BATTERY POWERED HOT STICK TESTER

CAT. NO. 7707

HASTINGS

A WORLDWIDE SUPPLIER OF

Hot Line Tools & Equipment

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WARNINGS

1) Do not use this tester until all instructions have been read and understood.

2) Do not try to test any equipment other than fiberglass hot sticks with this tester.

3) Do not touch the electrodes with your hand or any other foreign object.

4) Do not set tester on conductive surfaces when on.

5) Unit should only be operated between 32°F-104°F (0-40°C).

6) Batteries should only be charged between 32°F-104°F (0-40°C).

Failure to observe these warnings and the following instructions could result in inaccurate readings or damage to the tester.

OPERATION

1) To verify the tester is operating properly a check bar is supplied. Inserting the check bar in the tester should result in a full scale reading (approx. 50µA), when the tester is set for the dry test and one third scale when set for the wet test (approx. 37.5 µA).

2) The stick to be tested should be supported by non-conductive supports.

3) The 7707 is designed to run and test on battery power only. The unit will only charge while plugged in.

***Battery must be fully charged before first operation.**

4) To turn the unit on/off, press power/light button for three seconds.

5) Select either the “WET TEST” or “DRY TEST” as indicated on the display.

6) Press the reset button to enable the high voltage. The reset button must be pressed again to zero the meter.

-UNIT MUST NOT BE RESET WHEN ON A CONDUCTIVE OBJECT. THIS WILL RESULT IN INACCURATE READINGS.

-REMOVE FINGER FROM RESET BUTTON IMMEDIATELY AFTER PRESSING THE RESET BUTTON. LEAVING FINGER ON THE BUTTON WILL RESULT IN LOWER READINGS.

-IF UNIT IS SHOWING NEGATIVE VALUES WHEN NOT TESTING, THE UNIT SHOULD BE POWER CYCLED AND THEN RESET TO ZERO

7) If you are going to run the "DRY TEST" go to step 9.

8) Spray the entire stick with **DISTILLED** water to thoroughly wet the surface. Spray the water uniformly on the pole until droplets just begin to drip from the bottom surface.

9) Place the tester on any non-metallic portion of the stick to be tested and read the micro Amperes leakage on the meter.

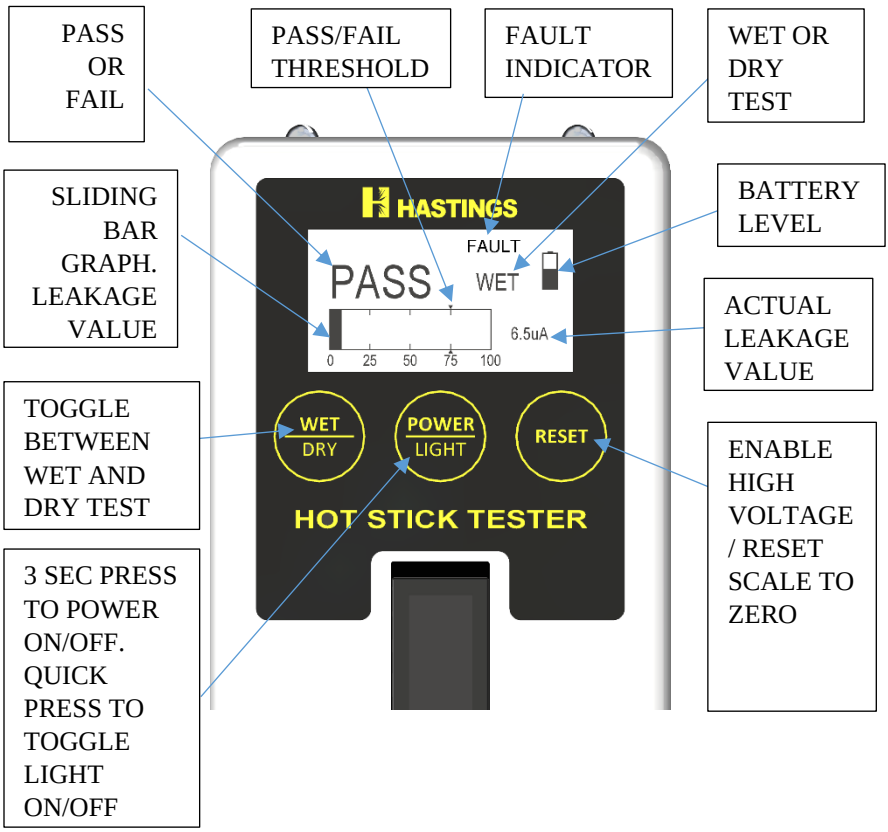
10) To test the entire length of the stick, the tester must be moved in six inch increments along the length of the stick. During the wet test, it is important **not to slide** the tester along the stick. This will cause a wiping action on the water droplets resulting in abnormally high readings.

