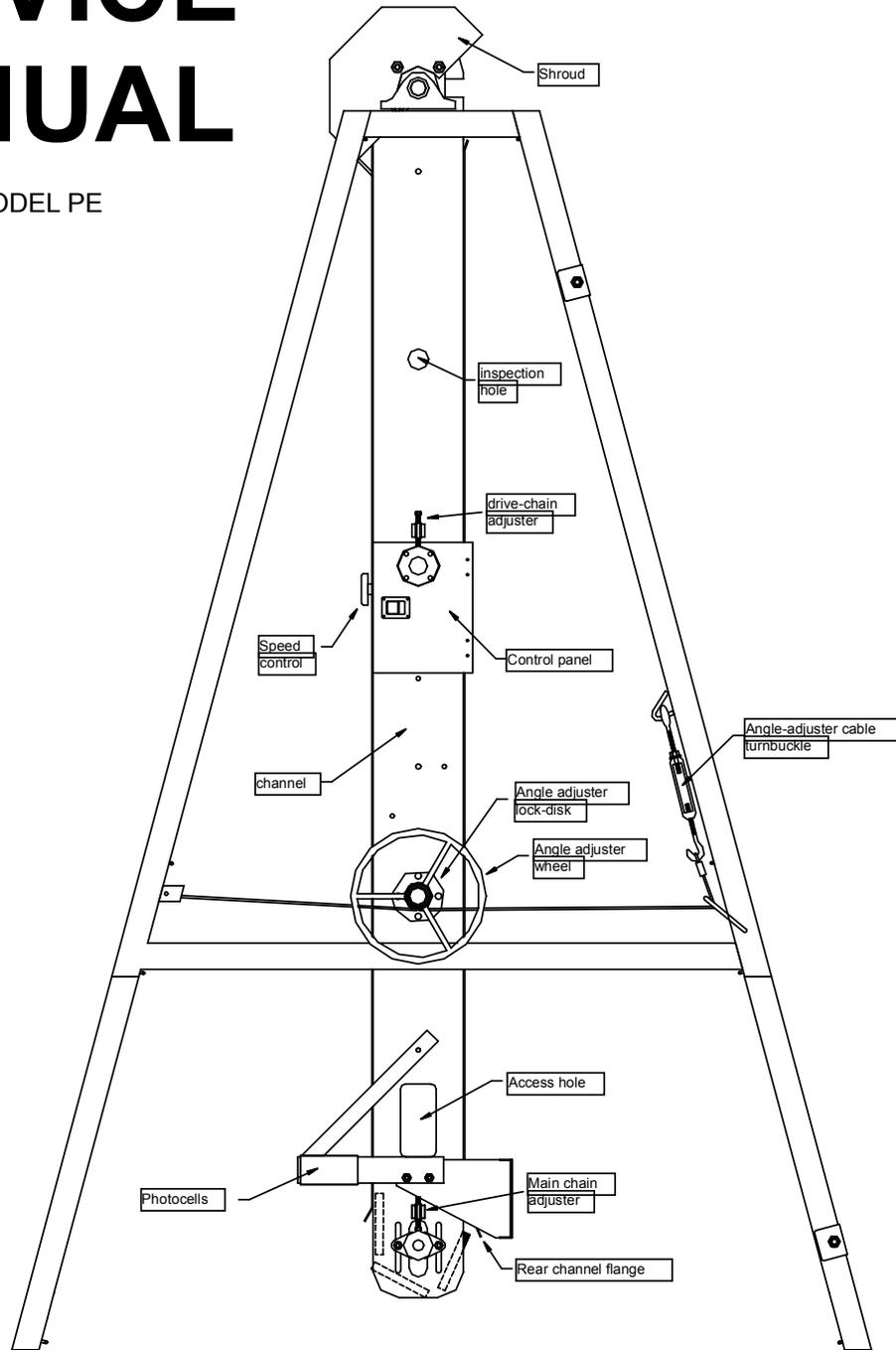


SERVICE MANUAL

TREADWALL® MODEL PE



ROTATING AND STATIONARY WALL SYSTEMS

Brewer's Ledge Inc

CLIMBING MADE SIMPLE

Brewer's Ledge Inc. • 34 Brookley Road • Boston MA 02130 • 800-707-9616 • www.treadwall.com

TREADWALL MAINTENANCE

Treadwall® maintenance is easy and requires only lubrication and attention to a number of adjustments relating to the alignment of the wall.

The most important maintenance of the Treadwall occurs during the first month of operation when the chains and cables are stretching to their final length. It is very important to keep the angle-adjuster cables tight during this break-in period so that the winds remain even and do not overlap. Also the drive chain and panel chains must be tightened after 2-3 weeks of use. Instructions for these adjustments are found inside of the control panel cover. This card is re-printed below:

TREADWALL MAINTENANCE

Drive Chain Adjustment:

The drive chain connects the pump in this panel to the top shaft. Over time, the chain will stretch and need adjustment.

- Use the long push-down bolt (A) to push down the pump and panel. This will tighten the chain. As you adjust the chain you can feel the amount of slack through the round access hole (B). Adjust slowly and just take out the excess slack. Do not over-tighten or the Treadwall will operate sluggishly.
- If you over-tighten the chain by mistake, loosen the push-down bolt (A) and pry the chain through the access hole (B) with a large screwdriver or wrench to loosen it up.

Cable Turnbuckles:

The cables that adjust the angle of the wall must be kept tight. If they become loose, fraying and breakage will result.

- Check and tighten the turnbuckles (C) often during the first two weeks of operation as the cables stretch to their final length. Make the turnbuckles as tight as you can by hand. Do not over-tighten with a tool. Check monthly and tighten as necessary.

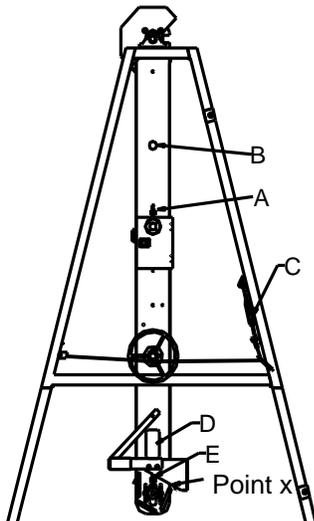
Interior Turnbuckles:

The turnbuckles inside the wall (D) keep it from swaying from side to side. They should be wired closed and should not loosen up in normal use.

