OPERATOR'S MANUAL SAFETY INSTRUCTIONS

WITH INSPECTION AND MAINTENANCE INSTRUCTIONS

BATTERY POWERED LIFT MAGNETS

MODELS: WBM-13, WBM-25, WBM-36, WBM-50, WBP-7, WBP-15



WBM-13



WBM-25



WBM-36



WBM-50



WBP-7



WBP-15



O.S. WALKER

ADANGER

- Always stay clear of the load.
- Never lift loads over people or in close proximity to people.
- Never attempt to operate either of these magnets until you have read and understand this Operator's Manual.

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INTRODUCTION

Thank you for purchasing this O.S. Walker Product. If used and maintained properly, it should serve you for many years. Thousands of O.S. Walker lift magnets are in service today doing safe, fast, and efficient magnetic material handling applications. It is often the only way for one person to load, transport, and unload material.

O.S. Walker Products have proven to be among the best designed and safest in our industry. However, if used improperly, any Model WBM OR WBP magnet can be rendered inefficient and unsafe. Therefore, it is absolutely essential that anyone who uses this lifting system and is responsible for its application be trained on how to use it correctly.

Read this manual carefully and watch the safety video to learn how to operate and maintain your magnet. Failure to do so could result in serious injury, or even death, to yourself and others in the area.

This manual should be considered a permanent part of your magnet and should always be available to all operators and remain with the magnet if it is re-sold.

Additional copies of this OPERATOR'S manual ARE AVAILABLE.

JUST CALL 1-800-962-4638 AND REQUEST ADDITIONAL COPIES OF MANUAL #37-DD14055.

SAFETY INSTRUCTIONS

GENERAL SAFETY RULES

Danger always exists when loads are transported by lifting devices, especially when the equipment is not being used properly or is poorly maintained. Because accidents and severe bodily injury or death can result, special safety precautions apply to the operation, inspection, and maintenance of the Walker Lift Magnets.

Following these simple rules can help to avoid lifting accidents:

ADANGER

- Always stay clear of the load.
- **Never** lift loads over people or in close proximity to people.
- **Never** attempt to operate this magnet until you read and understand the Operator's Manual.
- **Never** use this magnet to lift, support or transport people.
- **Never** leave any lifted load unattended.
- **Never** lift more than one work piece at a time with this magnet.
- Always make sure that the supporting structure and load attaching devices (i.e. crane, chains and hook) are rated to support the weight of the magnet and load.
- Always make sure that the load's weight and dimensions are within the Magnet's Lifting Guidelines. These Guidelines are located in the Operator's Manual.
- Always let those near you know that a lift is to begin.

Remember, proper lifting knowledge and techniques are the responsibility of the operator. Be sure to read and understand the instructions and safety warnings contained in this manual before using your lifter.

If you do not understand everything in this manual contact O.S. Walker for assistance before using the magnet.

Call 1-800-W-MAGNET

SAFETY INSTRUCTIONS RECOGNIZE SAFETY INFORMATION



This is the safety alert symbol. When you see this symbol on your magnet or in this manual, be alert to the potential for personal injury. Follow recommended precautions and safe operating practices at all times.



Red Background, White Letters



Orange Background, Black Letters



Yellow Background, Black Letters

This indicates a situation in which a hazard is imminent and will result in a high probability of serious injury or death.

This indicates a potentially hazardous situation, which could result in some probability of serious injury or death.

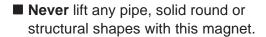
This indicates a potentially hazardous situation, which could result in minor injury or moderate injury.

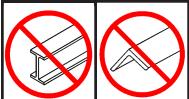
These are
Hazard
Seriousness
Signal
Words

UNSAFE LIFTING APPLICATIONS FOR YOUR MAGNET



A DANGER

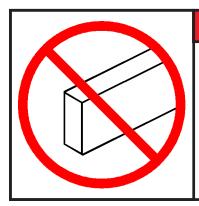




■ Never lift any castings that do not have a machined flat lifting surface for the magnet. The location of the lifting surface should be such to permit the load to remain level when lifted.

O.S. Walker can provide other type magnets for these applications.

For model WBM type magnets see lifting guidelines (page 15).



A DANGER

■ **Never** lift a load by its narrowest dimension.



If you have any difficulty lifting a load, DON'T LIFT IT! Call Walker for advice at 1-800-962-4638

SAFETY INSTRUCTIONS

WAYS TO AVOID A REDUCTION OF LIFTING CAPACITY

ADANGER

To Avoid any Reduction of Lifting Capacity:

- The lifting surfaces of the magnet and the area of the load where the magnet will be located must be clean, smooth, flat and free of nicks and burrs.
- The full area of the magnet's lifting surface must be in contact with the load.
- The load must be at least 2" (51mm) thick.
- The load must be low carbon steel such as SAE 1020.
- The magnet's lifting surface must stay level and the contacting surface of the load remain flat.
- The temperature of the magnet and/or the load must not be greater than 110°F (43°C).
- Repair of this magnet should only be done by the O. S. Walker Co. or a Qualified Person.*
- If you have any difficulty lifting a load, DON'T LIFT IT! Call O.S. Walker for advice at 1-800-962-4638.

ADDITIONAL WARNINGS

WARNING

- **Never** lift loads with any dimension greater than those shown in the LIFTING GUIDELINES.
- **Never** leave the I.R. Remote unit where it may be damaged.
- **Never** operate damaged or malfunctioning magnets.
- **Never** remove or damage Operating and Warning labels.
- Persons using pacemakers or other medical devices should not use this magnet until they have consulted with their physician.

A WARNING

- Disassembly or repair of this magnet can result in reduced holding power and/or cause an unsafe condition. Therefore, anytime the magnet is disassembled beyond the parts list shown in this manual, the magnet must be re-tested for breakaway force in accordance with the test described in ANSI/ASME B30.20.
- Modification of any operating mechanism or structure of this magnet can reduce the magnet's effectiveness and/or cause an unsafe condition.
- Repair or modification of this magnet should only be done by O.S. Walker*.

SAFETY PERSON

O.S. Walker recommends that a person be assigned to review all magnetic handling applications for these magnets to ensure that safe practices and procedures are being followed.

*Walker replacement parts may be installed by a **Designated Person.

** **Designated Person -** A person selected or assigned by the employer as being competent to replace specific replacement parts listed in this manual and is able to verify the proper functioning of the specific replacement parts and the entire product after the completion of the installation.

