

OPERATOR'S SAFETY AND SERVICE MANUAL



UV-10K

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

UV-10K 4040020
UVW-24 4042010
UVW-36 4041015



BOOM MOUNTED VIBRATORY ATTACHMENTS

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TABLE OF CONTENTS

Safety Information	1	Replacing Shockmounts.	5
Introduction	1	Service	7
Safety Precautions	1	Torque Chart	7
Safety Decals	1	Service Tools	7
Specifications	3	Vibration Head Disassembly	7
Operation	4	Exciter Disassembly	7
Introduction	4	Exciter Assembly	8
Before Starting & Operating	4	Vibration Head Assembly	8
Operating	4	Wheel Disassembly	8
Adjusting Pin-Type Mount.	4	Wheel Assembly.	9
Disconnecting Wheel Assemblies.	4	Parts Replacement Cycles and Tolerances	9
Connecting Wheel Assemblies	4	Replacement Parts	11
Maintenance	5	Exciter Assembly	12
Maintenance Schedule	5	Bracket Assemblies	14
Fluid Levels.	5	Vibration Head Assembly	16
Changing Exciter Oil	5	Wheel Assembly.	18
Checking Exciter Oil Level	5	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.



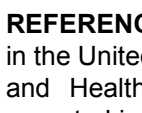
FOOT PROTECTION: Wear OSHA specified steel-tipped safety shoes.



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).

RETURN

PRESSURE

OPERATING INSTRUCTIONS

1. Back pressure in return lines **MUST NOT EXCEED 200 PSI.**
2. Hydraulic Requirements:
Pressure 1500-3000 psi
Volume 20-70 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 60,000 lbs.

**U.S. PATENT 5,244,306
U.S. PATENTS PENDING**



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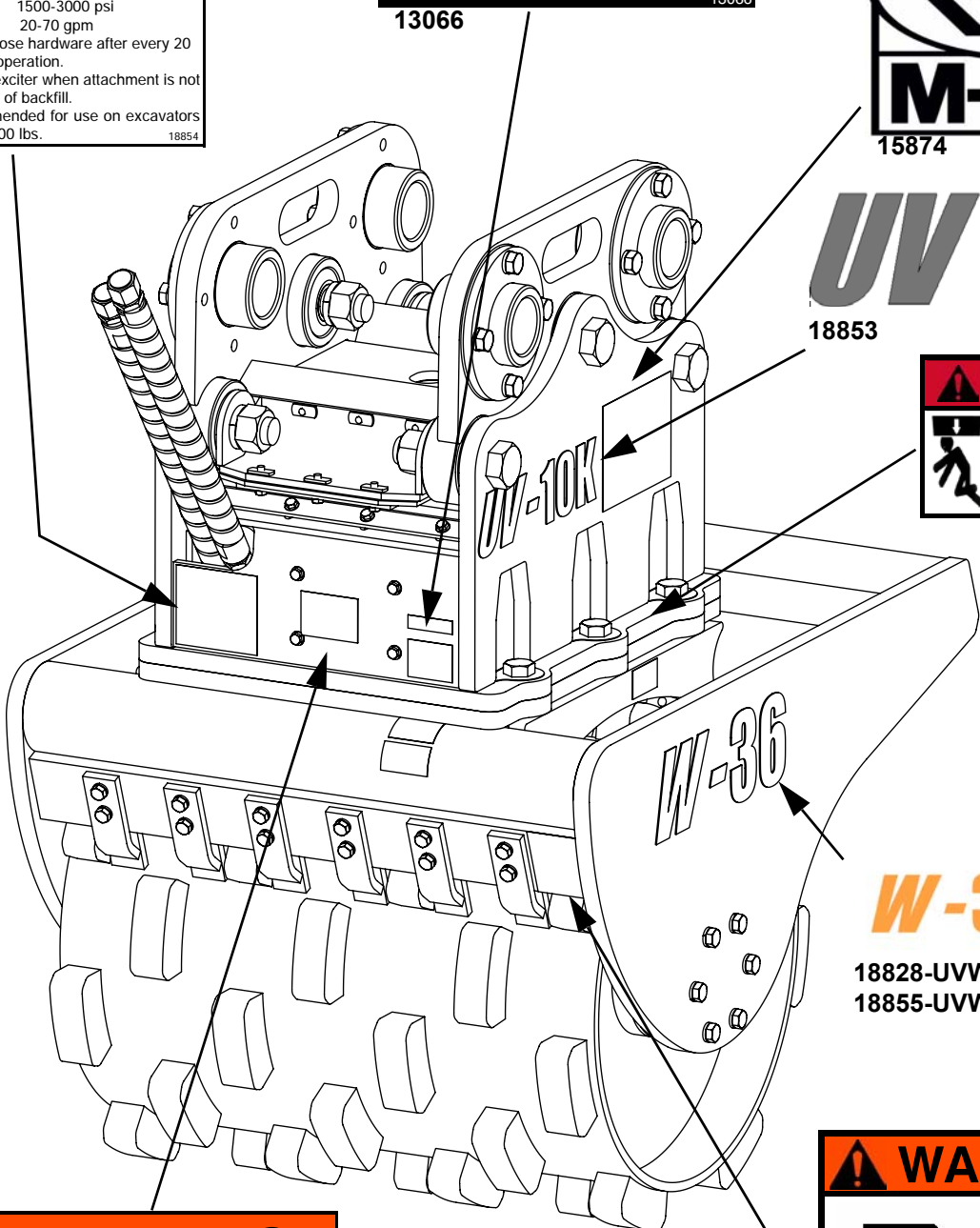
UV-10K

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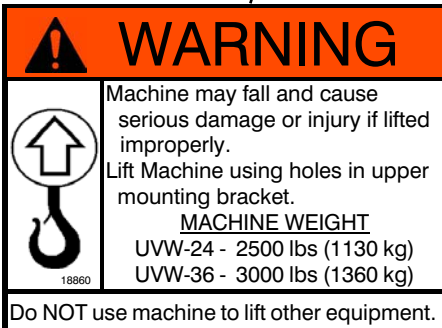
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W-36

