

**Mack**  
Manufacturing, inc.

2451 Lower Lk Rd.  
Hastings, MI 49058  
**(269)945-3970**

# Dual Buffer Assembly



***Owner's Manual***

# WARRANTY

Mack Manufacturing includes a one-year warranty for defects on material and workmanship affecting a machine's performance. For electrical components, including all switches, motor brushes, and plugs, the warranty period is 90 days. Shipping is not included in the warranty.



For any unit believed to be defective within warranty, write or call the dealer from which the machine was purchased. If you are unable to resolve to your satisfaction, please call Mack Manufacturing at (269)945-3970. Please give the seller's name, address, date and number of invoice, and describe the nature of the defect. If the unit was damaged during transit, file a claim with your carrier immediately!

After the one-year warranty period has expired, charges must be assessed. A Mack Manufacturing-approved technician must perform all repairs within warranty period unless directed otherwise in writing. The seal on controller box must not be broken. Failure to comply will result in a void on the unit's warranty.

## ADDENDUM

Mack Manufacturing's, liability under this warranty is limited to repair of the product and/or replacement of parts and is given to the purchaser in lieu of all other remedies, including incidental and consequential damages. There are no expressed warranties other than those specified herein.

There are no warranties that extend beyond the description of the face hereof. No warranties, including but not limited to warranty of merchantability, shall be implied. Mack Manufacturing accepts no responsibility for any direct or consequential damages or injuries, as Mack Manufacturing cannot control user's handling, end use, or effect of use.

## ELECTRICAL

All electrical connections should be made by a qualified electrician. Mack Manufacturing can accept no responsibility for improper electrical connections. Improper connections can cause damage to you or your machinery.

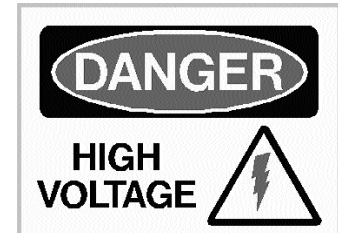
It is important for you and the longevity of your machinery that the proper electrical connections, with the proper voltage be made.

Also be sure the proper length and size of cord is used for your machinery. Improper cord size or length can damage the motor on your machine. If you are unsure, contact Mack Manufacturing for proper cord length and size.

Failure to remove electrical plug from outlet before attempting service or maintenance could result in electrocution or severe injury. Always unplug machinery before servicing.

Never leave the unit unattended while plugged in.

Inspect all cords and equipment prior to use. Do not operate this machinery with broken or frayed cords.



## WARNING

***Failure to follow all operating instructions and warnings can cause damage to your machinery or serious or fatal injury to yourself or others.***

**Do not operate this machine unless you are trained and authorized.**

**Do not operate a faulty machine.**

**Do not attempt repairs unless you are trained and authorized.**

**Riding sanders will tip over if not properly operated.**

**Slow before turning and do not turn on slopes.**

**Do not transport other people.**

**Make sure extension cables are free of obstructions and in good working condition.**

**Do not let hands, arms, legs or feet extend beyond the dimensions of the rider during operation.**

**Always do proper preventive maintenance before using the machine.**

**Return the pedal to the neutral position and turn machine off before getting off the machine.**

# Mack Manufacturing Dual Buffer

Congratulations on the purchase of your new Mack Manufacturing Dual Buffer. The Dual Buffer is labor, time, and money saving piece of American-made equipment. It can screen up to 10,000 square feet in as few as 30 minutes. Practical for large commercial jobs, this will top conventional methods where a small single buffer is not practical.

## SPECIFICATIONS

Width - 3'

Length - 3 ½' (excluding handle)

Height - 45" approx. (handle down)

Weight - 220 lbs.

Motor - 1 ½ h.p. Single-phase 220V Dual speed

180/320 output r.p.m. (no load)

10:1 planetary reduction

Frame - welded steel frame, aluminum casting

Pad drivers - 16" (PFB18)

Vac motor - 220V 5A .65 h.p. 190 cfm PVK1SB skirting included



# OPERATION

## Initial Inspection & Transport

Please make sure you have read the owner's manual before operating the machine. Correct power supply must be confirmed before a qualified individual connects the unit. Please follow all local electrical codes. Dual Buffers are available only in either three-phase or single-phase hook-up plug configuration. However, the machine's motors rely on 220V single-phase. Power cords must be secured and away from all rotating parts before operating the unit.

