



## Treadwall® Rotary Speed Valves - Service and replacement all units

### Overall:

Treadwalls were equipped with rotary speed control valves from February 1999 to May 2013. Three different valves were used and a variety of knobs. However, the earlier and later valves are not interchangeable.

Replacement of a defective valve is easy. There are two valves: J02 earlier or J04 later.

**J02:** measuring wrench opening distance on valve body = 7/8"

**J04:** measuring wrench opening distance on valve body = 1"

6-foot wide panels    1999 to June 2009    Replace with J02 valve

*Note: earliest valves turned clockwise to increase speed - new label will be required if replaced.*

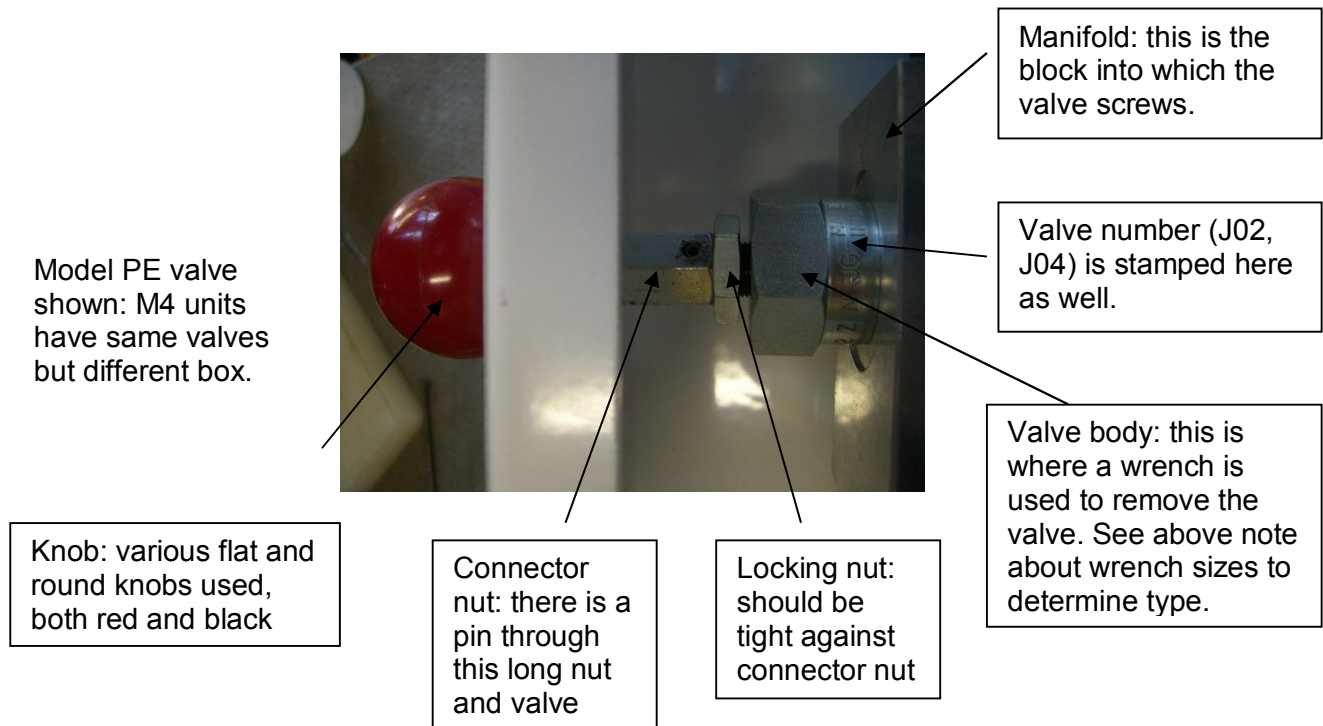
6-foot wide panels    June 2009 - 2013    Replace with J04 valve