INSTALLATION

BATTERY INSTALLATION:

The battery used in the WBM-13 series should be a BCI group 22NF style battery of the deep discharge type having a minimum reserve capacity of 45 ampere-hour @ 20 hour rate such as Dynasty DCS-50V battery. The battery used in the WBM-25, WBM-36, WBM-50, WBP-7 or WBP-15 series should be a BCI group 27 style battery of the deep discharge type having a minimum reserve capacity of 82 ampere-hour @ 20 hour rate such as Dynasty DCS-88BT battery. Replacement batteries must be 12 volt, top lug terminal, low maintenance type, AGM cell, and should have the highest reserve capacity available and be rated for deep cycle discharge. O.S. Walker does not recommend the use of wet lead acid batteries.

ADANGER

BATTERY GAS CAN EXPLODE. KEEP SPARKS AND FLAMES AWAY FROM BATTERIES.

IMPORTANT: CHARGER MAY BE PERMANENTLY DAMAGED IF BATTERY CABLES ARE REVERSED. BE SURE CABLES ARE CONNECTED WITH CORRECT POLARITY.

Install battery with the positive terminal towards the rear of the magnet.

- FIRST, connect the red battery cable to the positive post, marked (+) and cover with the terminal boot.
- **THEN,** connect the black battery cable and thermal probe to the negative post, marked (-).

BATTERY CHARGING

Read and understand the instructions supplied with your battery. After installation, the battery should be charged as soon as possible to avoid loss of life. Make sure the battery has been fully charged before placing the magnet into service.

NEVER ATTEMPT TO CHARGE A DAMAGED OR FROZEN BATTERY. Charge the battery in a well ventilated area. Battery gases are explosive. KEEP SPARKS AND FLAMES AWAY FROM THE BATTERY.

Turn the built in charger on by connecting the control unit to the 115 VAC line using the line cord shipped with your battery powered lift magnet. For the charger to operate, the magnet must be turned off.

The battery charger is designed to supply a slow charge to avoid overheating of the battery while providing adequate capacity to restore the charge to a healthy battery during non-production shifts. Recharging the battery, every night is recommended to increase battery life and your magnet's operation time.



NEVER DISCONNECT THE MAGNET FROM ITS POWER SOURCE WHILE IT IS ENERGIZED! ELECTRICAL ARCING WILL OCCUR AND MAY CAUSE SERIOUS INJURY.

SPECIFICATIONS

Magnet Specifications

Model No.	WBM-13	WBM-25	WBM-36	WBM-50	WBP-7	WBP-15
Length	16.25	21	48	60	18.5	30
Width	8.6	9.6	9.6	12	9.5	10.5
Ht. To Crane Hook	22.4	22.6	22.9	23.1	27.8	30.1
Net Weight lbs.	190	275	560	650	390	750
Shipping Wgt. Lbs.	200	290	580	700	410	775

Performance Rating on AISI 1020 Steel

Performance Rating on AISI 1020 Steel			
WBM-13	0 - 3,000 lbs. Rated Lift		
WBM-25	0 - 5,500 lbs. Rated Lift		
WBM-36	0 - 8,000 lbs. Rated Lift		
WBM-50	0 - 11,000 lbs. Rated Lift		
WBP-7	0 - 1,665 lbs. Rated Lift		
WBP-15	0 - 3,330 lbs. Rated Lift		

All model WBM & WBP Lifting Magnets are rated for 50% Duty Cycle (see page 14).

OPERATING INSTRUCTIONS

IMPORTANT FACTS FOR THE OPERATION OF LIFT MAGNETS

LOAD CHARACTERISTICS OTHER THAN JUST WEIGHT MUST BE CONSIDERED IN ORDER TO DETERMINE THE LOAD THAT ANY MAGNET CAN LIFT.

This statement is true for all lifting magnets because they all operate using the same fundamental laws of physics. Magnetic power is often pictured as lines of magnetic force flowing from north pole to south pole. Anything that limits the flow of these magnetic lines of force obviously reduces the magnet's lifting capacity. There are many important factors, which limit the flow of these lines of force.

1. LOAD THICKNESS

The greater the number of lines of magnetic force flowing from a magnet into the load, the greater the effectiveness of the magnet. The thicker the load, the more lines of magnetic force are able to flow. After a certain thickness of load, no additional lines of force will flow because the magnet has reached its full capacity.

Thin material (load) means less iron available, and thus fewer lines of magnetic force flow from the magnet into the load. Therefore, the lifting capacity of the magnet is reduced. In some cases, the magnet will attract more than one thin plate of material when set on a stack of thin plates. DO NOT LIFT more than one plate at a time since the lower plate may not be held sufficiently.

The lifting guidelines provide the user with what minimum thickness of load is required to reach full lifting capacity. Below such thickness of load, the user must accept the reduced lifting capacity of the magnet as shown in the guidelines.

2. SURFACE CONDITIONS

Magnetic lines of force do not flow easily through air. They need iron in order to flow freely; therefore, anything that creates a space or an air gap between a magnet and the load limits the flow of magnetic lines of force and, thus, reduces the lifting capacity of a magnet.

- Magnet's Lifting Surface Condition The lifting surfaces of a magnet must be clean, smooth, flat and free of nicks and burrs to minimize the air gap between a magnet and the load. This magnet has been designed with soft, low carbon steel lifting surfaces in order to maximize the lifting capacity; therefore, special care must be taken to protect these surfaces. Follow the Inspection Instructions in this manual. Attaching or welding other materials to the lifting surfaces in order to reduce wear should not be done with this magnet because it will reduce the lifting capacity.
- Load Surface Condition Paper, dirt, rags, rust, paint, and scale act the same as air. Also, a rough surface finish on the load creates an air gap between the magnet and load. Any of these conditions will reduce the magnet's lifting capacity.

3. LOAD ALLOY

Low carbon steels, such as SAE 1020 steel, are nearly as good conductors of magnetic lines of force as pure iron. However, many other alloys contain non-magnetic materials, which reduce the ability of magnetic lines of force to flow into the load. An alloy such as SAE 300 series of stainless steel is almost as poor a conductor of magnetic lines of force as air.

Type 416 stainless steel is considered magnetic, but it contains enough chromium so that a magnet can develop only one-half as much force on a type 416 stainless steel load as it can on a SAE 1020 steel load. Also, because of the carbon content, the force developed on cast iron is less than one-half of that developed on SAE 1020 steel. (Chilled cast iron further reduces the force to less than one-quarter.)

4. LOAD LENGTH OR WIDTH

As the length or width of a load increases, it ceases to remain flat when lifted and the edges begin to droop. This drooping or sagging of the load can create an air gap between the load and the magnet. This is called peel. If this occurs, the lifting capacity of the magnet is greatly reduced.

For plate lifting, where drooping often occurs, rectangular shaped magnets must be positioned so that the length of the magnet is parallel to the width of the load.

