



क्षेत्रीय रेल प्रशिक्षण संस्थान, भूली
ZONAL RAILWAY TRAINING INSTITUTE, BHULI



IMPORTANT

DEFINITION

AUTHORISED OFFICER

Authorised officer means the person who is duly empowered by general or special order of the Railway Administration, either by name or by virtue of his office, to issue instructions or to do any other thing.

AUTHORISED OFFICER

- ❖ **The Principal Chief Operations Manager is the authorized officer and is empowered to issue, amend or alter subsidiary rules.**
- 1) Authorised Officer is a person empowered by Railway Administration by General or Special order.**
- 2) Railway administration has given power either to a particular person or particular Post.**
- 3) At present PCOM (Principal chief operations manager) is the authorised officer of Eastern and East Central Railway.**
- 4) He is authorised to issue subsidiary rules and special instructions depending on the situation and necessity**

ADEQUATE DISTANCE

Adequate distance means the distance sufficient to ensure safety.

It is of two types:

1. *Block over lap*
2. *Signal over lap*

ADEQUATE DISTANCE

1. Block over lap:

It is an adequate distance that has to be kept clear beyond FSS before granting line clear.

(TAS - NLT 400 Mtrs and MAS: NLT 180 mtrs).

- In MAS Double line Block over lap is from Home signal to BSLB/Outer most facing point**
- In MAS on single line block over lap is between Home signal and Opposite Advanced starter/SLB or outer most facing points**

ADEQUATE DISTANCE

2. Signal over lap:

It is an adequate distance that has to be kept clear before taking off Home signal.

- **It is reckoned from trailing points on S/L and from Starter on D/L**
(TAS- NLT180 Mts. MAS- NLT120 Mts.)
- **In MAS double line between Starter and Advanced starter**
- **On single line MAS between trailing point and Advanced starter or SLB Sand hump, dead end/buffer stop are used as a substitute for signal over lap.**
- **Adequate distance to take off Automatic signal beyond next stop signal is 120 meters on double line.**

FOULING MARK

Fouling Mark means the mark at which the infringement of fixed standard dimensions occurs, where two lines cross or join one another.

FOULING MARK

- 1. Fouling mark is distinctly visible and difficult to remove.**
- 2. This is fixed at the point at which the spacing between the tracks, begin to reduce to less than the minimum standard dimensions.**
- 3. It is a white painted concrete/stone with flat top placed at ballast level. Starter signals also may be used as fouling mark.**
- 4. Number of vehicles that can be accommodated on the line will be painted on this board.**
- 5. Whenever train stops on a line guard and loco pilot shall ensure that train stands within this mark**

FOULING MARK



BLOCK SECTION

Block section means that portion of the running line between two block stations on to which no running train may enter until Line Clear has been received from the block station at the other end of the block section.

BLOCK SECTION

- 1. Block section is a portion of the running line between two block stations.**
- 2. No running train may be permitted until line clear is obtained.**
- 3. Block section lies between two block stations.**
- 4. Block section commences where station section ends.**
- 5. Normally only one train is permitted in block section.**
- 6. Block section shall not be obstructed for shunting or any other purpose without consent of other end station master.**
- 7. Limits of block section between every two stations shall be marked separately in SWR.**

LINE CLEAR

Line clear means the permission given from a block station to a block station in rear for a train to leave the latter and approach the former; or the permission obtained by a block station from a block station in advance for a train to leave the former and proceed towards the latter.

LINE CLEAR

- 1) It is the permission given by the SM for a train to leave a station.
- 2) It is the permission given to the rear SM for train to leave that station and come to his station. Or
- 3) It is the permission taken from the station in advance for train to leave his station and go to advance station

STATION

Station means any place on a line of railway at which traffic is dealt with, or at which an authority to proceed is given under the system of working.

OBSTRUCTION

Obstruction and its cognate expressions include a train, vehicle or obstacle on or fouling a line, or any condition which is dangerous to trains.

OBSTRUCTION

- 1) While dispatching/receiving a train into/from block section, it is must to ensure that line is free from any condition that is unsafe to train.**
- 2) A section of track already occupied with a train, big stones on track, rail breakage, floods, trees fallen on track, level crossing gates in open condition etc., are some of the examples of obstructions**
- 3) In such occasions, generally trains shall not be dispatched without extra precautions**

AUTHORITY TO PROCEED

Authority to proceed means the authority given to the Loco Pilot of a train, under the system of working, to enter the block section with his train.