4-foot wide panels    1999 to Jan 2007    Replace with J02 valve

*Note: earliest valves turned clockwise to increase speed – new label will be required if replaced.*

4-foot wide panels    Jan. 2007 - 2013    Replace with J04 valve

(all M4 units)



## **Instructions - all 6 foot wide panel units (PE, M6) and early 4 foot PE units (full height A-frame sides, wall pivots from top)**

### Contents:

- (1) replacement resistance valve with knob
- (1) panel label (optional depending on condition or if valve turns clockwise to increase)
- (1) knob label
- (1) instruction sheet (this sheet)

Replacing the resistance valve in the model PE or M6 simply requires removing the old valve from the manifold block and screwing the new valve in. If you work quickly enough, the small amount of oil that will be lost will not affect the operation of the Treadwall.

1. Unplug the Treadwall transformer from the wall.
2. (units with switch: later units did not have this switch) Remove terminals from the "auto-stop/continuous" switch and pop the switch out by squeezing the lugs on the back of the switch and pushing it out from the panel. Do not pull on the wires to remove the terminals. If necessary, use a pair of pliers to remove the terminals.
3. Peel off the old panel label. Use a hair dryer if available to heat the label up before peeling it to minimize the adhesive that is left behind. Cut it off from around the valve knob with a pair of scissors. Clean the panel to get off any remaining adhesive. The old adhesive is very sticky: a good solvent is alcohol.
4. Have the new valve ready to install before taking out the old. *Push the new valve in through the hole in the new label* so that the label is dangling from the stem of the new valve. Now, when the new valve is put into place the new label will be ready to stick down.
5. Set the angle of the wall to the easiest angle (all the way forward).
6. Place a rag in the control panel below the valve to catch any oil drips.
7. Using a 7/8" wrench or a large crescent wrench, loosen the old valve from the manifold block and unscrew it most of the way.
8. When the valve is unscrewed all the way, make a quick switch with the new valve and screw the new valve in. If you had up a piece of paper towel and have it handy, you can use it to cover the hole while you make the changeover. A small amount of oil will probably drip out, but this should not be a problem. The new valve should be seated quite firmly to prevent users of the Treadwall from loosening it while adjusting the knob.
9. When the new valve is in place, peel the backing off of the bottom of the label for about 2" and fold it up. Carefully line up the switch hole in the label with the switch hole in the panel and center the round hole over the hole in the panel. Stick it down lightly. When you are satisfied that the label is on straight, stick down the bottom 2 inches more firmly.
10. Peel off the rest of the backing paper and stick down the whole label firmly.
11. Now that the valve is installed, close the valve all the way and stick on the valve label with the arrow at the 12 o'clock position.
12. Replace the switch if needed. Plug the transformer back in.
13. Check the oil level to see if more oil is needed. Take off the plug on the vertical oil reservoir and dip in a pencil or screwdriver to check the level. It should be within 1" of the top. After topping off the oil (30 weight motor oil), circulate the oil by pulling the Treadwall around for a couple of rotations at the steepest angle and check the oil again.

14. If the Treadwall doesn't run smoothly or if there is inadequate resistance after changing the valve, there is probably air in the system. Slowly rotate the wall for a couple of rotations while it is at the most overhanging angle to work the air out of the system. If you rotate the wall too quickly, the air can become "entrained" into the oil, which will make it frothy. You will then have to wait a few minutes for the air to work its way out as bubbles again.

## **Instructions - all the Treadwall M4 models:**

Replacing the valve in the Treadwall M4 simply requires removing the old valve from the manifold block and screwing the new valve in. If you work quickly enough, the small amount of oil that will be lost will not affect the operation of the Treadwall.

