Pulsar Technologies, Inc.

PRODUCT ADVISORY LETTER (PAL)

PRODUCT ADVISORY LETTER NO.: CF46-99001

DATE: 4/16/99

AFFECTED PRODUCT(S): TCF-10B (shipped between 9/1/96 and 9/1/99)

AFFECTED MODULE(S): Receiver Logic module (Part/style # - CF20-RXLMN-003, rev./sub 6 or lower)

SYMPTOM(s): The Trip Positive and Trip Negative (Mark/Space) ratio is not equal when driving the logic outputs with station battery voltage. **This situation along with relay setting tolerances and low fault current levels can result in a mis-operation by the relay system.**

RECOMMENDATION: Pulsar recommends the corrective action listed below be taken for all CF20-RXLMN-003 Receiver Logic modules described above.

CORRECTIVE ACTION: Call Pulsar at phone # 800-785-7274 (ext. 211 or customer service) to obtain a RMA number and reference this PAL. Pulsar will provide a modification kit (CF56-99001) that contains a 20 Vdc power supply that operates at 125 Vdc input (if other input voltage is needed, please specify), quantity 2 of 0.01 microfarad capacitors, and instructions on how to modify the outputs to provide the correct ratio. This will not affect any applicable warranty. The modification kit is available at no charge.

TECHNICAL DETAILS: Due to the high input impedance of the ABB microprocessor-based phase comparison relays (REL-350 & REL-352) that the Receiver Logic module has to drive and the Receiver Logic outputs' protective surge capacitors, there is a long RC time constant which distorts the output waveform. C6 and C8 have to be decreased in value by replacing with the new 0.01 microfarad capacitors per the modification kit instructions. Also the receiver outputs have to be powered up with a lower voltage (i.e. the 20 Vdc power supply) to decrease the time for the capacitors to discharge, and the customer's relay inputs strapped accordingly.

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: CF46-99001

Communication Division • 4050 NW 121st Ave. • Coral Springs, FL 33065
(305) 344-9822 • (800) 785-7274 • Fax (305) 340-6676