AUTHORITY TO PROCEED

- 1) It is the authority given to the Loco Pilot of a train, under the system of working, to enter the block section with his train.**
- 2) It is an important document for loco pilot. He should not start his train without possessing ATP.**
- 3) It may be taking off last stop signal (single line token less and double line sections) or token (single line token sections) or a line clear ticket or a written document under special instructions.**
- 4) Loco pilot must ensure that correct authority to proceed is issued to him.**

TRAIN

Train means an engine with or without vehicles attached, or any self-propelled vehicle with or without a trailer which cannot be readily lifted off the track.

BLOCK BACK

Means to dispatch a message from a block station intimating to the Block Station immediately in rear on the double line, or to the next block station on either side on a single line, that the block section is obstructed or is to be obstructed.

BLOCK FORWARD

Block forward means to dispatch a message from a block station on double line intimating to the block station immediately in advance the fact that the block section in advance is obstructed or is to be obstructed.

BLOCK FORWARD

- 1) It is a message given, obtaining permission for shunting in block section.
- 2) It is given only on double line.
- 3) Message given for performing shunting beyond advance starter in right direction when there is no train in the section up to advance station.
- 4) Message given for performing shunting beyond LSS after clearance of the train in the next station

FIXED SIGNAL

Fixed Signal means a signal of fixed location indicating a condition affecting the movement of a train and includes a semaphore arm or disc or fixed light for use by day and fixed light for use by night.

FIXED SIGNAL

- 1) It indicates the condition in different positions for controlling the movement of trains.
- 2) There are many types of fixed signals like Permissive signals, stop signals, subsidiary signals and duplicate signals. Their place is fixed.
- 3) They are designed to use during both day and night.
- 4) Fixed signals when fixed must be visible to loco pilots.
- 5) They are fixed on left side of track generally.

STATION MASTER

Station Master means the person on duty who is for the time being responsible for the working of the traffic within station limits and includes any person who is for the time being in independent charge of the working of any signals and responsible for the working of trains under the system of working in force.

INTERLOCKING

Interlocking means an arrangement of signals, points and other appliances, operated from a panel or lever frame, so interconnected by mechanical locking or electrical locking or both that their operation must take place in proper sequence to ensure safety.

INTERLOCKING

- 1) It is an arrangement of signals, points and other appliances.**
- 2) These may be operated by panel or lever frame.**
- 3) They are interlocked with each other by mechanical locking or electrical locking or both.**
- 4) Their operation takes place in a sequence such that safety is completely ensured for trains**

SHUNTING

Shunting means the movement of a vehicle or vehicles with or without an engine or of any engine or any other self-propelled vehicle, for the purpose of attaching, detaching or transfer or for any other purpose.

