



# Lead Repair Instructions

## Before You Start

### Lead Replacement Kit Contents

- 1 lead - 10 feet
- 3 large heat shrinks
- 3 medium heat shrinks
- 3 small heat shrinks

**Note:** Small heat shrinks are used when connecting the heating wire of the mat to the larger cold lead wire.

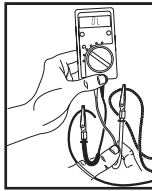
## How to Test Nuheat

### DO NOT CONNECT MAT TO POWER DURING TESTING

#### Insulation Test

To ensure that the copper conductors are fully insulated:

Acquire a digital ohm/multi meter with alligator clips or equivalent testing device. Place one meter probe on the ground outer metallic braid and the other probe on the copper wire inside the white lead.

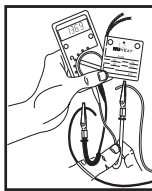


- Confirm that the reading is 1 million ohms to infinity.

Repeat these steps to check the reading between the metallic braid and the copper wire inside the black lead.

#### Resistance Test

To ensure continuity in your heating mat: Acquire a digital/multi meter with alligator clips or equivalent testing device. Set the ohm meter to the lowest setting. Place one of the meter probes on the copper wire in the white lead and the other probe on the copper wire in the black lead.



- Confirm that your ohm reading is within -5% or +10% of the factory reading listed on the mat tag. Record reading in the Mat Resistance Log.

**Note: Nuheat must be tested before, during and after installation to validate the warranty.**

## Installing Replacement Lead

**Repeat the following steps for each lead wire: (black & white)**

**1.** Cut the mat lead wire away from the point of damage.

**Note:** Cut 1/8" in front of the damaged portion to ensure that no damaged wire remains on the good lead.

**2.** Take two of the large diameter heat shrinks from the repair kit and slide them over the steel braiding (you may need to smooth out the braiding on the lead first).

**3.** Push back the steel braiding from the wire on the old lead to expose approximately 3" of insulated wire.

**4.** Very carefully strip 1/8" of insulation from the end of the old lead wire.

**5.** Take the new lead from the repair kit.

**6.** Obtain one medium heat shrink from the repair kit and place it over the new piece of lead wire.

**7.** Overlap 1/8" of the bared wire ends of the old lead wire and the new piece of lead wire.

**8.** Carefully slide the medium heat shrink over the overlapping ends ensuring that the solder ring is centered over the overlapping bare wires. Make sure that the wires are within the heat shrink seals (the blue and clear bands).

**Note:** Keep the metal braid at least 1" away from the heat shrink during the heating process to prevent a short between the wire and the metal braiding.

**9.** With the heat gun, heat the heat shrink until the solder ring melts on the overlapping connection and the plastic tube is shrunk tight around the insulation protecting the wire.

**Heat the ends of the heat shrink first to seal in the solder.**

**10.** Pull the bunched steel braiding over the repaired wire connections. Slide the large heat shrink over the overlapping ends ensuring the solder ring is centered over the overlapping steel braid ends.

**11.** With the heat gun, heat the heat shrink until the solder ring melts on the overlapped connection and the plastic tubing is shrunk tight around the steel braiding.

**After finishing the repair, conduct Insulation & Resistance Tests.**