5. POSITION OF MAGNET'S LIFTING SURFACE

As the slope of the magnet's lifting surface changes from horizontal to vertical, the lifting capacity of the magnet decreases. When the magnet's lifting surfaces are vertical, the lifting capacity of the magnet is minimum and dependent upon the coefficient of friction between the magnet's lifting surface and the load.

6. PORTION OF MAGNET SURFACE IN CONTACT WITH LOAD

The full surface of the magnet must contact the load if the magnet is to achieve rated lift capacity.

7. LOAD TEMPERATURE

The temperature of the load can cause damage to the magnet and, if high enough, can even change the magnetic characteristics of the load. For Standard Lift Magnets, Walker should be consulted if the load or air temperature exceeds 110° F (43° C).

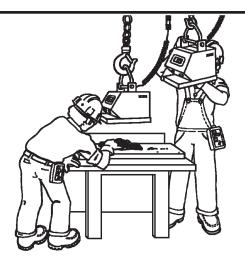
SAFETY

FOR FAST, EASY LIFTING WITH YOUR WALKERLIFT MAGNET -

1 NEVER

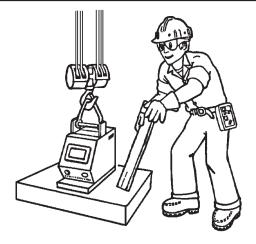
attempt to operate this lift magnet until you read and understand the OPERATOR'S MANUAL & SAFETY INSTRUCTIONS (Manual #37-DD14055 for the WBM and WBP magnets).

2



Check the condition of the magnet prior to every lift. WIPE clean the bottom of the magnet and the area on the load where the magnet will be located. File away burrs.





Check to be sure no one is near the load to be lifted. Inform others in the area that a lift is to begin. Lift the load 2 to 3 inches (50 to 75 mm) and then jar the load to insure that adequate holding power is available.

ALWAYS STAY CLEAR OF THE LOAD.

Lift and move the load SMOOTHLY. Avoid jarring and swinging the load while it is in transit. KEEP THE

If you have any difficulty lifting a load, DON'T LIFT IT. Ask your supervisor for help or call O.S. Walker Co., Inc., for advice at 1-800-W-MAGNET

When working in an area using lifting magnets, wear safety glasses, work gloves, steel-toed shoes and a safety hat.

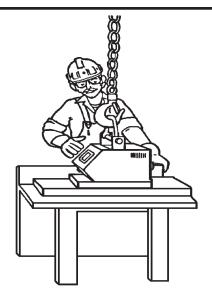
LOAD LEVEL. NEVER let

any obstruction.

the load come in contact with

RULES

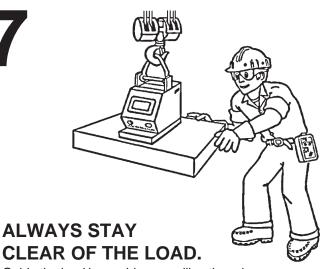
MODELS: WBM-13, WBM-25, WBM-36, WBM-50, WBP-7, AND WBP-15



Position the magnet so the load remains level.

This magnet can be operated with the controls located on the front panel of the magnet, or with the Remote Control unit when its lens is pointed towards the control panel lamps on the magnet. To energize the magnet, push the "LIFT" button. The alarm will sound and the red

DANGER lamp will light while the magnetic energy builds up. When the magnetic energy builds up to a sufficient level, the alarm will stop sounding. The indicator lamps will now show the battery charge level. This might take a few seconds. IF THE ALARM CONTINUES SOUNDING, OR THE RED DANGER LAMP STAYS ON, DO NOT OPERATE THE MAGNET. TURN THE MAGNET OFF.



Guide the load by pushing or pulling the edges. This keeps your entire body clear of the load at all times. DO NOT guide the load by pushing or pulling the Magnet. NEVER get in a position where you could get hit with load if it dropped.



Carefully set the load down. To release the load, press the "RELEASE" button on the Front Panel or push both "RELEASE" buttons on the Remote Control at the same time by using both thumbs. Then lift the magnet slightly to be sure the load has been released.



NEVER re-energize the magnet until it has been placed in contact with the load to be lifted. Prematurely energizing the magnet could cause unwanted materials to be attracted to the magnet. PERSONAL INJURY MAY RESULT.

RECOMMENDED LIFTING PROCEDURES

SAFETY HOOK LATCH

Always use a safety hook latch on your crane hook to hold your magnets.

STAY CLEAR OF THE LOAD

Guide the load by pushing or pulling the edges of the load.

Keep your entire body clear of the load at all times.

■ PLATE LIFTING

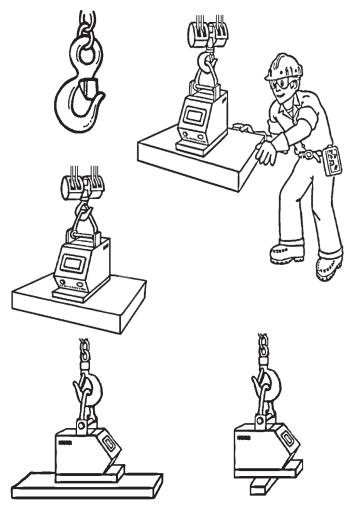
On plates less than 1 1/2" (38mm) thick, position the magnet length so that it is parallel to the width of the plate. Never lift any plate less than 3/16" (4.7mm) thick. (See Important Facts 1 & 4).

BAR LIFTING

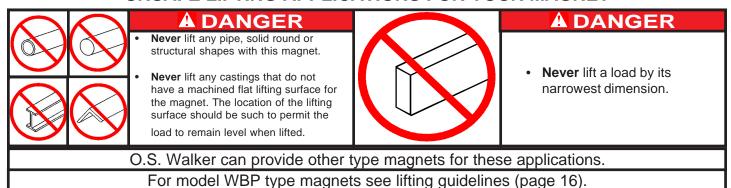
When the load width is less than the magnet length and wider than the magnet width, position the magnet length so that it is parallel to the length of the bar and the entire lifting surface of the magnet is in contact with the load.

When the load width is narrower than

the width of the magnet, position the magnet so the length of the magnet is parallel to the width of the load, and you get the maximum, and equal amounts of each pole area in contact with the load.



UNSAFE LIFTING APPLICATIONS FOR YOUR MAGNET





If you have any difficulty lifting a load, DON'T LIFT IT! Call Walker for advice at 1-800-962-4638

GUIDELINES FOR THE REDUCTION OF THE RATED LIFTING CAPACITY:

Each Walker lifter model is rated for a different weight limit. Load characteristics will affect the lifting capacity of the magnets. The lifting guidelines for the various models are shown on the following pages.

