

Using The Scales

Calibration should normally not be required.

Don't drop scales.

Don't turn scales over.

Make shoring with wheel chocks or your plane will roll off the scales.

The scales are rated for one thousand pounds each. At one thousand and one pounds, they will break. Oilcanning of the black checker plates should not affect weight readings.

Supplies Required

Extension cords to reach the three power supplies (at least two cords).

Shoring material. Example, 3/4-inch plywood 6 x 8 inches, 2 x 6 x 8 inches.

Calibration should not be necessary as it has been done. The scales need to be checked from time to time for accuracy (maybe once a year). The instructions for calibration are included at the back of this book. You will require a very accurate two hundred pound weight to calibrate. **DON'T DO IT UNLESS YOU HAVE IT!** Not bathroom scales! Not weight lifting weights! Not you! To calibrate, you should have a certified scale to check a weight of two hundred pounds. Once verified, use that weight to calibrate the scales. Example, five gallon paint buckets filled with water and marked then sealed would be one way. Of course, the five pails would need to be stored somewhere to verify the scales from time to time.

Weighing Your Plane

- Plug in power supplies. Keep control panels out of way. Watch that you don't trip over extension cords.
- Turn scales on. Lights will test (8888) and return to zero. (Has to be turned on and read zero before any weight applied or scales will not work properly.)
- Step on scales and test your weight. Sigh...too bad! Yes, they are accurate!
- Jack your plane.
- Place shoring on scales and record this weight.
- Lower your plane onto scales.
- Read your weights and subtract your shoring weight if used.

Calibration of WS 1000 L Scale

First item is to find an accurate 200 pounds. One way is to weigh yourself on an accurate scale, assuming that you weigh less than 200 pounds. Then fill your pockets with diver weights or whatever to get to 200. Keep the same clothes and shoes, do not eat or go to the bathroom, and use yourself as the calibration weight.

a. Remove the right plastic end cap on the display (2 screws).

b. At the open end of the display box you will find a 2-position calibration flip switch for normal operation (up position) and calibration (down position.) Flip switch to down position.

c. Press the ON button to turn on scale. While the display is showing 8888 with the lb and kg lights blinking alternately, press both TARE and LB/KG buttons simultaneously.

d. It displays the zero reference number. Normally it is between 2000 and 9500. Press TARE to display zero.

e. Put your calibration weight on the scale.

f. Press TARE, to lock in digital calibration. Remove weight. Flip calibration switch to normal (up) position.

g. Turn scale off. The scale is now calibrated.

h. Install the plastic end cap over the right side of the display using two screws. Make sure the two rubber feet are in place between the aluminum housing and the end cap.

Hardware Repair

Remove the checkerplate top of the scale and give the scale a shake to see if there are any loose parts. If nothing rattles this can mean either that the scale is in good shape, or that any loose parts have fallen out.

To be certain, use a set of needle nose pliers to remove the top of the scale body. There will be two springs that hold it together and the needle nose pliers can be used to grab the top loop.

Once inside have a look around. The load cell is in the centre and it has a little plate with four rectangular slots.

At each corner there is a fulcrum, and from each fulcrum pivots a tapered lever that hooks into the plate on the load cell. Sometimes the hook end of the lever comes out of the plate with the slots. Also if someone has already been fooling around inside it might be possible for one or two of the levers to be mispositioned so that they touch the floor of the scale body. Check against the other two scales to see that all have their arms positioned in the same holes. There are no instructions for any of this so I am telling you what I have seen over the past years when scales came back malfunctioning.

On each tapered lever there is a little stamped steel saddle that straddles the lever. Sometimes the saddles fall off the levers when the scale gets dropped. This is the part that usually rattles.

Place all the saddles on their respective levers and set the top of the scale body onto the saddles. Notice that the top can be moved in the horizontal plane quite a bit.

Take the top off again and find a couple of pieces of safety wire. Make a loop in one end of each wire and use it to catch the top loop of the spring. A second set of hands is now handy.

Have the assistant pull the safety wires vertically and thread them through the two large holes in the top of the body. Lower the body gently onto the saddles and keep tension on the safety wires. Check that the top of the scale body still can move around on the saddles.

Use the needle nose pliers to pull each spring up and hook its loop into the appropriate hole in the scale. Then unwind the loop in the safety wire and sneak it out of the spring loop.

The top of the scale body should still be able to move around a bit. Shake the scale to be sure that none of the saddles have fallen off their levers.

Now reinstall the black checker plate cover. The scale is now ready to be calibrated.

Before calibration, step on the scales to see if anyone has oilcanned a checker plate top. I had this happen once when a fellow overloaded the scale. I do not know how to repair that condition so cross your fingers that there is no oilcanning.