## **OPERATOR'S SAFETY AND SERVICE MANUAL**



## GP12, GP15, GP18

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

GP12	1120500
GP15	1160172
GP18	1180312

### VIBRATORY PLATES

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# 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.

#### Introduction

A

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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

A

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 NEVER OPERATE IN A ventilation. 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 quards 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.

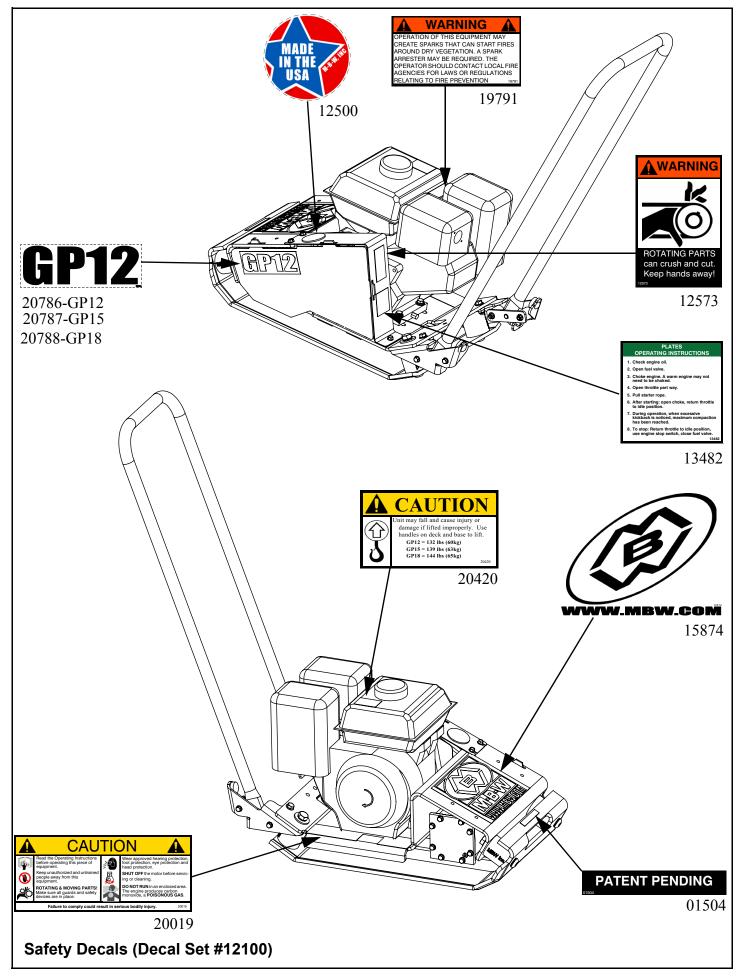


**OPERATOR:** Keep children and bystanders off and away from the equipment.

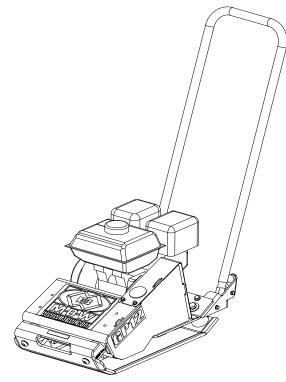
**REFERENCES:** For details on safety rules and regulations in the United States, contact your local Occupational Safety and Health Administration (OSHA) office. Equipment operated in other countries must be operated and serviced in accordance and compliance with any and all safety requirements of that 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).



### **S**PECIFICATIONS



	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	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		165 lbs/75 kg no water 183 lbs/83 kg full water		
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	l dBA			
	HONDA GX120 (118 cm) <sup>3</sup>						
	ROBIN EX13 (126 cm) <sup>3</sup>						
ENGINE OPTIONS	ROBIN EX17 (169 cm) <sup>3</sup>						
			BRIGGS 55	0 (127 cm) <sup>3</sup>			

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.

