITEM	PART #	Description	QTY
1	31411	O-Ring 160x5.3	1	19	31423	Piston Pin	1
2	31312	Guide Cylinder	1	20	31424	Retaining Ring 1	2
3	31413	Pin 6x8	2	21	31440	Pin 3x32	1
4	11621	Lock Washer 10	4	22	31425	Stopper, Upper	1
5	10077	HHCS, M10-1.5x35mm	4	23	31426	Spring Cylinder	1
6	31414	O-Ring 160x3.55	4	24	31427	Spring, Outer	2
7	31415	Bellow Clamp	2	25	31428	Spring, Inner	2
8	31416	Bellow	1	26	31429	Stopper, Lower	1
9	11615	Hex Nut, M8-1.25	2	27	31430	Piston End	1
10	10452	HHCS, M8-1.25x40mm	2	28	10071	Hex Nut M18-1.5	1
11	31417	O-Ring 160x3.55	1	29	31431	O-Ring 87.5x3.55	1
12	31418	Protection Sleeve	1	30	31432	Foot Plate	1
13	31376	O-Ring 95x2.65	1	31	11621	Lock Washer, M10	4
14	31419	Copper Wash, M14	2	32	10072	SHCS, M10-1.25x20mm	4
15	31420	Plug M14x1.5	2	33	11621	Lock Washer, M10	4
16	31421	Level Gauge	1	34	10073	SHCS, M10-1.5x40mm	4
18	31422	Piston Rod	1				

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## GUIDE CYLINDER & SPRING ASSY.

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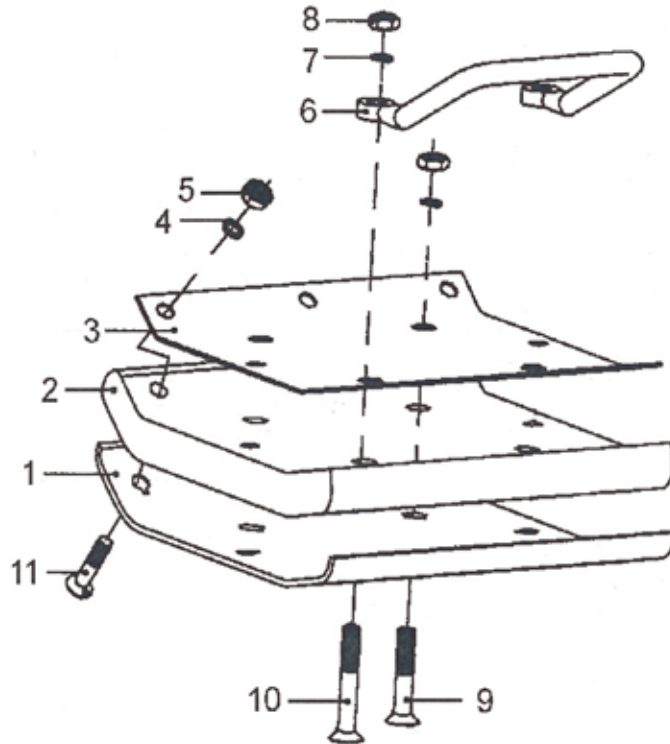
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## PARTS LIST - FOOT ASSEMBLY

ITEM	PART #	Description	QTY	ITEM	PART #	Description	QTY
1	31433	Tamping Plate	1	7	10735	Lock Washer 12	4
2	31434	Taming Foot	1	8	10956	Lock Nut M12-1.75	4
3	31435	Foot Cover	1	9	31441	Screw M12-1.75x65mm	2
4	11621	Lock Washer 10	7	10	31442	Screw M12-1.75x75mm	2
5	11802	Lock Nut, M10	7	11	31443	Screw M10-1.5x50mm	7
6	31436	Lifting Hook	1				



FOOT ASSY.