- If they become loose, make them finger tight (no more) and wire them closed.

Main Chains:

- The wall panels hang from heavy-duty chains inside of the wall.
- These chains should be sprayed with chain lube every six months. Spray through the access holes as an assistant moves the wall around.
 - The main chains occasionally need re-adjusting as they stretch. If the wall hangs up, check at "point x". If the main chains are loose, the panels will jam trying to enter the channel at this point.
 - To tighten the chains, loosen the bearing mounting bolts slightly and use the chain tension adjusters (E) to push down the adjustable bearings at the bottom of the channels. Just a turn or two should be enough to take out the slack. If you tighten them too much, the wall will operate sluggishly. When the chains are adjusted properly, the panels should clear the flange at 'point x' with about 1/2" of clearance.



THE CRUCIAL FIRST MONTH:

Following these instructions for adjustment during the break-in period is very important to the health of your Treadwall. These simple adjustments assure that stretching chains and cables will not result in damage to the machine. After the first month, maintenance requirements are very low.

After the initial break-in period, follow the schedule below.

MAINTENANCE ITEM	SERVICE INTERVAL (MONTHS)		
	2	6	12
Cable tension	X		
Drive chain tension		X	
Main chain tension		X	
Lube channels			X
Clean holds	X		

TOUCH-UP PAINT:

Treadwall panels are painted with a high-quality enamel paint that is very dark gray. A mixture of 50% battleship gray and 50% black will give a good match for touch-up purposes. The white frame color can be matched with automotive touch up paint: Toyota #3226.

CLEANING HOLDS.

Clean holds make a big difference in the climbing experience. As the Treadwall is used, the climbing holds get contaminated with dirt and grime and eventually become slick and greasy to the touch and unpleasant to climb on.

When you look at dirty holds, you may think that they need replacing, but really all they need is a good cleaning. If you take them off and run them through a dishwasher for a couple of cycles or just scrub them off in a sink with a brush and soap, you will be amazed at how much better they look and feel.

You don't need to clean them all at once. If you just take off the 10 dirtiest holds every month or so and give them a good washing, you can rotate them around and keep them in good shape.

TROUBLESHOOTING GUIDE -- TREADWALL® Model PE FITNESS CLIMBER		
<i>Problem</i>	<i>Cause</i>	<i>Solution</i>
Wall is sluggish: lighter weights will not pull wall down.	Chains too tight. Channels need lubrication Ends of panels rubbing channels	See Service Sheet #10. See Service Sheet #38. See Service Sheet #20.
Wall sticks occasionally. (Backing-up momentarily frees wall).	Chains too loose	See Service Sheet #10.
Pump makes excessive noise	Low hydraulic oil.	Add oil to Pump Assembly. Open panel, remove pipe cap, and inspect: oil should be about 1" from top. Use 30 wt. non-detergent oil. Rotate motor as filled to remove air pockets. Cover fill opening with rag as rotating to prevent spills. Leave 1" air pocket. Total capacity of system: 1 pint.
Wall makes excessive noise	Chains too loose.	See Service Sheet #10.
Wall sways side-to-side.	Internal x-bracing too loose.	Tighten Internal x-bracing. Do not over-tighten. Tighten until just firm. When you have completed this adjustment, make sure locknuts on the turnbuckles are very tight and wire the turnbuckles so that they cannot loosen up.
Hold rotates.	Hold bolts not sufficiently tightened.	Re-check hold bolts; re-tighten if necessary.
Wall too far to one side (Angle adjuster is hard to engage or disengage) disengage).	Main (external) X-bracing needs re-adjustment.	See Service Sheet #2.
Wall doesn't release unless it is unplugged or control-panel switch is turned off.	Photoelectric problem	See Service Sheet #40

INDEX OF SERVICE SHEETS

Treadwall® Climbing Simulators -- Model PE

The Treadwall is a very easily maintained machine. Occasional adjustments, lubrication and cleaning of the holds are generally all that is required.

The following service sheets cover most issues that could arise. If there is a situation that is not covered by these sheets, feel free to call Brewer,s Ledge for assistance.

Index of Service Sheets

- 1 Panel Removal
- 2 Frame Adj. w/ X-brace
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Panel removal

The Treadwall wall panels are bolted to a set of chains. These two chains form a continuous loop around the top and bottom axles. Each panel is attached by two bolts at the ends to flanges mounted on the chains.

Tools needed:

- Phillips screwdriver or VSR drill with phillips bit,
- 3/8" box end or open end wrench, needle nosed pliers.

Panel hardware:

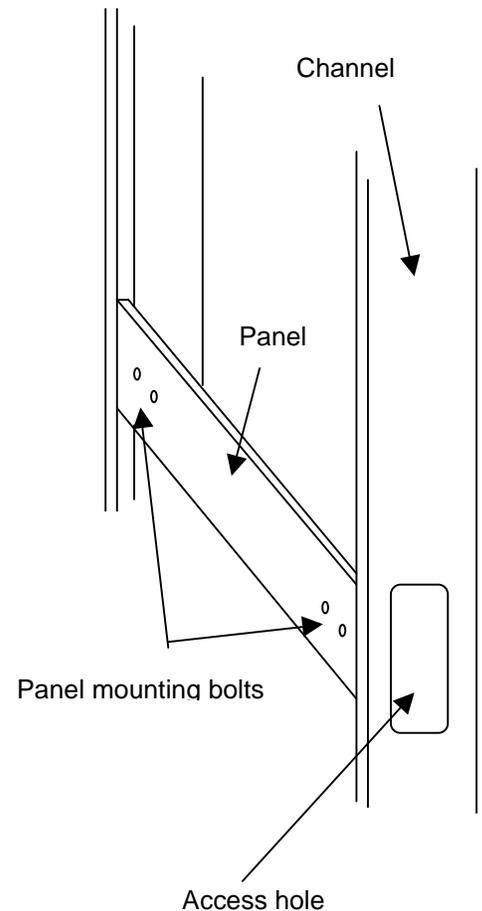
- 10-32 x 1 1/4" truss head screws, phillips-drive
- 10-32 nylon locknuts.

Removing a panel is simple and requires about 15 minutes effort.

