

OPERATOR'S SAFETY AND SERVICE MANUAL



GP12, GP15, GP18

This manual covers the following serial numbers
and higher for each model listed:

GP12.....	1120780
GP15.....	1160300
GP18.....	1180600



VIBRATORY PLATES

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TABLE OF CONTENTS

Safety Information	1	Service	7
Introduction	1	Torque Chart	7
Safety Precautions	1	Service Tools	7
Safety Decals	1	Engine Maintenance	7
Specifications	3	Engine RPM	7
Operation	4	Changing Exciter Oil	7
Introduction	4	Cleanup	7
Before Starting & Operating	4	Belt Adjustment	8
Starting Engine	4	Engine Removal	8
Operating	4	Exciter Disassembly	8
Stopping Engine	4	Exciter Assembly	8
Lifting/Transporting	4	Parts Replacement Cycles and Tolerances	9
Maintenance	6	Replacement Parts	10
Maintenance Schedule	6	Exciter Assembly	12
Fluid Levels	6	Main Assembly	14
Engine Maintenance	6	Handle Assembly	16
Engine Speed	6	Optional Equipment	18
		Warranty	20



WARNING



CALIFORNIA PROPOSITION 65 WARNING

Engine exhaust and some of its constituents are known in the state of California to cause cancer, birth defects, and other reproductive harm.

SAFETY INFORMATION

Introduction



This Safety Alert Symbol is used to call attention to items or operations which may be dangerous to those operating or working with this equipment. The symbol can be found throughout this manual and on the unit. Please read these warnings and cautions, along with all decals, carefully before attempting to operate the unit. Make sure every individual who operates or works with this equipment is familiar with all safety precautions.

WARNING

GENERAL WARNING. Indicates information important to the proper operation of the equipment. Failure to observe may result in damage to the equipment and/or severe bodily injury or death.

CAUTION

GENERAL CAUTION. Indicates information important to the proper operation of the equipment. Failure to observe may result in damage to the equipment.

Safety Precautions



LETHAL EXHAUST GAS: An internal combustion engine discharges carbon monoxide, a poisonous, odorless, invisible gas. Death or serious illness may result if inhaled. Operate only in an area with proper ventilation. **NEVER OPERATE IN A CONFINED AREA!**



DANGEROUS FUELS: Use extreme caution when storing, handling and using fuels, as they are highly volatile and explosive in vapor state. Do not add fuel while engine is running. Stop and cool the engine before adding fuel. **DO NOT SMOKE!**



SAFETY GUARDS: It is the owner's responsibility to ensure that all guards and shields are in place and in working order.



IGNITION SYSTEMS: Breakerless, magneto, and battery ignition systems can cause severe electrical shocks. Avoid contacting these units or their wiring.



SAFE DRESS: Do not wear loose clothing, rings, wristwatches, etc. near machinery.



NOISE PROTECTION: Wear OSHA specified hearing protection devices.



EYE PROTECTION: Wear OSHA specified eye shields, safety glasses, and sweat bands.



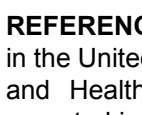
FOOT PROTECTION: Wear OSHA specified steel-tipped safety shoes.



HEAD PROTECTION: Wear OSHA specified safety helmets.



DUST PROTECTION: Wear OSHA specified dust mask or respirator.



OPERATOR: Keep children and bystanders off and away from the equipment.

REFERENCES: For details on safety rules and regulations in the United States, contact your local Occupational Safety and Health Administration (OSHA) office. Equipment operated in other countries must be operated and serviced in accordance and compliance with any and all safety requirements of that country. The publication of these safety precautions is done for your information. MBW does not by the publication of these precautions, imply or in any way represent that these are the sum of all dangers present near MBW equipment. If you are operating MBW equipment, 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.

Safety Decals

Carefully read and follow all safety decals. Keep them in good condition. If decals become damaged, replace as required. If repainting the unit, replace all decals. Decals are available from authorized MBW distributors. Order the decal set listed on the following page(s).



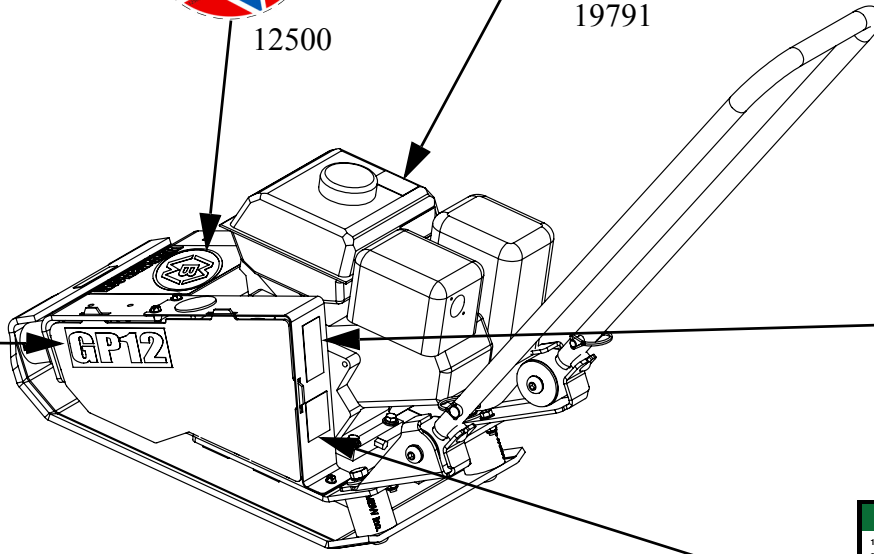
WARNING
 OPERATION OF THIS EQUIPMENT MAY
 CREATE SPARKS THAT CAN START FIRES
 AROUND DRY VEGETATION. A SPARK
 ARRESTER MAY BE REQUIRED. THE
 OPERATOR SHOULD CONTACT LOCAL FIRE
 AGENCIES FOR LAWS OR REGULATIONS
 RELATING TO FIRE PREVENTION 19791