- The Lifting Guidelines charts show the effect of air gap, load thickness, load length, and load width on lifting capacity. As the thickness of the load decreases, so does the rated lifting capacity of the magnet. The tables show the maximum weight or load size, which can be lifted for each thickness under varying air gap conditions. DO NOT EXCEED EITHER THE MAXIMUM WEIGHT OR SIZE FOR EACH THICKNESS.
- Each value shown on the Lifting Guidelines charts is for SAE 1020 steel, and any increase in alloy content will result in further reduction of the lifting capacity of the magnet.

THIS TABLE PROVIDES SOME REDUCTION FACTORS FOR MATERIAL OTHER THAN SAE 1020 STEEL Reduction Factors for Materials Other than SAE 1020 Steel			
Materials	REDUCTION FACTOR		
Cast Steel	0.90		
3% Silicon Steel	0.80		
SAE 1095 Steel	0.70		
416 Stainless Steel 0.50			
Cast Iron (non-chilled)	0.45		
Pure Nickel 0.10			
For Other Materials Consult O.S. Walker			

Rated Lifting Capacity (for these materials) = Reduction Factor multiplied by Maximum Load Value (for 1020 Steel) from Lifting Guidelines. (Plate) Ref. page 15.

Example: Lifting SAE 1095 STEEL, 1/2" thick, ROUGH machined flat surfaces (use .020" air gap) with a Model WBM-25 magnet.

RATED LIFTING CAPACITY = 0.70 multiplied by 725 = 507 pounds

ADDITIONAL OPERATING INFORMATION

Avoid dropping, banging, or slamming the magnet into other objects.

Battery Powered Lifting Magnets are electromagnetic devices. Therefore, do not allow water to enter the magnet body. Water is an electrical conductor and could short out the magnet.

If you have any difficulty lifting a load, DON'T LIFT IT!



DANGER: NEVER DISCONNECT THE MAGNET FROM ITS POWER SOURCE WHILE IT IS ENERGIZED! ELECTRICAL ARCING WILL OCCUR AND MAY CAUSE SERIOUS INJURY.

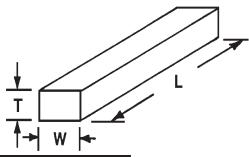
LOAD WEIGHT GUIDELINE

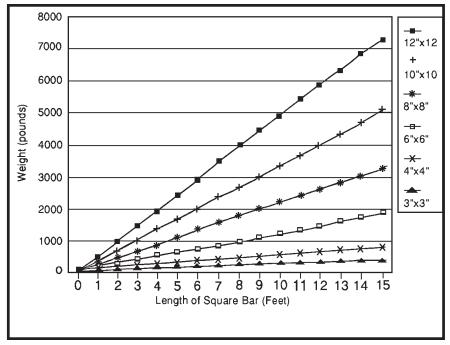
To estimate the weight of a steel work piece, first determine the volume of the Load in cubic inches. Then multiply the volume (cubic inches) by the density of steel (.283) pounds per cubic inch.

Load Weight (steel) = (volume) multiplied by (density) = (W x T x L) x (.283)

Example: What is the weight of a 10" wide x 5" thick x 96" long piece of steel?

Load Weight = $(10 \times 5 \times 96) \times (.283) = 1358$ lbs.





DUTY CYCLE

DO NOT EXCEED THE RATED 50% DUTY CYCLE OF THESE MAGNETS. (Exceeding the duty cycle will result in reduced lifting capacity, less operating time between battery charges, and a shorter magnet lift.)

Duty cycle rating (D.C. %) is defined as:

(Time On x 100) / (Time Off + Time On) = D.C. % and is expressed as a Percent (with a maximum of 10 minutes Time On.)

Therefore, to maximize the effectiveness of your magnet, keep the power off when the magnet is not in use.

EXAMPLES:

3 MINUTES ON, 1 MINUTE OFF EQUALS: $(3 \times 100) / (3 + 1) = 75\%$

5 MINUTES ON, 5 MINUTES OFF EQUALS: $(5 \times 100) / (5 + 5) = 50\%$



If you have any difficulty lifting a load, DON'T LIFT IT! Call Walker for advice at 1-800-962-4638

LIFTING GUIDELINES WBM PLATE

		TYPE OF SURFACE						
MAGNET MODELS	WORK PIECE THICK NESS		SMOOTH ground surface h RMS.000" r Gap †	Similar to a flat surface.010	R SCALE hot rolled steel " (.254mm) r Gap †	IRREGULAR OR ROUGH Similar to a flat smooth cut file.020" (.508mm) Max. Air Gap †		
		Max. Load (lbs.)	Max. Size (ft.)	Max. Load (lbs.)	Max. Size (ft.)	Max. Load (lbs.)	Max. Size (ft.)	
	NEVER LIFT ANY LOADS WITH ANY DIMENSION GREATER THAN 9 FEET							
	OVER 1-1/2"	3000	-	2575	-	2000	-	
	1 - 1 / 2 "	3000	7 x 7	2575	6 x 7	2000	5 x 6	
WDM 40	*1"	2100	7 x 7	1975	6 x 7	1700	5 x 6	
W B M -13	*3/4"	1475	7 x 6	1300	6 x 6	1100	5 x 6	
	*1/2"	825	6 x 6	750	6 x 6	650	5 x 5	
	*3/8"	475	5 x 6	425	5 x 5	400	5 x 5	
	*1/4"	200	4 x 4	190	4 x 4	175	4 x 4	
	1	NEVER LIFT AN	IY LOADS WITH	ANY DIMENSI	ON GREATER	THAN 15 FEET		
	OVER 2"	5500	-	4650	-	3850	-	
	*2"	5500	8 x 8	4650	7 x 8	3850	6 x 7	
	*1-1/2"	4075	8 x 8	3575	7 x 8	2975	6 x 7	
W B M -25	*1"	2650	8 x 8	2500	7 x 8	2100	7 x 7	
	*3/4"	1650	7 x 7	1450	6 x 7	1350	6 x 7	
	*1/2"	825	6 x 6	800	6 x 6	725	5 x 7	
	*3/8"	475	5 x 6	450	4 x 7	400	5 x 5	
	*1/4"	210	4 x 5	190	4 x 4	180	4 x 4	
	ı	NEVER LIFT AN	IY LOADS WITH	ANY DIMENSI	ON GREATER	THAN 20 FEET		
	OVER 2"	8000	-	7200	-	6000	-	
	*1"	8000	9 x 20	7200	8 x 20	6000	8 x 18	
W B M -36	*3/4"	5350	8 x 20	4900	8 x 20	4320	8 x 17	
	*1/2"	2000	8 x 12	1925	8 x 11	1850	8 x 11	
	*3/8"	1100	8 x 9	1025	8 x 8	950	7 x 8	
	*1/4"	550	6 x 9	525	6 x 8	500	6 x 8	
	ı	NEVER LIFT AN	IY LOADS WITH	ANY DIMENSI	ON GREATER	THAN 25 FEET		
	OVER 2"	11000	-	9300	-	7700	-	
	*2"	11000	11 x 12	9300	10 x 11	7700	9 x 10	
	*1-1/2"	8150	11 x 11	7150	10 x 11	5950	9 x 10	
W B M -50	*1"	5300	11 x 11	5000	11 x 11	4200	10 x 10	
	*3/4"	3300	9 x 10	2900	9 x 10	2700	9 x 9	
	*1/2"	1650	8 x 9	1600	8 x 9	1450	8 x 8	
	*3/8"	950	7 x 8	900	7 x 8	800	7 x 7	
	*1/4"	420	6 x 6	380	6 x 6	360	5 x 6	

