

**Government of India Ministry of Railways
Research Designs & standards Organisation**

Manak Nagar, Lucknow 226011.


No.EL/3.2.12/1-THY

Dated 17th Nov, 1983.

SPECIAL MAINTENANCE INSTRUCTION NO.RDSO/EL.RS/SMI/109

1. **TITLE**
Setting of battery charger type BCF3, BCF6 and BCF7 of M/s Control and Drive make and provided on ac locomotives for 110V battery (50 cells).
2. **OBJECT:**
To prevent over charging/under charging of 110V lead acid battery provided on ac locomotives.
3. **WORK TO BE DONE**
These battery chargers are provided with current and voltage feed back arrangement and maintain flat VI characteristic with an input voltage between 360V to 400V set the output dc voltage for 109 ± 1 V at light load say 1 A.
Increase the current upto 15 A and see that flat VI characteristic is obtained. Set the potentiometer P1 and P2 such that with increase of load current beyond 15 A the output dc voltage falls rapidly.
The battery chargers provided with external current limit resistor of .6 to .7 ohm should be set for 110 ± 1 V dc instead of 109 ± 1 V.
4. **REFERENCE DRAWING:** Nil.
5. **AGENCY FOR IMPLEMENTATION:**
Electric Loco Sheds and POH shops.
6. **MATERIALS EQUIPMENT REQUIRED:**
Material Required Nil.
Equipment Required :-
 - i) A dc precision grade voltmeter having sensitivity of not less than 24 K Ohm per volt for measuring output Voltage.
 - ii) DC ammeter range 0 to 50 A to measure the output current (already available in Sheds),
 - iii) Loading facilities already available in the Sheds.
7. **DISTRIBUTION**
As per enclosed list.

Encl: Distribution list.


(S. Kumar)
for Director General(Elec.)