12500

19791

GP12

20786-GP12
 20787-GP15
 20788-GP18



WARNING

ROTATING PARTS
 can crush and cut.
 Keep hands away!
 12573

12573

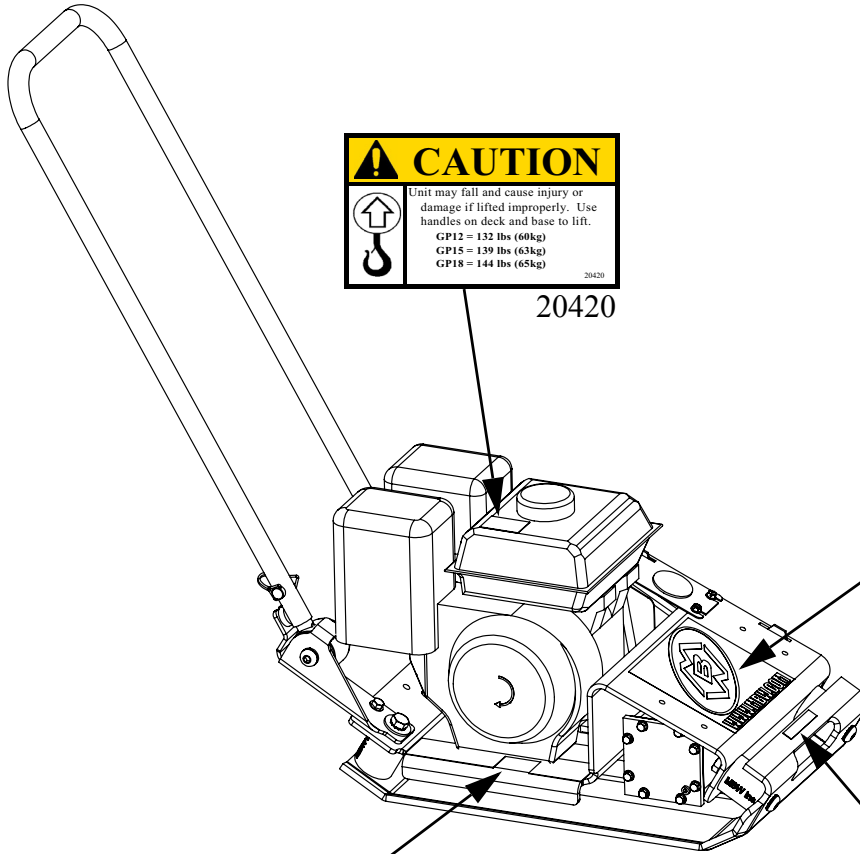
PLATES
OPERATING INSTRUCTIONS
 1. Check engine oil.
 2. Open fuel valve.
 3. Choke engine. A warm engine may not need to be choked.
 4. Open throttle part way.
 5. Pull starter rope.
 6. After starting: open choke, return throttle to idle position.
 7. During operation, when excessive kickback is noticed, maximum compaction has been reached.
 8. To stop: Return throttle to idle position, use engine stop switch, close fuel valve.
 13482

13482

CAUTION

 Unit may fall and cause injury or damage if lifted improperly. Use handles on deck and base to lift.
 GP12 = 132 lbs (60kg)
 GP15 = 139 lbs (63kg)
 GP18 = 144 lbs (65kg)
 20420

20420



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15874

CAUTION

 Read the Operating Instructions before operating this piece of equipment.
 Keep unauthorized and untrained people away from this equipment.
ROTATING & MOVING PARTS!
 Make sure all guards and safety devices are in place.
 Failure to comply could result in serious bodily injury. 20119

Wear approved hearing protection, foot protection, eye protection and head protection.
SHUT OFF the motor before servicing or cleaning.
DO NOT RUN in an enclosed area. The engine produces carbon monoxide, a **POISONOUS GAS**. 20119

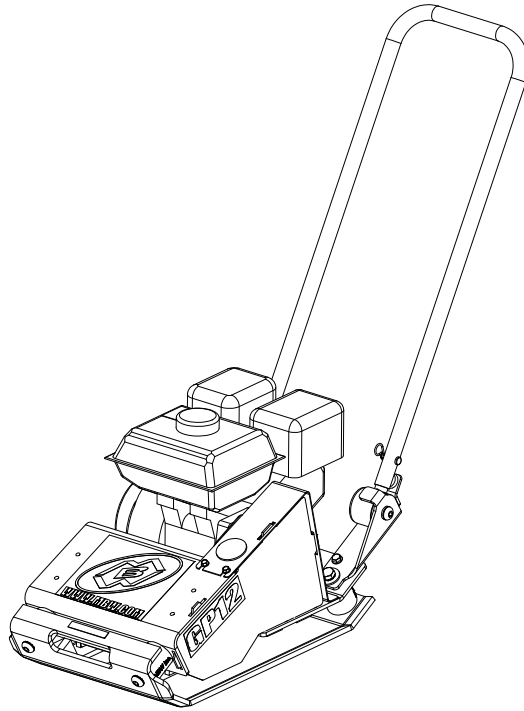
20119

PATENT PENDING
01504

01504

Safety Decals (Decal Set #12100)

SPECIFICATIONS



	AP12	GP12	AP15	GP15	AP18	GP18
CENTRIFUGAL FORCE	1920 lbs (873 kg)	1920 lbs (873 kg)	2000 lbs (898 kg)	2000 lbs (898 kg)	2780 lbs (1261kg)	2780 lbs (1261kg)
EXCITER (VPM)	5240	5240	5350	5350	5240	5240
TRAVEL SPEED	83ft./min. (25m/min.)	83ft./min. (25m/min.)	68ft./min. (21m/min.)	68ft./min. (21m/min.)	75ft./min. (23m/min.)	75ft./min. (23m/min.)
COMPACTION DEPTH	10 in. (25 cm)	10 in. (25 cm)	10 in. (25 cm)	10 in. (25 cm)	10 in. (25 cm)	10 in. (25 cm)
WIDTH & LENGTH	13 x 22.5 in. (33 x 57 cm)	13 x 22.5 in. (33 x 57 cm)	16 x 22.5 in. (40 x 57 cm)	16 x 22.5 in. (40 x 57 cm)	18 x 22.5 in. (46 x 57 cm)	18 x 22.5 in. (46 x 57 cm)
OPERATING WEIGHT HONDA	134 lbs/61 kg no water 152 lbs/69 kg full water	130 lbs (59 kg)	143 lbs/65 kg no water 161 lbs/73 kg full water	139 lbs (63 kg)	165 lbs/75 kg no water 183 lbs/83 kg full water	161 lbs (73 kg)
ENGINE SPEED (RPM)	3400	3400	3475	3475	3400	3400
WATER TANK CAPACITY	2.3 gal. (8.7 l)		2.3 gal. (8.7 l)		2.3 gal. (8.7 l)	
NOISE LEVEL	84-94 dBA					
ENGINE OPTIONS	HONDA GX120 (118 cm) ³ ROBIN EX13 (126 cm) ³ ROBIN EX17 (169 cm) ³ BRIGGS 550 (127 cm) ³					

Specifications subject to change without notice

- No universal method or formula has been accepted for determining "Compaction Force". All manufactures employ their own method or formula.

OPERATION

Introduction

MBW equipment is intended for use in very severe applications. They are powered by four cycle engines and are available in different sizes and a selection of engines.