W-36

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18855-UVW24



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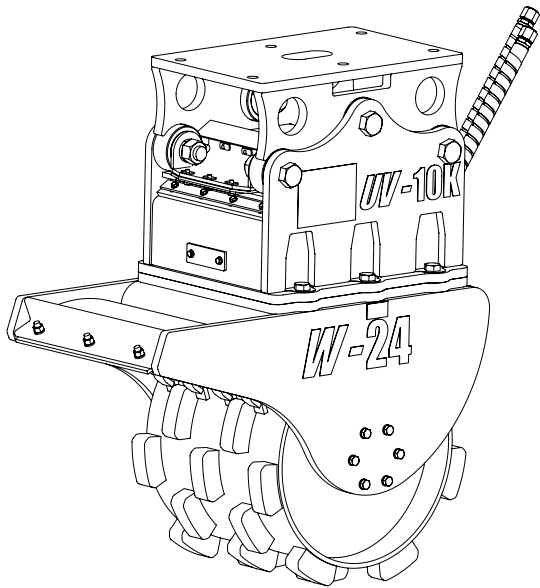


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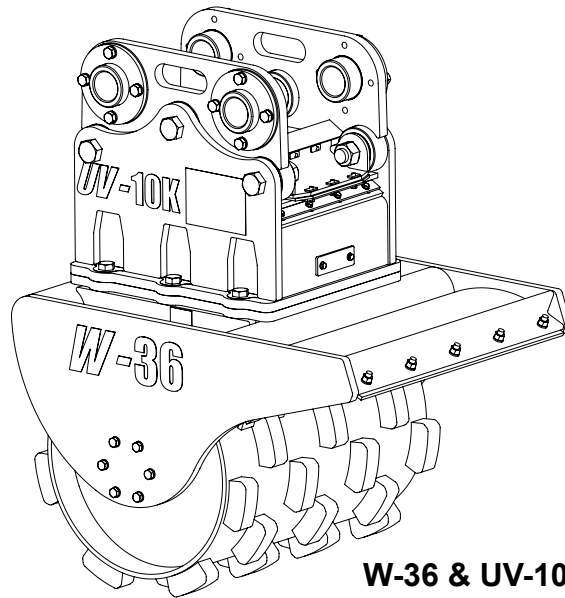
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Safety Decals

SPECIFICATIONS



W-24 & UV-10K (FLAT)



W-36 & UV-10K (PIN)

	W-24	W-36	UV-10K (PIN)	UV-10K (FLAT)
Excavator Connection	Flat Top Style	Flat Top Style	Adjustable Pin Style	Flat Top Style
Static Weight*	1367 lbs (620 Kg)*	1750 lbs (794 Kg)*	1019 lbs (462 Kg)*	1095 lbs (497 Kg)*
Overall Width	24" (61 cm)	36" (91 cm)	24" (61 cm)	24" (61 cm)
Drum width	21" (53 cm)	33" (84 cm)	-	-
Drum diameter	28" (71 cm)			
Exciter speed	3000 rpm			
Centrifugal Force	10,000 lbs (45Kn)			
Compaction Depth	24" (61 cm)			
HYDRAULIC REQUIREMENTS				
Pressure			1500-3000 psi	1500-3000 psi
Flow			20-70 gpm	20-70 gpm
Connection			1" Male JIC 37°	1" Male JIC 37°

Specifications subject to change without notice

* Static weight does not include weight of bonnets or auxiliary lines not manufactured by MBW

OPERATION

Introduction

MBW equipment is intended for use in very severe applications.

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.

Operating

1. Do not run exciter when roller attachment is not in contact with the ground.
2. The UV-10K attachments are not recommended for excavators exceeding 60,000 lbs.
3. The operating pressure supplied to the control valve must be between 1500 and 3000 psi.
4. The flow supplied to the control block must be between 20 and 70 gpm.
5. Do not apply excessive down force when compacting soil.



CAUTION



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

Adjusting Pin-Type Mount

The UV-10K can be ordered with an adjustable mounting system which can adjust to allow for excavator booms 9" to 15" wide. The center distance is fixed at 17.5". Refer to Pin Mount Assembly, page 14.

1. Loosen, but do not remove, the 16 retaining bolts.
2. Tap bushings with a aluminum or rubber mallet to move them in or out. Leave 1/4" of play between bushings and boom.
3. In regard to the mounting bracket, bushings must be symetric. Also, the ends of the bushings can not be inset of the clamping rings.
4. Tighten bolts with pins in place to ensure correct alignment of the bushings.

Disconnecting Wheel Assemblies

Refer to Vibration Head Assembly, page 16.

1. Support blade with blocks and chock the wheel so that unit is secure, stable, and upright.
2. Remove locknuts (#21), washers (#22), and locking collars (#17) .
3. Loosen and remove bolts (#14).
4. Lift vibration head assembly straight up to remove it from the wheel assembly.

Connecting Wheel Assemblies

Refer to Vibration Head Assembly, page 16.

1. Carefully align vibration head assembly and wheel frame so that mounting holes align, and set in place.
2. Tighten the bolts (#14) to 480 ft-lbs in a cross-wise pattern.
3. Install locking plates (#17) on all 6 bolts and secure with washers and locknuts (#21)



WARNING



Always stop the engine before:

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	DAILY	EVERY 50 HOURS	EVERY 250 HOURS	YEARLY
Drum hubs	Grease	X			
Exciter	Check oil level		X		
	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
Isolation mats	Check for cracks, tears, or wear		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	17 oz	MBW Ground Pounder [®] Exciter Oil ¹

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

Changing Exciter Oil

Refer to Exciter Assembly, page 12.