#### 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.

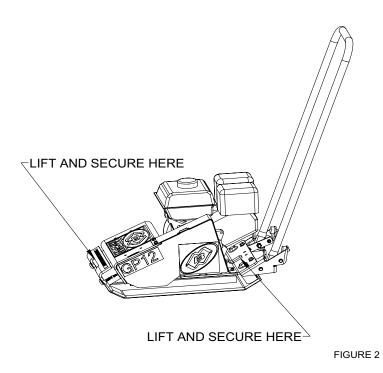
### WARNING

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.



#### 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.

#### Maintenance Schedule

A

#### **A** 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.

SYSTEM	MAINTENANCE	EACH USE	EVERY 50 HOURS	EVERY 250 HOURS	YEARLY
Engine	Refer to engine operator/owner manual	Х			
Exciter	Check for oil leaks	Х			
	Change oil			X	Х
	Tighten Bolts <sup>1</sup>		X		Х
Hardware	Check and tighten as needed <sup>1</sup>		X		Х
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 <sup>®</sup> Exciter Oil <sup>1</sup>	
Engine	Refer to engine operator/owner manual		
<b>.</b>	Re	fer 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			
	CONVE	RSIONS				
	in•lbs x 0.0	)83 = ft•lbs				
	ft•lbs x 1	2 = 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.
- 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 14.

- Remove hardware(13) 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 (4) screws securing engine to engine deck.
- 4. Push engine towards the back of the plate. While holding pressure on the engine retighten (4) hex head cap screws 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 (plastic one first), using hardware from step 1.

#### **Engine Removal**

#### Refer to MAIN ASSEMBLY, page 14.

- 1. Remove hardware and belt guards as described in earlier section.
- 2. Remove (4) bolts securing engine to engine deck.
- 3. Slide engine forward and remove belt and engine.

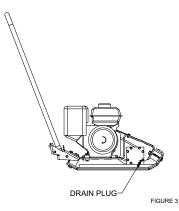
#### **Exciter Disassembly**

#### Refer to MAIN ASSEMBLY, page 14.

- 1. Remove engine and belt guards as described in earlier section.
- 2. Remove (4) screws 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 screw (16) securing pulley to exciter shaft. Remove pulley (5) and shaft key (4).
- Remove hex head flange screws securing exciter covers to exciter housing. Remove exciter covers and gaskets.
- 7. Remove exciter shaft by pressing the opposite of pulley end of the exciter shaft towards the opposite 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. **<u>GP18 only</u>**, remove and replace internal snap ring (7) if required.
- 10. Check bearings 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. **<u>GP18 only</u>**, 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 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 into the pulley side exciter cover. Lubricate lip of seal with fresh exciter oil.
- 11. Assemble a new gasket and pulley side exciter cover to the exciter housing.
- 12. Assemble opposite side exciter cover and new gasket to exciter housing. Install hex head flange screws.

- 13. Install shaft key and slide pulley onto exciter shaft. Apply medium strength loctite to the set screw 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.