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

The MBW GP12, GP15, GP18 compactors are intended to compact various types of soil. Recommended soil types include granular soils and gravel & sand mixtures. These compactors are not intended to be used on cohesive soils such as clay or hard surfaces like concrete.

Before Starting & Operating

- REMEMBER! It is the owner's responsibility to communicate information on the safe use and proper operation of this unit to the operators.
- Review ALL of the Safety Precautions listed on page 1 of this manual.
- Familiarize yourself with the operation of the machine and confirm that all controls function properly.
- Know how to STOP the machine in case of an emergency.
- Make sure hands, feet, and clothing are at a safe distance from any moving parts.
- OIL LEVEL - Check the oil level in the engine. For more information see "Lubrication" under the respective engine's "Owners Manual" or the Maintenance section of this manual.
- AIR CLEANER - Check to ensure element is in good condition and properly installed.
- FUEL SUPPLY - The engines on MBW equipment require an automotive grade of clean, fresh, unleaded gasoline.
- FUEL FILTER - If clogged or damaged, replace.

Starting Engine

1. Open fuel valve.
2. Turn engine switch to "ON".
3. Set throttle to idle.
4. Choke engine if necessary (you may not need to choke a warm engine).
5. Pull starter rope repeatedly until engine starts.
6. After starting engine, open choke gradually and let engine warm up at idle.

Operating

1. After engine warms up open fully open throttle. The compactor will begin vibrating and moving forward. The number of passes required to reach a desired compaction level will depend on the type and moisture content of soil. Maximum soil compactions has been reached when excessive kickback is noticed in the compactor.
2. When using a compactor on asphalt a water sprinkling system is required to help prevent the bottom plate from adhering to the hot asphalt surface.

Stopping Engine

1. Move throttle to idle position.
2. Let engine idle for one or two minutes.
3. Turn switch on engine to "STOP" position.
4. Turn off fuel valve.

Lifting/Transporting

1. The unit can be lifted by the handles in front and back of the unit as shown in figure 2.
2. The unit must be transported in the upright position. DO NOT lay machine on its side or top.
3. Secure or tie down unit using the lifting handles.



WARNING



Always stop the engine before:

Adding fuel.

Leaving the equipment unattended for any amount of time.

Before making any repairs or adjustments to the machine.

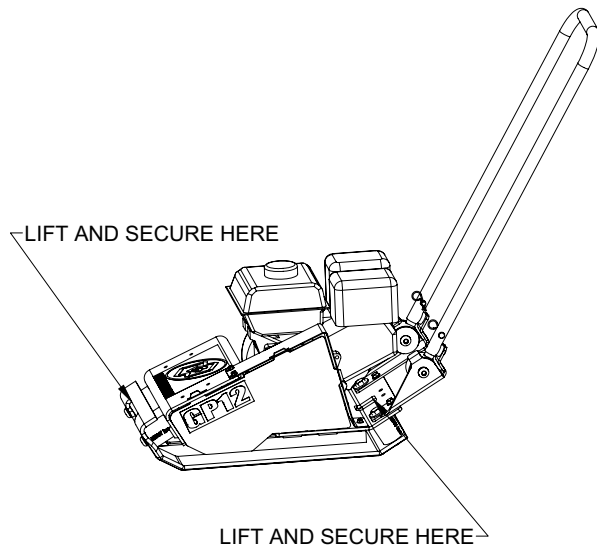


FIGURE 2

MAINTENANCE



WARNING



Always exercise the stopping procedure before servicing or lubricating the unit.

After servicing the unit, replace and fasten all guards, shields, and covers to their original positions before resuming operation.



CAUTION



Always verify fluid levels and check for leaks after changing fluids.

Do not drain oil onto ground, into open streams, or down sewage drains.

Maintenance Schedule

SYSTEM	MAINTENANCE	EACH USE	EVERY 50 HOURS	EVERY 250 HOURS	YEARLY
Engine	Refer to engine operator/owner manual	X			
Exciter	Check for oil leaks	X			
	Change oil			X	X
	Tighten Bolts ¹		X		X
Hardware	Check and tighten as needed ¹		X		X
Shockmounts	Check for cracks or tears		X		X

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

Fluid Levels

SYSTEM	FLUID VOLUME	RECOMMENDED OIL
Exciter	2 oz (GP12 &12) 1.5 oz (GP18)	MBW Ground Pounder [®] Exciter Oil ¹
Engine	Refer to engine operator/owner manual	

1. MBW #01058---- 6-Pack (8 oz bottles)
MBW #17320---- 1 quart (32 oz)

Engine Maintenance

Refer to the engine owner's manual for maintenance intervals and procedures.

Engine Speed

1. The engine speed is factory set according to the specifications section of this manual. Do not tamper with the governor setting. The governor establishes safe operating limits which must not be exceeded.

SERVICE

Assembly and disassembly should be performed by a service technician who has been factory trained on MBW equipment. The unit should be clean and free of debris. Pressure washing before disassembly is recommended.

- Prior to assembly, wash all parts in a suitable cleaner or solvent.
- Check moving parts for wear and failure. Refer to the Replacement section in this manual for tolerance and replacement cycles.
- All shafts and housings should be oiled prior to pressing bearings. Also, ensure that the bearings are pressed square and are seated properly.
- All bearings should be replaced when rebuilding any exciter or gearbox.
- All gaskets and seals should be replaced after any disassembly.

Torque Chart

SIZE	GRADE 2	GRADE 5	GRADE 8
1/4-20	49 in·lbs	76 in·lbs	9 ft·lbs
1/4-28	56 in·lbs	87 in·lbs	10 ft·lbs
5/16-18	8 ft·lbs	13 ft·lbs	18 ft·lbs
5/16-24	9 ft·lbs	14 ft·lbs	20 ft·lbs
3/8-16	15 ft·lbs	23 ft·lbs	33 ft·lbs
3/8-24	17 ft·lbs	26 ft·lbs	37 ft·lbs
7/16-14	24 ft·lbs	37 ft·lbs	52 ft·lbs
7/16-20	27 ft·lbs	41 ft·lbs	58 ft·lbs
1/2-13	37 ft·lbs	57 ft·lbs	80 ft·lbs
1/2-20	41 ft·lbs	64 ft·lbs	90 ft·lbs
9/16-12	53 ft·lbs	82 ft·lbs	115 ft·lbs
5/8-11	73 ft·lbs	112 ft·lbs	159 ft·lbs
5/8-18	83 ft·lbs	112 ft·lbs	180 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			

Service Tools

Part No.	Description
01629	Test Mat
12100	Decal Set

Engine Maintenance

1. Refer to engine Owner's Manual for maintenance schedule.

Engine RPM

1. Refer to the engine Owner's Manual for procedure to set the operating and idle speed.
2. The engine operating speed should be set to the RPM listed in the Specifications section (Page 3).
3. The engine idle speed should not exceed 1800 RPM. If the idle speed is greater than 1800 RPM the clutch may not disengage.