1. Follow Disconnecting Wheel Assemblies, page 4.
2. Support the Vibration Head over a drain pan and remove the drain plug (#19).
3. Reinstall the drain plug using a thread sealing compound.
4. Clean the area around the fill plug (#24) and remove it through access holes in mount weldment.
5. Make sure vibration head is level, and fill exciter with MBW Ground Pounder[®] Exciter oil until the level is visible centered in the sight gage (#3). See chart for proper amounts.
6. Reinstall fill plug using a thread sealing compound.

Checking Exciter Oil Level

Refer to Vibration Head Assembly, page 16.

1. Hold Vibration Head Assembly level and remove the sight gage cover (#10).
2. Oil Level should be visible near the top of the gage.
3. If necessary, remove fill plug on top of exciter and add MBW Ground Pounder[®] Exciter oil. Do not overfill.

Replacing Shockmounts

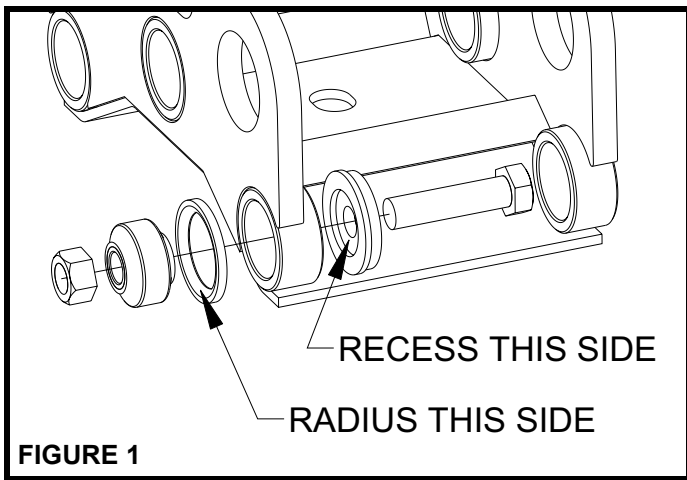
Refer to Bracket Assemblies, page 14.

1. Remove unit from excavator and support blade with blocks and chock the wheel so that unit is secure, stable, and upright.

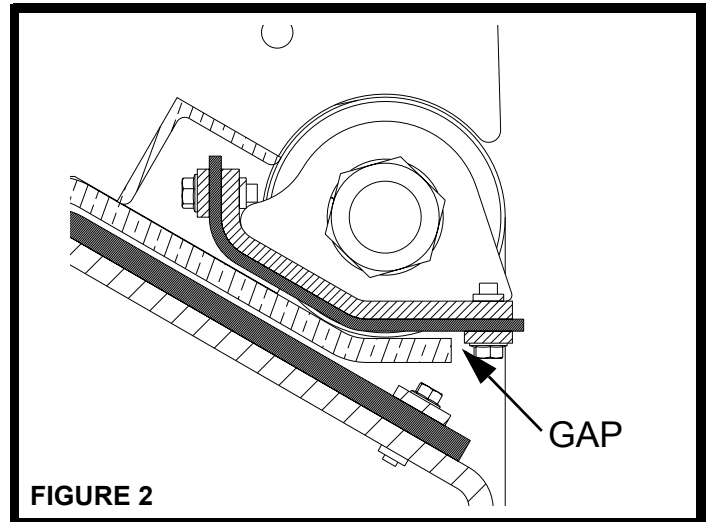
2. Remove the 6 nuts (#13) and bolts (#12) which secure the mounting bracket to the vibration head assembly and separate the two with a suitable lifting device.
3. Remove old primary shock mounts (#1) by pressing them out. A small hydraulic bottle jack or porta power works best.
4. After removing old mount, lubricate the new shock mount and inner cylindrical surface of UV frame prior to assembly. Be sure to apply enough lubricant to completely cover both surfaces.

Note: Lubricate with a soap or rubber lubricant. Do not use grease or oil as it will deteriorate the rubber.

5. Assemble components of tool, shock mount, and UV frame as shown in Figure 1.
6. Tighten nut until the shockmount is fully seated in the frame.



7. Remove secondary and third compression mounts (# 5) by removing the clamping strips (# 3) on each side. It may be necessary to insert a screwdriver between the compression mount and the weldment (# 4) to start removing the rubber.
8. Clamp new secondary and third mounts into place. Mounts should be as tight as possible.
9. Reinstall mounting bracket. To avoid noise during operation, make sure the bottom of the third mounts are rotated away from the mounting bracket as you tighten the bolts as shown in figure 2.



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 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
16163	Torsion mount install tool
16184	Torsion mount install lubricant (included with 16163)
00709	Exciter Shim, .005"

Vibration Head Disassembly

Refer to Vibration Head Assembly, page 16.

1. Follow Disconnecting Wheel Assemblies, page 4
2. Flip vibration head assembly over on a sturdy work surface to expose the exciter and valve block.
3. Loosen and remove the two main supply lines (#9 & #12).
4. Loosen and remove the two motor supply lines (#5 & #6). Note orientation for proper reassembly later.
5. Remove the four exciter nuts (#22), lock washers (#20), and washers (#21).
6. Note location of any shims for proper reassembly.
7. Attach lifting chain to eyelets on exciter (#11), and lift out.
8. Remove valve block bolts (#19), and remove valve block (#13).

Exciter Disassembly

Refer to Exciter Assembly, page 12.

1. Drain exciter oil by removing both plugs (#19) and slightly tipping exciter assembly towards the plugs.
 2. Remove both socket head cap screws (#21 & #22) securing hydraulic motor (ref 18). Remove motor.
 3. Remove 14 bolts (#23) securing cover (#10) to exciter housing and remove cover.
 4. Remove both snap rings (#4) and slide gears (#11 & #12) off.
 5. Remove 8 bolts (#23) securing cover (#9) to exciter housing, remove cover.
- Note: If removing bearings from shaft assemblies or housing, bearings MUST be replaced.**
6. Press both exciter shafts (#16 & #18) out of housing (#8), use care not to damage shaft splines.
 7. Remove snap rings (#1) and press both bearings (#6) from housing (#8).

