

# OPERATOR'S SAFETY AND SERVICE MANUAL



## MVW11

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

MVW11.....1490001



## BOOM MOUNTED VIBRATORY WHEELS

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L21827 / 02.22.B  
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Printed in the USA

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# **WARNING**



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## **CALIFORNIA PROPOSITION 65 WARNING**

Engine exhaust and some of its constituents and dust produced during the use of this product contain chemicals known in the state of California to cause cancer, birth defects, and other reproductive harm.

For more information go to **[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)**

# 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.

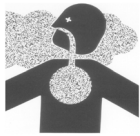
### **WARNING**

**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 a properly ventilated area. **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!**



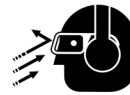
**SAFETY GUARDS:** It is the owner's responsibility to ensure that all guards and shields are in place and in working order.



**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.



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

**DUST PROTECTION:** Machining, crushing or handling of stone, concrete, masonry, metal and other materials may generate dust, mist and fumes containing chemicals such as silica

known to cause serious or fatal injury or illness such as respiratory disease, silicosis, cancer, birth defects, or other reproductive harm.

- Control dust, mist and fumes at the source where possible. Water should be used to control dust whenever feasible.
- Use good work practices and follow the recommendations of the manufacture, OSHA/NIOSH and other occupational trade associations.
- When hazards cannot be eliminated the operator and any bystanders should always wear a OSHA specified respirator for materials being handled.

**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.

**OPERATING INSTRUCTIONS**

1. Back pressure in return lines **MUST NOT EXCEED 200 PSI.**
2. Hydraulic Requirements:  
 Pressure 1500 psi minimum  
 Volume 10-50 gpm
3. Check for loose hardware after every 20 hours of operation.
4. Do not run exciter when attachment is not in contact of backfill.
5. Not recommended for use on excavators over 14,000 lbs.

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**MVW11**

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**MBW**

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**WARNING**  
 Operating, servicing and maintaining this equipment can expose you to chemicals, including engine exhaust, phthalates and lead, which are known to the state of California to cause cancer and birth defects or other reproductive harm. Avoid breathing engine exhaust. Do not operate equipment in confined areas. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

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**WARNING**  
  
 MOVING PARTS CAN CRUSH AND CUT  
 STAY CLEAR OF MOVING PARTS


13019

13019

**NOTICE**  
 Premature wear may occur if preventive maintenance is not performed.  
 GREASE DRUM HUBS DAILY.

19179

19179

**CAUTION**  
  
 Machine may fall and cause damage or injury if lifted improperly.  
 When lifting, attach proper safety chains through top frame.  
 Weight~ #660 (300kg)

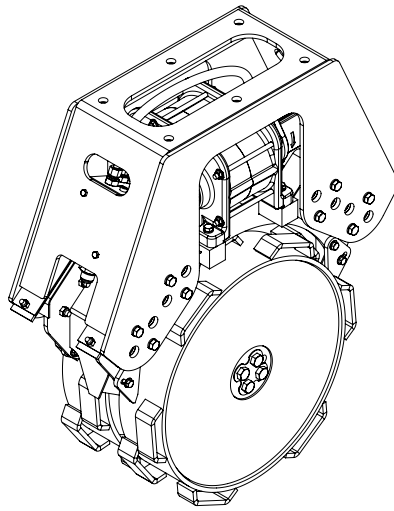
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**Safety Decals**

# SPECIFICATIONS

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	<b>MVW11</b>
<b>Weight</b>	660 LBS (300KG)
<b>Width</b>	11" (280mm)
<b>Height</b>	36" (910MM)
<b>Length</b>	32" (810 MM)
<b>Exciter speed</b>	3000 rpm
<b>Centrifugal Force</b>	2780 lbf (12.4 KN)
<b>Hydraulic Requirements</b>	
<b>Volume</b>	10-50 gpm (38-189 lpm)
<b>Minimum pressure</b>	1500 psi (103 bar)

Specifications subject to change without notice

# OPERATION

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## 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.