Changing Exciter Oil

Refer to **EXCITER ASSEMBLY**, page 12.

1. Allow machine to completely cool down before performing any service or maintenance.
2. Clean debris from exciter, engine deck and base plate.
3. Remove drain plug (Figure 3), and tilt plate to the right so the oil drains from the exciter housing into a pan.
4. After the oil is drained, tilt the plate to the left and wipe any excess oil from the plate. Do not get debris in the exciter drain hole.
5. Fill the exciter housing with MBW Inc. Grounder Pounder® exciter oil according to the fluid level specified in the Maintenance section of this manual. **DO NOT OVERFILL - over filling can result in excessive temperatures in the exciter.**
6. Apply pipe sealant to the plug and reinstall.
7. Discard the used oil and any contaminated debris in a proper container.

Cleanup

1. Remove dirt and debris from plate daily.
2. If repainting plate, be sure that all decals are masked.
3. Replace any decals that are damaged.

Belt Adjustment

Refer to Main Assembly, page 13.

1. Remove hardware(#15) securing painted belt guard (#10) to engine deck and remove belt guard(#10). Remove plastic belt guard (#7) for full access to belt.
2. Apply moderate thumb pressure to belt about half way between pulleys. When properly adjusted the belt should deflect approximately 3/8" (9mm). If the belt is adjusted correctly reinstall belt guard and hardware.
3. To adjust belt tension loosen the four hex head cap screws (#17) screws securing engine to engine deck.
4. Push engine towards the back of the plate. While holding pressure on the engine retighten the four hex head cap screws (#17) securing engine to engine deck.
5. Recheck belt tension as described in Step 2 and readjust if necessary until the proper tension is reached.
6. Reinstall belt guards (#7, #10) (#7 first), using hardware from Step 1.

Engine Removal

Refer to Main Assembly, page 13.

1. Remove hardware and belt guards as described in earlier section.
2. Remove the four bolts (#17) securing engine to engine deck.
3. Slide engine forward and remove belt (#2) and engine (#3).

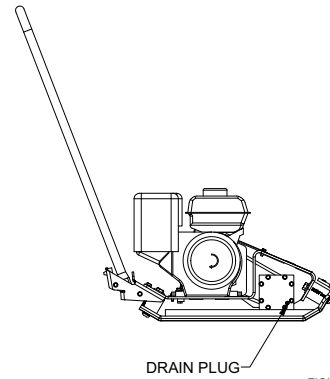
Exciter Disassembly

Refer to Main Assembly, page 13.

1. Remove engine (#3) and belt guards (#2) as described in earlier section.
2. Remove the four screws (#25) securing engine deck to shock mounts/base plate and remove engine deck.
3. Clean the entire baseplate to remove all dirt and debris.
4. Drain exciter oil as described in Changing Exciter Oil section of this manual.

Refer to EXCITER ASSEMBLY, page 12.

5. Remove set screws (#16) securing pulley to exciter shaft. Remove pulley (#5) and shaft key (#4).
6. Remove hex head flange screws (#15) securing exciter covers (#9, #10) to exciter housing. Remove exciter covers and gaskets (#11).
7. Remove exciter shaft (#8) by pressing the opposite of pulley end of the exciter shaft towards the opposite



DRAIN PLUG
FIGURE 3

- side of the housing. This will push the exciter shaft and the bearing on the pulley side out of the exciter housing. Press the bearing off of the exciter shaft.
8. Press the remaining bearing out of the exciter housing.
9. **GP18 only**, remove and replace internal snap ring (#7) if required.
10. Check bearings (#12, #13) for wear and replace if necessary as described in Parts Replacement Cycles and Tolerances section of this manual.

Exciter Assembly

Refer to EXCITER ASSEMBLY, page 12.

1. Prior to assembly, clean all parts in a suitable solvent cleaning solution.
2. Inspect all part for wear or failure and replace if necessary as described in Parts Replacement Cycles and Tolerances section of this manual.
3. Replace all seals and gaskets at every overhaul or disassembly.
4. All shafts and housings should be oiled prior to pressing in bearings. Ensure that all bearings and seals are pressed squarely and properly seated.
5. For proper hardware torque setting refer to Torque Chart table in this section of the manual.
6. Press bearing (#12) onto the pulley side of the exciter shaft.
7. **GP18 only**, install retaining ring (#7) into exciter housing opposite of the pulley side.
8. Press bearing (#13) into the exciter housing opposite of the pulley side.
9. Support the bearing in the exciter housing while pressing the exciter shaft (#8) into the housing. Press the exciter shaft into the housing until the bearing on the pulley side of the shaft is properly seated in the housing.
10. Install a new seal (#3) into the pulley side exciter cover (#11). Lubricate lip of seal with fresh exciter oil.
11. Assemble a new gasket (#11) and pulley side exciter cover (#9) to the exciter housing.

12. Assemble opposite side exciter cover (#10) and new gasket (#11) to exciter housing. Install hex head flange screws (#15).
13. Install shaft key (#4) and slide pulley (#5) onto exciter shaft (#8). Apply medium strength loctite to the set screws (#16) and make sure the exciter shaft turns freely.
14. Fill exciter housing with oil as described in Changing Exciter Oil section of this manual.

Parts Replacement Cycles and Tolerances

Bearings	Replace anytime a bearing is rough, binding, discolored or removed from housing or shaft.
Clutch	Replace clutch if it does not disengage below 1800 rpm.
Engine Components	Refer to your engine manufacturer's Owner's Manual.
Hardware	Replace any worn or damaged hardware as needed. Replacement hardware should be grade 5 and zinc plated unless otherwise specified.
Safety Decals	Replace if they become damaged or illegible.
Seals & Gaskets	Replace if a leak is detected and at every overhaul or teardown.
V-Belts	Replace if cracked, torn, or stretched to the point the belt won't tension properly.
Exciter Oil	Replace once every season or every 250 hours. Use 2 ounces of oil from the 6-pack of MBW Inc. #01058 Grounder Pounder® Exciter Oil.

