

## Technical Service Bulletin 020709

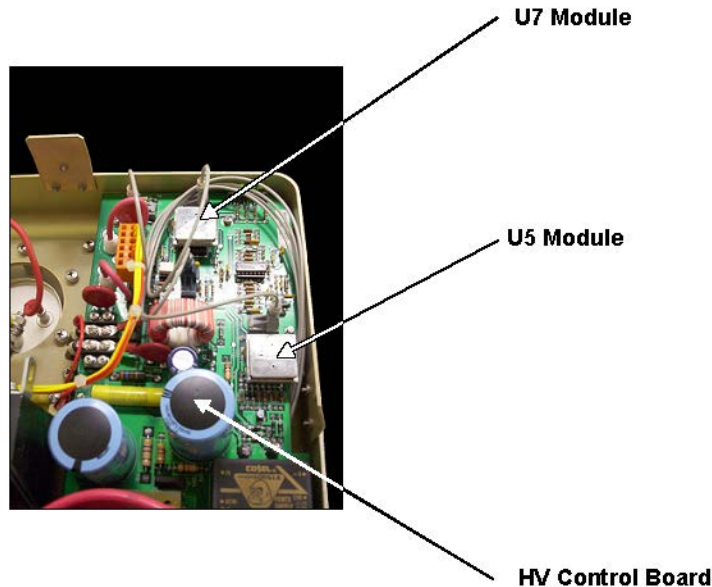
### Crowbar Retrofits and Procedure

This service bulletin concerns all Comark IOX, Advantage, DCX, and DCX Millennium transmitters.

As part of an on-going effort to proactively improve the quality and reliability of our transmitter products, Comark has developed a series of retrofits for the thyatron crowbar assembly installed in all IOX, Advantage, DCX, and DCX Millennium transmitters.

Please find attached the document *46744354-328 Retrofit Procedure, Thyatron Crowbar*, an extensive procedure detailing what steps are required to update older crowbars to current revision levels.

A critical part of the upgrades described in this document are the U5 (P/N 46744258) and U7 (P/N 46744352) retrofit modules installed on the Crowbar HV Control board. These modules specifically address a problem in which the crowbar logic "freezes" after a firing, thereby preventing the crowbar from reporting a "ready" signal to the HPA control system. Upon closer inspection of the crowbar assembly, one or several of green indicator LEDs on the upper (HV) half of the crowbar are extinguished or glowing dimly.



For those customers who wish to obtain the complete retrofit kits described in the attached procedure (especially P/N 900836-01, which contains replacement LV and HV control boards), these kits are available for purchase. Contact Comark for pricing and delivery information.

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