Rotate wall so that desired panel is in front of the rectangular opening. Remove four panel bolts and their locknuts by using the opening to access the back. Rotate the wall downward and allow the panel to drop out at bottom. Multiple panels can be removed in a similar manner if necessary. Rotate the wall until the opening is at the height where service is required.

Replace panels by inserting panel at bottom and rotating upward until it is in front of rectangular opening. Be careful not to pinch fingers. Replace all four bolts. Bolts should be snug but not overly tight.

Note that the hold-mounting holes are off-center and are intended to be staggered from panel-to-panel.



Treadwall® Service Sheet #2:

FRAME ADJUSTMENT WITH "X-BRACING"

Adjustment of the Treadwall frame by means of the "X-Bracing" in the back allows the wall to be centered between the main side frames. It is important both for angle adjustment as well as the wall's performance that the wall be centered.

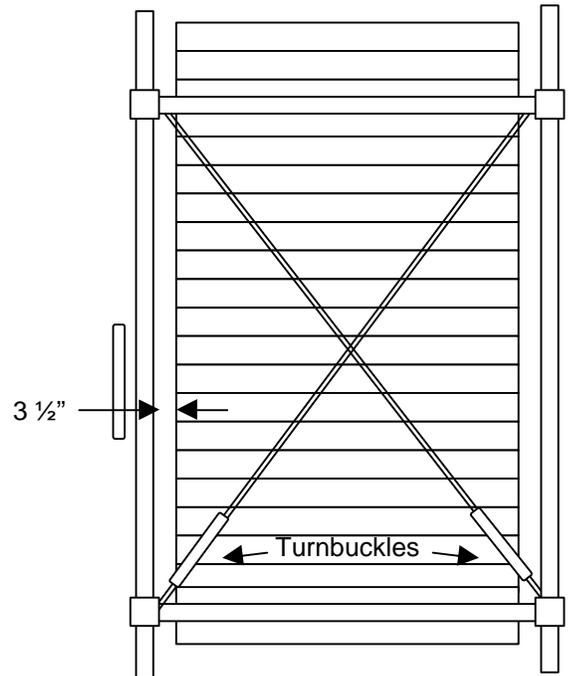
With the wall at vertical, note the gaps between the side channels and the two main side frames. When the wall is centered, the gap on the right side (just below the angle-adjuster wheel) should be 3 ½"

If the wall needs adjustment, loosen both turnbuckles at the bottom of the "X-Braces" in the back; re-tighten on the side to which you wish swing the wall. For example, if the wall is too close to the left side, you will need to tighten the right "X-bracing" to bring the wall closer to the right side.

You may find as you tighten one side, you will have to continue to loosen the opposite turnbuckle to give yourself enough slack.

When the adjustment is complete, tighten down the locknuts to secure the turnbuckles.

Special adjustment for left-mounted wheel: Note that there is normally a smaller gap at the left side than at the right. Sometimes Treadwalls must be installed with the adjustment wheel on the left side of the machine. In this case, the turnbuckles should be adjusted so that there is extra space at the left side for the angle adjuster to work correctly. With this adjustment the channels will not be completely parallel to the A-frames, but this will not affect the performance of the Treadwall.



View of Treadwall frame from back

Treadwall® Service Sheet #4a:

REPLACING CABLES

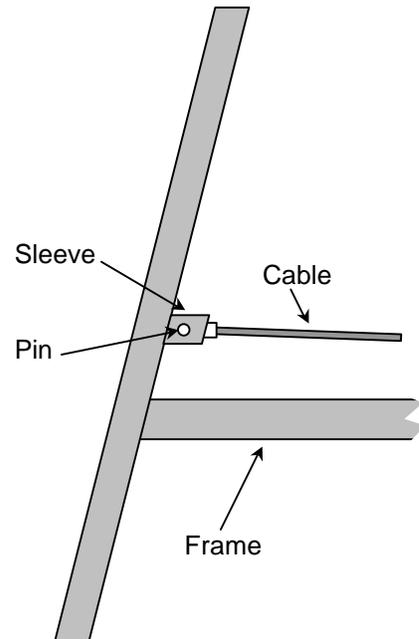
Tools needed:

1. Ball peen hammer
2. A small box wrench with closed end. (Exact size not important.)

Procedure (Same on both sides):

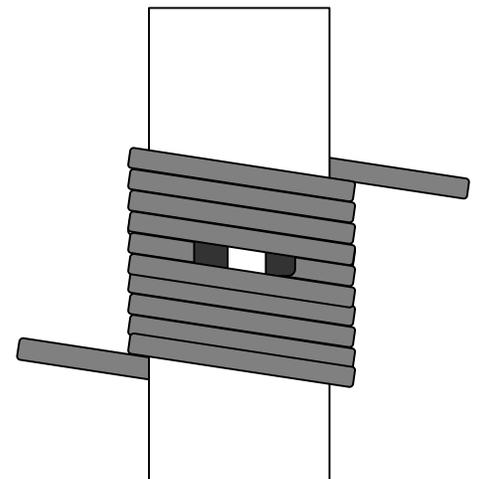
Removing...

1. Lock wall in a position so hole in Adjuster Pipe faces up (Note how cable dips into hole near the center of the windings and is locked in place with a bolt inside pipe.)
2. Lift side cover.
3. Remove chrome Adjuster wheel (right side) or plastic cap (left side) from the end of Adjuster Pipe. The wheel simply unscrews from the pipe. To remove it, engage the locking disk to the channel and turn the wheel hard to the left. Remove the ball from the locking rod and slip the wheel off.
4. Loosen and disassemble turnbuckle. slip the end of the cable through the guide loop.
5. Remove Cable Guard.
6. Using the closed end of a wrench, reach into Adjuster Pipe end and pull out bolt that holds cable to pipe.
7. Remove pin from front frame, and cable will come free.



Installing...

1. New cable is pre-bent at a certain spot. Note that the bend is not exactly in the middle, so that one end is slightly shorter than the other. Push the bend into Adjuster Pipe hole so that the shorter end leads to back of machine. (After winding, the cable will leave pipe at bottom as in fig. 1 and the shorter end will go towards front of machine)
2. Re-insert bolt to catch the loop of cable inside pipe.
3. Pull up on cable to take-up all cable slack around the bolt that is inside pipe.
4. Hammer down cable on both sides where it exits the hole. This is just to put a bend in cable so it will exit hole and lay nicely around pipe.
5. Wrap the short end around pipe so as to follow a left hand thread as shown in fig. 1.