REPLACEMENT PARTS

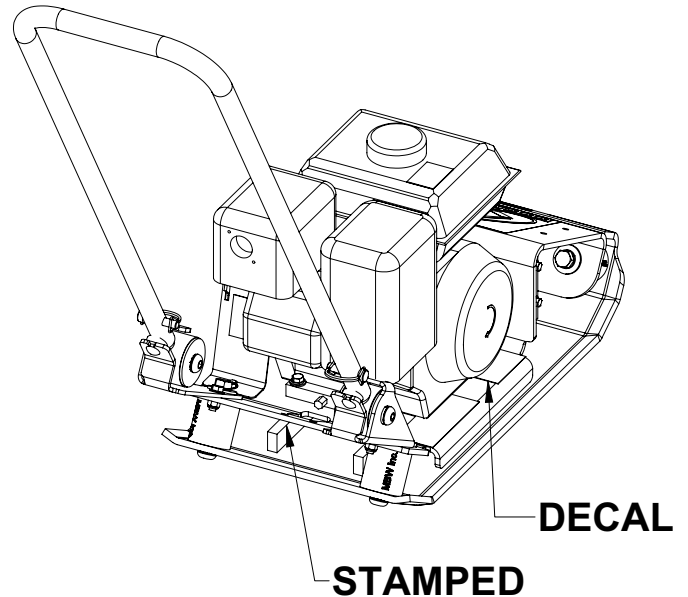
The warranty is stated in this book on page 20. Failure to return the Warranty Registration Card renders the warranty null and void.

MBW has established a network of reputable distributors/dealers with trained mechanics and full facilities for maintenance and rebuilding, and to carry an adequate parts stock in all areas of the country. Their sales engineers are available for professional consultation. If you cannot locate an MBW distributor in your area, contact MBW or one of our Sales Branches listed below.

When ordering replacement parts, be sure to have the following information available:

- Model and Serial Number of machine when ordering MBW parts
- Model and Serial Number of engine when ordering engine parts
- Part Number, Description, and Quantity
- Company Name, Address, Zip Code, and Purchase Order Number
- Preferred method of shipping

REMEMBER - You own the best! If repairs are needed, use only MBW parts purchased from authorized MBW distributors.



The unit's serial number can be found in the following locations:

- The model/serial number decal is located on the front right side of the engine deck.
- The serial number is stamped on the top of the left rail of the base plate.

Write Model Number here

Write Serial Number here

Contact Information

MBW, Inc.

250 Hartford Rd • PO Box 440
Slinger, WI 53086-0440
Phone: (262) 644-5234
Fax: (262) 644-5169
Email: mbw@mbw.com
Website: www.mbw.com

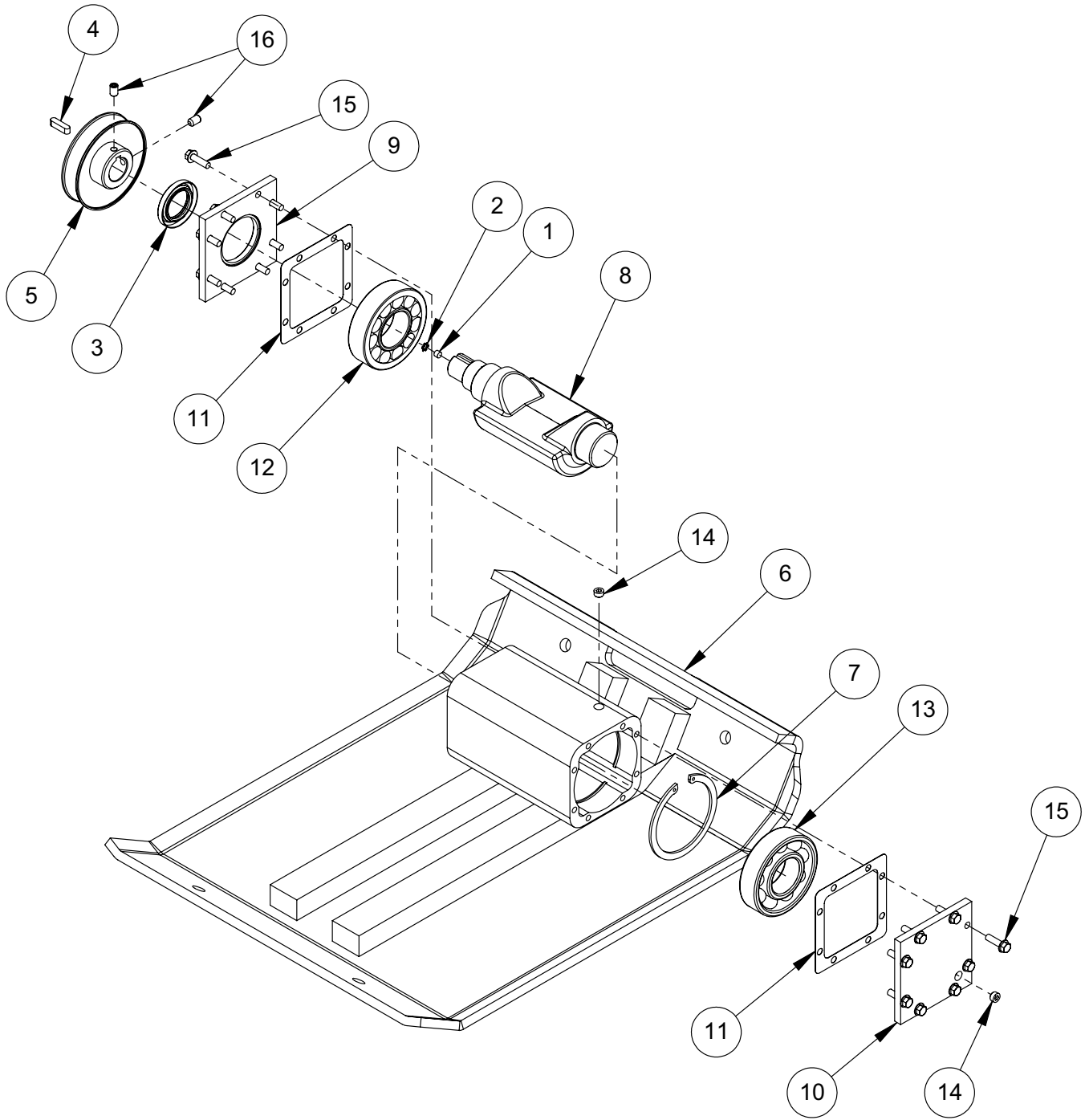
MBW (UK) Ltd.