^{*} LIFTING CAPACITY AFFECTED BY PEEL AND THICKNESS. SEE 2 & 4 OF THE "IMPORTANT FACTS" (PAGE 8 & 9) IN THIS INSTRUCTION MANUAL.

Values shown are for maximum rated capacities when operating instructions and warnings are followed. Values are based upon SAE 1020.

Higher alloy steels and other magnetic materials will require further reductions of these rated capacities. (See Guidelines for the Reduction of Rated Lifting Capacity.)

[†] SEE SECTION 6 OF THE "IMPORTANT FACTS" (PAGE 9) IN THIS INSTRUCTION MANUAL. ALSO, READ RECOMMENDED LIFTING PROCEDURES (PAGE 12).

LIFTING GUIDELINES WBP PLATE

		TYPE OF SURFACE						
MAGNET WORK PIECE THICK NESS	CLEAN & SMOOTH Similar to a flat ground surface 32 microinch RMS.000" Max. Air Gap †		RUST OR SCALE Similar to a flat hot rolled steel surface.010" (.254mm) Max. Air Gap †		IRREGULAR OR ROUGH Similar to a flat smooth cut file.020" (.508mm) Max. Air Gap †			
		Max. Load (lbs.)	Max. Size (ft.)	Max. Load (lbs.)	Max. Size (ft.)	Max. Load (lbs.)	Max. Size (ft.)	
		NEVER LIFT A	NY LOADS WIT	H ANY DIMENS	ION GREATER	THAN 7 FEET		
	OVER 2"	1665	-	1515	-	1365	-	
	*2"	1665	4 x 5	1515	4 x 4	1365	4 x 4	
	*1-1/2"	1665	5 x 5	1365	4 x 5	1250	4 x 5	
WBP-7	*1"	1500	6 x 6	1233	5 x 6	1115	5 x 5	
	*3/4"	1165	6 x 6	965	5 x 6	865	5 x 5	
	*1/2"	830	6 x 6	680	5 x 6	615	5 x 6	
	*3/8"	565	6 x 6	465	5 x 6	450	5 x 6	
	*1/4"	400	6 x 6	350	5 x 6	330	5 x 6	
	ı	NEVER LIFT AN	IY LOADS WITH	ANY DIMENS	ON GREATER	THAN 12 FEET		
	OVER 2"	3330	-	3030	-	2730	-	
	*2"	3330	6 x 6	3030	6 x 6	2730	5 x 6	
	*1-1/2"	3330	7 x 7	2730	6 x 7	2500	6 x 6	
WBP-15	*1"	2865	8 x 8	2330	7 x 8	2115	7 x 7	
	*3/4"	2100	8 x 8	1730	7 x 8	1550	7 x 7	
	*1/2"	1400	8 x 8	1165	7 x 8	1050	7 x 7	
	*3/8"	900	7 x 7	750	7 x 7	715	6 x 7	
	*1/4"	630	7 x 8	550	7 x 7	530	7 x 7	

LIFTING GUIDELINES (STRUCTURAL SHAPES)

	•		MAGNET	MODELS	
MATERIAL TYRE	***************************************	WВ	P -7	-7 W B P -	
MATERIAL TYPE	MATERIAL SIZE	MAX.WT. (lbs)	MAX LENGTH (ft)	MAX.WT. (lbs)	MAX LENGTH (ft)
	1/4" - 3/8" W E B	330	20	530	20
BEAMS & CHANNELS	7/16" - 1/2" W E B	500	20	815	20
REDUCE CAPACITY BY "	5/8" - 3/4" W E B	830	2 0	1450	20
WHEN LIFTING ON FLANGE	7/8" - 1" W E B	1000	20	1865	20
	ABOVE 1" WEB	1665	2 0	3330	20
	1" THRU 5 1/2" DIA	-	20	-	20
SOLID BARS	5-1/2" - 12" D IA .	1665	-	3330	-
PIPE & TUBING	1" - 12" DIA.	1665	20	3330	20
ANGLES (APEX UP)	ALL SIZES	600	20	1000	20
NEVER LIFT STRUCTUE	RAL SHAPE LOADS WIT	H ANY DIME	NSION GRE	ATER THAN	20 FT.

^{*} LIFTING CAPACITY AFFECTED BY PEEL AND THICKNESS. SEE 2 & 4 OF THE "IMPORTANT FACTS" (PAGE 8 & 9) IN THIS INSTRUCTION MANUAL.
† SEE SECTION 6 OF THE "IMPORTANT FACTS" (PAGE 9) IN THIS INSTRUCTION MANUAL. ALSO, READ RECOMMENDED LIFTING PROCEDURES (PAGE 12).

Values shown are for maximum rated capacities when operating instructions and warnings are followed. Values are based upon SAE 1020.

Higher alloy steels and other magnetic materials will require further reductions of these rated capacities. (See Guidelines for the Reduction of Rated Lifting Capacity.)

INDICATING LAMPS, I.R. REMOTE, and LOCAL CONTROL



Do Not Attempt To Lift a Load While Alarm Is Sounding Or Red "Danger" Lamp Is On.

LAMP DISPLAY DURING LIFT

When the magnet is on a load and the "LIFT" button on the Front Panel or I.R. remote is pressed, the red "DANGER" lamp will light and the alarm will sound. The alarm may continue for a few seconds, until the magnetic energy builds up to the proper level needed for lifting. **NEVER BEGIN TO LIFT A LOAD WHILE ALARM IS SOUNDING OR WHEN THE RED DANGER LAMP IS ON**. If the red DANGER lamp remains on and the alarm continues to sound, **DO NOT USE THE MAGNET**. See Troubleshooting page 21 section B for more information.

The panel lamps indicate the battery's charge level while using the magnet as well as during charging. When the magnet is turned on, the lamps indicate the voltage as the battery discharges. When the four green lamps go out, the battery charge is low, and it should be recharged before doing any further lifting.

