

⋮  
**No Fix No Pay**

October 19, 2015

*Better Business Bureau*  
4747 Viewridge Ave., #200  
San Diego, CA 92123

Regarding Complaint ID: 10818282, of 10/6/15

This dispute provides public record of industry practices violating OSHA's Nationally Recognized Testing Laboratory (NRTL) standard for factory equipment and public safety.

During warm up of Tina Nguyen's shower-steam generator, as with some other domestic factory Steam & Sauna brands, enough ground-fault current flows temporarily to trip Ground Fault Circuit Interrupters (GFCI).

Tina's used equipment was also out-of-warranty, and wire-Insulation Testing @ 0.003 megaOhm (MΩ) --Leg to Ground-- failed factory specifications >20MΩ. Fault hazard. Tested while cool.  
(1) SteamSpa Manual p.20, TECHNICAL PARAMETERS, Insulation Resistance  
<http://steamspa.com/wp-content/uploads/2016/05/steamspa-generator-installation-manual.pdf> (Pg.20)

With the failed wiring insulation, potential line voltages to ground are not just temporary. Since, Steam equipment is bonded to plumbing, people standing on metal drains, and touching plumbing faucets can be electrocuted. Objectionable current (NFPA-70 250.6) from this ground faulted steam equipment may flow across plumbing, equipment housings, appliance doors / handles, and raceways. Tina and her husband were advised of the hazard, the wiring connections were dismantled, and Steam unit replacement was advised.

Tina now reports a factory sales agent told her, "that the GFCI unit was not compatible," and regardless of wiring Insulation-Test failure, she is led to believe, "There is nothing wrong with the steam generator." Tina also expects compensation for this GFCI trouble, since the equipment works fine without it, and Fire Code NFPA-70 110.3(B) requires Listed or labeled equipment shall be installed per instructions, (ie) no GFCI.

The problem is, no Nationally Registered Testing Laboratory (NRTL) label or listing was seen on Tina's equipment or instruction manual. Further, GFCI's are compatible with OSHA's required testing standard for products in this category, (Link shows list of OSHA Standards, including UL 499) --Steam bath equipment (KQBZ)-- ANSI/UL 499, "Electric Heating Appliances."  
[https://www.osha.gov/dts/otpc/nrtl/list\\_standards.html](https://www.osha.gov/dts/otpc/nrtl/list_standards.html) (Scroll down to "UL 499")

The 2013 revision of UL 499, for "Leakage Current" p28 of 36 is available here:  
<http://publicaa.ansi.org/sites/apdl/Documents/Standards%20Action/2014-PDFs/SAV4523.pdf>  
This standard prohibits leakage current above 0.75mA, except during heat up & cool down when the "Standard for Leakage Current for Appliances, UL 101" allows up to 2.5mA. Both standards are well

below, or compatible with Class A GFCI of 4-6mA. Some 240volt steam-unit models explicitly require GFCI protection in their instruction manuals, albeit from properly NRTL Listed, labeled, or international manufacturers.

<http://www.livinghouse.co.uk/ShowerSteamRoomGenerator/caution.html> (See item #2)

Any factory, or sales agent that discourages Class A GFCI safety disconnects, for steam-bath equipment, is likely pushing Un-listed product that can not pass (UL 499). And, any contractor or owner builder, installing such Un-listed or sub-standard equipment, legally voids homeowner insurance policies, since doing so breaks the listing law. NFPA-70 90.7 requires factory equipment "has been listed by a qualified electrical testing laboratory", (to avoid AHJ approved field-testing).

"View List" of (KQBZ) UL listed Steam-bath equipment: (a small list)

<http://productspec.ul.com/details.php?ccn=KQBZ> (Click "View List" Link)

The GFCI safety disconnect installed was compatible with the standard required by NRTL Listed, & labeled Bath Steam equipment, to protect the life and safety of your family. Just like the electrician before me refused to put a 50amp breaker on your old 30amp Steam unit feeder, he acted reasonably to prevent the wire from becoming the fuse that ignites your home.

This industry practices that misled the public in this case (you), to install sub-standard equipment that is Un-listed, or fails required-test standards, will be on record with OSHA, & NRTL members, Oct-2015 minutes, at Orange empire division, International Association of Electrical Inspectors (IAEI).

Whether we agree my parts-pickup time is billable or not, my 10% Veteran's discount did save you ~\$28.20 in parts cost, plus ~\$25.00 in free truck stock. It was cable straps, lag screws, & special hardware needed to repair your fuse box, mount disconnects, and properly support over 60ft of large cable thru crawlspaces, foundations, over concrete boulders, and mud puddles under your house. The cable path was not straight, and both ends were pulled up thru walls & floors to fuse box, and legally required disconnects. Not 35 feet, as you stated with other misrepresentations in the public domain.

Regardless of unpaid overtime, for orders beyond original scope, and merits of material-markup for compensation, which you dispute by character attack, and malicious misrepresentation of fact, to defame and damage my business, I hereby settle this transaction in good faith with a \$200 payment refund to you, if you can remove the smear campaign: all statements / business reviews / past, present, & future, which you, or agents may have published about me, or my business, at <http://www.yelp.com/biz/nofixnopay-fullerton>, and elsewhere in the public domain.

Cordially,



Roger Ruhle DBA: NoFixNoPay

RR