11) After the entire length of the stick has been tested, the stick should be rotated 180 degrees and re-tested. This will ensure that the most critical reading has been obtained.

12) The tester will sense any conductive object near the electrodes. Contact with the electrodes is not necessary for this to happen. If the operator were to place their hand around the outside of the tester near the front electrode, the reading will increase. Placing objects around the keypad will also decrease readings. Therefore all foreign objects should be kept away from the tester during use and only one hand should be placed on the meter while testing.

13) Should the tester sense an overload of current it will disconnect the high voltage source and display “FAULT” on the screen. Power cycle the unit to return to normal operation.

14) If 10 minutes of inactivity is detected, the unit will automatically power off (auto shutoff may be disabled by holding the wet/dry button for more than 2 seconds, a small dot will appear in the top left of the screen).



CALIBRATION

The meter is calibrated to indicate the leakage that would be present if 100 kV were applied to a 12 inch section of the tool for the dry test, and 75 kV per foot for the wet test. The actual distance

between the electrodes is 6 inches which would make the leakage current twice as high as the 12 inch length. It will also cause the test to be slightly more severe as a smaller defect will be detectable.

The actual voltage is 2500 volts. This is 40 times less than 100 kV requirement for the dry test and 30 times less than the 75 kV requirement for the wet test. To make the tester correlate with the full scale values the actual leakage current is amplified 20 times for the dry test (40 x .5) and 15 times for the wet test (30 x .5).

WET TEST

Current industry standards require a stable or decreasing reading which would also eliminate flashovers. The 7707 was designed so that readings above 75 micro Amperes would be considered failing on the wet test and 75 micro Amperes and below would be considered as passing. This is more stringent than the current industry standards and is well below the level where flashover or unstable readings will occur.

DRY TEST

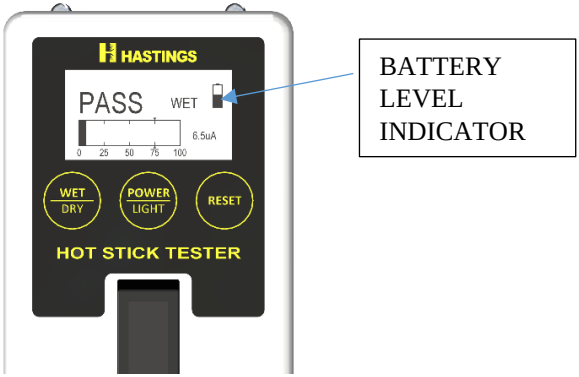
The dry test is not required as an in-service test by OSHA. It is only required by the manufacturers on new sticks. It can offer the user additional information about the tools insulating properties which will not be revealed with the wet test. The 7707 was designed so that readings above 15 micro Amperes would be considered failing on the dry test and 15 micro Amperes and below would be considered passing. This test cannot be substituted for the wet in-service test which is required by OSHA.

TEST RESULTS

Any fiberglass tool not meeting the required leakage values should be removed from service and examined more thoroughly to determine the cause of the leakage and its suitability for service.