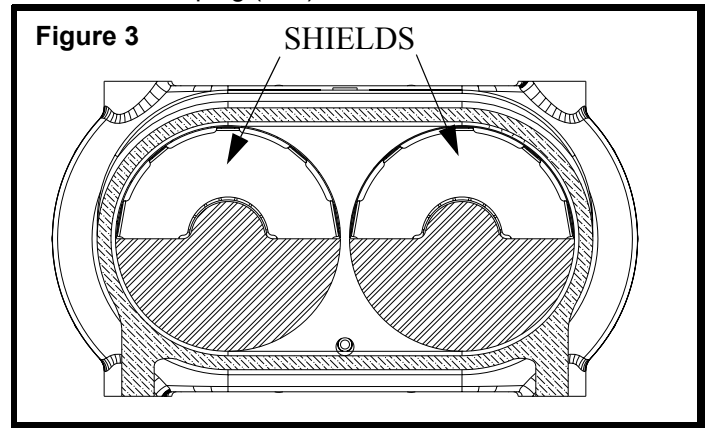
8. (A puller will be required to do this step) Remove snap rings (#7) from both exciter shafts (#16 & #18) and remove inner races.
9. Remove both snap ring (#1) securing bearings (#5) in cover (#9). Remove 4 bolts and washers (#17 & #20).
10. Support cover (#9) and use a brass punch to tap out bearings (#5) alternate from side to side of each bearing to eliminate binding of the bearing.

Exciter Assembly

Refer to Exciter Assembly, page 12.

1. Press inner race of bearing (#5) onto exciter shaft (#16) and install snap ring (#7). Repeat procedure on second exciter shaft.
2. Press remaining portion of bearing (#5) into cover (#9) and install snap ring (#1). Repeat procedure on second bearing.
3. Press both bearings (#6) into housing (#8) and install snap rings (#1).
4. Supporting inner race of bearing (#6) that is already in housing (#8), press exciter shaft (#16) into the bearing, repeat procedure on second exciter shaft. If the inner race of the bearing (#6) is not supported properly, the bearing can be damaged.
5. Apply GasketMaker type sealant onto gearbox housing (#8). Make sure all 4 dowel pins (#14) are in place and install cover (#9). Secure cover with bolts (#23) and torque to 23 ft/lbs. Check and see that both shafts rotate freely.
6. With the exciter housing sitting as shown, both exciters shafts should be in a position with the heavy side down. Install gears (#11 & #12) over the shafts without rotating the shafts and install snap rings (#2). See figure 3 for proper timing.
7. Install gasket (#13) and cover (#10) onto housing (#8). Ensure dowel pins (#4) are in place, secure cover with bolts (#23), and torque to 23 ft/lbs.
8. Apply GasketMaker type sealant and install motor (#15). Secure with socket head cap screws and lock washer (#21, #22, & #25).

9. Install plugs (#19) and fill with 17oz of exciter oil, install fill plug (#24).



Vibration Head Assembly

Refer to Vibration Head Assembly, page 16.

1. Loosely assemble fittings (#2) to motor on exciter as shown.
2. Place shims in proper locations, and set exciter in place. If using a new exciter or new vibration head weldment, use shims to ensure exciter sits flat in weldment. No "rocking" should be noticeable.
3. Bolt exciter into place with nuts (#22), lock washers (#20), and washers (#21). Torque to 315 ft-lbs.
4. Assemble fittings (#3 & #1) to valve block (#13) as shown. Tighten fully.
5. Install motor supply hose (#6) from the fitting on the valve block closest to the exciter, to the fitting on the motor closest to the side of the weldment (#15). Route hose so that it will not chafe or become pinched. Tighten hose and the motor fitting.
6. Install second hose (#5) from the fitting on the valve block farthest from the exciter, to the fitting on the motor closest to the center of the unit. Route the hose so that it will not chafe or become pinched. Tighten hose and the motor fitting.
7. Install main supply lines (#9 & #12) so that they will not chafe against the weldment (#15).

Wheel Disassembly

Refer to Wheel Assembly, page 18.

1. Remove unit from excavator, support blade with blocks and chock the wheel so that unit is secure, stable, and upright.
2. Wash the drum and lower frame to remove all dirt, grime and sand that could contaminate the bearings.
3. Secure an adequate lifting device to the mounting bracket and lift the unit just enough to lift the wheel off the ground.



WARNING



See Specifications, page 3 for weight of your machine. If unit is lifted improperly, it may fall and cause serious injury or death.

4. Loosen and remove the 12 bolts (#13) that secure the wheel hubs to the frame.
5. Carefully lift the machine off the wheel. To avoid binding, be sure it lifts straight up. Move the machine away so that work on the drum can be performed safely.
6. Remove the socket head cap screws (#9) and Axle limiter caps (#6).
7. Pull the hubs (#4) off the axle.
8. Clean the bore, and then remove the bearings (#5) from the hubs.

Wheel Assembly

Refer to Wheel Assembly, page 18.

1. Remove the seal from one side of the bearing (#5).
2. Insert bearing, seal-less side first, into the hub (#4).
3. Assemble the bearing and hub subassembly onto the axle.
4. Tighten the axle limiter cap (#6) on to the axle with the three socket head cap screws (#9). Use a medium strength threadlocker, such as Loctite 242.
5. Rotate the hubs so that the grease fittings (#1) are straight down.
6. Carefully lift the frame assembly onto the wheel and align the bolt patterns on the frame and hubs.
7. Insert and tighten the hex head cap screws (#16).
8. Grease both zerks.

Parts Replacement Cycles and Tolerances

Bearings	Replace anytime a bearing is rough, binding, discolored or removed from housing or shaft.
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 tear down.
Shock Mounts	Replace every 6 months.
Isolation mats	Replace every 6 months.