6. After four turns, attach the cable to the front of the frame with the clevis pin and cotter pin.
7. Wrap the other end and lead up through corner loop at back of unit. The number of wraps will be clear from the length of the cable: the turnbuckle will only reach when the correct number of turns is on the pipe.
8. Hook turnbuckle and tighten. Make sure wraps of cable on pipe are evenly wound and tight together as you tighten turnbuckle.
9. Re-install chrome Adjuster wheel and swing wall front and back to stretch the new cable. Re-tighten turnbuckle.
10. Swing wall front and back to make sure all is working and look for windings that are spread apart.
11. Once more, tighten turnbuckles to remove any slack. See the box to the right for a good way to stretch the cables. This method will remove 90% of the slack.
12. Before stretching the cables, it is a good idea to spray them with silicone spray. They will stretch easier and last much longer if you do.
13. When cable is stretched, it is time to install the cable guard. Slip the cable guard over the windings so that one hook is engaged with the front end of the cable. Loosen the turnbuckle a few turns. Now hold the windings at the bottom of the pipe to keep them from loosening, and with your other hand remove the turnbuckle from its loop. Continue to hold the windings in place while you work the rear end of the cable under the other hook on the cable guard. Re-attach the turnbuckle and tighten it. This process is easier than it sounds as long as you don't let go of the windings. You might want to have someone help with the turnbuckle.
14. Make sure cable wrappings inside the guard are still tight together when you are finished - this may involve using the hammer and wrench to tap the windings back together after you have begun to re-tighten turnbuckle.
15. Tighten the turnbuckles as tight as you can make them by hand (don't use a tool to tighten the turnbuckles). Tighten locking nuts on turnbuckles.

Carefully note direction of wind – same both ends.

TAKING OUT STRETCH

The cables will stretch after installation, and if they are not kept tight with the turnbuckles the coils can overlap and the cable will shred and break.

Here is a good way to stretch the cables after installation:

1. Adjust the angle of the wall to the extreme forward position.
2. Strike downward on the exposed cables with a piece of 2x4, a mallet, or even a hammer. Give them a good couple of whacks – it won't hurt the cables but it will stretch them.
3. Re tighten the turnbuckles and re-angle the wall the the other extreme.
4. Repeat step 2.
5. Do this whole process a couple of times. When you are finished, put the wall to vertical and tighten the turnbuckles as tight as you can make them by hand (don't use a tool to tighten the turnbuckles).

*******PLEASE re-tighten cables each day for the first 4 days to ensure proper working.*******

Treadwall® Service Sheet #10

Adjustment of chain tension

MAIN CHAINS

The main chains that suspend the panels on the Treadwall will stretch in the course of the first few months of use. If they are not adjusted, the panels will be loose as they move around the bottom and up the back, and they will jam as they attempt to enter the channel in the back (see diagram). Symptom: Machine jams up and will not go forward. Reversing the wall slightly frees it but it jams up again.

The chain tension is adjusted by moving down the bearing on the bottom of each channel. There is a push-down bolt (E) above each bearing that will move it down (see diagram).

It is usually not necessary to loosen the mounting bolts on the bearings to use the tension adjuster, but if they are excessively tight, loosen them slightly.

Turn the push-down bolt with a wrench to adjust the bearing down. Do not overtighten the chains. You just want to take out the excessive slack.

As you tighten the chain, watch point x where the panel is re-entering the channel at the back of the Treadwall. The panel should pass the end of the flange at point x with a clearance of about 1/2"

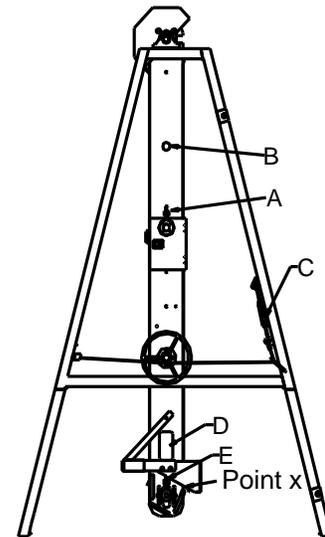
Usually a turn or two of the push-down bolt is plenty. Adjust both sides.

DRIVE CHAIN

There is a smaller drive chain that connects between the control pump and the main shaft at the top of the machine.

This chain is adjusted with a similar push-down bolt at the top of the control panel (A). You can feel the slack in the drive chain through the access hole (B) above the control panel. Do not overtighten this chain – just take out the excess slack and leave a little looseness in it.

If you make it too tight by mistake, you can loosen it by slacking off the push-down bolt and prying the chain with a large wrench or screwdriver through the access hole.



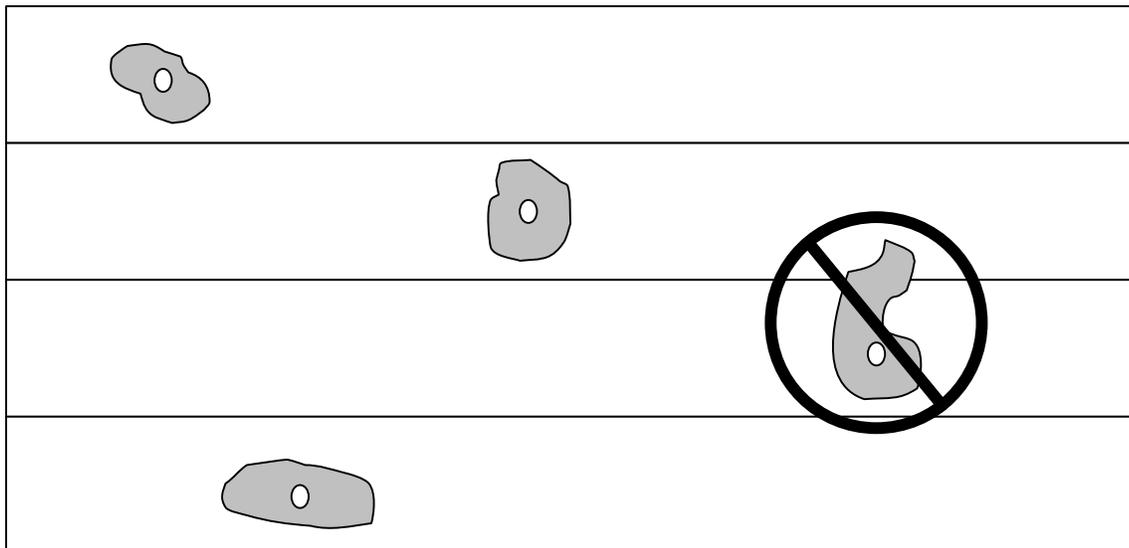
Hold placement

It is very important when placing holds on the Treadwall that the holds do not overlap the space between two panels. A hold that overlaps two panels will restrict the machine from rotating as the panel moves around the bottom or top of the Treadwall. In an extreme case, the force can cause a hold or panel to break.

