

3A30K7 TEST PROCEDURE

CB Trip Circuit Monitoring Relay

The relay monitors the integrity of the trip coil circuit. The relay current flows through the trip coil circuit to the battery. If this circuit is broken, the relay drops out and raises an alarm. The current flowing through the monitoring relay and trip coil is less than the trip coil's operating value.

The diode bridge and 10K ohm resistors enable the relay to remain energised when a trip positive voltage is applied to the trip coil. The trip circuit connects battery voltage to the trip coil which increases the voltage at terminal 8 above the voltage at the centre point of the two 10K ohm resistors. The diode bridge steers the polarity of the voltage so that the relay remains operated.

The design parameters are :

1. The relay circuit must pick up at minimum battery volts (approx. 88 volts).
2. Relay drop out voltage must be less than the minimum battery volts with the 1000 ohm trip coil resistor in circuit (26 volts for 110 volt battery) but higher than zero (acceptable range is from 15 - 22 volts).

The relay pickup test is performed with terminal 8 connected to positive voltage and terminals 1 and 7 connected to zero volts. Increase the voltage until the relay picks up (88 volts). Reduce the voltage until the relay drops out (15 - 22 volts).