The Dual Buffer is shipped with its transport wheels turned upward for packaging convenience. When unpacking, these transport wheels must be removed and reinserted so that the wheels are pointed towards the floor. Do this by loosening the setscrew and pulling the rod from the chassis. For operation, the wheels can be reinserted pointed outward for wall protection or straight up.

When moving your Dual Buffer from job site to job site, Make sure the unit cannot roll, shift, or bounce around. Using tools such as blocks and clamps, secure the unit well. Do not transport your buffer hooked to a riding machine,

## NOTICE:

The center lift clamp must stay in the "up" position at all times or excessive bearing breakage may occur. Only lower the lift clamp (red handle) when the dual buffer is securely fastened to your riding unit. When you lift the machine, take care to secure the steering handle. It can swing around very quickly, causing injury.

## Operating

Newer model dual buffers have four two-way switches. Two switches are located on the handle box. (Figure 1)

One on the right turns your buffer on and off. The left switch turns your vacuum on and off. Another switch is located on the electrical box near the motors. This controls the two-speed operation of the motors.



**Figure 2**

There is a switch located on the vacuum motor. This must be in the "on" position in order to use your handle mounted vac switch. (Figure 2)

The pressure reduction levers are the iron bars in front of the steering grips. (Figure 1)

By squeezing this lever, you remove approximately 60lbs. from the head pressure to the floor. This is for removing screening pressure during slower operation, when turning or reversing direction.

The desired screens and pads can be placed on the unit during the hook-up. Red or white 16" pads are required for buffing. These are part numbers SVMPR16 and SVMPW16 respectively.



**Figure 1**

## IMPORTANT!

**Before changing speeds on your motor, turn the buffer off!** Change the speed and then turn the buffer back on. Changing speeds while the motors are running can burn out your motors' diodes in the electrical box. These are very costly to replace.

## Maintenance

Motor brushes on the vacuum motor need to be checked approximately every 100 hours. They should not be allowed to get any shorter than ½" in length. The Dual Buffer motors are equipped with a warning light designed to illuminate when the brushes near the limit of their useful length.

To change buffer brushes:

1. Confirm that all electricity is unhooked from the unit and that switches are all in the "off" position.
2. Remove the three screws holding the motor cover.
3. Unplug the two wires from underneath the low brush indicator light and remove the cover.
4. Push the retainer spring back and pull out the brushes. (PTMB - four per motor)
5. Remove the screw retaining the wire from each brush.
6. Replace each of the brushes and assemble, using the reverse procedure.

To change vacuum motor brushes:

1. Remove the two screws from each of the small black brush covers located on each side of the end of the motor.
2. Using your fingers or a coin, unscrew the brush retainers and remove the brushes (PEBBPV2 - two per motor).
3. Replace the brushes and reassemble the unit.

Blow the dust from your machine after 12 hours of use. Make sure the Dual Buffer is off. The finishing process of wood floors creates wood dust that can build up over time inside your motors. This may cause overheating and unnecessary mechanical wear. Buffer motor covers can be removed and motors cleaned using an air nozzle. Brushes can be inspected at this time. Eye protection is recommended. The following is a caution advisory by OSHA standard regarding wood dust.

1. Avoid dust contact with ignition source,
2. Sweep or vacuum dust for recovery or disposal.
3. Avoid prolonged or repeated breathing of wood dust in the air.
4. Avoid dust contact with eyes and skin.
5. First Aid: In case of contact, Flush eyes and skin with water. If irritation persists, call a physician.

## DUAL BUFFER HOOK-UP

### Floor Mack Ryder

To connect the Floor Mack Ryder to a Dual Buffer, use the PFB1 hook-up bracket (supplied with Dual Buffer). ( Figure 3) This bracket is labeled "Ryder" and "Buffer", designating which side faces the Ryder. Using the supplied bolts, connect the hook-up bracket to the top of the casting at the front of the Ryder.



**Figure 4**

Single wheel Ryders require using both bolts to secure the PFB1 bracket to the Ryder frame. Dual wheel Ryders require only one of the two supplied bolts installed in the center hole.

Lift the front of the Floor Mack (Figure 4) and slide the pins of the dual buffer into the sleeves of the hook-up bracket. Tighten 3/8" Allen head bolts on the sleeves.



**Figure 3**

## Floor Mack cont.

Remove the transport wheels. If mounted properly, the transport wheels will slide out with little effort. (Figure 5)

If there is too much pressure on the front of the buffer casting, the transport wheels will be difficult to remove. Adjust the hook-up bracket's two bolts to level the buffer mainframe. (It may also be necessary to loosen the large center bolt as well)



**Figure 6**

The transport wheels can either be rotated outward to serve as wall bumpers, or upright to be out of the way.