The holds provided with the Treadwall are designed so that overlap is not possible, but sometimes users put other holds on that are larger and have the potential to overlap.

If the Treadwall suddenly locks up and will not rotate, check the bottom and top of the wall, front and back, to make sure that a hold has not rotated and overlapped two panels.

Lockup can also be caused by loose chains. See bulletin #10.



Treadwall® Service Sheet #20**Correction of stiff operation**

In a properly working Treadwall, a body weight of approximately 60-70 lb.. will operate the wall consistently. If the operation is stiff or sluggish and will not operate at the minimum weight, there are several areas that may be responsible.

The two basic reasons for sluggish operation are friction of the panels in the channels and chains that are too tight.

Symptom	Cause	Fix
Wall jams tight and won't move but it will back up and sometimes move forward before jamming again.	The panels are catching on the back of the channels as they try to enter the back channel slot at the bottom - caused by chains that are too loose.	The chains that suspend the panels are tightened at the bottom of the two channels. Loosen the bearing bolts and use the long bolt to take out the slack. Do not over-tighten! If the chains are too tight, it will cause excessive resistance. Just take out the slack. (see sheet #10)
Wall shows resistance intermittently at the same place during each rotation of the panels.	One or more panels are binding in the channels.	Examine to see if all the panels are loose and free to move.
	The ends of the panels are rubbing against the channels (especially at the top) Check at the top rear of the machine to see if there is clearance between the panel ends and the channels at each end of the panels.	Center the panels between the channels: Loosen the set-screws on both the upper channel bearings and slide the channels (lever or hammer and wood block) back and forth to center them. Re-tighten.
	Bottom of channels too close together.	Loosen lower bearing set-screws and spread channels. Reset shaft collars on shaft inside channels so that they are against the inside of the bearings.
	X-bracing inside channels too tight. X-braces should just take up slack and not be overly tight.	Loosen turnbuckles through access holes. Check spacing of bottoms of channels, When all adjustments are correct, re-tighten the turnbuckle locknuts.
General friction – chains adjusted correctly and no rubbing of ends of panels.	Channels need grease	Grease channels with spray grease (see sheet #38)

Treadwall® Service Sheet #28

Moving the Treadwall

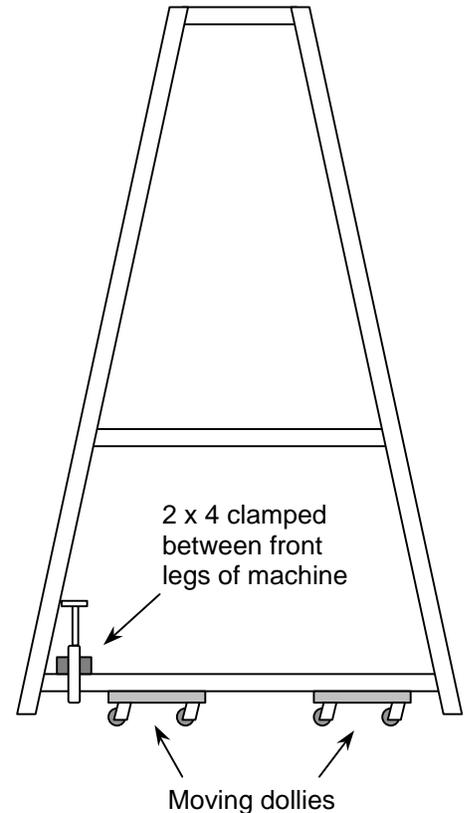
The following methods are used in re-locating the Treadwall.

Moving within a room without overhead obstructions.

Casters: Brewer's Ledge provides both light duty (for occasional moving) and heavy duty (for frequent moving) casters. These casters are bolted onto the lower cross-member of the side frames and may be left in place during normal operation. If you need to move the Treadwall on a regular basis, we recommend these casters. Call for details.

Moving dollies: 4 wheel moving dollies can be rented from moving or truck rental companies, and are a convenient way to move the Treadwall if you have a relatively level, smooth floor. You will also need an 8 ft. 2x4 and a couple of large c-clamps. Use the 2x4 to pry up each side of the Treadwall and slip 2 moving dollies under each bottom frame member (4 total). Then clamp the 2x4 across the bottom front of the Treadwall to prevent the front legs from spreading apart while moving it.

Lift and carry: The Treadwall weighs about 1300 lb.. Theoretically 10 people can lift and carry it (especially if they are accustomed to lifting weights) and it has been done - but not without difficulty. It is not recommended for any distance more than a couple of feet. If you go this route, it is absolutely necessary to clamp a 2x4 across the front of the machine as in the diagram to prevent misaligning the machine.

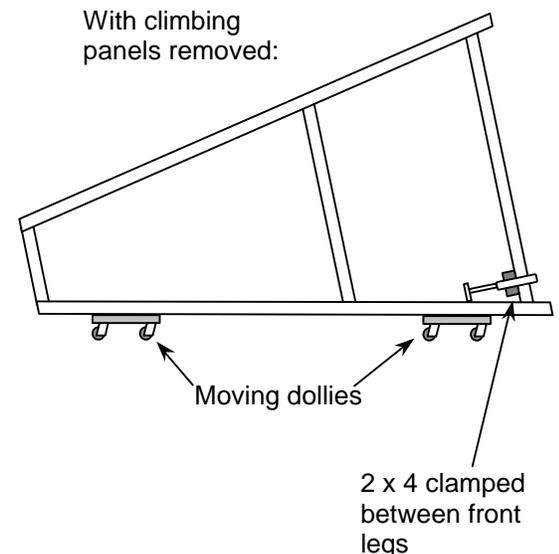


MOVING IN A ROOM WITH OVERHEAD OBSTRUCTIONS.

