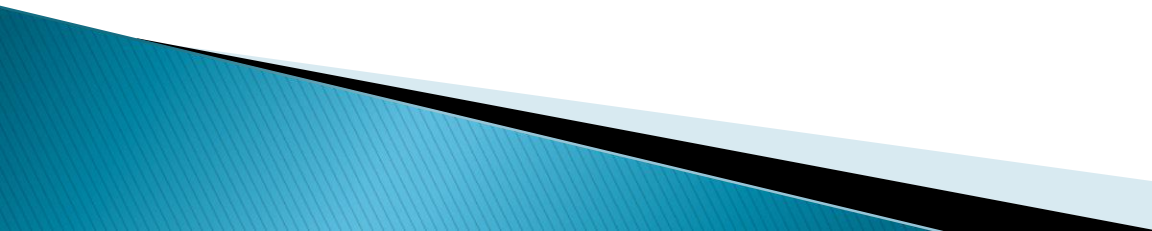


AUTO FLASHER LIGHT SYSTEM



**PRESENTING
BY**

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L/MLY**

- **IMPORTANCE OF FLASHER LIGHT**
 - **PURPOSE OF AUTO FLASHER**
 - **COMPONENTS IN AUTO FLASHER SYSTEM**
 - **Conditions of normal working of train**
 - **Working of Auto flasher light while train parting**
 - **Working of Auto flasher light while A9 application**
 - **Working of Auto flasher light while A9 emergency application**
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IMPORTANCE OF FLASHER LIGHT

- ▶ **The main use of flasher light in a emergency condition.** it is yellowish light glow with flickering. when a Loco Pilot switch on his Locomotive flasher light, it is assumed that there must be something sluggish happen with that train.
- ▶ **It is strictly instructed to all Loco Pilot that if you see flasher glowing on opposite coming loco, must try to stop your train before that train. if need apply emergency brake.** It is seems that when flasher light glow it may be that adjacent line is obstructed and your train could be in an **other accident**. so flasher light glowing is very very important .

PURPOSE OF AUTO FLASHER

- To indicate opposite coming train driver by flashing the light in case of any unusual such as train parting or derailment occurs when he is incapacitated to switch on FL.

COMPONENTS

- 1. P1 PRESSURE SWITCH**
closes below 4.5 kg/cm² BP
opens above 4.8 kg/cm² BP
- 2. P2 PRESSURE SWITCH**
closes below 4.4 kg/cm² BP
opens above 4.7 kg/cm² BP
- 3. PCS2 PRESSURE SWITCH**
closes above 4.0 kg/cm² BP
opens below 2.8 kg/cm² BP


COMPONENTS

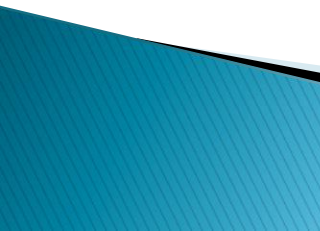
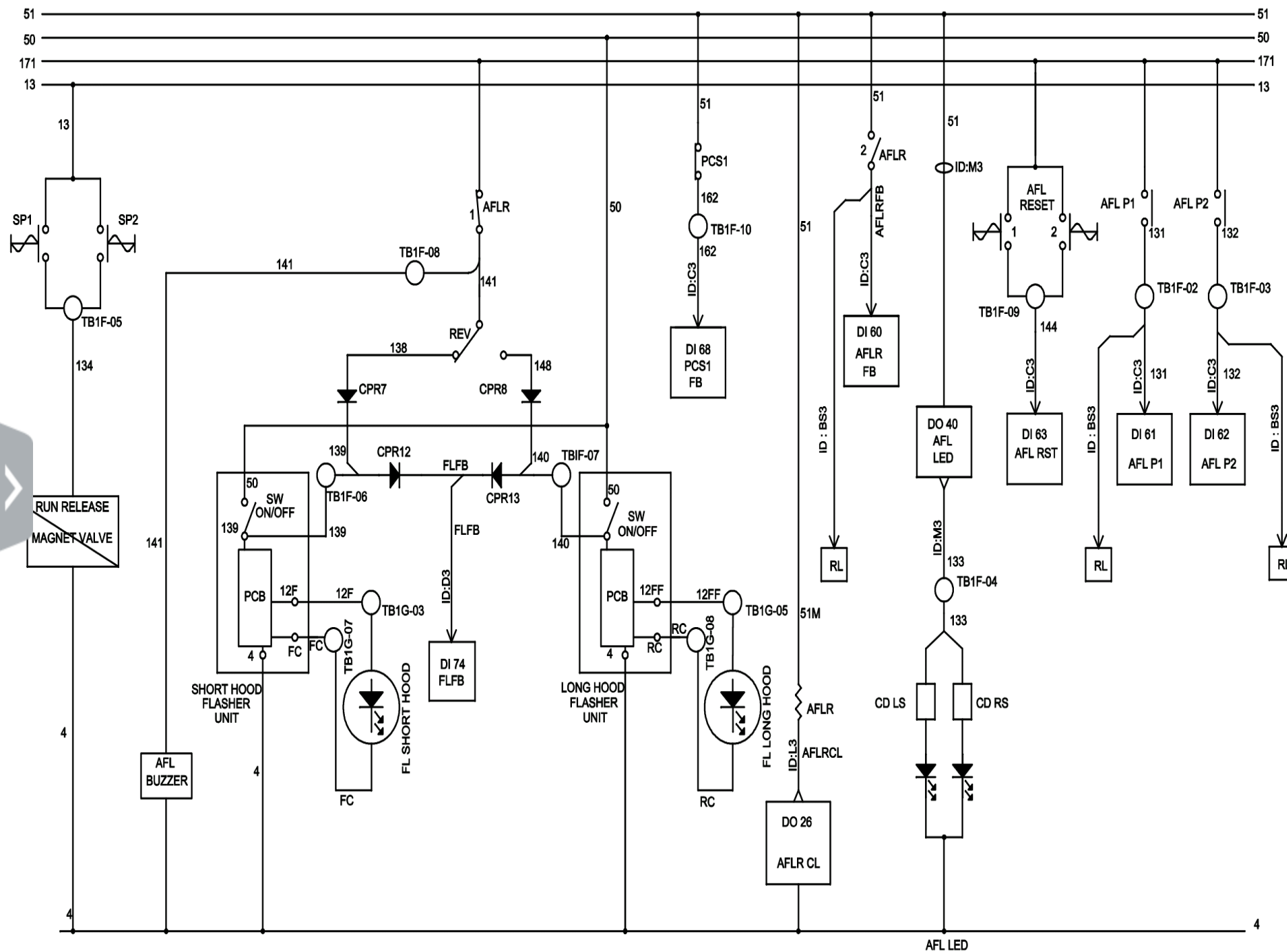
- ▶ PUSH BUTTONS
 - ▶ Location:- Control stands
 - a) SW1 & SW2 (resetting)
 - b) SP1 & SP2 (quick release)