Once the proper angle of the bracket frame is achieved, tighten the jam nuts on the leveling bolts. (Figure 6)

The bracket can now be tightened to the Ryder casting. Once tightened, this bracket never has to be removed.

To install buffer's pad drivers (Figure 7), part #P162616, and the transport wheels in the down position, slide the pad driver under the head and attach. Once secured, the transport wheels can be turned to the upright position. Do not operate the dual buffer with the transport wheels in the down position.

The Dual Buffer's power cord (three-phase configuration model) plugs in to the front outlet of the Ryder. The Buffer's vacuum plugs into the buffer head's electrical box. (Figure 8)



**Figure 8**

Adjust the steering handle for comfort before operation.



**Figure 5**



**Figure 7**

## Mini Mack

Remove your Mini Mack's front wheels using an Allen wrench. Install the lower bracket plate using the 1 1/2" Allen bolts through the threaded caster wheel holes, pinching it between the caster wheels and the front cross member.

Connect your Dual Buffer hook-up bracket (PMM25DB) with the 4 1/4" shoulder bolt provided. Lift the front of the Mini Mack and slide the mounting bracket on to the Dual Buffer mounting pins. (Figure 9)

You now can connect the power cord from the Dual Buffer to the Mini Mack. Transport wheels should be removed and reinserted pointed outward or upward. The handle can be adjusted to your comfort before operation.



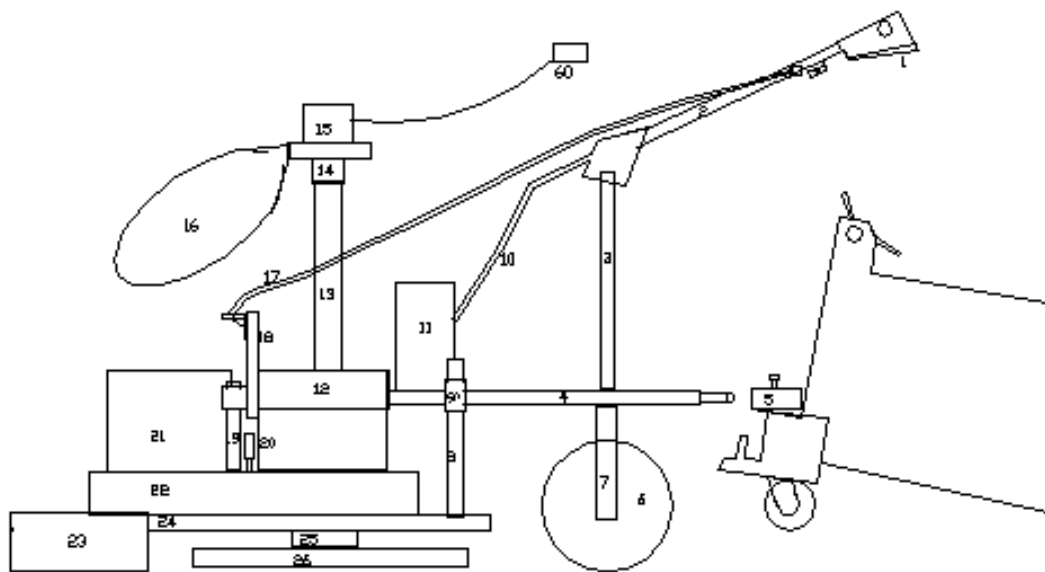
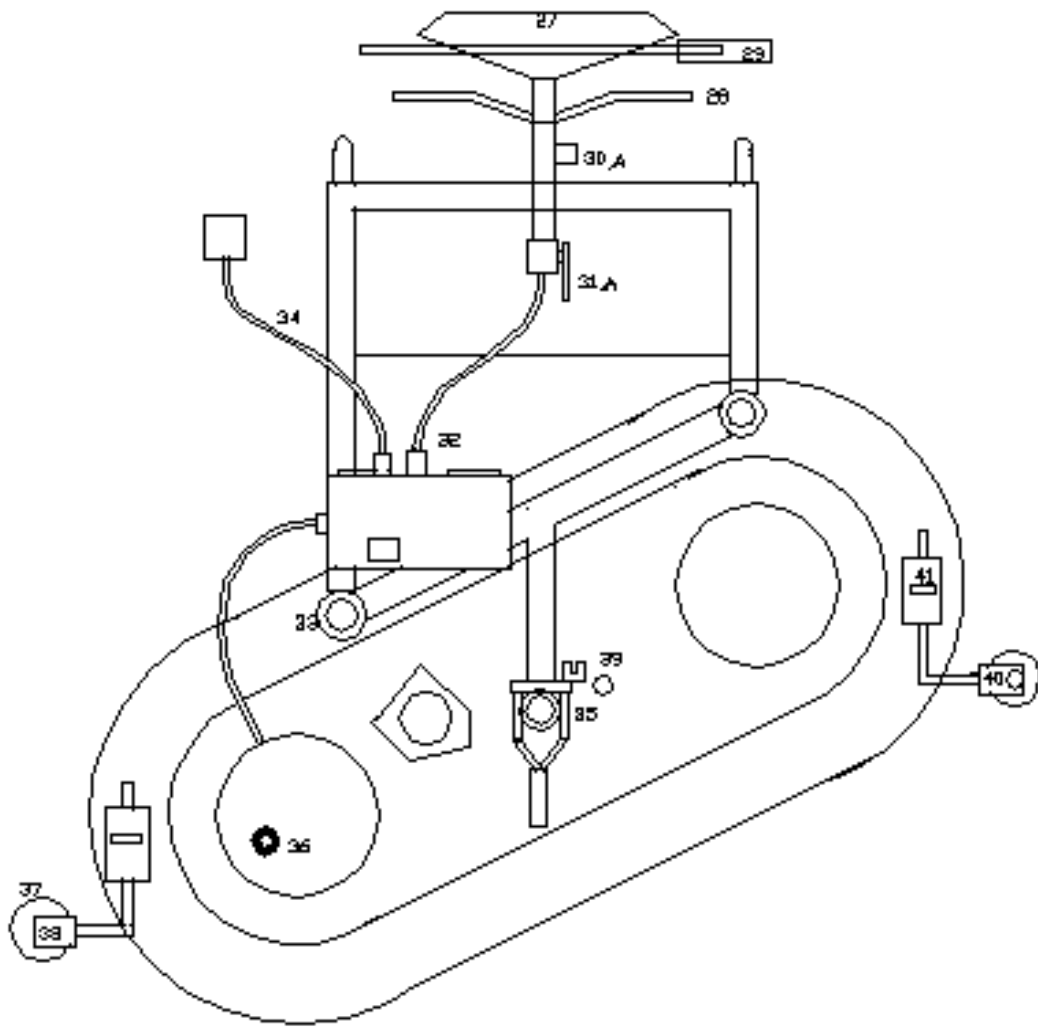
**Figure 9**