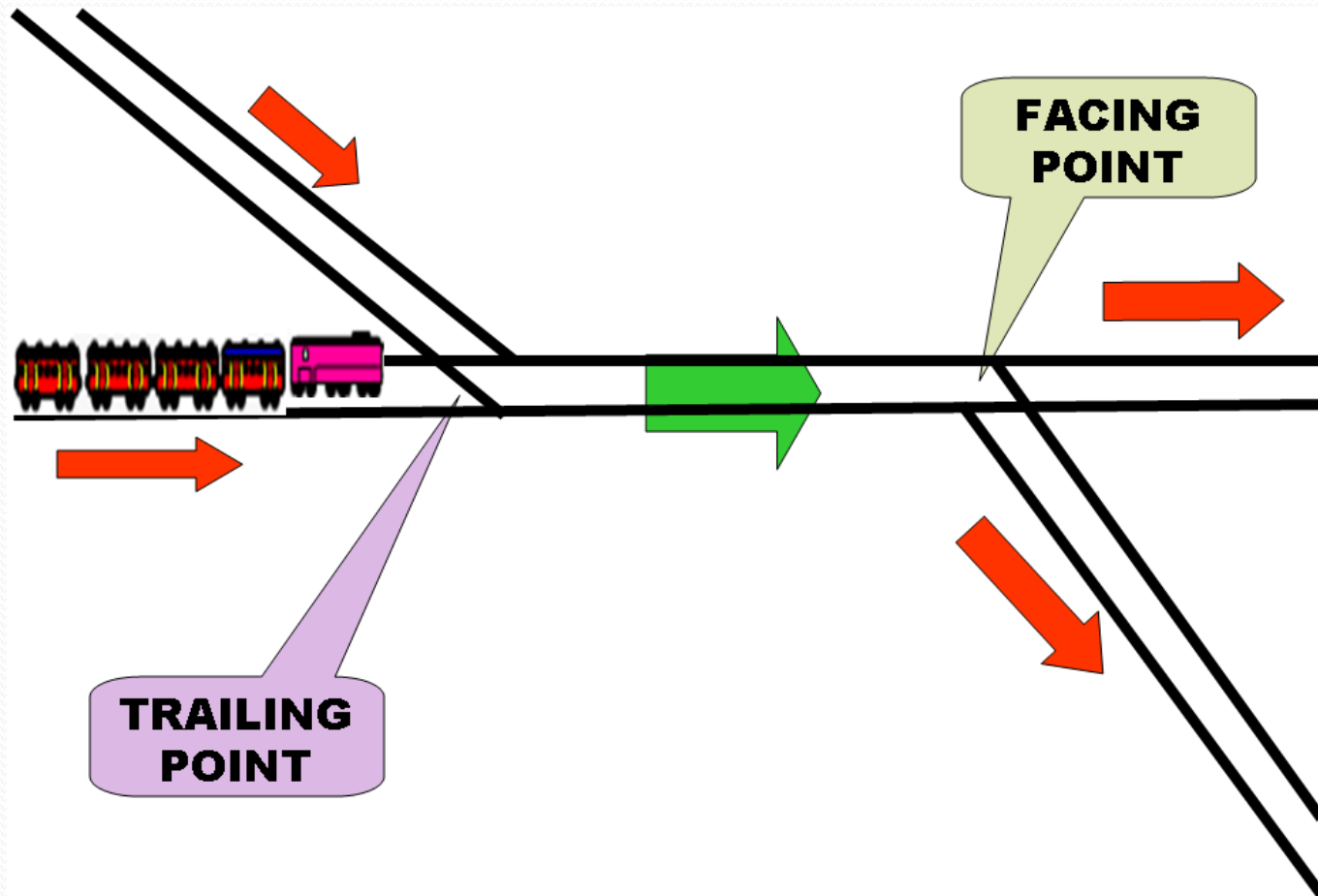
SYSTEM OF WORKING

System of Working means the system adopted for the time being for the working of trains on any portion of a railway.

FACING AND TRAILING POINTS

Points are facing or trailing in accordance with the direction a train or vehicle moves over them. Points are said to be facing points when by their operation a train approaching them can be directly diverted from the line upon which it is running.

FACING AND TRAILING POINTS



FACING AND TRAILING POINTS

- 1) Points are connections between lines.**
- 2) They are used to divert the train from one line to other with either mechanical or electrical operation.**
- 3) Generally points have two ends.**
- 4) Points are said to be facing which when operated, can divert the movement of train from one line to other.**
- 5) Points are said to be trailing which when operated do guide the movement of train that were diverted by facing points.**
- 6) So points become facing or trailing depending on the direction of train over which they pass.**

RUNNING TRAIN

Running Train means a train which has started under an authority to proceed and has not completed its journey

ISOLATION

Isolation Means an arrangement, secured by the setting of points or other approved means, to protect the line so isolated from the danger of obstruction from other connected line or lines.

ISOLATION

By providing isolation chances of side collision can be averted. Isolation is not required when the speed of run through trains doesn't exceed 50 kmph.

The following are the effective means of Isolation.

- Derailing switch: When it is open any vehicle passing over it derails without fouling the other lines.
- Scotch block: It is metal or wooden piece placed on a rail ahead of points and locked to prevent movement of any vehicle.

ISOLATION

- Haye's Derail: When it is on a rail any vehicle passing over it derails.
- Dead end/Buffer stop: It is an extended siding into a dead end/buffer stop .It traps escaped vehicles.
- Sand hump: It is a short siding of an approved design ending in a sanded hump and a sharp rising gradient. It traps the escaped vehicles.

RUNNING LINE

Running Line means the line governed by one or more signals and includes connections, if any, used by a train when entering or leaving a station or when passing through a station or between stations

Thank you!