Units 2 & 3 Cochrane Street
Bolton BL3 6BN, England
Phone: 01204 387784
Fax: 01204 387797

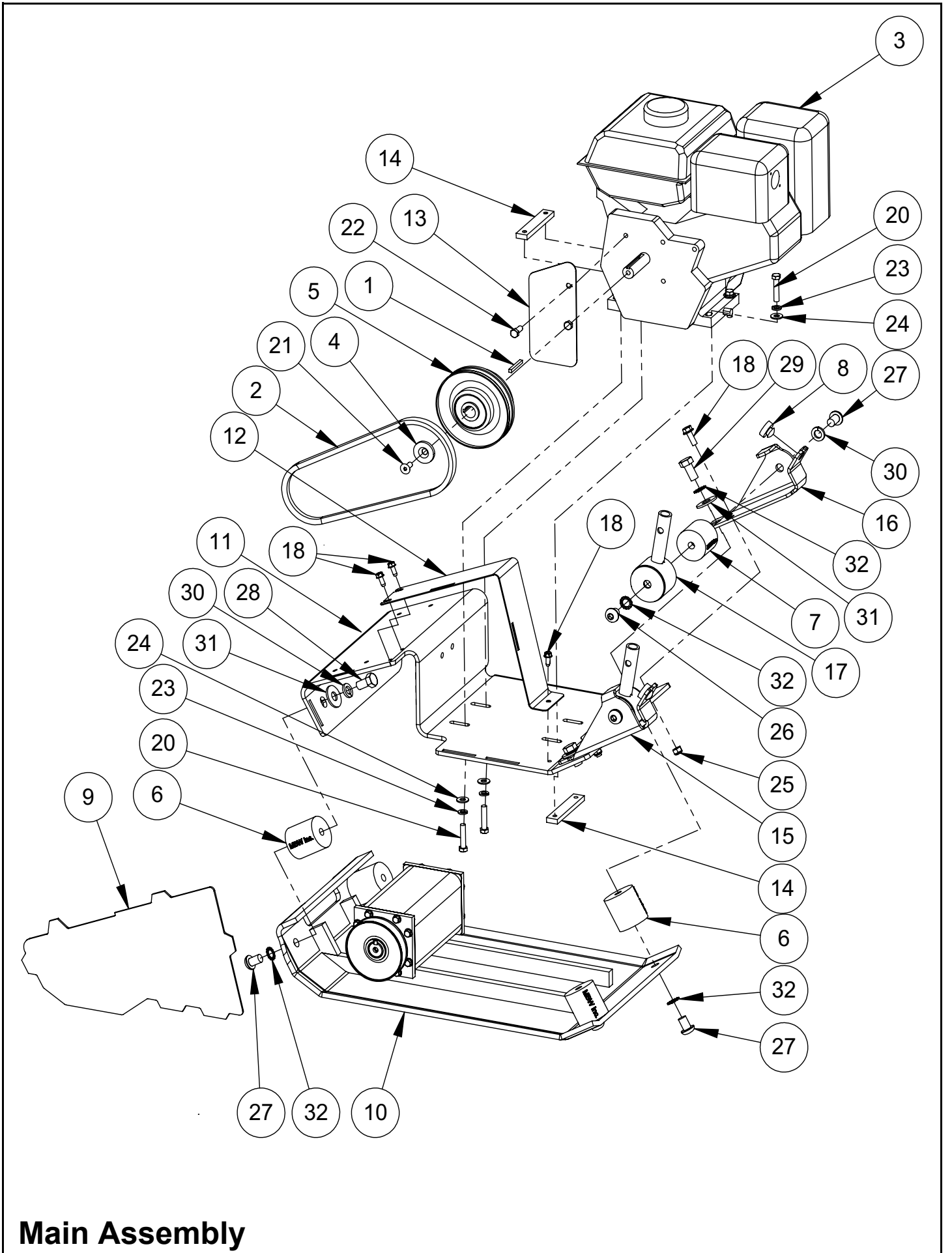
MBW FRANCE S.A.R.L.