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REPLACEMENT PARTS

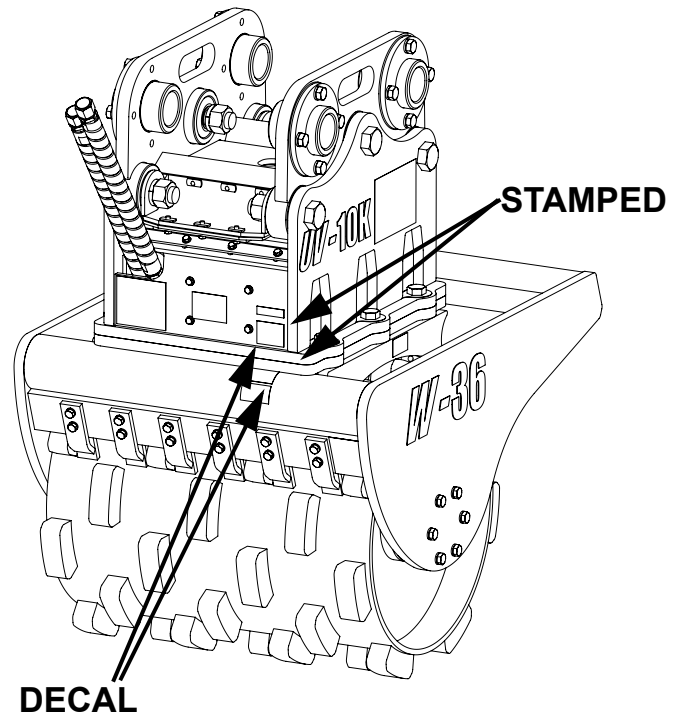
The warranty is stated in this book on page 18. Failure to return the Warranty Registration Card renders the warranty null and void.

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 UV-10K'S serial number can be found in the following locations:

- Decal- Rear of the vibration head
- Stamped- Edge of sideplate, rear of machine

The UVW-24 OR UVW-36'S serial number can be found in the following locations:

- Decal- Rear support tube
- Stamped- Edge of support plate, opposite blade

Write Model Number here

Write Serial Number here

Contact Information

MBW, Inc.

