Duplication of Passenger carrying Trains

A passenger carrying train may be duplicated, if the original train is either stranded due to accidents or floods or breaches or running so late as would cause serious inconvenience to passengers. The duplicate train starts at an intermediate station and follows the path of the original train so that passengers in those stations can board the duplicate train.

In order to take care of very high demands for a train reflected by long waitlists, clone trains having similar origin and destination and stoppages are also run during peak seasons.

Punctuality

Punctuality in running of the passenger carrying trains is one of the significant indices of the Railway efficiency. It is monitored at various levels of Railway operations and management. Any serious dislocation of passenger trains also affects goods train running and corridor blocks. Thus punctuality is not only important for passenger satisfaction, but also have significant bearing on the freight operations maintenance & safety.

Punctuality statistics on Division / Railway is monitored on daily basis for improvement through Punctuality Analysis Module (PAM) of Integrated Coaching Management System (ICMS). Based on ICMS data, inputs of which are made at different levels detailed analysis of bad runners, bad sections are done and action plan are drawn in order to improve punctuality. Integration of ICMS to COA ensures real time status of the train services.

To monitor the Passenger carrying trains effectively according to their importance, relevance and stock they are grouped into following categories.

i. *M/Express trains:* Vandebharat, Rajdhani, Duronto, Shatabdi, Garib Rath, Jan-Shatabdi, Superfast, Mail/Express & Suvidha trains
ii. *Passenger trains:* DEMU, MEMU, Holiday Specials, Conventional rakes
iii. *Sub-urban trains*

Norms for Punctuality

Train arriving late is considered to be 'Lost Train' based on the following norms.

- Intra zonal & Terminating trains: arriving more than 15 minutes late at destination.
- Originating & Passing through trains: handing over by more than 3 minutes at interchange point.
- In case of Sub-urban trains, punctuality of the train is lost when it arrives more than 5 minutes late at destination.

$$\textbf{\% Punctuality} = \frac{\text{(Total No. of trains - No. of trains lost Punctuality)}}{\text{(Total No. of trains)}} \times 100$$

Real Time reporting

To improve factual reporting of punctuality and asset failures in ICMS by the divisions, Railway Board declared 2018-19 as 'Zero base year'. Further to improve factual reporting, Control Office Application (COA) has been integrated with RTIS/REMMLOT devices provided in locos; Data loggers; E-TSR & C-TSR at stations. Through these, timings of trains are automatically captured in the Control Office Application and further transmitted in NTES, thereby ensuring that, real time information is available to the public and division office.

REMMLOT / RTIS: (Remote Monitoring and management of Locomotives and Trains) / (Real time train information system). These devices are based on GPS system provided in Diesel / Electric locos which automatically update location of trains in COA.

Data logger: At originating/terminating/interchange stations, data loggers have been integrated with COA. The SM has to input the train number against the occupation of berthing track circuits by the train at the station.

E-TSR & C-TSR are provided at stations where SM makes entries of train arrival/departure in a computerized system which is connected online to COA.

Sequence of picking up timings in COA is

i. REMMLOT/RTIS
ii. Data Logger
iii. E-TSR & C-TSR
iv. Manually by the SCOR.

Lost Train Analysis

1. Trains that lost punctuality for the day are analyzed to identify the reasons in order to initiate measures for correcting them. Information is obtained through LTM of Guard & entries by SCOR in COA. Every coaching train Guard after completion of his journey is required to submit a report called LTM report (Late Train Movement report). It is a summary of the timing lost and gained on account of various departments and causes. The Guard at the end of the trip has to total up all the losses occurred under various department heads and summarize for each of the department separately.

2. Trains lost punctuality are categorized into different causes based on the maximum time of loss on the concerned department in PAM module of ICMS viz. Engineering, Planned Blocks, Traffic, Signal & Telecommunications, Carriage & Wagons, Diesel Loco, Electric Loco, ACP, Accidents, Incident, LC

gate, On other railways, Out of path, Construction works, NI working, miscreant act, commercial, weather, etc.

3. The trains which lost punctuality are analysed by the concerned departments in detail daily and necessary action is taken.

