Technical Service Bulletin 030514
HVPS Resistor Board

This service bulletin concerns all Comark Communications high power UHF television transmitters.

Recently, Comark has identified a failure mechanism in the high voltage power supplies used in its klystron and IOT equipped transmitters. The high voltage power supplies in question were originally manufactured by NWL Incorporated.

This failure manifests itself as a gradual deterioration of a resistor support board located in the high voltage air compartment of the supply. The red fiberglass-like material from which this board is made suffers irreversible damage due to localized voltage breakdowns, which form spider web-like conduction paths to ground. An example of a damaged resistor support board is shown in Figure 1.

Although the total number of reported failures to date has been relatively low, Comark is recommending that all of its high power transmitter customers to inspect their high voltage power supplies for this type of damage, before a catastrophic failure occurs.

WARNING: Before performing any maintenance procedure, ensure that transmitter is OFF and disconnected from the AC mains voltage. The removal of panels identified with warning symbols can expose high voltage. These voltages can cause injury or death. Do not allow personnel to work alone on the transmitter. Always ground all high voltage circuits with transmitter grounding stick before coming in physical contact with them.

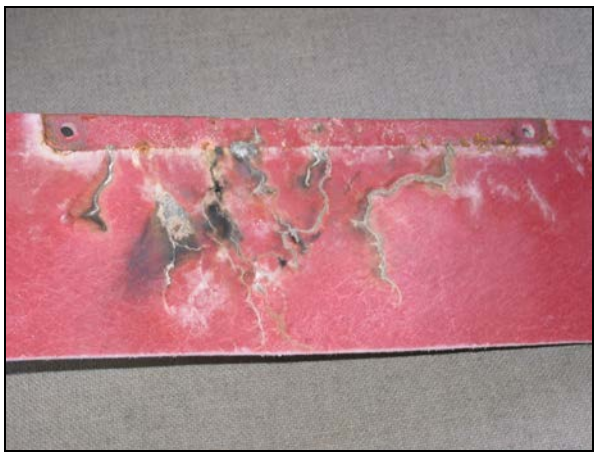

Figure 1. Photograph of HVPS resistor board showing deterioration.

Once a low-resistance conduction path to ground has been established, the high voltage output of the power supply will arc to ground, typically producing an immediate and consistent body current alarm.

NOTE: The transmitter control system will register a body current alarm because it has no means to distinguish beam current that has leaked to ground due to a fault condition from beam current that has struck the grounded body of the tube (i.e. true body current).

Replacement resistor support boards are available from Comark.

Depending on the model number of the high voltage power supply, a resistor support retrofit kit from the power supply manufacturer may also be applicable.

Please do not hesitate to contact Comark Customer Service with any question you may have concerning the information contained in this service bulletin.

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