

# Operator's Manual Portable Wood Chip Moisture Tester



# Introduction

**THANK YOU** for purchasing a Wood Chip Moisture Tester.

**READ THIS MANUAL** carefully to learn how to operate and service the Moisture Tester correctly. Failure to do so could result in personal injury or equipment damage.

**THIS MANUAL SHOULD BE CONSIDERED** a permanent part of the Moisture Tester and remain with the Moisture Tester when you sell it.

**WARRANTY** is provided for customers who operate and maintain the Moisture Tester as described in this manual.

This warranty provides you the assurance that we will back our products where defects appear within the warranty period. In some circumstances, the manufacturer also provides field improvements, often without charge to the customer, even if the product is out of warranty. Should the Moisture Tester be abused, or modified to change specifications, the warranty will become void and field improvements may be denied.

**PROOF OF PURCHASE** (retail sales receipt) must be included with the returned Moisture Tester to obtain free warranty service. Without proof, the Moisture Tester will be assumed to be out of warranty and repair costs will be invoiced.

**RECORD SERIAL NUMBERS.** Accurately record all the numbers on the back cover of this manual, and refer to it in all communication with the factory. The manufacturer, needs these numbers when you order parts or obtain service.

All information, illustrations and specifications in this manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without notice.

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***CAUTION: Always use the appropriate protective equipment and follow the safety instructions of the motorized chainsaw's manufacturer.***

# Set Up and Installation



## CONTENTS OF THE BOX

- Wood Chip Moisture Tester
- Operating instructions

## GENERAL

The Wood Chip Moisture Tester measures the moisture content of firewood, wood pellets and other wood materials. To take a measurement use the necessary amount of wood samples from the debris of a motorized chainsaw. This tester can also measure the moisture content of regular sawdust as well.

The tester shows the moisture content of the material in weight percent. The measurement range is:

- 15 – 65% for sawdust (from a motorized chainsaw)
- 4 – 23% for wood pellets
- 6 – 30% for usual sawdust

# Operation

## TAKING THE SAMPLE

### **Log/sawdust (from a motorized chainsaw)**

Take the sample from a tree length log with a motorized chainsaw. Place a bucket to hold the sample near the point of sawing so that the sawdust debris goes straight into the bucket. Always saw the tree crosswise.

**Always use the appropriate protective equipment and follow the safety instructions of the motorized chainsaw's manufacturer.**

Check that the saw blade is sharp enough. Sawing with a blunt blade warms the sample and can cause the incorrect measurement results.

Take the samples from different places of the sawdust collected.

Collect about 1 pound of sawdust. If you do not take the measurement immediately, close the bucket lid tightly.

When collecting a sample from a pile of sawdust in storage remember, that if some part of the pile is covered, the material under the cover is usually drier than the rest of the material.

Before carrying out the measurement mix the collected sample properly.

**Pellets** - Collect the sample from different places of the pellet pile and make sure, that the quality of the collected sample represents the average quality of the whole mass. The measurement scale for pellets is developed for about .25 inches (6-8 mm) thick and 1 inch (20-30 mm) long wood pellets.

**Sawdust** - Before collecting the sample remove some material from the surface. The scale for sawdust is suitable for all the woods.

## CHECKING AND CHANGING THE SCALE

Before taking the measurement always remember to check, if you are using the correct scale. The complete list of the scales is located on the side label of the tester. There is an additional -0- scale in the tester. -0- scale is used by the service department to calibrate the testers.

### **Checking the scale**

Switch the tester on with a single press on the **POWER** - button. The number of the present scale, for example -1-, will appear on the display. If the scale is correct, keep waiting. You will see run on the display and in a moment the meter will turn off. Now the meter is ready for use.

# Operation

## CHECKING AND CHANGING THE SCALE (CON'T)

**Before carrying out the measurement mix the collected sample properly.**

### Changing the scale

If you need to change the scale, switch the tester on with a single press on the **POWER** - button. The number of the present scale, for example -1-, will appear on the display. When the number of the scale is displayed, you can change the scale by pushing the **FUNCTION** - button. When the number of the correct scale is displayed, keep waiting. You will see **RUN** on the display and in a moment the tester will turn off. Now the meter is ready for use.

## STEP-BY-STEP MEASUREMENT

### Filling the Test Cell

Place a half handful of sawdust taken with a motorized chain saw, pellets or regular sawdust into the test cell and lightly shake the tester. Next, fill the test cell to the brim, level off the contents by scraping the overflow and twist the cap until the center of the cap is level with the cap's surface. Now the compression of the sample is correct and the measurement can be taken.

### Measurement

Switch the tester on with a single press on the **POWER** - button.

The number of the selected scale will appear on the display. After that the tester proceeds to the measurement. You will see **RUN** on the display during the measurement. The result of the measurement (moisture content) will be displayed in weight percent. After the measurement the tester will automatically turn off and will be ready for a new measurement.

You can ensure that the measurement result represents the average quality of the whole mass by making the measurement from different places of the mass. Make several measurements if needed.

**NOTE:** Moisture content within the same mass can vary greatly.

# Operation

## AUTOMATIC AVERAGE CALCULATION

The tester can calculate the average value of several measurements. After you have made the measurement, the result can be saved for the average calculation.

### **Saving the measurement result for the average calculation**

Take the measurement as usual. When the result is displayed, push the **FUNCTION** - button for a short time. **A** will appear on the display and the tester will add the measurement result for the average calculation. The average calculation is ready when two numbers, for example **A05** and **25.6**, appear alternating on the display.