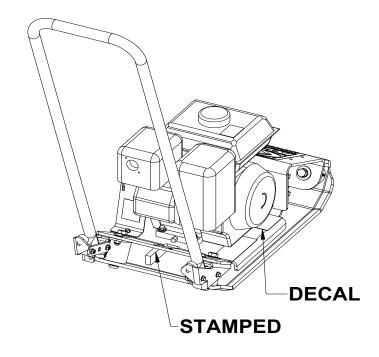
### **REPLACEMENT PARTS**

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

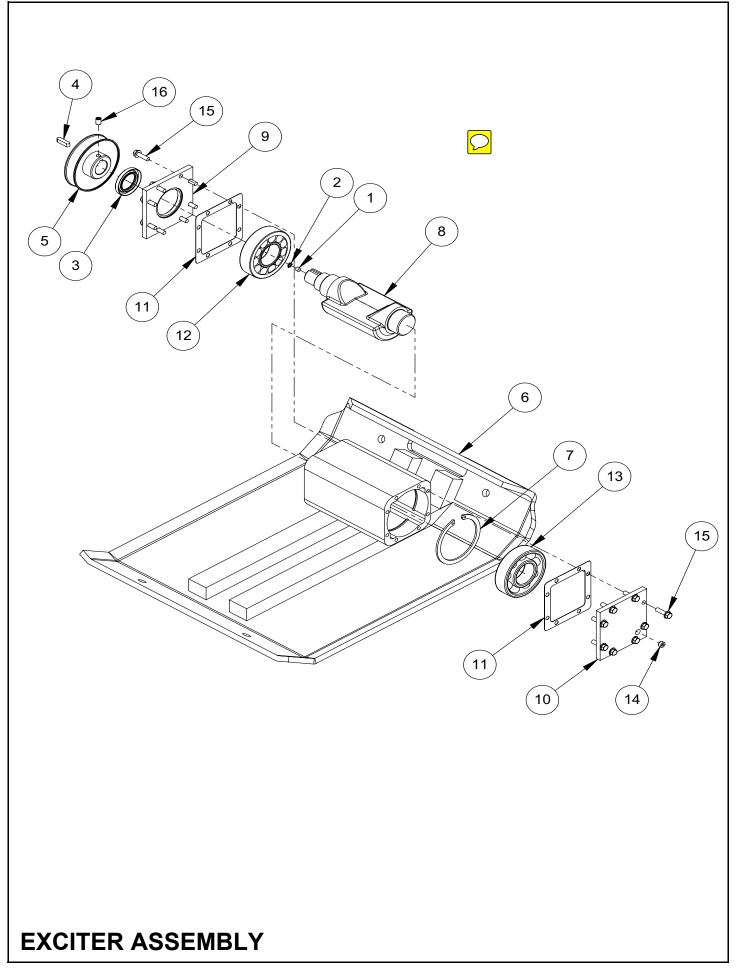
#### MBW (UK) Ltd.