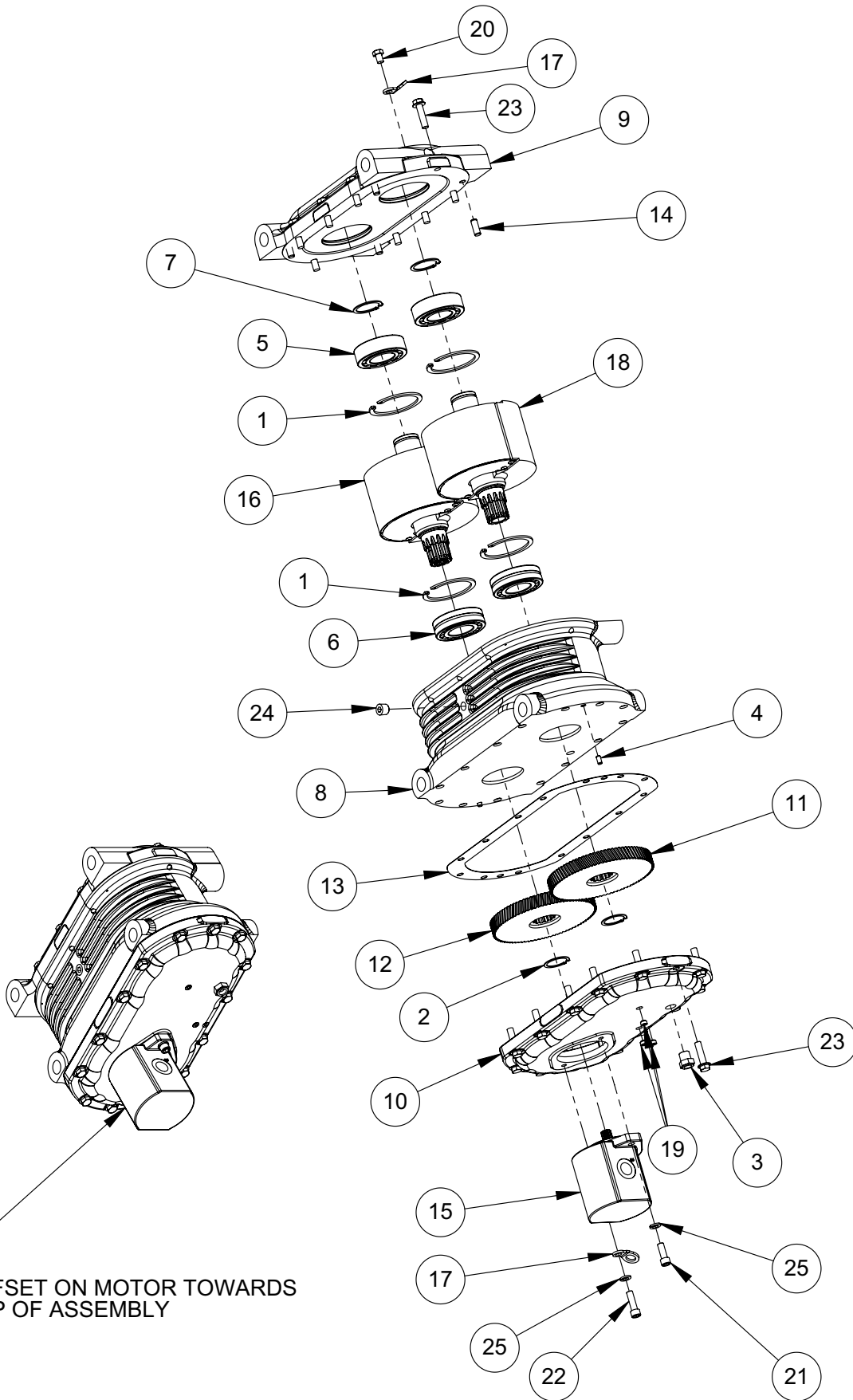
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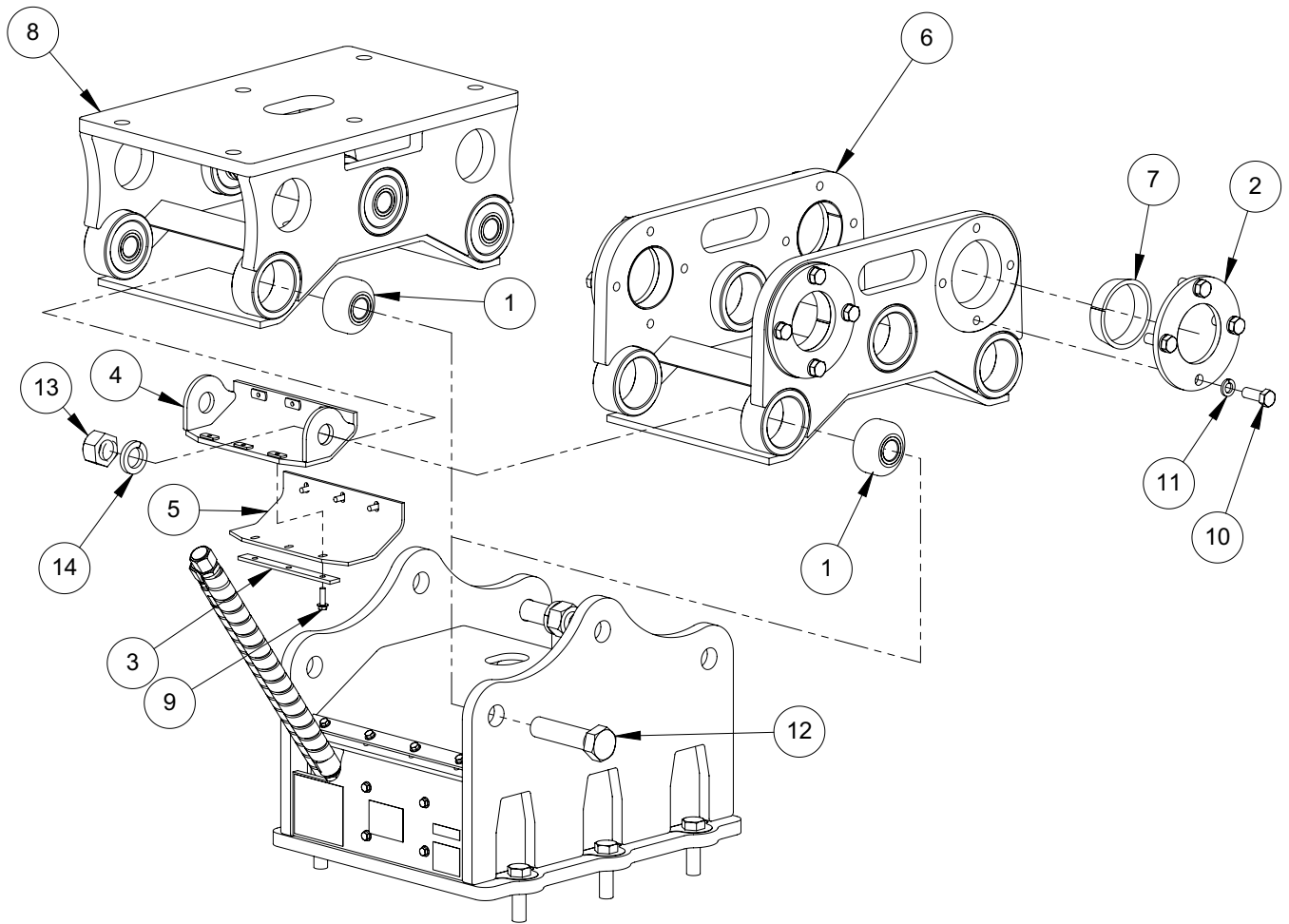
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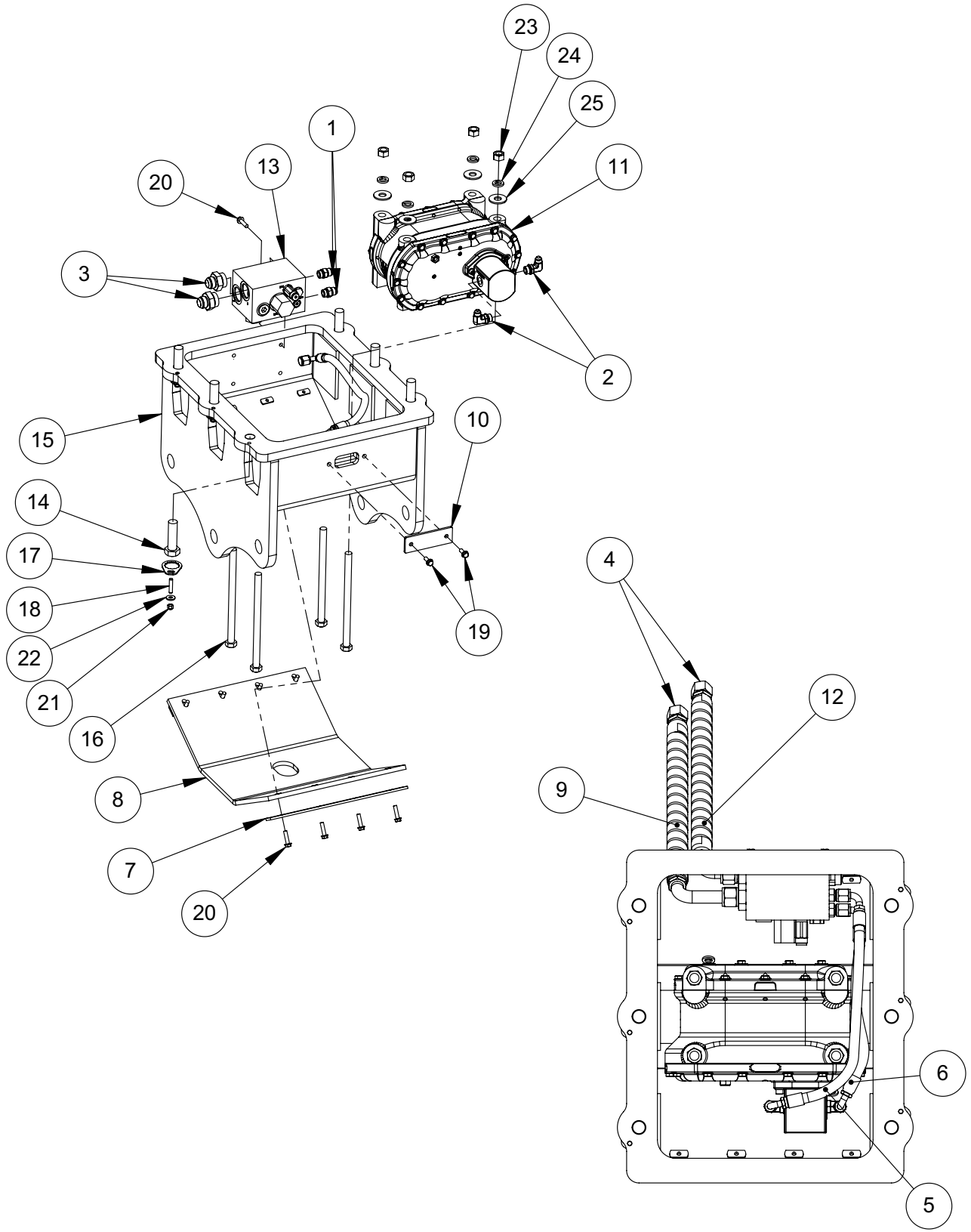
Exciter Assembly