## 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.

## Operating

1. Do not run exciter when roller attachment is not in contact with the ground.
2. The MVW11 attachment is not recommended for excavators exceeding 14,000 lbs. See SPECIFICATIONS, page 3, for hydraulic requirements
3. Do not apply excessive down force when compacting soil.
4. Ensure host machine has adequate lifting capacity to handle the weight of the roller. Refer to SPECIFICATIONS, page 3. for attachment weights.



### WARNING



**Back pressure in return line must not exceed 200 PSI. Excessive back pressure can damage hydraulic motor.**

---



### 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.**

---

# 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
Wheel	Grease wheel bearings	X			
Exciter	Check oil level		X		
	Check for oil leaks	X			
	Change oil			X	X
	Tighten Bolts <sup>1</sup>		X		X
Hardware	Check and tighten as needed <sup>1</sup>		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	10 oz	MBW Ground Pounder <sup>®</sup> Exciter Oil <sup>1</sup>

1. MBW #01058---- 6-Pack (8 oz bottles)  
MBW #17320---- 1 quart (32 oz)  
MBW #01469---- 1 gallon (U.S.)

## Changing Exciter Oil

Refer to Exciter Assembly, page 10.

1. Support roller over drain pan with drain plug (#19) with exciter level.
2. Remove drain plug (#19) from side of exciter opposite motor and allow oil to drain.
3. Reinstall drain plug (#19) with pipe sealant.
4. Remove Fill plug (#19) from top of exciter and fill.
5. Replace Fill plug using pipe sealant.

## Checking Exciter Oil Level

1. Orient roller so that it is level.
2. Remove Square head pipe plug from top of exciter.

3. Insert Clean 1/4" rod of at least 8" long into hole as dip stick.
4. Dip stick should measure 1/2" of oil at bottom of exciter.

## Replacing Shockmounts

Refer to Roller Assembly, page 12.

1. Remove nuts and bolts securing valve block to upper frame (#19)
2. Remove the 16 bolts securing upper frame to shockmounts (#30)
3. Lift upper frame (#15) away from rest of roller assembly.
4. Replace the compression strips (#11) and shockmounts (#5)



# 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
3/4-16	144 ft·lbs	200 ft·lbs	315 ft·lbs
1-8	188 ft·lbs	483 ft·lbs	682 ft·lbs
1-14	210 ft·lbs	541 ft·lbs	764 ft·lbs
1-1/2-6	652 ft·lbs	1462 ft·lbs	2371 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
00259	Exciter shim

## Exciter Removal

Refer to Roller Assembly, page 12.

1. Support roller in upright position.
2. Remove bolts (#19) securing valveblock and let it hang.
3. Remove 16 bolts (#30) between upper weldment (#15) and shockmounts and remove weldment.
4. Loosen and remove hoses (#16, 17) from hydraulic motor on exciter. Catch oil that may be in lines with drain pan.
5. Remove 6 bolts (#27) securing exciter to frame and remove exciter. Note positions of any shims between exciter and frame.

## Exciter Installation

Refer to Roller Assembly, page 12.

1. Place exciter assembly on lower frame and use PN #00259 shims to prevent any rocking.
2. Install six washers(#29) and bolts (#27) with medium strength loctite, and torque to 37 ft·lbs.
3. Connect return line (#17) between bottom port of motor and port on valve block labeled "B".
4. Connect pressure line (#16) between top port of motor and port on valve block labeled "A".

## Exciter Disassembly

Refer to Exciter Assembly, page 10.

1. Drain exciter oil by removing plug (#19) and tipping exciter into drain pan.
2. Remove the two bolts (#16) securing motor (#7) and slide motor out of assembly.
3. Set the exciter assembly on the rear face, Opposite the motor mounting flange. Remove the eight bolts(#17) securing the two halves of the exciter housing together.
4. Carefully split the halves of the exciter assembly and lift off the top half. The shafts should remain in the lower half.
5. Lift the shaft assemblies out of the lower housing.