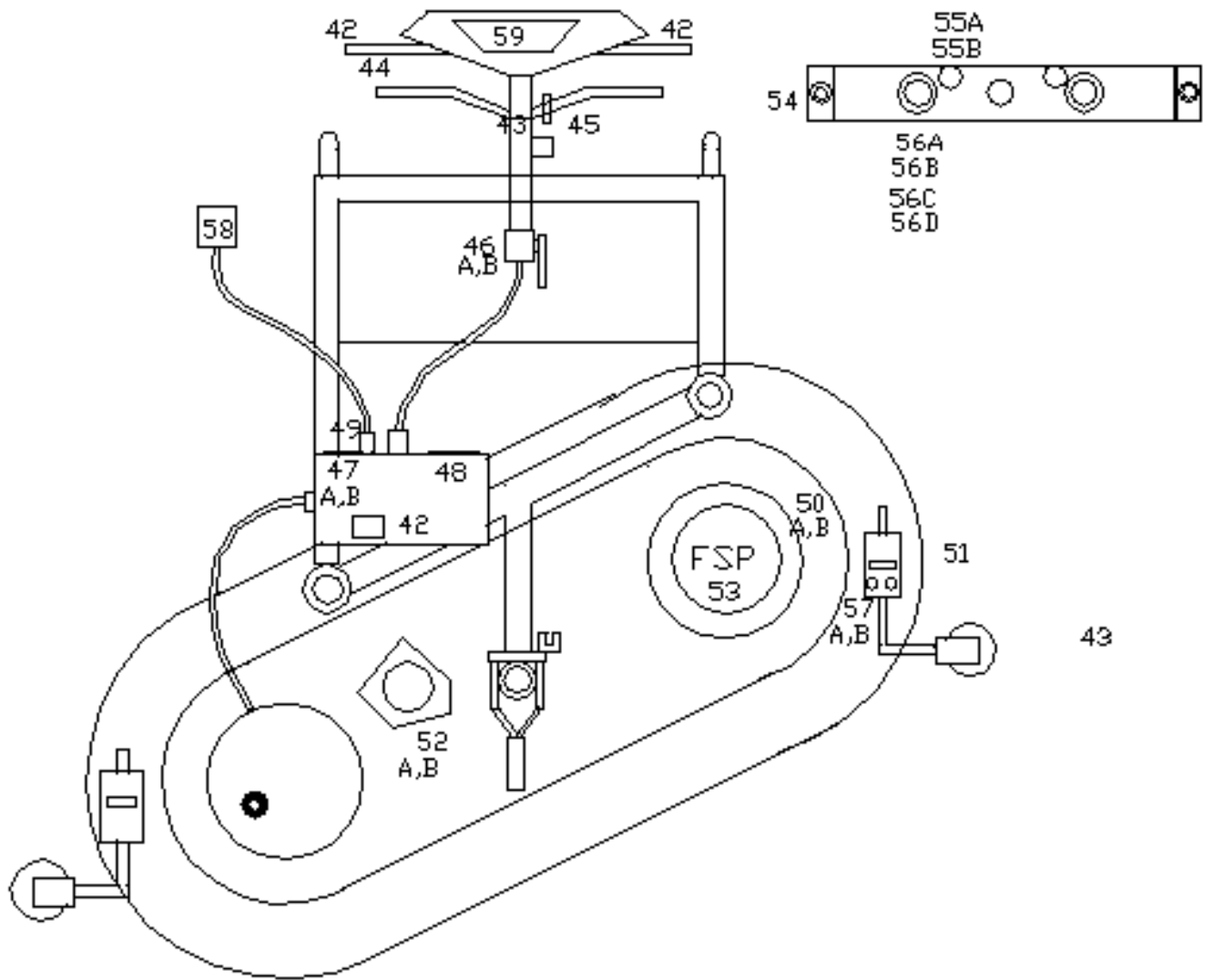


**Figure 10**

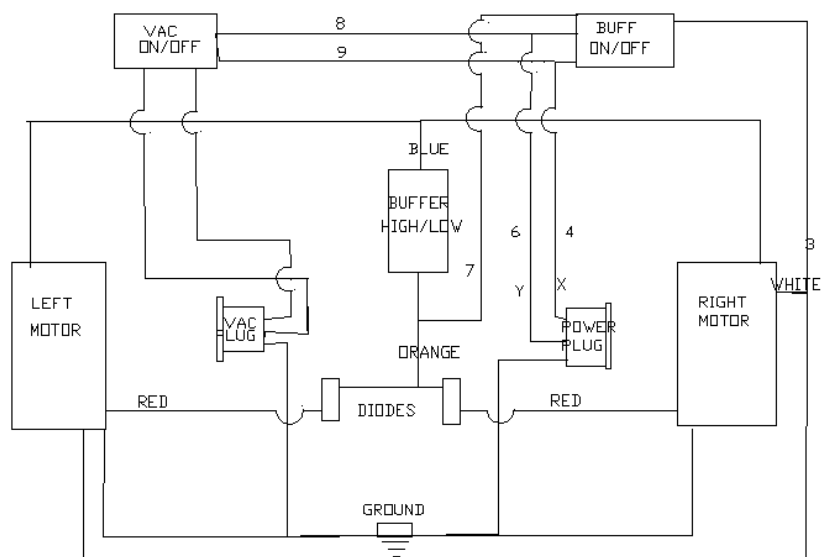
When using the Mini Mack and Dual Buffer, two weights are required for each machine. (Figure 10) The Dual Buffer requires a PFB90 weight on the top of each motor. The Mini Mack requires two PMM21 weights, two PMM22 washers, and two HABNF1/4-20X1 screws.

The system will not operate properly without these weights.