ITEM	PART NO.	DESCRIPTION	QTY
1.	01000	RETAINING RING, INTERNAL 5000-315	4
2.	19930	RETAINING RING, EXTERNAL 1.375	2
3.	06457	GAGE, VIEW	1
4.	07203	PIN, DOWEL 1/4 X 1/2	2
5.	07456	BEARING, ROLLER 80 X 40	2
6.	07458	BEARING, SHPERICAL ROLLER	2
7.	07469	RETAINING RING, EXTERNAL 5108-156	2
8.	09451	HOUSING, MACHINED EXCITER	1
9.	09453	COVER, MACHINED REAR	1
10.	09455	COVER, MACHINED FRONT	1
11.	09457	GEAR, DRIVE LEFT	1
12.	09485	GEAR, DRIVE RIGHT	1
13.	09741	GASKET, COVER FRONT	1
14.	09745	PIN, DOWEL 3/8 X 1	4
15.	14267	MOTOR, HYD. CASAPPA HIGH PRES	1
16.	18808	EXCITER SHAFT, ASM	1
17.	18841	EYELET	2
18.	19046	EXCITER SHAFT, ASM, SPLINELESS	1
19.	F0227SPP	SOCKET PIPE PLUG, 1/8-27	2
20.	F061604HCS	HHCS, 3/8-16 X 1/2 Gr5 ZP	4
21.	F061608SCS	SCS, 3/8-16 X 1	1
22.	F061610SCS	SCS, 3/8 X 1-1/4	1
23.	F061612FWS	FWLS, 3/8-16 X 1-1/2 ZP	22
24.	F0618SPP	PLUG, PIPE 3/8-18(SEE DWG)	1
25.	F06LW 01291	LOCKWASHER, 3/8 ZP TIE, CABLE	2 1
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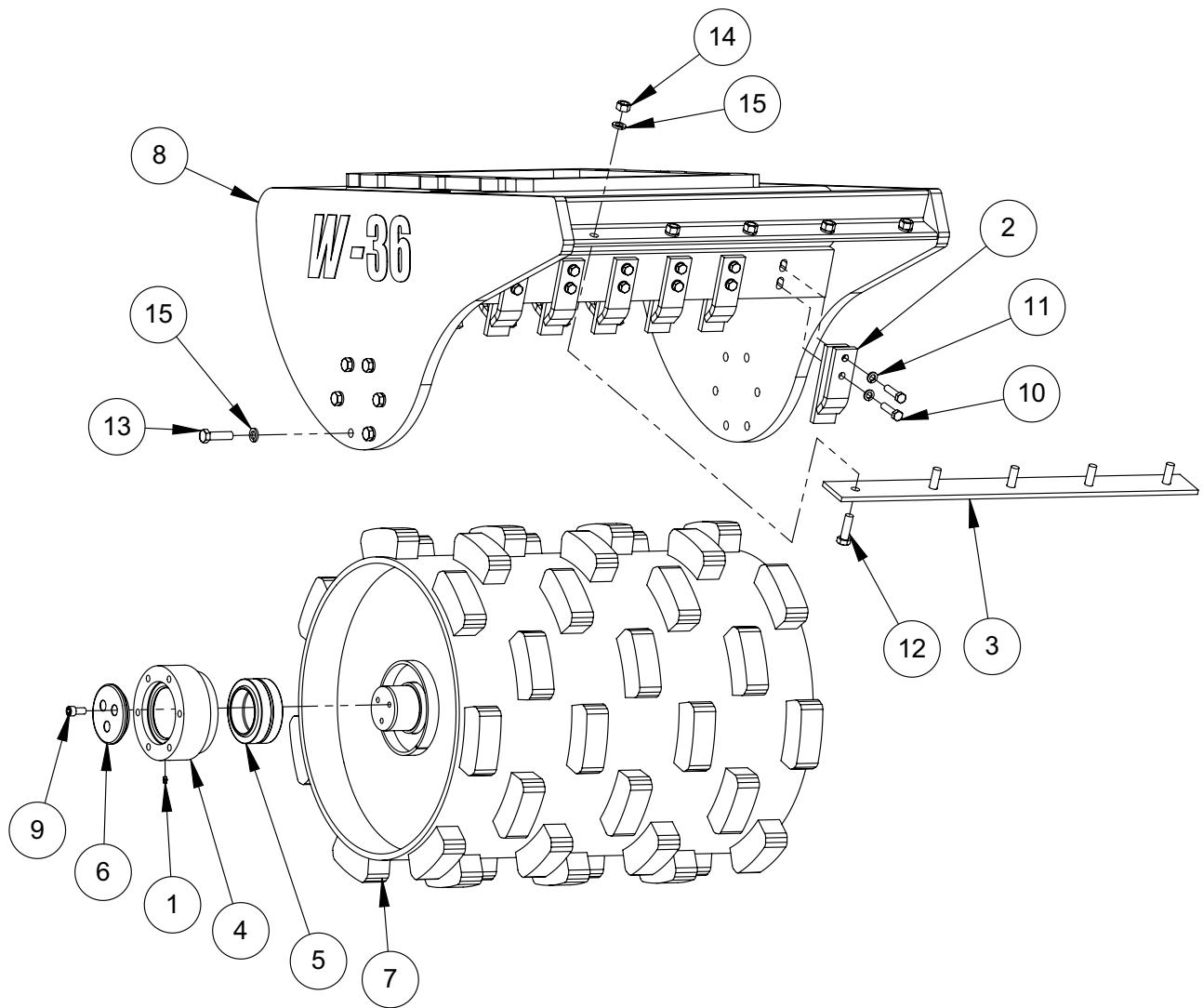
Bracket Assemblies