6. If bearings need to be replaced, remove socket head cap screws (#15) from housing halves and use access to press outside races out of housing.
7. Inner races of bearings can be removed from shafts using a bearing splitter. Bearings must be replaced in sets.

10. Install the eight bolts (#15) with medium strength loctite.
11. Press seal (#3) into housing flush with outside face.
12. Flip exciter assembly over and fill with recommended amount of MBW exciter oil. Install drain plug with pipe thread sealant.
13. Install motor (#7) with offset towards the middle of the exciter.

## Exciter Assembly

Refer to Exciter Assembly, page 10.

1. Press gears (#9) onto shafts (#11, #12) being careful to align keyways.
2. Attach weights (#8) to shafts with ferry head bolts (#4) use high strength loctite and torque to 100 ft-lbs.
3. Press inner races of bearings (#10) onto shafts. Install flange side first.
4. Press outer races of bearings into housing halves (#14, #13). Make sure races are fully seated.
5. Place shaft assemblies into rear exciter half (#13). Time the gears together such that the timing marks on the gears are next to each other. See figure one.

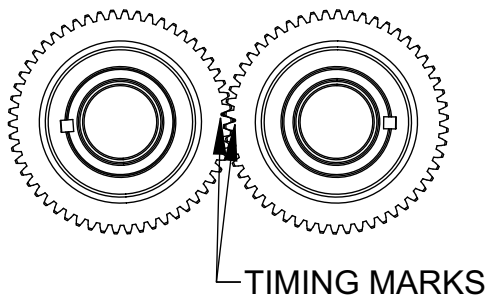


Figure 1

6. Install alignment pins (#2).
7. Carefully apply a bead of Permatex 'The Right Stuff' Or equivalent to the sealing surface.
8. Lower the top half of the exciter housing (#14) into place, being careful to align the bearings and pins.
9. Insert the eight bolts (#14) and tighten in a cross-wise pattern as shown in figure two. Torque to 15 ft-lbs.

## Removing Wheel Assemblies

Refer to Roller Assembly, page 12.

1. Secure roller assembly upright with wheels on the ground.
2. Remove scrapers (#10) and hardware (#21).
3. Flatten tabs on locking washer (#9) which secure bolts (#32) and remove bolts. Use caution when bolts are removed as wheel may shift.
4. Remove wheel (#12) by pulling wheel straight out.
5. Repeat steps 2 and 3 for other wheel assembly.
6. Press bearings (#7) out of bottom weldment (#14) by hammering center spacer (#8) with dead blow type hammer.

## Installing Wheel Assemblies

Refer to Roller Assembly, page 12.

1. Place center spacer (#8) in axle tube and slide bearings (#7) into place on both sides.
2. Carefully slide wheels (#12) into bearings while maintaining alignment to prevent jamming.
3. Rotate wheels to align bolt holes with center spacer, then insert bolts through locking washer (#9) and tighten to 180 ft-lbs.
4. Bend tabs of locking washer up against a flat of each bolt head to prevent it loosening.
5. Install scrapers (#10), Leaving enough gap between tooth and wheel to prevent dragging.

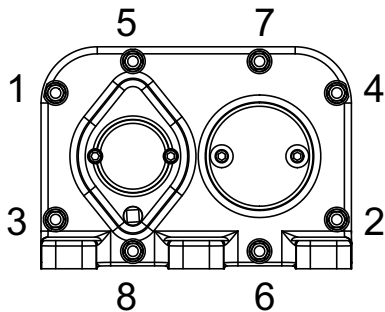


Figure 2

## Parts Replacement Cycles and Tolerances

<b>Bearings</b>	Replace anytime a bearing is rough, binding, discolored or removed from housing or shaft.
<b>Clutch</b>	Replace clutch if it does not disengage below 1800 rpm.
<b>Engine Components</b>	Refer to your engine manufacturer's Owner's Manual.
<b>Hardware</b>	Replace any worn or damaged hardware as needed. Replacement hardware should be grade 5 and zinc plated unless otherwise specified.
<b>Safety Decals</b>	Replace if they become damaged or illegible.
<b>Seals &amp; Gaskets</b>	Replace if a leak is detected and at every overhaul or teardown.
<b>V-Belts</b>	Replace if cracked, torn, or stretched to the point the belt won't tension properly.