- ▶ FLASHER CONTROL UNIT
 - ▶ Location: SH/LH Control Stands.
- ▶ LED LIGHT UNITS - 2Nos
 - ▶ Location :- front hood and rear hood.
- ▶ AFL RELAY
- ▶ DMR Relay



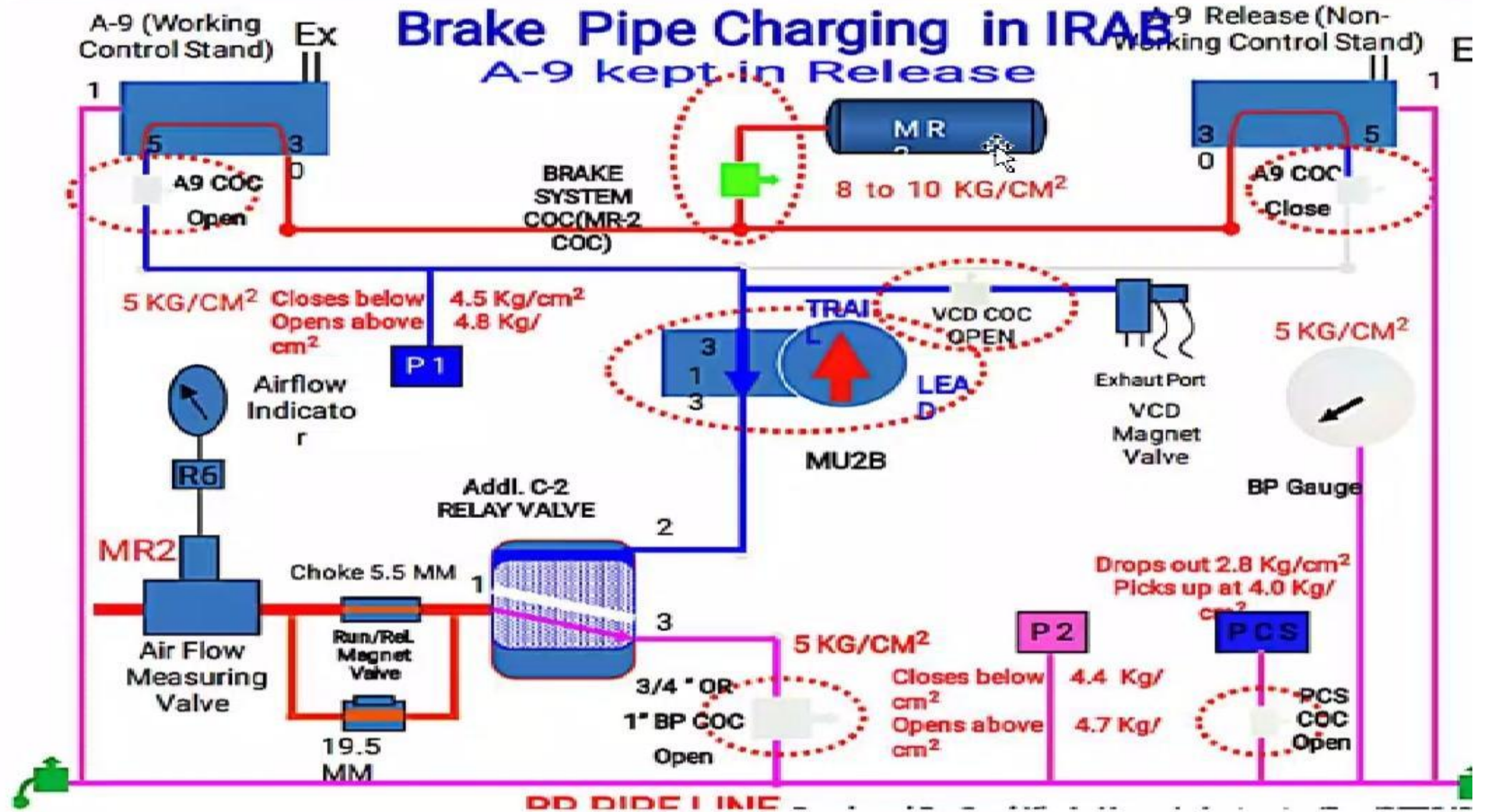
Conditions of normal working of train

- Pressure switch P1- open condition.
 - Pressure switch P2- open condition.
 - AFL relay – energized condition.
 - AFLR feed –high
 - DMR – energized condition.
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Brake Pipe Charging in IRAB

A-9 kept in Release



WORKING OF AUTO FASHER

- **In Pure Air Brake Formation, if BP dropping other than A9 operation like Accident, Derailment, Parting, BP pipe cut, brake van (guard) emergency brake application, chain pulling and fireman emergency application, Auto Flasher System Starts Working.**
- **Auto flasher system starts working When reverser is thrown in working direction by energizes 171 wire through the I/L from 50 wire. This 171 wire supply is used in total auto flasher circuit.**
- **Whenever BP pipe pressure drops below 4.4 kg/cm², P2 switch will close (171-132) and gives input to the microprocessor system.**
- **Whenever system receives the P2 switch signal before P1 switch signal. (input of P2 first then input of P1) microprocessor de-energizes the AFL relay and gives output to the indications which are provided on both control stands.**

- **Auto flasher light glowing through**

- N/C interlock of AFLR relay gives supply to the 141 with 171 wire
 - buzzer starts working
 - Further 141 supply goes to 139 or 142 through the I/L of reverser according to the direction FL light glows SH/LH control stand.
- AFLRFB feed back will be low through N/O interlock of AFLR relay.
 - DMR relay drops and engine comes idle.
 - Indication on control stands will glow.

Whenever A9 is operated action taking place in Auto flasher light system

- With A9 operation whenever BP drops below 4.5 kg/cm², first P1 switch will close (171-131) then P2 switch will close (171-132).