If pipes, ducts, beams or suspended ceilings prevent moving the Treadwall across the room, removal of the panels is required. This is a tedious but not difficult job. You will need a socket wrench with a 3/8" socket, a 1/8" Allen wrench and a bit of patience. Remove the first 3 panels at the bottom of the machine by reaching into the gap where the panels go under with the socket wrench and unscrewing the bolts that hold the panels onto the chains with the Allen wrench. The rest of the panels can be removed at waist height by moving the wall around and locking it into place with the resistance control.

With the panels off, the machine is much lighter and can be tilted forward by 6 strong people onto a pair of moving dollies. Clamp a 2x4 between the front legs first. At its new location, re-erect the Treadwall and put the panels back on.

Note that the hold-mounting holes are not symmetrical. As the panels go back on, they should alternate so that they are staggered from one panel to the next. If you mark the panels with post-its before you take them off, you can put them on in the same order and avoid setting a new route (changing around the climbing



holds) at the end of the move. You can use a cordless drill with a phillips bit to speed up the job, but don't make the screws too tight - just draw them up snug. You will probably need a few extra bolts and nuts, so call us first.

PARTIAL DISASSEMBLY

This option involves taking the panels off and disassembling the Treadwall down to the major components. The largest part is the channel assembly which consists of the two side channels (connected together as they are on the machine) along with the pulley bar and sprocket shaft at the top, the rear guard and sprocket shaft at the bottom, and the x-braces. This assembly is heavy and large, but it will fit diagonally through a normal door and can be transported with a pickup truck if the top part of the assembly is rested on the cab.

For equipment, a pair of moving dollies and several moving blankets are highly recommended. You will also need a good 8' stepladder.

Remove the panels as described above.

Remove the angle-adjuster cables and the adjuster pipe and wheel (see service bulletin #4).

Unplug the wires inside the channel and take the upper wires out of the wire clips. Pull the upper wires out of the channel.

Remove the channel assembly. Take the nuts off the four bearing bolts that hold the pillow block bearings to the top of the frames (you have already loosened the right ones). Leave the bolts in place until the last minute for safety. The channel assembly is heavy, but four strong people can handle it easily. Place one person on either side of each channel. After the bolts are removed, lift the assembly slightly and walk it towards the front of the frame until it can be rested on the floor. Be careful! it is top-heavy. Lower it down, turn it on its side, place it on dollies and it is ready to transport.

Dissassemble the frame. Remove the x-bracing from the bottom horizontal (you can leave it connected to the top horizontal) and remove the horizontal bolts so that the frame will come apart.

Reassemble in the reverse order.

TOTAL DISASSEMBLY.

The Treadwall may be totally disassembled into parts that will fit through a normal doorway. If this is required, an installation kit is available from Brewer's Ledge that includes a comprehensive manual and video. Price - \$45. Call for details.

1/8" gap

Reed
Switch**Treadwall® Service Sheet #35****Replacing and adjusting the counter switch**

The counter switch is a proximity reed switch that is activated by magnets at the top of the left channel. It can be accessed from the back of the machine at the top through the opening between two panels where they come over the top.

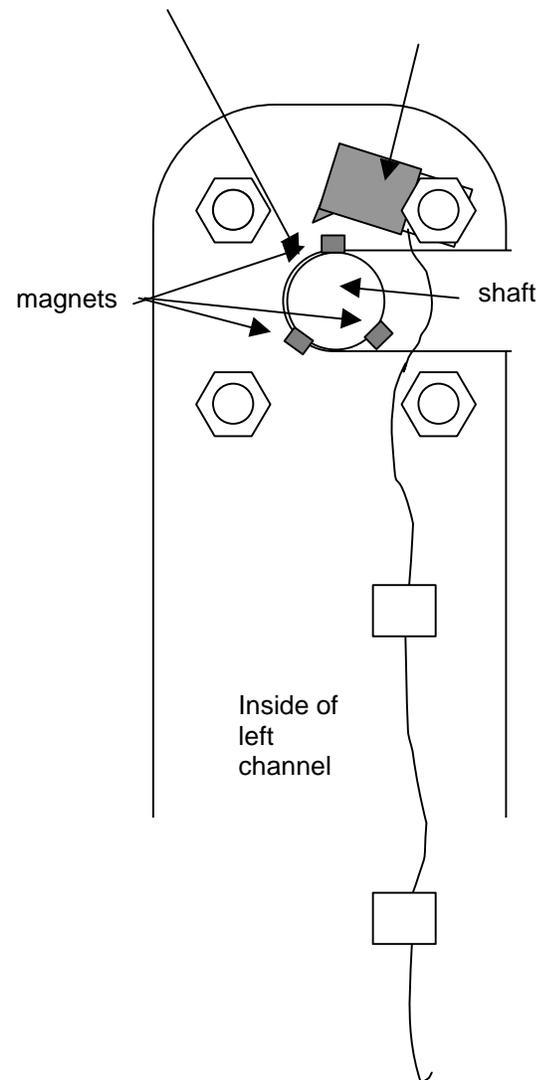
Before replacing a reed switch, make sure the old one is adjusted properly and check it again. The three magnets should be placed on the shaft so that the center of the magnets pass under the reed switch with about a 1/8" gap. The magnets have two flat surfaces. Make sure that they are oriented so that one flat surface is against the shaft and the other flat surface faces the reed switch.

The reed switch protrudes slightly from one corner of the bracket. Note in the diagram which bolt is mounted on. If you mount it on the wrong bolt, the switch may not be facing the magnets.

If the original cord is not defective and you have a crimping tool you can cut the cords and connect the new switch to the old cord with butt-connectors. To check the old cord, cut and strip the wires near the old switch and short them out to see if the counter responds. The counter should register one foot for every two times you short out the wires.

To replace the switch and cord, it is necessary to remove one panel (see bulletin #1) so that you can access the cord inside the wall and clip the new cord into the plastic clips.

Your Reed Switch may be on either the front upper bolt or the rear upper bolt, depending on the model. All current models have the switch mounted as on the right, on the rear bolt. This improves access. Replacement switches will be set up for rear mounting, and you may simply redirect the existing wires to handle the change.