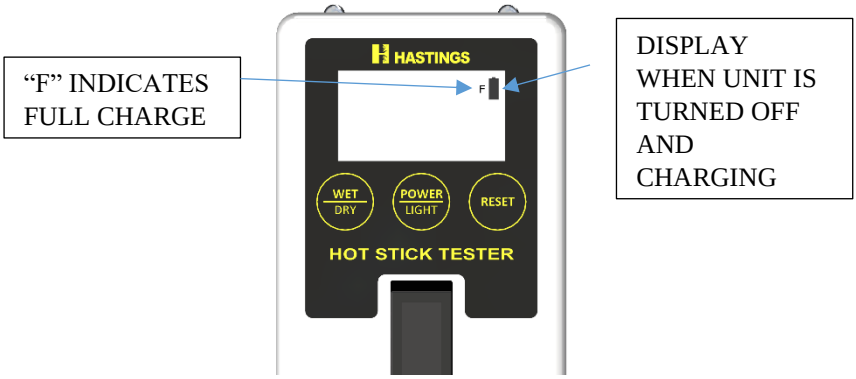
BATTERY CONSIDERATIONS

The Battery Operated Hot Stick Tester is designed to provide six hours of continuous testing. A full battery level indicator represents a 100% charge. When the battery level has reached below 10% of remaining battery life, the battery symbol will show empty. The unit will automatically turn off once the battery has been drained. The unit will function as normal and yield proper test results no matter what level the battery is at until the unit has completely shut off.



BATTERY CHARGING

Plug USB cord into unit and securely lock by twisting bayonet lock. A battery symbol will display on the screen. The battery symbol will display the current battery level as the unit charges. Unit should only be charged with wall charger and cord that will output 5VDC and 2 or more amps.



***The battery should only be charged between 32°F-104°F (0-40°C). Charging outside of these temperatures will degrade the battery and shorten the lifespan.**

CLEANING/WAXING INSTRUCTIONS FOR HOT LINE TOOLS

Should any of the tools tested not meet the required leakage values of the Hastings Fiber Glass Hot Stick Tester, restoration to acceptable leakage values is possible by using the proper cleaning aids and cleaning products.

CAUTION: ONLY cleaning products designed specifically for Hot Sticks/Hot Line Tools should be used!

If your tool is deemed unacceptable by the preceding test, we recommend the following procedures:

1) Clean the fiberglass surface using Hastings Fiber Glass All Purpose Cleaner (catalog number 10-168, 10-169, 10-197)

NOTE: If contaminants appear to be imbedded in the fiberglass surface, use of the Hastings Fiber Glass Products Non-Abrasive Cleaning Pads (catalog number 10-170) may be required in conjunction with the All-Purpose Cleaner.

2) After cleaning, make sure the surface is thoroughly dried.

NOTE: Do not use any treated shop cloths, or synthetic wiping cloths for drying!

3) After drying is complete, apply a coat of fiberglass wax. (Hastings Fiber Glass catalog number 10-091).

NOTE: The glossy surface may be retained by daily wiping with a silicone cloth. (Hastings Fiber Glass catalog number 10-090).

4) Retest your stick!

If the retested tool still does not meet acceptable leakage values, further measures must be taken. The tool must be refinished or discarded!

INSTALLING AC BLADES TO THE POWER ADAPTER

Removing the insert before use: If an insert is included, then remove it by using a thumb or finger to slide the spring-loaded locking key downward.

Inserting the AC blade assembly:

1. Insert the tip of the blade assembly into the power supply at a 30-60 degree angle (Figure 1). The top edge of the blade assembly is flat and the bottom edge is U shaped. The power supply has the corresponding shapes.

2. Push the blade assembly into the power supply in a downward motion (Figure 2).

3. Push the blade assembly down until the blade assembly locks in place. A clicking sound will occur (Figure 3).

4. Check to make sure blade installation is secure by holding the power supply in one hand and using another hand pull up on the blade (Figure 4).

Figure 1

Figure 2

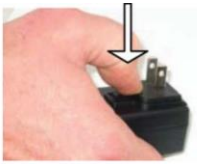


Figure 3

Figure 4

The Power Supply is ready to be used.

SPECIFICATIONS

Catalog number:	7707
Charging Cord:	P31603
Wall Charger:	P31618
AC Blade Kit, Types A,C, G, I:	P31640

Operating Temperature:	32°F-104°F (0°C-40°C)
Battery life@70°F.:	6 Hours of continuous testing
Charge Time:	4 hours @ 2amps
Weight	5.3 pounds

For Video Instructions Visit:
www.hfgp.com/resources/videos

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P31612-R2

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