# REPLACEMENT PARTS

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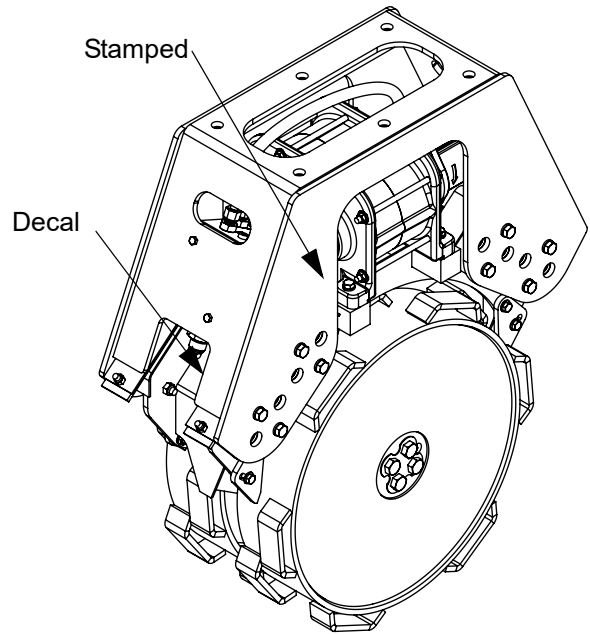
The warranty is stated in this book on page 14. Failure to return the Warranty Registration Card renders the warranty null and void.

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:

- Decal on lower frame
- Stamped on lower frame between exciter mounting feet

**Write Model Number here**

**Write Serial Number here**

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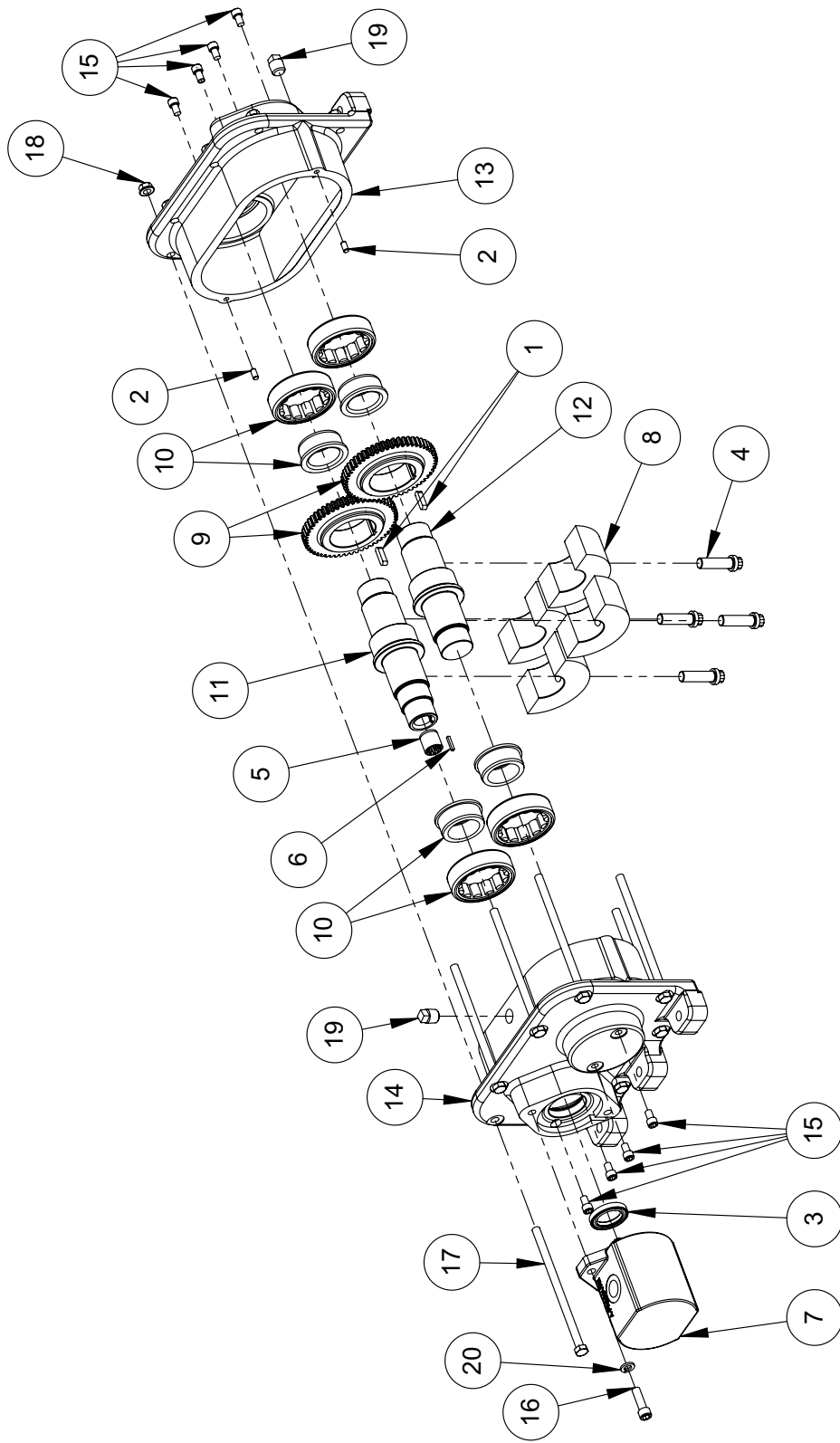
## Contact Information