After a complete battery charge, ALL the charge level lamps should light when the "LIFT" button on the Front Panel or I.R. remote is pressed. However, if the last green lamp(s) turn off shortly after the magnet has been turned on, this could indicate the battery's inability to retain the charge level. See Troubleshooting page 21 section C for more information.



Observe the battery charge level lamps frequently during each lift. If the red lamp goes on and/or the alarm sounds during a lift, set the load down immediately.

LAMP DISPLAY DURING CHARGING

With the magnet off and the power cord plugged into a 115 VAC source, the red "CHARGER ON" light should turn on within 10 seconds indicating the battery is being charged. As the battery charges, the yellow and green "BATTERY CHARGE LEVEL" lights will gradually light up. Eventually, when the charge voltage reaches approximately 14.5 volts, the BATTERY CHARGE LEVEL lights will go out and the green "Complete" light will flash. This indicates that the charger is now "topping off" the battery.

The magnet may be used at this time, but to assure longer production time between charges and an extended battery life, it is best to wait until the light glows steady. When this happens, the charger goes into a "Float" mode to maintain the battery charge. If no lamps come on after the charger is initially plugged in, see Troubleshooting page 22 Sections H & I.

When the "COMPLETE" lamp turns on, the charger may be left plugged in if desired. Over time, if the battery voltage drops back down, the charger will switch back into charge mode and the red "ON" light will turn on again.

Note: The "Battery Charge Level" display in charge mode is calibrated differently than for magnet use. Therefore, the number of lamps, which light during charging, may differ from the number, which light during magnet use, and does not indicate a malfunction.

I.R. REMOTE

TURN ON MAGNET

Press the green LIFT button. The red DANGER lamp will light and the alarm will sound. This alarm may continue, for a few seconds until the magnetic energy builds up to the proper level needed for lifting. NEVER BEGIN TO LIFT A LOAD WHILE ALARM IS SOUNDING OR WHEN THE RED DANGER LAMP IS ON. If the red DANGER lamp remains on and the alarm continues to sound, DO NOT USE THE MAGNET, refer to Troubleshooting page 21 section B.

RELEASE LOAD

First, relax the lift bail until the lights on the controller panel begin to flash. Press BOTH red RE-LEASE buttons simultaneously with both thumbs. After pressing the release buttons, wait several seconds until the magnet control runs through a discharge cycle and the indicator lights stop flashing. Each time the buttons are pressed the red LED indicator on the remote should illuminate. If the intensity of this LED dims or the activation distance from the magnet diminishes, replace the 9 Volt battery in the remote. If the magnet will not release the load, refer to Troubleshooting page 22 section G.

PROGRAM YOUR MAGNET

For use with a new replacement remote unit, point the remote at the lights on the bezel of the battery magnet, hold down the green "LIFT" button and the top red "RELEASE" button simultaneously for approximately ten (10) seconds. The row of lights on the battery magnet should flash sequentially and then stop. The battery magnet will then be ready for use with the remote. If this does not happen, refer to Troubleshooting page 22 Sections H & I.

LOCAL CONTROL

TURN ON MAGNET

Press the green LIFT button on the front of the controller panel. The red DANGER lamp will light and the alarm will sound. The alarm may continue, for a few seconds until the magnetic energy builds up to the proper level needed for lifting. **NEVER BEGIN TO LIFT A LOAD WHILE ALARM IS SOUND-ING OR WHEN THE RED DANGER LAMP IS ON.** If the red DANGER lamp remains on and the alarm continues to sound, **DO NOT USE THE MAGNET**, see Troubleshooting page 21 Section B.

RELEASE LOAD

First relax the lift bail until the lights on the controller panel begin to flash. Press the red RELEASE button on the front of the controller panel. After depressing the release button, wait several seconds until the magnet control runs through a discharge cycle and the indicator lights stop flashing. Each time the buttons are pressed the red LED indicator on the remote should illuminate. If the intensity of this LED dims or the activation distance from the magnet diminishes, replace the 9 Volt battery in the remote. If the magnet will not release the load, see Troubleshooting page 22 section G.

INSPECTION AND MAINTENANCE INSTRUCTIONS

— EVERY LIFT —

- Keep the lifting surfaces of the magnet CLEAN, SMOOTH, FLAT, FREE OF RUST and any FOREIGN MATERIALS. Nicks and burrs on the lifting surfaces will reduce the lifting capacity. If burrs occur, they can be removed by filing them away. However, care must be taken to protect the neighboring lifting surfaces.
- Deep nicks may require regrinding of the entire lifting surfaces. (See Weekly Inspection Instructions)
- Check that the alarm sounds and the red lamp lights when the LIFT button of the Front Panel or I.R. remote is pressed. If either of both the lamp and alarm do not operate, **DO NOT USE THE MAGNET.**

— DAILY —

- Check the entire magnet's case, lifting surfaces, lifting arms, bail, and welds for cracks or other defects. If present, DO NOT USE THE MAGNET Contact a Qualified Person or O. S. Walker.
- Check the lifting bail bar and shaft for wear. If the bail bar or shaft is worn to 80% of its original diameter, it should be replaced.
- Keep the battery charged as described on page 6.
- Check battery connection. If corrosion appears, clean them. Always remove grounded (-) cattery clamp first and replace it last.
- Check physical condition of all cables, leads, lamps, and alarms. Repair or replace any suspicious components.
- Check the condition of the Operating Instruction label and Product Safety signs. If these labels and signs are missing or damaged, they should be replaced.

— WEEKLY —

- The lifting surfaces of the magnet should be checked for flatness and wear. Uneven wear and out of flatness can greatly reduce the lifting capacity because it will cause a non-magnetic separation (air gap) between the magnet and the flat surface of the load. Some nicks and burrs will occur on the lifting surfaces due to normal usage. However, when the flat contact area of the entire magnet's lifting surfaces becomes less than 90% of the original total lifting surface, it should be taken out of service until the lifting surfaces are reground.
- If regrinding is necessary, all the lifting surfaces must remain flat and in the same plane. After regrinding, the magnet must be re-tested for breakaway force in accordance with the test described in ANSI/ASME B30.20.
- Check the rigid epoxy of the encapsulated coil. Contact Walker or your supervisor.

O.S. Walker recommends that your lifting magnet be re-tested for breakaway force each year.