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

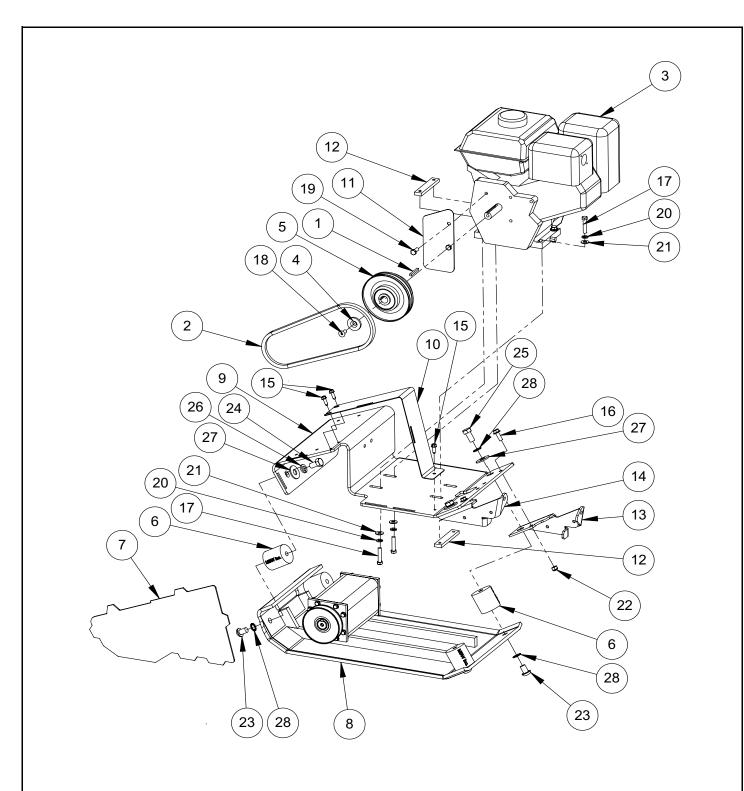
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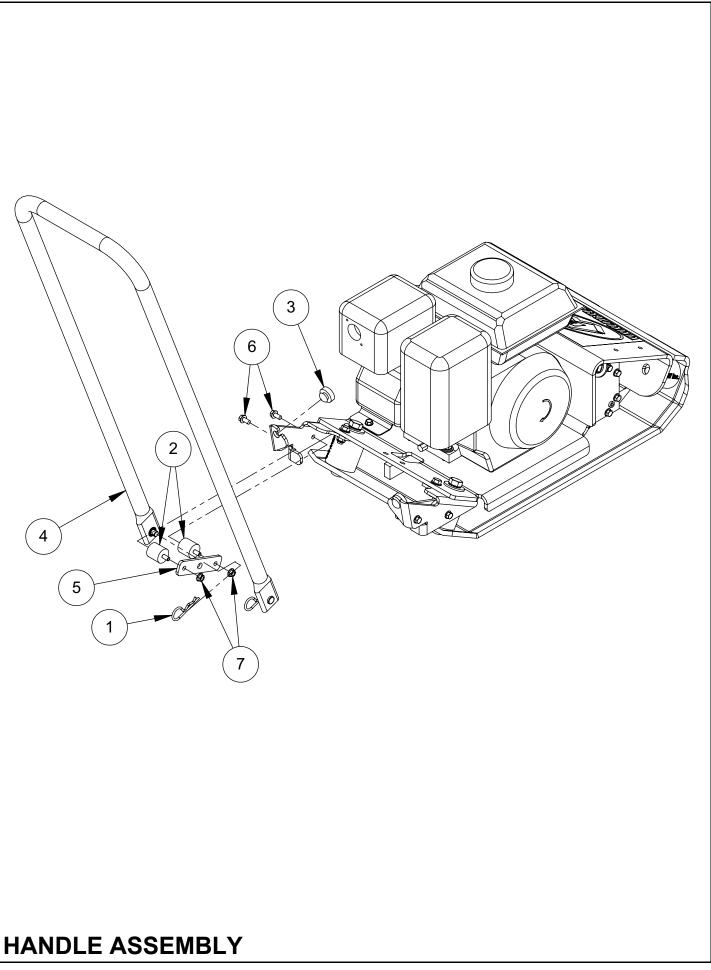


TEM	PART NO.	DESCRIPTION	GP12	GP15	GP18
1.	01072	FILTER, FELT	1	1	1
2.	01191	RETAINING RING, INTERNAL	1	1	1
3.	17179	SEAL, SHAFT, 1.25"	1	1	
	20379	SEAL, SHAFT, 1.25" (VITON) GP18 ONLY			1
4.	06335	KEY, 1/4 SQ X 1" LG	1	1	1
5.	19630	PULLEY, EXCITER, 1.0 X 3.88	1	1	1
6.	20751	BOTTOM PLATE WELDMENT	1		
	20408	BOTTOM PLATE WELDMENT		1	
	20533	BOTTOM PLATE WELDMENT			1
7.	20538	RETAINING RING, INT. 3.5 (GP18 ONLY)			1
8.	20756	EXCITER SHAFT, MACHINED	1	1	
	20536	EXCITER SHAFT, MACHINED (GP18 ONLY)			1
9.	20757	COVER, SEAL SIDE	1	1	1
10.	20758		1	1	1
11.	20760	GASKET	2	2	2
12.	16395	BEARING, ROLLER, GP18 ONLY			1
13.	20776	BEARING 6308	2	2	1
14.	F0227SPP	SOCKET PIPE PLUG, 1/8-27	1	1	1
15.	F042007FWS	FWLS, 1/4-20 X 7/8, ZP	16	16	16
16.	F051804SSS	SSS, 5/16-18 X 1/2"	1	1	1

