

# Eastern Railway

No. ELS/6/5

Sealdah, dt – 17.12.2020

CCC/R/SDAH, CCC/R/DDJ  
CCR/North, KOAA, DDJ & NH  
All CLIs

Eastern Railway

## Sub: Counseling on working status of MCPs in HMI/MMI in three phase AC EMU.

In connection with the detention of the train no. 31515UP due to BP & MR pressure was not build up, the conclusion of the incident is as under:

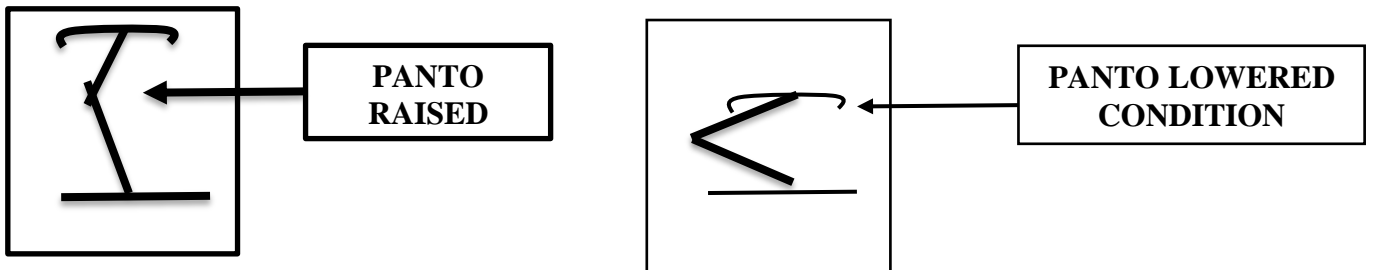
- i) All MCPs were OFF.
- ii) LPP failed to notice in HMI/MMI that all MCPs were OFF.

In order to prevent re occurrence of the same incident, a counseling is to be launched on build up MR & BP pressure in three phase AC EMU with the following points:-

**MR Pressure does not build up (Less than 6.0 kg/cm<sup>2</sup>), check the following-**

### **A. ALL PANTOGRAPHS ARE NOT RAISED-**

1. NOT ALL PANTO UP indication will glow in FAULT INDICATION PANEL.
2. Check Pantograph symbol in DDU and ensure Pantograph pictogram is black on white background.
3. Ensure DCS key is ON and give Pantograph raise command.
4. When Pantograph fully raised then Pantograph pictogram turned white to blue color.
5. Close VCB through MC ON/OFF switch.

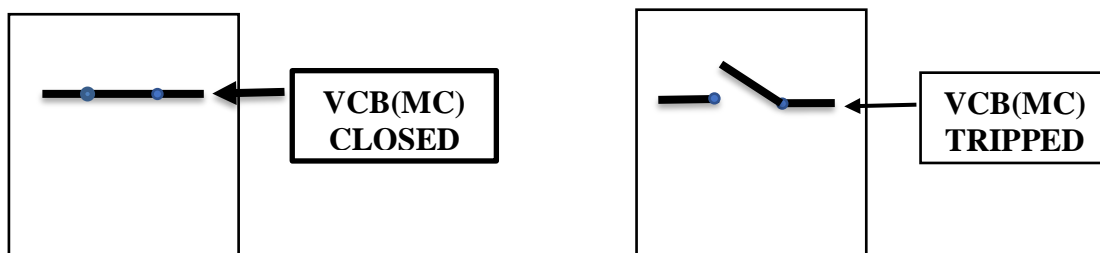


### **B. ALL VCB TRIPPED ONLINE-**

1. NOT ALL MC ON indication lamp will glow in FAULT INDICATION PANEL.
2. Check the VCB(MC) symbol in DDU & ensure that all VCBs are tripped.
3. Ensure all Pantographs are raised and PANTO icon showing in blue background & all VCB(MC) icon showing white background. Close VCB through MC ON/OFF switch.

### **C. NO TENSION ONLINE-**

1. If all Pantographs are raised & PANTO icon showing in white background & all VCB(MC) pictogram shows **GRAY background, OHE voltage showing '0.0KV' in DDU/HMI that means OHE supply is not available. Wait for OHE supply. When OHE supply restored then all PANTO pictogram turned white to blue background & all VCB(MC) pictogram turned GRAY to WHITE background & OHE voltage showing in DDU/HMI. Close VCB through MC ON/OFF switch.**
2. If all VCB are not closing switch OFF/ON battery asper procedure & energize the train.



**D. MAC (MAIN AIR COMPRESSOR) NOT WORKING.**

Sometimes all MAC not working due to all ‘MAC isolation’ or ‘MAC management failure’ resulting drop MR and BP pressure. This failure may be due to failure of Air Dryers resulting in isolation MAC.

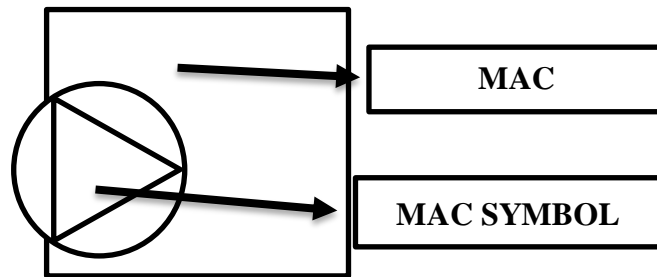
Therefore, whenever, low MR and BP pressure is observed during train working, following action to be taken to restore MR and BP pressure, in addition no air leakage occurred.

**1. MAC MANAGEMENT FAILURE-**

- i. **OBSERVE THE OVERVIEW OF DDU/HMI & CHECK THE ALL MAC ICON.**
- ii. If pictogram of all MAC symbol & MAC background is **WHITE** and MAC not starting at low MR pressure (below 6.0kg/cm<sup>2</sup>).
- iii. Turn the **“Start All Main Compressor”** switch (spring loaded) clockwise provided on Cab rear Wall (CRW) panel. Observed pictogram of all MAC symbol turned WHITE to BLUE & MAC background turned WHITE to BLACK. Observe that sufficient MR pressure is buildup.

**2. FAULTY MAC-**

- i) **OBSERVE THE OVERVIEW OF DDU/HMI & CHECK THE ALL MAC ICON.**
- iv. If pictogram of all MAC symbol & MAC background is **RED** color on DDU/HMI & a Fault message “Air dryer faulty, MAC isolated” appears on DDU/HMI then Press **‘FAULT RESET’ Push Button (Blue Color) for 1/2 second, provided on Driver’s front desk.** All compressor will start, and MAC pictogram will be turned into BLUE color. Observe that sufficient MR pressure is buildup.



MAC SYMBOL	MAC BACKGROUND	MEANING
BLUE	WHITE	MACK RUNNING, MR PRESSURE LESS
BLUE	BLUE	MACK RUNNING & WILL BE STOPED SHORTLY, MR PRESSURE OK.
WHITE	BLUE	MAC IS STOPED, MR PRESSURE OK
WHITE	WHITE	MAC MANAGEMENT FAILURE, MAC NOT STARTING, BUT MR PRESSURE LESS THAN 6.0KG/CM <sup>2</sup>
RED	RED	FAULTY MAC, MAC ISOLATED
BLUE	BLACK	MAC MANUALLY STARTED
GRAY	WHITE/BLUE	MAC IN STAND BY MODE

You are hereby advised to counsel all the running staff working under your control..

(S.C Ghosh)  
AEE/OP/SDAH