



AUXILIARY PLUGGING CONTROL (1 REC INHIBIT)

IC4484B700 FOR 36-72-VOLT OPERATION

Before any adjustments, servicing, parts replacement or any other act is performed requiring physical contact with the electrical working components or wiring of this equipment, DISCONNECT THE BATTERY AND DISCHARGE CAPACITOR 1C.

FUNCTION

The Auxiliary Plugging Control (APC) is for use with the Models 110, 210 and 310 controls on motors that require narrow pulses during plug to improve the plugging performance.

The card senses the plug signal at card 1, terminal 9, and if this signal is wide enough, prevents the gating of the main SCR on the next pulse.

During a plug on the second or third and succeeding pulses, the oscillator card will produce a positive pulse wide enough for the auxiliary card to prevent the firing of the main SCR, thus only 5 REC is gated. The charge on 1C capacitor discharges through inductance T3-T4; reverses its charge, and 5 REC turns off. 2 REC is gated by card 1 as normal, and the capacitor, battery and load are connected in series, thus giving a narrow pulse of power to the field.

A second circuit includes an SCR which conducts from T4 to T3 shorting the transformer during the interval that 2 REC conducts, thus preventing excessive voltage transients.

Near the end of a plug the width of the plug signal becomes short enough so that the gate of the main SCR is not clamped, and normal pulses resume.

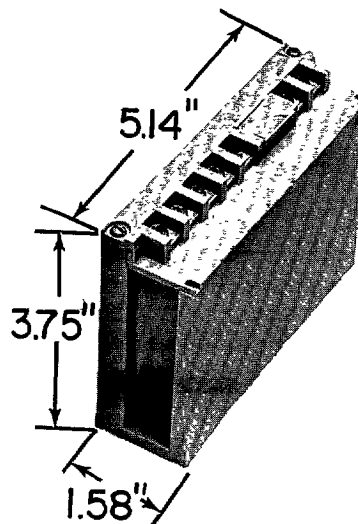


Fig. 1.

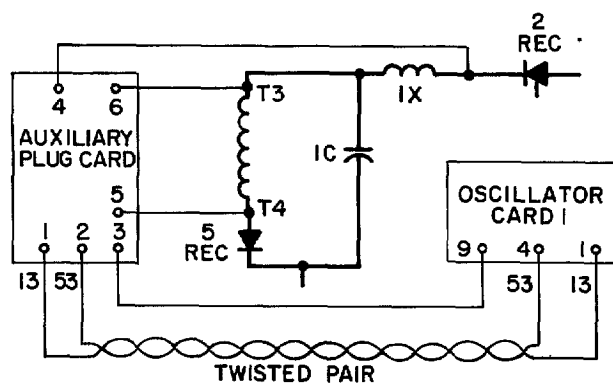


Fig. 2.

The information contained herein is intended to assist truck users and dealers in the servicing of SCR control furnished by the General Electric Company. It does not purport to cover all details or variations in equipment nor to provide for every possible contingency to be met in connection with installation, operation or maintenance.

Should further information be desired or should particular problems arise which are not covered sufficiently for the purchaser's purpose, the matter should be referred to the truck manufacturer through his normal service channels, not directly to General Electric Company.

GEK-28900 , Auxiliary Plugging Control (1 Rec Inhibit)

TUNE-UP PROCEDURE

Connect a direct current voltmeter across the motor to read motor volts and proceed as follows:

- (1) Following standard procedures, set up the oscillating card in the SCR control panel with the exception of plugging.
- (2) Make an eight-volt power supply as shown in Fig. 3.
- (3) Connect an additional separate wire from terminal 3 of the auxiliary plugging control card to the eight-volt supply.
- (4) Stall the truck, and by varying the truck accelerator, set the motor volts at battery volts divided by 10. Hold the accelerator at this position.

Example: $48V/10 = 4.8$ volts
 $36V/10 = 3.6$ volts

- (5) Turn the APC trimpot counterclockwise until the motor volts will reduce no further (1 REC not firing), then clockwise until the motor volts increase somewhat. (1 REC firing intermittently.)
- (6) Remove the eight-volt supply.

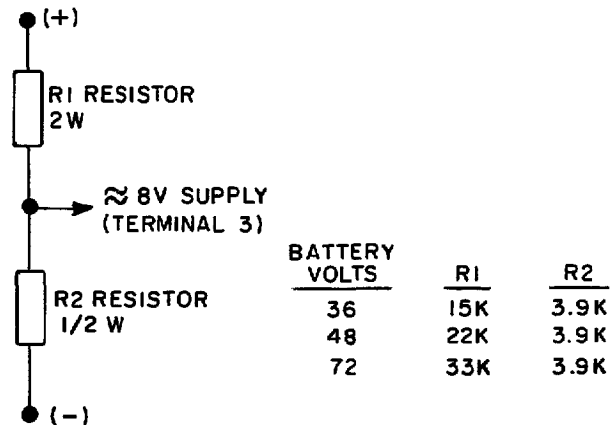


Fig. 3.

- (7) Set the oscillator card plug in the normal manner.

NOTE: If the APC trimpot has been set in 5 (above) for too long a time, the start and/or the end of the plug may be too stiff. Turn the trimpot counterclockwise. If the APC trimpot has been set as in step 5 (above) for too short a time, some pulses may be inhibited at creep. Turn the trimpot clockwise.

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