1. Have the new valve ready to install before taking out the old.
2. Set the angle of the wall to the easiest angle (all the way forward).
3. Place a rag below the valve to catch any oil drips.
4. Using a 1 1/16" wrench or a large crescent wrench, loosen the old valve from the manifold block and unscrew it most of the way.
5. When the valve is unscrewed all the way, make a quick switch with the new valve and screw the new valve in. A small amount of oil will probably drip out, but this should not be a problem. The new valve should be seated quite firmly to prevent users of the Treadwall from loosening it while adjusting the knob.
6. Now that the valve is installed, close the valve all the way and stick on the valve label with the arrow at the 12 o'clock position.
7. If the Treadwall doesn't run smoothly or if there is inadequate resistance after changing the valve, there may be air in the system. Slowly rotate the wall for a couple of rotations while it is at the most overhanging angle to work the air out of the system. If you rotate the wall too quickly, the air can become "entrained" into the oil, which will make it frothy. You will then have to wait a few minutes for the air to work its way out as bubbles again.
8. If the Treadwall continues to run rough, check the oil level to see if more oil is needed. Take off the plug on the vertical oil reservoir and check the level of the oil. It should be within 1" of the top. After topping off the oil (20 weight motor oil), circulate the oil by pulling the Treadwall around for a couple of rotations at the steepest angle and check the oil again.

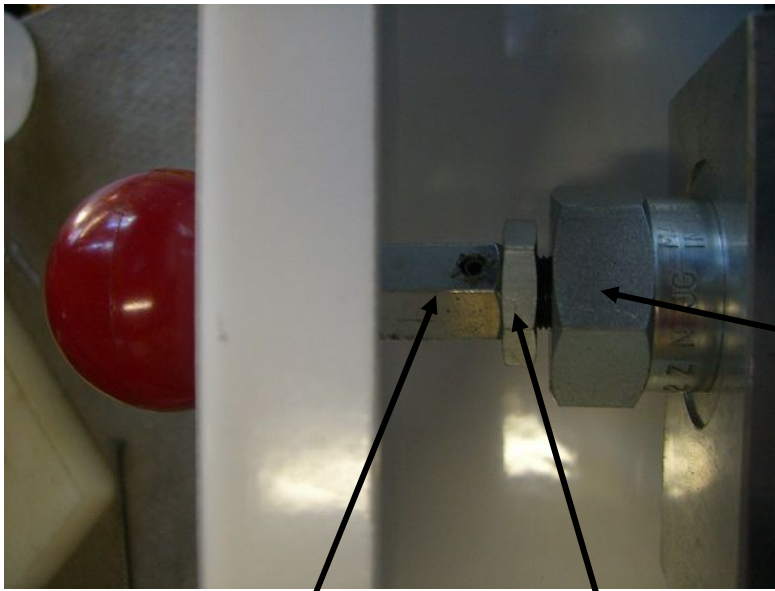
## **Replacing the Knob only**

Tools needed: small adjustable wrench or 1/2" wrench or pair of pliers, thread locking compound (Loctite, etc)

- 1) Apply Loctite onto the threads of the replacement knob.
- 2) Screw knob into the threads on the valve stem with the lock washer in place. As you screw it on, rotate it back and forth a few times to distribute the loctite evenly around the threads.
- 3) Hold the valve stem with the wrench or pliers to keep it from turning while you tighten down the knob as hard as you can.
- 4) Close the valve all the way and stick on the label at the 12 o'clock position, making sure it is well centered. It takes about 1/2 hour for the Loctite to set up completely. Wash your hands thoroughly if you get any Loctite on them.

## 1. Rotary Speed Control Valve - Freeing stuck valve

When a Treadwall control valve becomes stuck, you can often use a wrench to free up the valve. Make sure to know if the valve is closed in the open (wall moves freely) or closed (wall is locked up) position.



This is the barrel of the valve - do not loosen this unless you are replacing the entire valve.

This is the connector nut. Put a wrench on it and turn as needed to free a stuck valve.  
**Make sure to turn in the correct direction**

This is the lock nut that holds the connector nut secure. Make sure it is tight against the connector nut and not loose and hitting the barrel of the valve. If it is, re-tighten against the connector nut. See following sheet.