- MEP will sense feedback sequence of DI 131, DI 132 and it will not drop the AFLR.

NOW, BRAKES WILL APPLY, AUTO FLASHER LIGHT, INDICATION, BUZZER WILL NOT WORK AND ALSO ENGINE WILL NOT COME TO IDLE.

Whenever A9 is operated to Emergency position action taking place in Auto flasher light system

- With A9 Emergency application BP pressure drops below 2.8 kg/cm² PCS2 switch will open (16PD-30K).
- Only DMR will de energize and engine comes to idle. Emergency brakes will apply. Auto flasher light, indication and buzzer will not operate.

Whenever required fast charging of BP.

- Either SP1 or SP2 button to be pressed (13-134) from any control stand.
- Magnet valve will energize (134,4) and makes BP charging with ¾" (19mm) pipe including 5.5mm choke.

RESETTING PROCEDURE OF AUTO FLASHER LIGHT


- When pressing SW1 and SW2 switches 144 becomes high to the microprocessor system from 171.
- Whenever system receives the 144 high, a DI gives to the AFLR coil to pickup AFL relay
- By opening NC interlock of AFLR (171-141) supply will cutoff to 141 wire, so the buzzer will not operate, auto flasher stops functioning and also AFL indication offs in indication panels.



Reasons for auto flasher light malfunctioning

- P1,P2 pressure switches foundation slack leads to chattering of switches
- Wrong fitting of pressure switches when ever changes.
- Moisture entering in diaphragms pressure switches.
- In auto flasher light system P1 and P2 switches are going to operate number of times during train working
- Because of above reason at any time either P1 or P2 may go for mal-functioning.

TROUBLE SHOOTING IN AUTO FLASHER LIGHT SYSTEM:

- **To avoid failure isolate AFL through isolation switch (if available) or disconnect 171(which is available in P2 pressure switch).**
 - **Work with normal flasher light to reach destination.**
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Thank you!