### **MBW, Inc.**

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Email: [mbw@mbw.com](mailto:mbw@mbw.com)  
Website: [www.mbw.com](http://www.mbw.com)

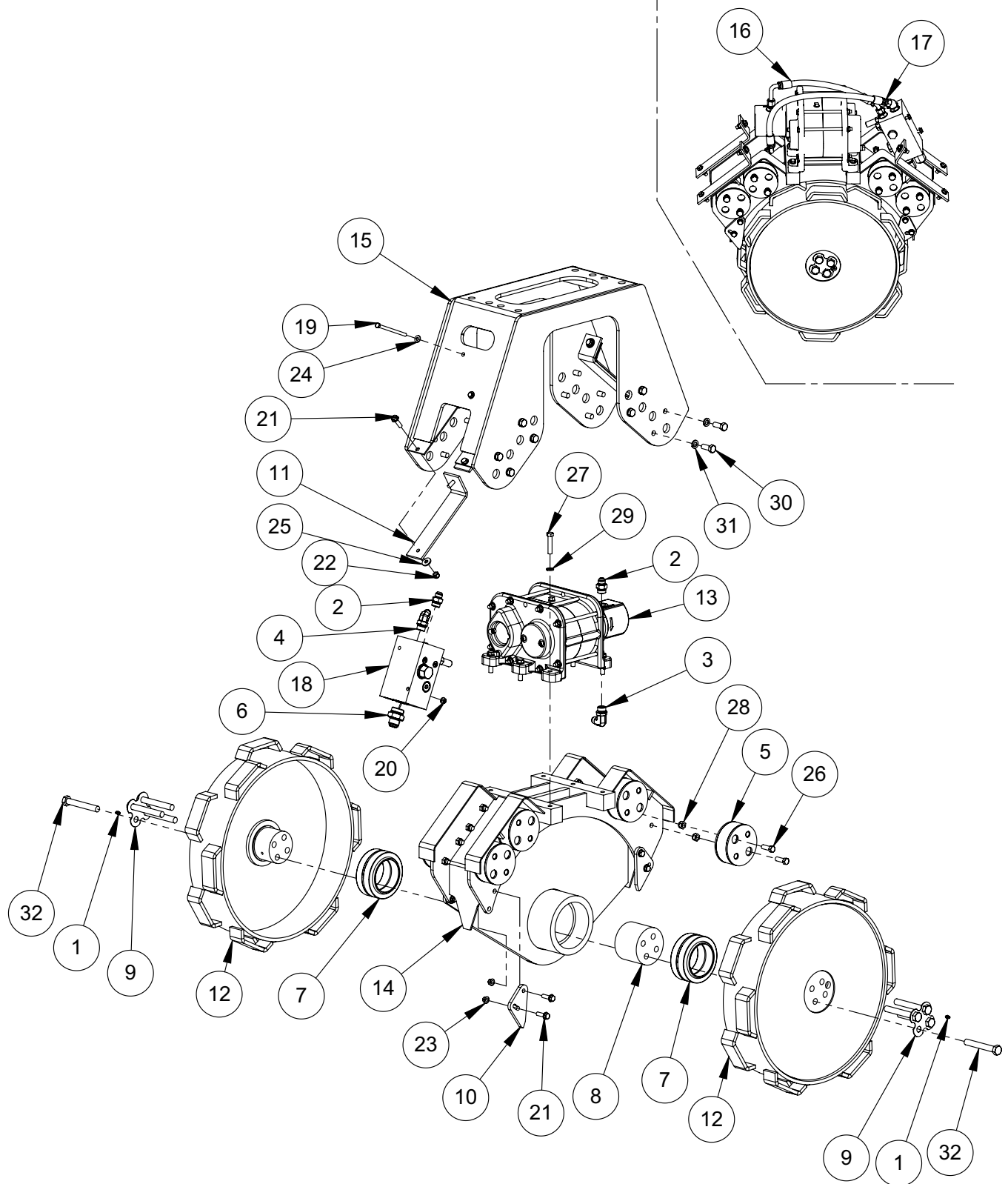
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Website: [www.mbweurope.com](http://www.mbweurope.com)



# Exciter Assembly





## Roller Assembly

ITEM	PART NO.	DESCRIPTION	QTY
1.	01177	FITTING, GREASE	2
2.	08213	FITTING, PARKER 8-10F50X	3
3.	08730	FITTING, ELBOW, 8-10C50X	1
4.	09746	FITTING, ELBOW, 8C50X	1
5.	12475	MOUNT, TORSION	8
6.	14747	FITTING, ST PARKER 12-16F50XS	2
7.	19290	BEARING, SPHERICAL PLAIN	2
8.	21753	CENTER SPACER	1
9.	21754	LOCKING WASHER	2
10.	21755	SCRAPER, MVW11	4
11.	21756	COMPRESSION STRIP, RUBBER	4