Téléfono: +33 (0) 3 44 07 15 96

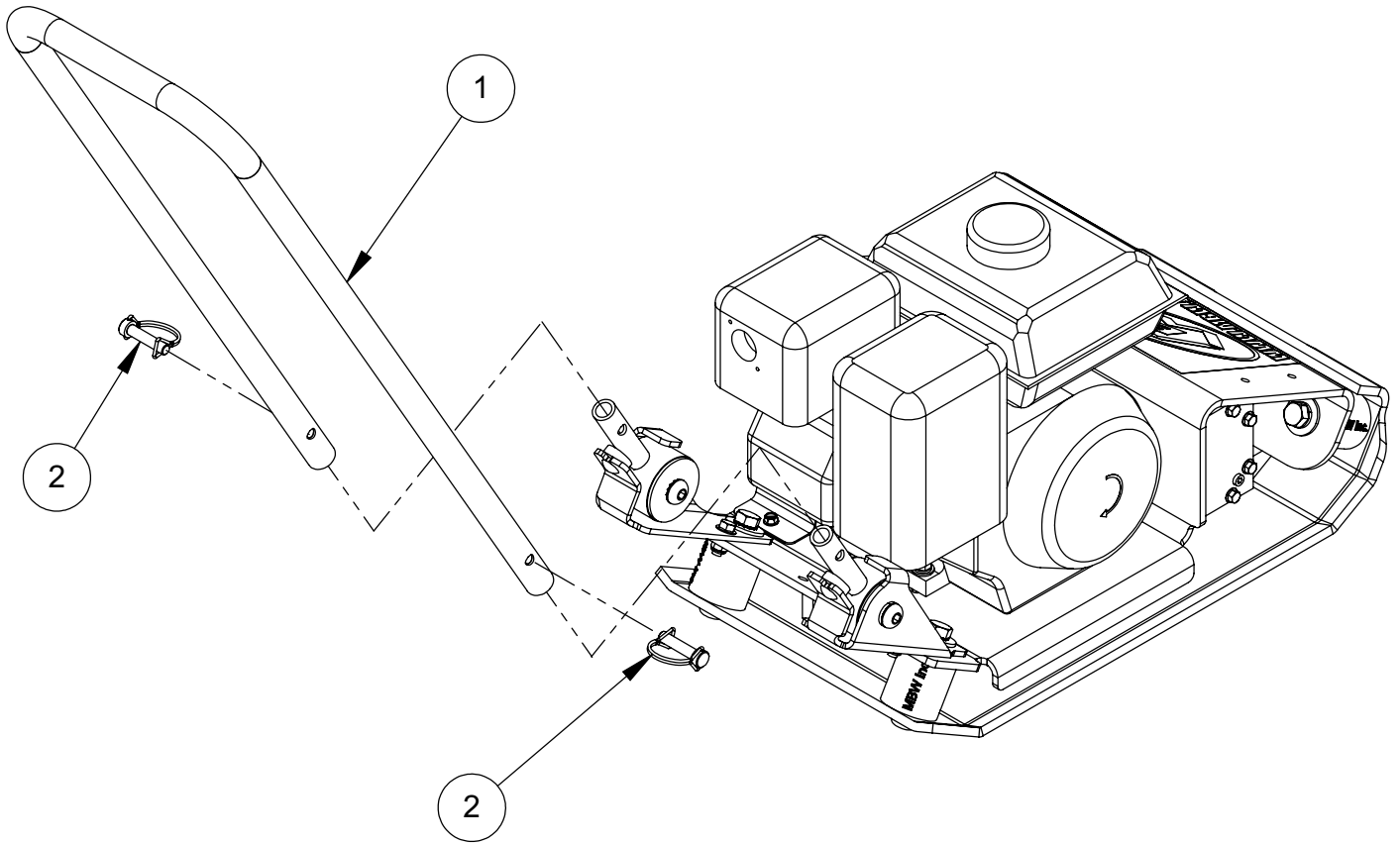
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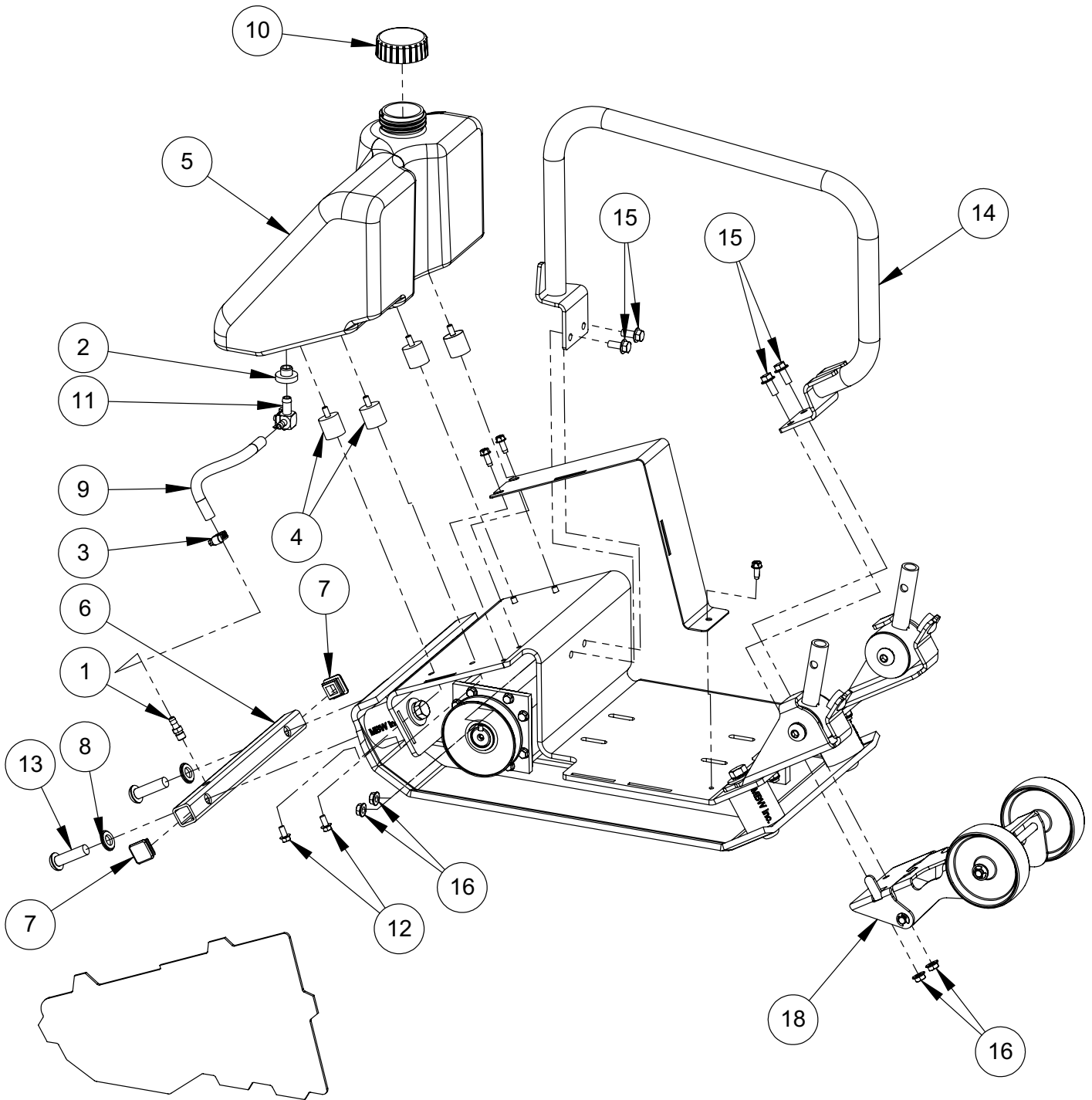
Exciter Assembly



Main Assembly



Handle Assembly



Optional Equipment

ITEM	PART NO.	DESCRIPTION	QTY
		WATER TANK	
1.	05803	PIPE ADAPTER, MALE	1
2.	06192	GROMMET, WATER TANK	1
3.	08442	CLAMP, WORM DRIVE	1
4.	17643	SHOCK MOUNT 1" DIA.	4
5.	20486	WATER TANK, GPX PLATE	1
6.	20489	SPRAY BAR, AP12	
	20490	SPRAY BAR, AP15	
	20491	SPRAY BAR, AP18	
7.	20492	CAP, SQ. TUBE	2
8.	20493	SEALING WASHER	2
9.	20494	HOSE, 1/4" x 7" LG.	1
10.	20496	CAP, WATER TANK	1
11.	20497	VALVE, WATER TANK	1
12.	F042004FWS	FLANGE HEAD SCREW, 1/4-20 x 1/2 LG.	4
13.	F081314BCS	BUTTON HEAD SCREW, 1/2-13 x 1-3/4 LG.	2
		LIFT CAGE	
14.	20797	LIFT CAGE	1
15.	F051807FWS	FLANGE HEAD SCREW, 5/16-18 x 7/8 LG.	4
16.	F0518FN	FLANGE LOCK NUT, 5/16-18	4
		WHEEL KIT:	
17.	19755	HANDLE BUMPERS	2
18.	20725	WHEEL KIT ASSEMBLY	1
19.	F051804FWS	FLANGE HEAD SCREW, 5/16-18 x 1/2 LG.	2
		OPTION KITS:	
	20482	WATER TANK, AP12	
	20483	WATER TANK, AP15	
	20484	WATER TANK, AP18	
	20801	LIFT CAGE, 12 THRU 18	
	20736	WHEEL KIT, 12 THRU 18	
	21050	PAVER PAD, GP12	
	21051	PAVER PAD, GP15	
	21052	PAVER PAD, GP18	

WARRANTY

WHAT DOES THIS WARRANTY COVER? MBW, Incorporated (MBW) warrants each New Machine against defects in material and workmanship for a period of twelve (12) months. "New Machine" means a machine shipped directly from MBW or authorized MBW dealer to the end user. This warranty commences on the first day the machine is sold, assigned to a rental fleet, or otherwise put to first use.

