



INSTRUCTIONS – SCR ELECTRIC VEHICLE CONTROL

IC4484 AUXILIARY PLUGGING CONTROL

**E-701 (36-84 VOLTS) E-702 (84-144 VOLTS)
RESISTOR AND NORMALLY OPEN CONTACTORS**

WARNING

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 IC.

FUNCTION

The function of the auxiliary plugging control, Fig. 1, or "B" kit is to insert a resistor in series with the motor armature during a "plugging" operation. This resistor dissipates most of the energy used in stopping the vehicle and forces the field current to approach the armature current thus reducing armature current and improving commutation.

OPERATION

The auxiliary plug card is connected in the EV-1 SCR circuit as shown in Fig. 2. The logic in the "B" card energizes the "B" coil when positive voltage is applied to the "B" coil, pin 6 of the "B" card and no "plug" signal occurs at R10. During normal running, the "B" contactor is closed and the "B" resistor is by-passed.

When the truck is plugged, a "plug" signal occurs at R10 which de-energizes the "B" coil and a negative signal is produced at A1 by the motor armature. The logic in the "B" card clamps R7 to zero. Near the end of the plug, the negative signal at A1 becomes zero and the logic in the "B" card puts a positive voltage into R7 (as adjusted by the trimpot on the "B" card). CW reduces the speed in the new direction needed to cancel the plug signal which re-energizes the "B" coil.

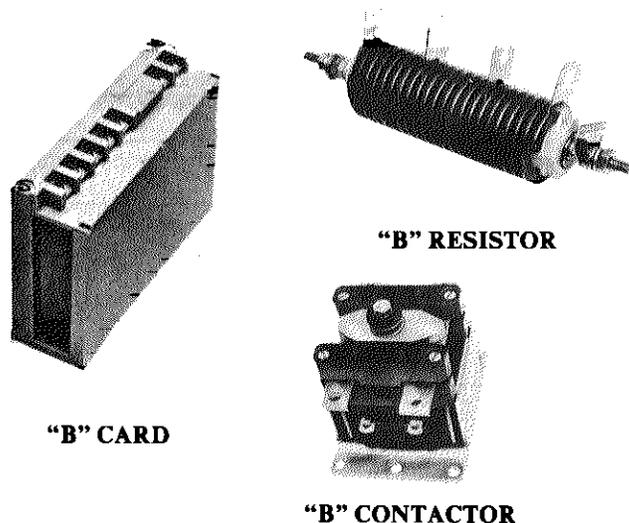


Fig. 1. IC4484 Auxiliary plugging control

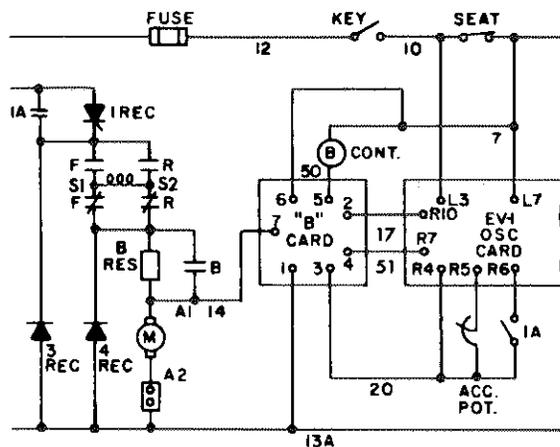


Fig. 2. EV-1 SCR circuit showing connection of auxiliary plug card

**FUNCTION OF B CARD TERMINALS
FOR E-701 (36-84 VOLT)**

TERMINAL	DESCRIPTION	CONDITION	VOLTS
1	Common input to card.	Key off, use VOM and read from card terminal 1 to "NEG".	Less than 1 OHM
2	Plugging input logic.	Not plugging mode Plugging mode	0 volts 8 volts
3	Common return to card through Oscillator card.	Key off, use VOM and read from terminal 3 to "NEG".	Less than 1 OHM
4	% on time input running.	Not plugging Plugging	2.2 to 6.2 volts 1.5 volts
5	"B" contactor common input.	Key or seat switch open Key & seat switch closed Plugging	0 volts 0 volts Battery volts
6	Card power supply input.	Key open Key closed	0 volts Battery volts
7	"B" contactor hold off input.	Running not plugging mode Plugging mode	POS volts NEG volts (POS volts will vary depending on speed 0-BV volts.)
			(NEG volts will vary -1 to -15 depending on plugging current.)

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.