12.	21757	WHEEL, MVW11	2
13.	21765	EXCITER, MVW11	1
14.	21766	MVW11 BOTTOM WELDMENT	1
15.	21773	WELDMENT, UPPER	1
16.	21782	HOSE, PRESSURE	1
17.	21783	HOSE, RETURN	1
18.	21851	VALVEBLOCK	1
19.	F051836HCS	HHCS, 5/16-18 X 4-1/2	2
20.	F0518FN	NUT, FLANGE WHIZ LOCK	2
21.	F061610FWS	FWLS, 3/8-16 X 1/1/4	16
22.	F0616ELN	LOCKNUT, 3/8-16 NYLOC	8
23.	F0616FN	FLANGE WHIZ LOCK NUT, 3/8-16	8
24.	F05SW	WASHER, 5/16 X 3/4 X 15GA	2
25.	F06SW	WASHER, 25/64 X 1 X 1/8	8
26.	F071410HCS	HHCS, 7/16-14 X 1/1/4	16
27.	F071416HCS	HHCS, 7/16 -14 X 2	6
28.	F0714ELN	LOCKNUT, 7/16-14	16
29.	F07LW	LOCKWASHER, 7/16	6
30.	F081310HCS	HHCS, 1/2-13 X 1-1/4	16
31.	F08LW	LOCKWASHER, 1/2	16
32.	F101836HCS	HHCS, 5/8-18 X 4-1/2 GR8	8
	00259	EXCITER SHIM (NOT SHOWN, USE AS NEEDED)	



