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Safety Bulletin
PROsine™ 1000/1800 Inverters (Hard-wire versions)

Shock Hazard Due to Missing Neutral-to-Ground Bonding Wire

Overview

The 120 Vac output PROsine 1000 and PROsine 1800 inverters are designed with the output neutral connected to ground, as required by Canadian and U.S. electrical codes and standards. Xantrex has discovered a manufacturing error in certain models that resulted in this Neutral-to-Ground (N-G) "bonding wire" being omitted. As a result, the neutral voltage may rise above ground, creating a shock hazard, even though the unit appears to be functioning normally.

Xantrex has corrected the manufacturing error and removed as many of the faulty products as possible from the distribution chain. However, some of the affected products have reached customers and are in service. Xantrex is providing easy-to-install repair kits to customers so they may fix the defect themselves. Alternatively, Xantrex will repair the PROsine inverters for those customers who do not want to install the kit.

In the meantime, this Safety Bulletin explains the problem, outlines the conditions that create a hazard, states what precautions to take, and lists the serial numbers of affected inverters.

Applicability

This bulletin applies only to PROsine 1000 and PROsine 1800 inverters with 120 Vac output, 12 Vdc or 24 Vdc input, and with the "hard-wire" output style option, manufactured between May and September, 2001. The part numbers and serial numbers of the affected units are listed in Appendix A. This bulletin does not apply if your PROsine inverter has the GFCI receptacle output option or the hard-wire with built-in transfer relay output option.

Explanation

The 120 Vac output PROsine 1000 and PROsine 1800 inverters are designed with the output neutral bonded to (connected to) ground, as required by Canadian and U.S. electrical codes and standards. The purpose of this N-G bonding is to ensure there is no voltage on the output neutral with respect to ground. This maintains the expected normal state of a 120 Vac system—the line conductor is at 120 Vac above ground and the neutral conductor is at (or close to) zero volts above ground. As a result of the missing N-G bonding, the neutral voltage may rise above ground, typically by approximately 60 Vac, creating a shock hazard on circuits and loads connected to the inverter. Other than this neutral-to-ground voltage, the inverter operates normally, so this hazard could go unnoticed.

The hazard is reduced, but not eliminated, by the inaccessibility of bare, live parts connected to the neutral (and line) circuits in most typical AC-powered equipment. Two notable exceptions are the outer screw-shell on standard household lamps and old-style "plug" fuses. In both cases the neutral-connected screw-shell is partially accessible with the lamp or fuse in place, and is completely accessible with the lamp or fuse removed.

Since there is a shock hazard involved, the safest course of action is to stop using the faulty unit and disconnect power from it until the problem is fixed. Xantrex has produced a field-installable N-G bonding kit for those customers who wish to fix the unit themselves. We will repair faulty PROsine inverters for those customers who prefer not to install the bonding kit themselves.

What to do if your PROsine inverter is affected

If your PROsine inverter has one of the serial numbers listed in Appendix A, stop using the product. Disable the inverter by turning off the front panel switch and disconnecting the battery from the DC input. Then contact Xantrex Customer Service to determine how to receive the field-installable N-G bonding kit or to have your unit repaired.

Contact Information

If you determine that your PROsine 1000 or PROsine 1800 inverter is one of the affected ones, please contact Customer Service in one of the following ways:

Phone: 1-800-670-0707, press "1"

Fax: 1-800-994-7828

Email: support.prosine@xantrex.com

Web: www.xantrex.com

Appendix A
Part Numbers and Serial Numbers of Affected Units

Unit	Serial Numbers
PROsine 1000/12 hard-wire	21307801 to 21307810
Part number 806-1001	21336673 to 21336699
	21336700 to 21336734
	21336735 to 21336772
	21336887 to 21336899
	21336900 to 21336906
	21352221 to 21352260
	21435575 to 21435576
	21435578
	21435581 to 21435600
	21435601 to 21435614
	21524051 to 21524052
	21524057 to 21524060
	21524063 to 21524066
	21524071 to 21524072
	21524075 to 21524076
	21524081 to 21524084
	21524087 to 21524090
	21524097 to 21524114
	21524217 to 21524218

Unit	Serial Numbers
PROsine 1800/12 hard-wire	21258061 to 21258062
Part number 806-1801	21258068
	21258073 to 21258080
	21258153 to 21258162
	21258172 to 21258175
	21269780 to 21269797
	21269800 to 21269801
	21269805 to 21269809
	21269831 to 21269832
	21269835 to 21269836
	21269841 to 21269842
	21281207 to 21281229
	21281231 to 21281265
	21281267 to 21281280
	21295581 to 21295587
	21336623 to 21336626
	21336649 to 21336652
	21336655 to 21336656
	21485001 to 21485020
	21485039 to 21524540
PROsine 1800/24 hard-wire	21270097 to 21270114
Part number 806-1851	21515061 to 21515110
	21525324 to 21525325
	21525334 to 21525337
	21525340
	21525343
	21525422 to 21525433

Unit	Serial Numbers
PROsine 1800/24 hard-wire Part number 806-1860	21270146 21270148 21435226 21435232 21435236 21435242 21435244 21435723 to 21435724 21435726 21435731 21435733 to 21435734 21535685 to 21535686 21535688
PROsine 1800/24 hard-wire Part number 806-1051	21281297 to 21281302

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Part number: 512-0023-01-01