

Technical Service Bulletin 030331

Stack Pole Resistor Maintenance

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

For many years, Comark transmitters have incorporated heavy-duty resistors composed of a series of carbon disks held together by an insulated retaining rod. These resistors are commonly referred to as “stack pole” resistors, although not manufactured by the company with the same name. Two of these resistors in an IOX high voltage compartment are shown in the photo below. After a review of our service call records and discussions with our customers, Comark has identified an increased rate of failure among older stack pole resistors installed in Comark transmitters.

It is believed that a high resistance condition gradually develops over the lifetime of the resistor due to a loosening of the central retaining rod as a result of component aging and thermal cycling. This high resistance condition results in increased heat generation within the resistor and the acceleration of the process. This process continues until the eventual catastrophic failure of the resistor.

As a result, Comark is recommending that all high power UHF transmitter customers include the careful inspection of stack pole resistors in their regular monthly transmitter maintenance routine, especially for those transmitters greater than five years old. This inspection should include the removal of dust from the resistors and the checking of the retaining rod for tightness. Should the retaining rod be found to be loose, tightening the rod may provide some temporary protection. However, it is believed that the increased tension on the rod will only serve to hasten the loosening process. The correct long-term solution to this problem is the complete replacement of the rod. Replacement rods are available from Comark Customer Service. Request part number 607253-01.



WARNING: Before inspecting stack pole resistors, ensure that transmitter is OFF and disconnected from the AC mains voltage. Consult Service Bulletin 940911 for more information on proper HV safety procedures.

WARNING: Stack pole resistors will be HOT after periods of continuous operation. Exercise caution to prevent burns.

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