# WARRANTY

1. IN GENERAL - The warranties described in this document are provided by M-B-W, INC. and MBW EUROPE, LTD. ("MBW") to define what is, what is not, and for how long machines and parts are covered against material defects and/or defective workmanship. To obtain warranty service, the purchaser must, within the Warranty Period (defined in Paragraph 3): (i) report the product defect to an authorized repair center, (ii) make a written request for repair, (iii) provide proof of purchase to the authorized repair center, and (iv) deliver the equipment to the authorized repair center. A list of authorized repair centers is available on the MBW website (mbw.com) or by contacting MBW at 800-678-5237.

2. COVERED - MBW's obligation under this limited warranty is limited to the cost of the parts and the labor to repair any defect in material and/or workmanship at an authorized MBW repair center. Transportation charges are not covered by this limited warranty.

3. WARRANTY PERIODS - The Warranty Period begins on, as applicable: (i) the product purchase date by an end user or (ii) the first day the product is put into rental or two years after invoice date from MBW to Dealer, whichever starts the warranty period first. To insure that your warranty is in place, fill out the warranty card and mail it in or register your product online at [www.mbw.com/service-support/warranty-registration](http://www.mbw.com/service-support/warranty-registration). The warranty is nontransferable.

The Warranty Period ends after:

- A. New Ground compaction equipment - 2 years.
  - B. New Concrete finishing equipment - 1 year.
  - C. New Utility equipment - 1 year.
  - D. Demonstration equipment - 6 months.
  - E. Wear parts: lubricants, filters, belts and shock mounts - 30 days.
4. NOT COVERED- This warranty does not include, and MBW specifically excluded from any warranty:
- A. Used equipment - all used equipment is not warranted and is sold 'as is' 'where is' with all defects.
  - B. Replacement electrical parts, including but not limited to: electric motors, circuit boards, switches, are not warranted or returnable.
  - C. OEM: engines, batteries, and chargers. Those warranties are covered by the manufacturer.
  - D. Consumable parts: trowel and screed blades.
  - E. Equipment that has been: altered, abused, neglected, not maintained, or modified to run outside its specifications. Any modification to the machine or its parts makes this warranty null and void.
  - F. Other: damage to a product from normal wear, air freight, overtime, pickup and delivery, temporary replacement rentals, freight damage, or other similar incidents.
  - G. Product used in a fashion it was not designed for.
  - H. Parts and labor not performed by authorized dealers.

It is at MBW's discretion if warranty applies and has the right to adjust labor rates on a claim by claim basis.

**5. OTHER - 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, DAMAGE, SPECIAL DAMAGES, DIRECT DAMAGES, INCIDENTAL DAMAGES, EXEMPLARY, CONSEQUENTIAL, OR PUNITIVE DAMAGES ARISING DIRECTLY OR INDIRECTLY FROM THE USE OF MBW PRODUCT OR DAMAGES FOR LOSS OF USE, LOSS OF ANTICIPATED PROFITS, INCOME, OR ECONOMIC LOSSES OF ANY KIND. MBW'S LIABILITY TO BUYER UNDER THESE WARRANTIES FOR THE PRODUCT IS LIMITED AS SET FORTH HEREIN, WHETHER BASED UPON WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR ANY OTHER THEORY OF LIABILITY, INCLUDING BUT NOT LIMITED TO FRAUD, MISREPRESENTATION, BREACH OF CONTRACT, PERSONAL INJURY, PRODUCTS LIABILITY OR ANY OTHER THEORY.**

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