MBW warrants each Demonstration Machine against defects in material and workmanship for a period of six (6) months. "Demonstration Machine" means a machine used by MBW or its agents for promotional purposes. This warranty commences on the first day the machine is sold, assigned to a rental fleet, or otherwise put to first use.

This warranty covers the labor cost for replacement or repair of parts, components, or equipment on New Machines or Demonstration Machines, and MBW shall pay labor costs at MBW's prevailing rate to affect the warranted repair or replacement. MBW reserves the right to adjust labor claims on a claim-by-claim basis.

This warranty covers the shipping cost of replacement parts, components, or equipment via common ground carriers from MBW to an authorized MBW dealer. Air freight is considered only in cases where ground transportation is not practical.

MAY THIS WARRANTY BE TRANSFERRED? This warranty is non-transferable and only applies to the original end user of a new machine or demonstration machine.

WHAT DOES THIS WARRANTY NOT COVER?

1. This warranty does not cover any Used Equipment. "Used Equipment" means any MBW machine or equipment that is not a New Machine or a Demonstration Machine. All Used Equipment is sold **AS IS/WHERE IS WITH ALL FAULTS**.

2. This warranty does not cover any New Machine, Demonstration Machine, or their equipment, parts, or components altered or modified in any way without MBW's prior written consent. This warranty does not cover the use of parts not specifically approved by MBW for use on MBW products. This warranty does not cover misuse, neglect, shipping damage, accidents, acts of God, the operation of any New Machine or Demonstration Machine in any way other than recommended by MBW in accordance with its specifications, or any other circumstances beyond MBW's control. This warranty does not cover any New Machine or Demonstration Machine repaired by anyone other than MBW factory branches or authorized MBW distributors.

3. This warranty does not cover, and MBW affirmatively disclaims, liability for any damage or injury resulting directly or indirectly from design, materials, or operation of a New Machine or Demonstration Machine or any other MBW product. MBW's liability with respect to any breach of warranty shall be limited to the provisions of this document and in no event shall exceed an amount equal to the purchase price of the New Machine or Demonstration Machine purchased from MBW.

4. This warranty does not cover engines, motors, and other assemblies or components produced by other manufacturers and used on a New Machine or Demonstration Machine, as said engines, motors, and other assemblies or components may have warranties provided by the manufacturer thereof. This warranty does not apply to consumable items, such as v-belts, filters, trowel and screed blades, seals, shock mounts, batteries, and the like, all of which are sold **AS IS/WHERE IS WITH ALL FAULTS**.

5. This warranty does not cover the cost of transportation and other expenses which may be connected with warranty service but not specifically mentioned herein.

6. This warranty does not cover any updates to any New Machine, Demonstration Machine, or any other MBW product. MBW reserves the right to improve or make product changes without incurring any obligation to update, refit, or install the same on New Machines or Demonstration Machines previously sold.

WHAT MUST YOU DO TO OBTAIN WARRANTY COVERAGE? Each New Machine or Demonstration Machine is accompanied by a Warranty Registration Card. You must sign, date, and return the Warranty Registration Card to the place of origin of the New Machine or Demonstration Machine, either to MBW, Inc. at P.O. Box 440, Slinger, Wisconsin 53086, MBW (UK), Ltd. at Units 2 & 3 Cochrane Street, Bolton BL3 6BN, United Kingdom or MBW FRANCE SARL at ZA D'Outreville, 5 Rue Jean Baptiste Neron, Bornel 60540 France, within ten (10) days after purchase, assignment to a rental fleet, or first use. This signed warranty card is the buyer's affirmation that he has read, understood, and accepted the warranty at the time of purchase. Failure to return the warranty card as specified herein renders the warranty null and void. In order to receive warranty coverage consideration, warranty claims must be submitted within thirty (30) days after the New Machine or Demonstration Machine fails. Warranty claims must be submitted to MBW, Inc., MBW (UK), Ltd. or MBW FRANCE SARL, and written authorization for the return of merchandise or parts under the warranty must be obtained before shipment to MBW.

WHAT WILL MBW DO? MBW's obligation under this warranty is limited to the replacement or repair of parts for a New Machine or Demonstration Machine at MBW factory branches or at authorized MBW distributors, and such replacement or repair is the exclusive remedy provided hereunder. Labor must be performed at an authorized MBW distributor. MBW reserves the right to inspect and render a final decision on each warranty case, and MBW's repair or replacement is solely within the discretion of MBW.

IT IS EXPRESSLY AGREED THAT THIS SHALL BE THE SOLE AND EXCLUSIVE REMEDY UNDER THIS WARRANTY. UNDER NO CIRCUMSTANCES SHALL MBW BE LIABLE FOR ANY COSTS, LOSS, EXPENSE, DAMAGES, SPECIAL DAMAGES, INCIDENTAL DAMAGES, OR PUNITIVE DAMAGES ARISING DIRECTLY OR INDIRECTLY FROM THE USE OF THE NEW MACHINE OR DEMONSTRATION MACHINE WHETHER BASED UPON WARRANTY, CONTRACT, NEGLIGENCE, STRICT LIABILITY, OR ANY OTHER LEGAL THEORY.

THE FOREGOING WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR USE, AND FITNESS FOR A PARTICULAR PURPOSE, AND ALL OTHER OBLIGATIONS OR LIABILITY ON MBW'S PART. MBW NEITHER ASSUMES NOR AUTHORIZES ANY OTHER PERSON TO ASSUME ON BEHALF OF MBW ANY OTHER LIABILITY OR WARRANTY IN CONNECTION WITH THE SALE OR SERVICE OF ANY NEW MACHINE, DEMONSTRATION MACHINE, OR ANY OTHER MBW PRODUCT.

EXTENDED RAMMER WARRANTY - MODELS R422, R442, R482 & R483.

This extended warranty commences on the last day of MBW's standard, one year, "limited warranty" and runs for an additional four years (48 months). This extended warranty is limited to part replacement and shipping costs of rammer **bellows and non-metallic slide bearings only**. This extended warranty does not cover labor, down time, or any other cost beyond that of component replacement and freight. This extended warranty is subject to all limitations set fourth in MBW's "limited warranty", above.

NOTES: