



## **PRODUCT ADVISORY LETTER NO.: C046-96001**

**DATE:** AUGUST 29, 1996

**AFFECTED PRODUCT(S):** TC-10B/TCF-10B (including product supplied by ABB Power T&D Company, Inc.) NOTE - This product advisory letter was originally issued by ABB as PAL 90-83 on 12/18/90.

**AFFECTED MODULE(S):** RF Interface modules (style # - 1609C32G01 rev./sub 3 or lower) and RF Output Filter / Hybrid modules (style # 1606C36G01) with jumper L8 inserted.

**SYMPTOM(s):** 10 watt Power Amplifier module (style # 1606C33G01) fails during high transient or surge conditions.

**RECOMMENDATION:** Pulsar recommends the corrective action listed below be taken in situations where there have been failures of 10 Watt Power Amplifiers especially during known transient/surge events.

**MODIFICATION KIT NO.:** C056-96001

### **CORRECTIVE ACTION:**

On the RF Interface module (style # 1609C32G01) the problem can be solved by the addition of a Metal Oxide Varistor (MOV) and the relocation of the 350V gas tube protector.

On the RF Output Filter / Hybrid module (style # 1606C36G01) where jumper, L8, is inserted to bypass the series L/C filter, the problem can be solved by the addition of a Metal Oxide Varistor (MOV).

Either of these changes can be accomplished in the field in approximately ten minutes with simple hand tools. It should also be noted that these modifications do not effect the capability of TC/TCF-10B to perform properly during a fault condition. In addition to the modification to the above modules, the spark gaps in the line tuners and coupling capacitors for the particular system should be checked to make sure they are correctly gapped and not corroded per the manufacturer's specifications.

### **TECHNICAL DETAILS:**

In 1990 abnormal failures of the 10 watt Power Amplifier used in the TC-10B and TCF-10B were noted. An investigation revealed that during high transient or surge conditions a large amount of energy can enter the 10 watt power amplifier through the RF Interface or the RF Output Filter / Hybrid module and damage the output stage of the amplifier. Usually the parts that fail on the 10 watt power amplifier are transistors Q6 or Q7 and/or six resistors R33, R35 - R39.

Pulsar Technologies appreciates your past support and we want to continue to provide you the best service possible. Please help us by letting us know if future notices should be sent to another individual.

PAL: C046-96001