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# DUAL BUFFER ASSEMBLY PARTS LIST

No.	PART #	DESCRIPTION	QTY	No.	PART #	DESCRIPTION	QTY
1	PFB25	BOX COVER-HANDLE	1	35	PFB16	SHAFT - CENTER LIFT CLAMP	1
2	PFB27	UPPER STEERING COLUMN	1	36	PTM1458-2	LOW BRUSH INDICATOR TMBWI	2
3	PFB28	LOWER STEERING COLUMN	1	37	PF59907A	AL WHEEL GREEN WITH BEARING	2
4	PFB6	MOUNTING FRAME	1	38	PFB8	YOKE ASSY - TRANSPORT WHEEL	2
5	PFB1	HOOK-UP BRACKET: DUAL BUFF	1	39	PFB17	BRACKET - CENTER LIFT SPRING	1
6	PFB92	GRAY BUFFER STEER WHEEL ASSY	1	40	PF60101A	AXLE - WHEEL AL	2
7	PFB14	YOKE ASSY; WHEEL-STEERING	1	41	PFB9	MOUNTING COVER - TRANSPORT WHEELS	2
8	PFB13L	DUAL BUFF LONG LINEAR SHAFT	2	42	SUDOST08110310		
9	PFB12	SLEEVE-LINEAR BEARING	3			SWITCH - 2 WAY	3
10	SU15005100	1/2" 90DGR FLEX CON	5	43	PFB22-1	BLOCK PRESS - RELEASE ; BASE	1
11	SU6C725	POWER BOX - DUAL BUFFER	1	44	PFB26	HANDLE - TUBE	1
12	PTM1458-1	DUST COVER F/2-SPD	2	45	SUSPM4	1/4-28 ROD END	2
13	PF66110L	DUST PIPE 8&12 AL (LONG)	1	46A	HBA3/816X21/4	ALLEN BOLT	1
14	PFB30-1	TWIST LOCK FOR DUST STACK	1	46B	HNNL3/816	NYLON LOCK NUT	1
15	PEMF10230	BPV MOTOR SMALL 230V	2	47A	PE3334C	30A 125/250V 3W MALE FLANGED (1PH ONLY)	1
16	B70HB	BAC PAC VACUUM BAG	1	47B	PE2725	30A 250V 4W MALE FLANGED (3PH ONLY)	1
17	SU332260	CABLE ASSEMBLY - BUFFER	1	48	PE4585C	15A 250V 3W FEMALE FLANGED	1
18	PFB7	BEARING SLEEVE - MOUNT BRKT	3	49	PEC650DC2	ROMAX CONN. 3/8"	3
19	PFB13S	DUAL BUFF SHORT LINEAR SHAFT	1	50A	HBA5/1618X1	ALLEN BOLT	16
20	PFB20	SPRING-LIFT	1	50B	HWL5/16	LOCK WASHER	16
21	PEMDB	DUAL BUFF MOTOR 220V 2 SPEED	2	51	HTS5/1618X3/4	THUMB SCREW	2
22	PFB100	MAIN FRAME - DUAL BUFFER	1	52	PF27801A	STACKMOUNT W/ GASKET	1
23	PVK1SB	DUAL BUFFER-SKIRTING	1	52A	HBH5/1618X1	HEX BOLT	3
24	SUVELCRO	1" VELCRO-SELF ADHERE	0.5	52B	HWL5/16	LOCK WASHER	3
25	P34401A	MOTOR GIMBAL	2	53	SU24081	MOTOR STICKER - BUFFERS	2
26	PFB18	PAD DRIVER ASSEMBLY 16"	2	54	HBA3/816X3/4	ALLEN BOLT	2
27	PFB24	BOX; HANDLE - DUAL BUFFER	1	55A	HBH1/213X2	HEX BOLT	2
28	PFB23	HANDLE - PRESSURE RELEASE	1	55B	HNJ1/213	JAM NUT	2
29	SU8055	HANDLE GRIP 7/8"	2	56A	HBH5/811X21/2	HEX BOLT	2
30	HBA1/420X1	ALLEN BOLT	4	56B	HBN5/811	HEX NUT	2
30A	HWL1/4	LOCK WASHER	4	56C	HW5/8	FLAT WASHER	2
31	SUDK5	LEVER - LOCK DOWN	1	56D	HWS5/8	STAR LOCK WASHER	2
		5/16-18 CARRIAGE BOLT	1	57A	HBH1/420X1	HEX BOLT	8
32	SULT20DNEW	1/2" 90 DGR FLEX CON	1	57B	HWL1/4	LOCK WASHER	8
33	SUINA725	LINEAR BEARING	5	58	PE2723	30A 250V 4W FEMALE (3PH ONLY)	1
34	PE144	14/4 CABLE 600V SOW-A 90C BLK (CORD ON 3PH)	6	59	SU24082	HANDLE STICKER - BUFFERS	1
				60	PE4570C	15A 250V 3W MALE	1

## Recommended Safety Equipment

available from Floor Style



**Dust Masks**



**Ear Plugs**



**Safety Glasses**

For all your safety equipment needs, contact Mack Manufacturing at (269)945-3970