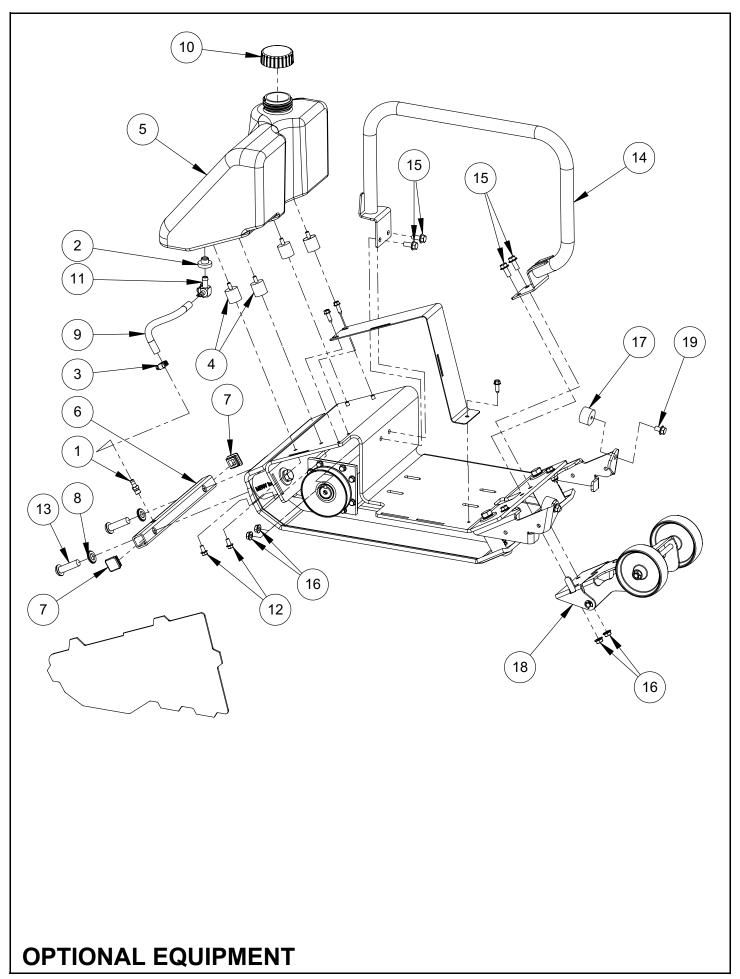


### MAIN ASSEMBLY

ITEM	PART NO.	DESCRIPTION	GP12	GP15	GP18
1.	00032	KEY, 3/16" SQ. x 1-5/8 LG.	1	1	1
2.	01289	V-BELT (A-27)	1	1	1
3.	12860	ENGINE, HONDA, GX120	1	1	1
	17210	ROBIN EX13			
	20382	BRIGGS 550			
4.	14993	WASHER, COUNTERSUNK	1	1	1
5.	16105	CLUTCH, CENTRIFUGAL	1	1	1
6.	16908	SHOCKMOUNT, 2" OD X 2-1/8" LG	4	4	4
7.	20759	BELTGUARD, PLASTIC	1	1	1
8.	20768	BOTTOM PLATE ASSEMBLY (12")	1		
	20426	BOTTOM PLATE ASSEMBLY (15")		1	
	20530	BOTTOM PLATE ASSEMBLY (18")			1
9.	20771	ENGINE DECK, PAINTED	1	1	1
10.	20772	BELT GUARD, PAINTED	1	1	1
11.	20773	GUARD, REAR, PAINTED	1	1	1
12.	20789	ENGINE MOUNTING BAR	2	2	2
13.	20793	HANDLE BRACKET, RIGHT	1	1	1
14.	20795	HANDLE BRACKET, LEFT	1	1	1
15.	F042005TCS	THREAD CUTT SCREW, 1/4-20 X 5/8 ZP	3	3	3
16.	F051807FWS	FLANGE WHIZ-LOCK SCREW, 5/16-18x7/8 ZP	2	2	2
17.	F051812HCS	HEX HEAD SCREW, 5/16 -18 X 1-1/2 GR5 ZP	4	4	4
18.	F052406FSS	FLAT HEAD SCREW 5/16-24 x 3/4"	1	1	1
10.	F052406HCS	HHCS 5/16-24 x 3/4 GR5 ZP	2	2	2
20.	F05LW	LOCKWASHER, 5/15 ZP	4	4	4
20.	F05SW	WASHER, 5/16 X 3/4 X 15 GAUGE ZP	4	4	4
21.	F0518ELN	LOCKNUT, 5/16-18 NYLOC ZP	2	2	2
22.	F081306BCS	BUTTON HEAD SCREW 1/2-13 X 3/4	4	4	4
23. 24.	F081306BCS	HEX HEAD SCREW, 1/2-13 x 3/4 GR5 ZP	4	4	4
24. 25.			2	2	2
25. 26.	F081308HCS	HEX HEAD SCREW, 1/2-13 x1 LG. GR5 ZP	2	2	2
	F08LW	LOCKWASHER, 1/2 ZP	4		
27. 28.	F08SW M12ETLW	FLAT WASHER, 1/2 ZP LOCK WASHER, M12, EXTERNAL TOOTH	4	4 6	4 6
20.			0	0	0
	20435	SERVICE KIT, HONDA PLATE, INCLUDES:			
		(4) #16908 SHOCK MOUNT			
		(4) #17643 SHOCK MOUNT (HANDLE)			
		(2) #18515 SNUBBER (HANDLE)			
		(1) #01289 V-BELT			