In this case **A05** means that the number of measurement results included into the average value is 5. Number **25.6** is the average value of those 5 measurements.

If you do not want to include the measurement result into the average calculation, do not take any readings after the measurement, just wait until the tester automatically turns off and is ready for the next measurement.

**Before calculating the average value of every new lot of material, make sure that average calculation memory is empty and erase it if needed.**

## ERASING THE AVERAGE CALCULATION MEMORY

Push and hold the **FUNCTION** - button. Switch the tester on with a single press on the **POWER** - button.

When you see **A** on the display, release the **FUNCTION** - button. If the average value appears on the display now, you can erase it by pushing and holding the **FUNCTION** - button. The memory is erased, when **0** appears on the display.

**NOTE: Always remember to erase the average calculation memory after the measurement series so that the previous average value will not affect the average value of the new lot.**

Average calculation memory can accommodate maximum 99 results. If no more results can be added to the memory, the number on the display will start blinking.

# Operation

## ADJUSTING THE RESULT

If the quality of the measured material is different from normal, the result can be incorrect. You can adjust the result shown by the meter to conform to a reference value.

**Adjusting the value upwards** - When the measurement result is displayed make the double press on the **FUNCTION** - button. **Three bars will appear on the upper edge of the display. Wait for a moment and the result appears on the display again.** Now each time you push the **FUNCTION** - button, 0.1 moisture % will be added to the result.

**Adjusting the value downwards** - When the measurement result is displayed, push the **FUNCTION** - button three times. **Three bars will appear on the lower edge of the display. Wait for a moment and the result appears on the display again.** Now each time you push the **FUNCTION** - button, 0.1 moisture % will be deducted from the result.

**NOTE: This adjustment is specific to the used scale. In other words there may be defined specific adjustment for each scale.**

## ERASING OF THE SCALE ADJUSTMENT

When the moisture content result is displayed, you can erase the adjustment. To do that push and hold **FUNCTION** - button for about 6 seconds. When the result value on the display changes, you know that the adjustment has been erased.

**NOTE: Always make several measurements, because the moisture content in the mass can vary greatly.**



# Illustrations



# Battery Replacement

## BATTERY

The tester is powered by a 9V alkaline battery.

This tester gives a warning about the low battery voltage with **LOBAT** - text in the left upper part of the display. If the battery is almost empty, the display will show some random marks and **LOBAT** text can fade.



The battery box is located on the bottom of the tester. Open the box by pushing the locking lever over the battery symbol as shown in the picture (see image) and replace the battery.

Remove the battery from the tester, if the device is not used for a long period of time. To ensure the correct functioning of the tester replace the battery regularly. If you suspect a fault in the tester, always test the battery first.

**NOTE:** A battery slowly discharges itself even if the tester is not used.

# Warranty and Service

If the Moisture Tester should display inaccurate readings or cease to operate, follow these steps:

1. Review this manual, particularly the Operations sections.
2. Call the toll-free number, 1-800-821-9542, and ask for customer service. Be certain to call between 8:30 a.m. and 4:30 p.m. Eastern Standard Time. Describe the problem to our service personnel so that a determination can be made as to what is wrong with the tester. If necessary, arrangements can be made for repair or replacement and a Return Authorization number will be given to you. Be certain to have the serial number available.
3. In the event factory service is required AND AUTHORIZATION HAS BEEN OBTAINED, remove the battery from the tester, pack the unit carefully and return to AgraTronix PREPAID. Do not return the battery. Be certain to include your name and return address.
4. Do not return the tester without following the above procedure. THERE WILL BE A \$15.00 HANDLING CHARGE MADE ON ALL UNITS RETURNED AND NOT FOUND TO BE DEFECTIVE.
5. Repairs will be made free of charge during the warranty period. After the warranty expires, the tester will be repaired at a flat rate.

## IMPORTANT WARRANTY INFORMATION

1. PROOF OF PURCHASE (retail sales receipt) must be included with returned tester to obtain free warranty service. Without proof, tester will be assumed to be out of warranty and repair costs will be invoiced.
2. Every tester has a serial number identification. Note this serial number on the appropriate line on the next page and refer to it in all communication with the factory.

## LIMITED WARRANTY

This Moisture Tester is guaranteed to be free from defects in materials and workmanship for two years in North America and for one year overseas from date of retail purchase. This warranty does not cover the battery or damage resulting from misuse, neglect, accident or improper installation or maintenance. This warranty does not apply to any product which has been repaired or altered outside the factory. The manufacturer does not assume any liability for damage from misuse, dropping the tester or damage resulting from or damage caused by water or from unauthorized repair. The warranty does not cover any damage which may directly, indirectly, consequentially or incidentally result from use or inability to use this moisture tester.

The foregoing warranty is exclusive and in lieu of all other warranties of merchantability, fitness for purpose and any other obligation or liability in connection with its product.

# Warranty and Service

## RECORD SERIAL NUMBER

**NOTE:** The tester serial number is located on the bottom or back side of the unit.

Write your model number, serial number and date of purchase in the space provided below. The manufacturer needs this information when ordering parts and when filing warranty claims.

Date of Purchase \_\_\_\_\_

Serial No. \_\_\_\_\_

Model No. \_\_\_\_\_

(To be filled in by purchaser)

## Manufacturer's Contact Information



Toll-Free 1-800-821-9542

1-330-562-2222

FAX 1-330-562-7403

[www.AgraTronix.com](http://www.AgraTronix.com)

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