Treadwall® Service Sheet #38

Lubricating the channels

Lubricating the channels on your Treadwall will make it move freely and operate with a minimum of weight. This procedure should be carried out every 6 months.

Time: 10 minutes.

Staff needed: One person.

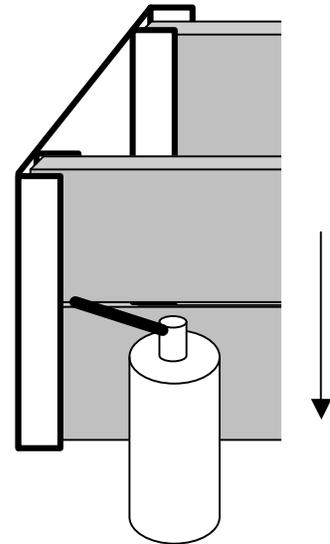
Tools needed: A can of spray white lithium grease or heavy duty spray silicone (with red nozzle extender)

The Procedure:

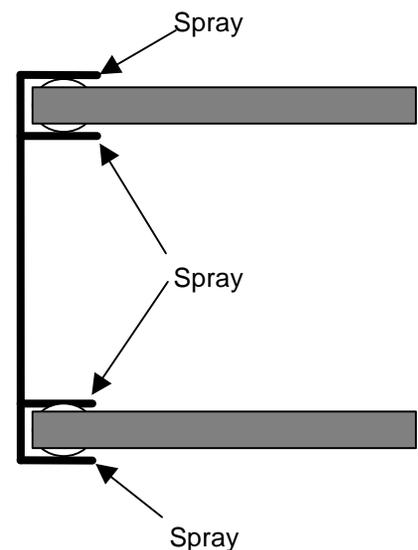
For interior machines, we recommend white lithium spray grease (available at any auto or hardware store). For exterior machines or trailer mounted Treadwalls, we recommend heavy duty spray silicone which is more resistant to accumulation of dirt and contaminants. Silicone May also be used for interior machines (it is a little cleaner to use) but it requires more frequent application.

Using your choice of lubricants with the red nozzle attached, start at the top left front and spray into the gap between the climbing panel and the channel flange. To Lubricate the inner flange, stick the nozzle between two panels and apply spray lubricant into the channel as you move the wall down, coating the inside metal surface (see diagrams below) where the white nylon buttons slide. Do the right side next, also making sure to coat both the front and back surfaces.

Repeat this procedure for the Rear Side of the Treadwall.



Move wall down while spraying rear flange



View of channel from the top

Treadwall® Service Sheet #40

Photoelectrics.

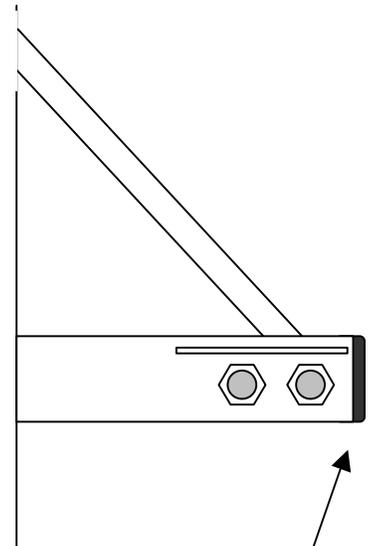
The photoelectric units on the Model PE Treadwall operate by retro-reflection. The units send an invisible light beam across the wall to a reflector. When the beam is broken, the wall locks up. If the wall will not lock up, or is locked up and will not release unless the transformer is unplugged from the wall, there may be a problem with the photoelectrics.

Testing:

As each photocell is covered, you should hear a faint click. The photocells also have pilot lights. Take off the black plastic cap on the front of the photocell bracket. When you peer into the housing, you can see the two photocells inside. Each photocell has a red pilot light that glows when the beam is unbroken. If the pilot lights are facing away from you, bend a strip of paper to slip in behind the photocell so that you can see the reflected glow.

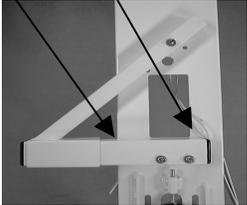
If both of the pilot lights are glowing, and they go out when you break the beam with your hand, the photocells are working correctly. If neither photocell glows, there probably is a power problem--check the transformer to make sure it is plugged into a working outlet. There could also be a misalignment problem if the entire channel has become twisted so that the photocells are not facing the reflectors properly.

If one of the cells is not glowing, first check to make sure that the mirror and photocell are clean. If it still does not work, check it with a small mirror. Hold the mirror about 3-4" from the front of the photocell so that you reflect the beam directly back into the cell. When you line the mirror up correctly, the pilot light should glow.



Remove this cap to look at photocells

Symptom	Possible problem	Action
<i>Wall will not lock up--pilot lights not glowing</i>	Lack of power to photocells	Check transformer--is it plugged in? Check connection at bottom of frame where wires plug into transformer wires. Check all outside wires to see if they are damaged or broken.
<i>Wall will not lock up--pilot lights glowing</i>	Bad connection to valve coil. Bad switch in control panel. Bad valve-coil or stuck valve.	Open control panel and check connection to valve coil and switch. Short out switch in control panel with paperclip- see if wall locks up when photocells are blocked. With voltmeter (12 volts) or automotive wiring tester, check voltage at valve-coil in control panel. When photocells are blocked there should be 12 volts between the two connections on the valve-coil. If the voltage is there, and the wall will not lock, there is a bad valve-coil or the valve itself is stuck open. If you suspect the coil, remove the mounting nut from the coil and take it off the valve while the current is flowing. If the coil is good, you will feel fairly strong magnetic attraction between the coil and valve.