		(1) #19951 1-QUART ENGINE OIL, 10W30			
		(1) #20186 EXCITER OIL, 8 oz. BOTTLE			
		(1) #Q17210ZE0505 AIR CLEANER ELEMENT			
		(1) #Q9807956846 SPARK PLUG			



ITEM	PART NO.	DESCRIPTION	QTY
1.	12767	HAIR PIN, 3/32 DIA.	2
2.	17643	SHOCKMOUNT	4
3.	20537	SNUBBER, 1" DIA.	2
	18515	SNUBBER, For Serial Numbers: GP12-1120500, GP15-1160172 and	
		GP18-1180312 and lower	
4.	20763	HANDLE, ASSEMBLY (INCLUDES ITEM #1)	1
5.	20796	HANDLE BRACKET, PLATE	2
6.	F042004FWS	FWLS, 1/4-20x1/2 ZP	4
7.	F0420FN	FLANGE WHIZ-LOCK NUT, 1/4-20	4
7.	1012011		
	20435	SERVICE KIT, HONDA PLATE, INCLUDES:	
		(4) #16908 SHOCK MOUNT	
		(4) #17643 SHOCK MOUNT (HANDLE)	
		(2) #20537 SNUBBER 1" DIA. (HANDLE)	
		(2) #18515 SNUBBER (HANDLE)	
		(1) #01289 V-BELT	
		(1) #19951 1-QUART ENGINE OIL, 10W30	
		(1) #20186 EXCITER OIL, 8 oz. BOTTLE	
		(1) #Q17210ZE0505 AIR CLEANER ELEMENT	
		(1) #Q9807956846 SPARK PLUG	



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
10.	1001014800	Bottowner/B concew, inz to x t of t EG.	
		LIFT CAGE	
14.	20797		1
14. 15.	F051807FWS	FLANGE HEAD SCREW, 5/16-18 x 7/8 LG.	4
15. 16.	F051807FWS	FLANGE HEAD SCREW, 5/16-18 X 7/8 LG.	4
10.	FUDIOFIN	FLANGE LOCK NOT, 5/10-18	4
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	
	20404		
	20801	LIFT CAGE, 12 THRU 18	
	2000 !		
	20736	WHEEL KIT, 12 THRU 18	
	20805	PAVER PAD, GP12	
	20805	PAVER PAD, GP15	
	20741	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 nontransferable 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 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:


### NOTES:

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