ITEM	PART NO.	DESCRIPTION	FLAT	PIN
1.	12681	MOUNT, TORSION	6	6
2.	18805	CLAMPING FLANGE	0	4
3.	18812	STRIP, CLAMPING	4	4
4.	18815	WELDMENT, MOUNTING, TERTIARY	2	2
5.	18817	MAT, TERTIARY	2	2
6.	18829	UPPER BRACKET, PIN MOUNT	0	1
7.	18847	RING, INTERNAL	0	4
8.	18870	UPPER BRACKET, FLAT TOP	1	0
9.	F061610FWS	FWLS, 3/8-16 X 1-1/4	12	12
10.	F121016HCS	HHCS, 3/4-10 X 2	0	16
11.	F12LW	LOCKWASHER, 3/4 ZP	0	16
12.	F240648HCS	HHCS, 1 1/2-6 X 6 GR8	6	6
13.	F2406HN	HEX NUT, 1 1/2-6 GR8	6	6
14.	F24LW	LOCKWASHER, 1 1/2	6	6



Vibration Head Assembly

ITEM	PART NO.	DESCRIPTION	QTY
1.	08209	FITTING, ST PARKER 10-12F50X	2
2.	08730	FITTING, ELBOW PARKER 8-10C50X	2
3.	14817	FITTING, ST PARKER 16-20 F50XS	2
4.	14819	FITTING, CAP PARKER 16-FN TX	2
5.	18786	HOSE, HYDRAULIC, 1/2 X 21	1
6.	18787	HOSE, HYDRAULIC, 1/2 X 15	1
7.	18788	CLAMPING BAR	2
8.	18789	MAT, ISOLATION	1
9.	18790	HOSE, 1 X 18 LONG ELBOW	1
10.	18800	COVER, SIGHT GAGE	1
11.	18809	EXCITER, UV10	1
12.	18845	HOSE, 1/2 X 18 SHORT ELBOW	1
13.	18888	VALVE, COMB. (HIGH FLOW EXA)	1
14.	19149	HHCS, 1-8 X 3-1/2 GR8	4
15.	20228	FRAME, EXCITER	1
16.	20238	HHCS, 3/4-16 X 12 GR8	4
17.	20281	LOCKING PLATE	6
18.	20282	STUD, 3/8-16 X 1-3/4 ZP	6
19.	F061608FWS	FWLS, 3/8-16 X 1 ZP	2
20.	F061612FWS	FWLS, 3/8-16 X 1-1/2 ZP	12
21.	F0616ELN	LOCKNUT, 3/8-16 NYLOC	6
22.	F06SW	WASHER, 25/64 X 1 X 1/8	6
23.	F12LW	LOCKWASHER, 3/4 ZP	4
24.	F12SW	WASHER, 13/16 X 2 X 9ga ZP	4
25.	F1216HN	NUT, HEX 3/4-16 ZP	4
	18776	VIBRATION HEAD ASSEMBLY (Includes items 1-22)	



Wheel Assembly

ITEM	PART NO.	DESCRIPTION	24	36
1.	01177	FITTING, GREASE STD	2	2
2.	18826	SCRAPER TOOTH, WELDED, 1.5	8	0
3.	18837	SCRAPER TOOTH, WELDED, 2.0	0	12
	18792	SCRAPER BAR, 24	1	0
4.	18861	SCRAPER BAR, 36	0	1
	19286	HUB	2	2
5.	19290	BEARING, SPHERICAL PLAIN	2	2
6.	19291	AXLE LIMITER CAP	2	2
7.	19292	DRUM, UVW-24	1	0
	19293	DRUM, UVW-36	0	1
8.	20234	FRAME, ROLLER, 24	1	0
	20235	FRAME, ROLLER, 36	0	1
9.	F081308SCS	SCS, 1/2-13 X 1"	4	4
10.	F081316HCS	HHCS, 1/2-13 X 2	16	24
11.	F08LW	LOCKWASHER, 1/2	16	24
12.	F101116HCS	HHCS, 5/8-11 X 2	3	5
13.	F101118HCS	HHCS, 5/8-11 X 2-1/4 Gr8	12	12
14.	F1011HN	NUT, HEX 5/8-11	3	5
15.	F10LW	LOCKWASHER, 5/8	15	17
	24W	ROLLER ASM, UVW-24 (INCLUDES ITEMS 1-8 AND 10-17)		
	36W	ROLLER ASM, UVW-36 (INCLUDES ITEMS 1-8 AND 10-17)		

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