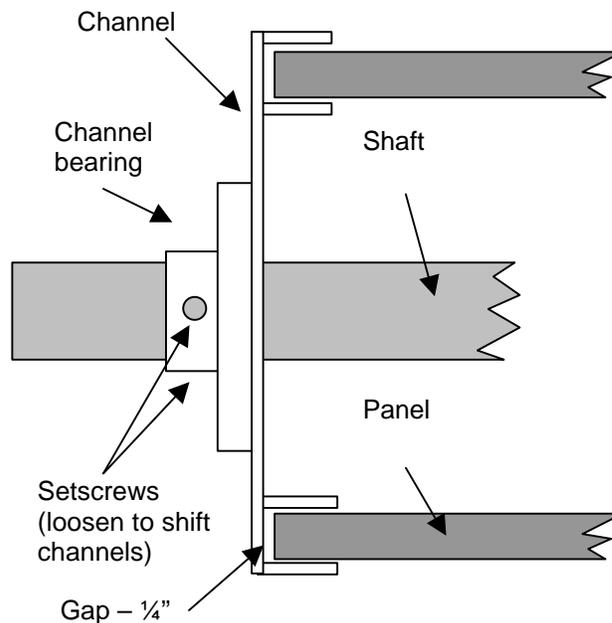
<p><i>Wall is locked up and will not release- It releases when wall is unplugged or control panel switch is turned off.</i></p>	<p>Dirty photocell or mirror</p> <p>Misaligned photocell.</p> 	<p>Clean mirrors and photocells.</p> <p>Usually this is due to misaligned photocells. The photocells send out an invisible beam across the face of the Treadwall to the reflectors on the other side. If they are not pointed directly at the reflectors, the system won't work right.</p> <p>Loosen the two long mounting bolts on the lower part of the photocell bracket and push or pull it into line until it works properly. Then slip cardboard shims between the photocell bracket and the channel either in the front or back to keep it in alignment when you re-tighten the bolts.</p>
<p><i>Wall is locked up and will not release- It will not release when wall is unplugged or control panel switch is turned off.</i></p>	<p>Probably not a photocell problem</p> <p>Chains loose</p> <p>Channels or panels misaligned</p> <p>Solenoid-valve is stuck closed.</p> <p>Speed-control valve is stuck closed.</p>	<p>See Service Sheet #10</p> <p>See Service Sheet #41</p> <p>If all other causes are eliminated, remove the solenoid-valve from the manifold and see if the wall rotates. Have a good container handy to catch the oil. If the valve is stuck, you can usually loosen it up by blowing it out with compressed air. Replace the oil with new #30 non-detergent motor oil (the oil level should be about 1" down from the top of the reservoir after the wall has been in use for a few minutes.)</p> <p>Remove the speed-control valve from the manifold. Have a rag handy to plug up the hole. Hold the rag in the hole and gently rotate the wall to see if it turns. If this valve is stuck, it can usually be released by holding it in your hand and tapping it's side with a small hammer or blowing it out with compressed air. Replace the oil.</p>

Treadwall Service Sheet #41

Alignment of panels and channels.

Occasionally the channels become misaligned on a Treadwall, causing the ends panels to rub against the channels. Usually, the panels have a clearance of $\frac{1}{4}$ " or so at each end, so that when you look at the top of the machine from the back, you will see a gap between the ends of the panels and the channels at each side. If the channels shift to one side, the panels will rub against the channel at one end and cause the Treadwall to operate very sluggishly.

To re-align the channels, loosen the two setscrews on both channel bearings (the large square bearings at the top of each channel – see second illustration) and use a short length of 2x4 and a hammer to move the channels along the shaft until there is an equal gap between the channels and the ends of the climbing panels. Because the channels are connected together by the top shroud and at other places, they must be both shifted as one unit. Re-tighten the setscrews firmly.



View from top (many parts not shown for the sake of clarity).

TREADWALL® LIMITED WARRANTY - Commercial

1. WHO IS COVERED?

The original purchaser of any model Treadwall ("Original Purchaser") may only enforce this warranty.

2. ORIGINAL PURCHASER OBLIGATIONS

- a. The Original Purchaser assumes full responsibility that this Treadwall purchased meets the specifications, capacity and other requirements of the Customer.
- b. The Original Purchaser assumes full responsibility for the condition and effectiveness of the operating environment in which the Treadwall is to function including spatial considerations.

3. HOW LONG IS THE WARRANTY?

According to the following schedule, Brewer's Ledge Inc. warrants to the Original Purchaser of its Treadwall that under normal maintenance the Treadwall will be free from any defect in materials or workmanship.

Structural Steel Frames and Welds:

Ten years - parts and labor and freight.

All other components except cords, floor mats and vinyl products:

One year - parts, labor, and freight.

Cords, sidecovers, floor mats:

Ninety days - parts, labor, and freight.

4. WHEN DOES THE WARRANTY BEGIN?

Warranty begins from date of delivery to Original Purchaser or date of installation in the case of factory assembly. In the case of either Demonstration or Trial Agreement and related purchase, the warranty begins from the date of the original delivery.

5. WHAT IS NOT COVERED

- a. Normal wear and tear is excluded from this warranty. No warranty shall be provided in the event the Treadwall is modified by original purchaser, for parts not approved by Brewer's Ledge Inc., or for warranty-related service other than by personnel authorized by Brewer's Ledge Inc.

- b. Damage incurred by negligence during movement, assembly, or breakdown of the Treadwall by the Original Purchaser or personnel contracted by the Original Purchaser is excluded from this warranty. The sale of special tools and instructional materials to the Original Purchaser and any training of the Original Purchaser's staff by Brewer's Ledge Inc. related to the movement, assembly and break-down of the Treadwall does not imply any warranty against Original Purchaser negligence and does not void this exclusion. Brewer's Ledge Inc. reserves the sole right to determine the origin of damage as related to this provision.

6. LIMITATION OF DAMAGES AND IMPLIED WARRANTIES

a. Except as provided herein, Brewer's Ledge Inc. makes no express warranties; implied warranty of merchantability or fitness for a particular purpose is limited in its duration to the duration of the written limited warranties set forth herein.

b. In no case shall Brewer's Ledge be liable for any special, incidental, or consequential damages based on breach of warranty, breach of contract, negligence or any other legal theory. Such damages include but are not limited to, loss of profits, loss of use of the equipment or any associated equipment, the cost of capital, the cost of substitute equipment, facilities or services, downtime, the claims of third parties, including customers, and injury to property.

This limitation does not apply to claims for personal injury where such limitation would be a violation of the applicable law. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

7. TERMS OF WARRANTY

The terms and conditions of this warranty are applicable as between Brewer's Ledge and Original Purchaser to the sale of Treadwall equipment to Original Purchaser.

8. STATE LAW RIGHTS

This warranty gives you specific legal rights, and you may also have other rights, which vary, from state to state.

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