PERIODIC INSPECTION RECORD

See ASME B30.20 Section 20 Record date and initials; note condition of each item

Date and Initial for each inspection	Condition	Date	Initials	Date	Initials
Magnet Face					
Elect. Wiring & Lights					
Control Operation					
Coil Resist. & Resist. To Ground					
Coil Potting					
Lift Bail, Bail Pin, & Click Pin					
Structural & Weld Condition					
Labels & Safety Instructions					

Date and Initial for each inspection	Condition	Date	Initials	Date	Initials
Magnet Face					
Elect. Wiring & Lights					
Control Operation					
Coil Resist. & Resist. To Ground					
Coil Potting					
Lift Bail, Bail Pin, & Click Pin					
Structural & Weld Condition					
Labels & Safety Instructions					

NOTES:			

TROUBLESHOOTING

Symptoms	Possible cause
	1) To operate the magnet, the LIFT button on the Front Panel or the I.R. remote must first be pressed. If no display lamps turn on, then the battery voltage may be below 11.3 volts, the minimum operating level for the magnet. Charge the battery for at least 20 minutes.
A. MAGNET DOES NOT TURN ON.	2) Check the battery terminals for corrosion, and clean if necessary. Dirty terminals reduce the voltage to the magnet.
	3) Check the LED on the remote to assure that it lights when the buttons are pressed. If this does not happen, change the battery in the remote.
B. ALARM WON'T STOP SOUNDING AFTER MAGNET IS TURNED ON.	1) When the magnet is turned on, the alarm will normally sound for a few seconds while the magnet energy builds to the proper level for safe lifting. If the alarm continues sounding after several seconds, then the battery level may have fallen below the danger level after the magnet was turned on. NEVER ATTEMPT TO LIFT A LOAD WHILE THE ALARM IS SOUNDING OR THE RED DANGER LAMP IS ON. The danger level is 11.3 volts and the magnet should not be operated once the battery falls below this voltage. The battery must be recharged before further use.
	2) The alarm will also sound if there is a break in the magnet coil, the magnet cord, or the control circuit. Check to see if the magnet is plugged into the female twist-lock receptacle. Twist the plug to the right and lock it. The magnet plug must be properly locked in the female receptacle for safe operation If the alarm persists, even after the above measures have been taken, do not attempt to use the magnet. Call 1-800-W-MAGNET and ask for technical assistance.
	3) Check the label located on the back of the control unit (inside the battery compartment) to be certain that is the correct control for your magnet model. Controls are calibrated for use the specific models.
C. DISPLAY LAMPS TURN OFF RAPIDLY.	1) After a complete battery charge, ALL the charge level lamps should light when the LIFT button on the Front Panel or I.R. remote is pressed. The green lamps will turn off as the battery discharges, and will turn off faster with higher power consumption lift magnets. (WBM-36, WBM-50, WBP-7 and WBP-15) than with the WBM-13 and WBM-25 magnets. However, if the last green lamp(s) turn off minutes after the magnet has been turned on, this does not necessarily indicate a problem with the charger. Instead, it could be indicating the battery's inability to accept its original full charge level.
	2) As lead acid batteries age or become damaged internally, they become unable to accept the full charge storage capacity, the lamps will begin to turn off sooner for the same previous "on time". With increase aging and/or damage and even less charge storage capacity the lamps will progressively turn off faster. Replacement batteries of lower reserve capacity than recommended will result in the lamps turning off more rapidly and providing less usage time between charges. Therefore, the user is cautioned to: OBSERVE THE BATTERY CHARGE LEVEL LAMPS FREQUENTLY DURING EACH LIFT. IF THE RED LAMP GOES ON AND/OR THE ALARM SOUNDS DURING A LIFT, SET THE LOAD DOWN IMMEDIATELY.
	3) Check the condition of the battery. Remove the battery from the magnet, and fully charge on an external charger. After completing the charge, check the battery voltage using a voltmeter. The battery voltage should read approximately 12.7 volts at a full charge. Let the battery sit for 15-20 minutes and re-check the voltage. If the voltage has dropped, replace the battery.

TROUBLESHOOTING

D. ALARM DOES NOT SOUND.	1) The alarm should always sound when the magnet is on a load and the LIFT button on the I.R. remote is pressed, or whenever the red DANGER light turns on. If the alarm does not sound, DO NOT USE THE MAGNET. Call 1-800-962-4638 and ask for technical assistance.
E. RED "DANGER" LAMP DOES NOT LIGHT.	1) The red DANGER lamp should always turn on when the LIFT button on the Front Panel or I.R. remote is pressed and whenever the alarm sounds. If the red lamp does not light, DO NOT USE THE MAGNET. Call 1-800-962-4638 and ask for technical assistance.
F. MAGNET NOT HOLDING.	1) A non-magnetic space (air gap) introduced in between the magnet and the work piece being lifting will cause a reduction in holding power. This air gap can be caused by any non-magnetic separation such as rust, paper, paint, dirt, scale, and burrs on either surface.
G. MAGNET WILL NOT RELEASE.	1) Check the lights on the control panel and assure that they are flashing. If the lights are steady, release any residual tension on the lift bail until the lights flash. NOTE : If the lift bail is fully relaxed or the crane hook is allowed to rest on the lift bail, the lights may not flash. Raise the lift bail until the lights flash.
	2) Check the LED on the remote to assure that it lights when the buttons are pressed. If this does not happen, change the battery in the remote.
H. BATTERY NOT CHARGING.	Check the battery terminals for a good clean contact. Clean, if required to remove any corrosion. A battery will not charge properly with corroded terminals.
	2) Check for proper operation of charger. The power cord should be plugged in and the magnet should be turned off. Check the fuse located in the cord receptacle. If the fuse is blown, replace with 1 amp Slo Blo 5x20 mm type. Check the cables for any damage. When charger is initially plugged in, at least one of the display lamps should turn on. If not, see section (I) below.
	3) As lead acid batteries age and/or become damaged internally, they do not retain the full charge capacity. Indications of the on-set of these battery conditions may be observed by the charger requiring longer periods of time to turn on the "complete" lamp or possibly not being able to reach a charge level to turn on the "complete" lamp.
	4) If the magnet was left on and the battery allowed to drop below 8 volts, the magnet's power relay would remain latched "ON" even if the RELEASE buttons on the I.R. remote were pressed. Under this condition, the magnet coil would load down the battery preventing it from being charged. The solution is to charge the battery with an external charger. Then, when it is connected to the circuit, the relay will reset itself.
	5) Check the output of the charger. This can be done by a qualified electrician using an amp meter (capable of handling 10 amps) connected in series between the (red) positive battery cable and the positive (+) terminal battery. Read section (I).
I. DISPLAY LAMPS DO NOT TURN ON WHILE CHARGING.	1) When the power cord is connected to a 115VAC power source, the red "CHARGE ON" light should turn on within 10 seconds to indicate the battery is being charged. As the battery charges, the yellow and green "BATTERY CHARGE LEVEL" lights will gradually light up. When the charging voltage reaches approximately 14.5 volts, the "BATTERY CHARGE LEVEL" lights will go out and the green "Complete" light will flash. This indicates that the charger is now "topping off" the battery. The charging voltage has reached its maximum, and the charger is waiting for the charge current to drop to a present level. When this happens, the charger goes into a "Float" mode to maintain the battery charge. There may be a significant delay before the charger reaches its maximum voltage, or the time it takes the charge current to drop to the preset level. The length of this delay is dependent on the characteristics of the individual battery. It may extend to hours or even days, and does not indicate a problem with the charger.
	2) If no lamps at all go on when the charger is initially plugged in and the magnet is turned off, then the battery level may have fallen so low that the charger cannot operate. Check the battery voltage. If the voltage has fallen below approximate 8 volts, the charger may not turn on immediately. If it doesn't turn on within a few minutes, then the battery may be worn out. We suggest replacing the battery or charging it with an external charger, then carefully watching its performance. If the lamps turn off rapidly as discussed in section (C), REPLACE THE BATTERY.
	3) The charger has built-in thermostat, which shuts off the charger if it gets too hot. When the charger has cooled off, the charging will resume, and the display lamps will turn on again.

RETURN AND REPAIR INSTRUCTIONS

For warranty and non-warranty repairs on any part of your magnet system, contact O.S. Walker, Inc. TOLL FREE at 1-800-W-MAGNET. A return authorization number will be issued along with any applicable packaging and shipping instructions. After receipt of the components to be repaired, O.S. Walker, Inc. will perform an inspection and provide an estimate of the repair costs at no charge to the customer. Authorization from the customer must be obtained by O.S. Walker, Inc. before repairs are made. Transportation charges, both to and from the factory, are the sole responsibility of the customer.

NEVER SHIP THE MAGNET WITH BATTERY INSTALLED. IT IS UNLAWFUL!

WARNING

- Disassembly or repair of this magnet can result in reduced holding power and/or cause an unsafe condition. Therefore, anytime the magnet is disassembled beyond the parts list shown in this manual, the magnet must be re-tested for breakaway force in accordance with the test described in ANSI/ASME B30.20.
- Modification of any operating mechanism or structure of this magnet can reduce the magnet's effectiveness and/or cause unsafe conditions.
- Repair or modification of this magnet should only be done by O.S. Walker.*

*Walker replacement parts may be installed by a ****Designated Person**.

** **Designated Person -** A person selected or assigned by the employer as being competent to replace specific replacement parts listed in this manual and is able to verify the proper functioning of the specific replacement parts and the entire product after the completion of the installation.

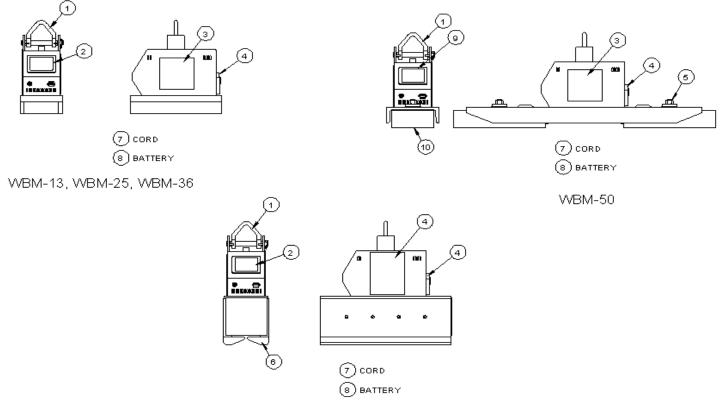
REPLACEMENT PARTS LIST

Item#	Description	WBM-13PB	WBM-25PB	WBM-36PB	WBM-50PB	WBP-7PB	WBP-15PB
1	Lift bail ass'y	54-CC12514S	54-CC12514S	54-CC12514S	54-CC12514S	54-CC12514S	54-CC12514S
2	Charger/Controller	54-AXM12496-1	54-AXM12496-4	54-AXM12496-7	54-AXM12496-7	54-AXM12496-7	54-AXM12496-7
3	Tag kit	54-DD14585-1	54-DD14586-1	54-DD14587-1	54-DD14588-1	54-DD14589-1	54-DD14590-1
4	I.R. Transmitter	39-DD14069	39-DD14069	39-DD14069	39-DD14069	39-DD14069	39-DD14069
5	Locking nut ass'y	-	-	-	54-DD3591S	-	-
6	Pole shoes	-	•	-	•	44-CC3279S	44-CC10058S
7	Cord (AC power)	10-5484	10-5484	10-5484	10-5484	10-5484	10-5484
8	Battery	16-1035	16-1037	16-1037	16-1037	16-1037	16-1037
9	Lens, lexan	39-DD15762	39-DD15762	39-DD15762	39-DD15762	39-DD15762	39-DD15762
10	Epoxy patch kit	54-DD14974	54-DD14974	54-DD14974	54-DD14974	54-DD14974	54-DD14974
11	Battery enclosure	54-AA11209	54-AA11210	54-AA11210	54-AA11210	54-AA11210	54-AA11210

^{*} Please note that all replacement chargers will have push buttons.

Tag kits with out push buttons

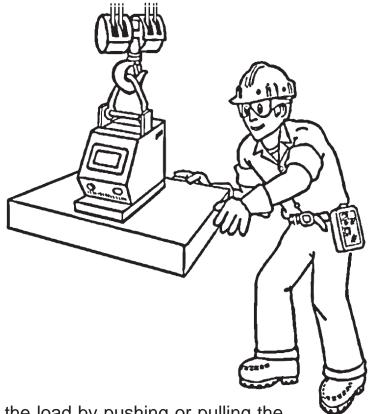
Item #	Description	WBM-13PB	WBM-25PB	WBM-36PB	WBM-50PB	WBP-7PB	WBP-15PB
3	Tag kit	54-DD14099	54-DD15000	54-DD15001	54-DD15002	54-DD15003	54-DD15004



WBP-7, WBP-15

O.S. Walker Inc., Battery Powered Magnets

ALWAYS STAY CLEAR OF THE LOAD



Guide the load by pushing or pulling the edges. This keeps your entire body clear of the load at all times.

DO NOT guide the load by pushing or pulling the magnet. NEVER get in a position where you could get hit with the load if it is dropped.

FOR FAST RESPONSE, CALL 1-800-W-MAGNET





Rockdale Street, Worcester, MA 01606 (508) 853-3232 FAX (508) 852-8649

1-800-W-MAGNET

3508 Glenridge Drive, Chino Hills, CA 91709 (909) 597-4785 FAX (909) 597-0581 901 Arvin Avenue, Stoney Creek, Ontario, L8F5N9

901 Arvin Avenue, Stoney Creek, Ontario, L8E5N9 Canada (905)643-3338

O.S. Walker Inc., Battery Powered Magnets

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