4. Daily, weekly and monthly Punctuality meetings are held at HQ of Divisional, Zonal & Railway Board to analyse the reasons and improve punctuality.

Measures for Improving Punctuality

Punctuality requires constant analysis and monitoring. Long term measures like improved design and maintenance of Locos, Track, S&T Gears, Security, Commercial and Terminal arrangements have a significant effect on punctuality. Some of the day to day activities which are very important to achieve punctual running of passenger trains are as follows…

Originating Stations:

Timely placement of empty rakes for train examination, sick detaching, marshaling, berthing on the platform, booking of staff, right time start and running to PTT, etc. are very critical to achieve 100% punctuality.

Control Organization*:*

(a) Crossings and precedence have to be arranged judiciously and efficiently.
(b) Wrong / improper crossings / precedence contrary to normal priority like through goods trains over passenger trains should be rarely done.
(c) The Controller should develop knowledge of the various passenger trains, dependability of the Loco Pilot and Guards, behavior of the passengers, particularly the daily commuters and the nature of the section.
(d) Perennial issues if any should be flagged to time table controller to factor in during time tabling.

Stations enroute:

(a) Timely advice to gateman for closure of gates, timely planning of shunting or other conflicting movements.
(b) In case of single line section, smart calculation of block section running time for reception & dispatch of trains or utilizing provision of simultaneous reception.
(c) If there are perishables loading, the material is to be stacked at suitable place for prompt loading.
(d) At crew change points, ensure readiness of the crew and box loading if any.
(e) Clearing signals as per PTT timings.
(f) Proper information should be conveyed to public regarding platform nominations etc., well in advance.

Crew of the train:

(a) Shall attend to their assigned trains well in time with complete equipment; conduct brake continuity test and verify that the train is in proper state of function and with complete equipments to travel safely.
(b) Make up time in case the train is running late by conserving gains on run and smartly exchanging all right signals.
(c) Take prompt remedial actions in case of unusual occurrences and equipment defects.
(d) Before scheduled departure, Guard to ensure parcel/luggage loading is completed, SLR doors are closed and locked, and relevant papers taken.
(e) Start the train as per PTT.

Coaching terminal operational procedures

i. On arrival of a rake at a station, mechanical staff to close all doors and windows of coaches.
ii. Before backing on to stabled/pit line, SM to ensure parcels and bedrolls are unloaded.
iii. In case of major repairs/ due for IOH/POH, mechanical and electrical staff has to advise SM for detaching with its replacement duly advising the control.
iv. If any coach is to be detached / attached on account of electrical maintenance, the SSE/TL shall inform the SSE/C&W and the mechanical staff shall issue sick/fit certificate to the Station Master.
v. SM will form rake with fit coaches as per it's consist and place it on the pit line as per its schedule.
vi. The TNC/SM has to advise Mechanical department in form No T.431 duly mentioning the painted numbers of the coaches and timing.
vii. Once the rake is offered for examination, SM shall neither disturb the rake nor perform any shunting onto the rake.
viii. SSE/C&W shall obtain line block from the SM before deputing men on to the formation. The mechanical staff shall place danger board at the entry into the pit line, place scotch block and lock before commencing the work on the formation, to prevent in advertent entry of outside vehicles, which may harm the staff attending the rake.
ix. After the rake is checked the mechanical staff advise SM by returning one foil of T.431 mentioning the time of completion and release the Line Block. The mechanical staff shall also remove the danger board and the scotch block.
x. SM to back the rake on stabled/platform line as necessary.
xi. The VG of the train will be prepared by SM/TNC and handed over to the Guard of the train.
xii. The TNC/Station staff has to ensure that the BV equipment is available in front/middle/rear SLR and is sealed.

Coaching Vehicle Census

Coaching Vehicle census is conducted to know the location of coaching vehicles and cross check the information with regard to its due dates. It is done under the directives of Railway Board. The month, date time of census is notified to all the staff involving in census. Prior to conducting a coaching vehicle census, CPTM holds a meeting and instructs the census officials. The data obtained through coaching census is updated in the master table of ICMS.

Passenger Marketing

The demand for travel is always increasing in our country. However, it is also seasonally fluctuating. All trains are not fully occupied throughout the year. Hence there is an opportunity to plan & achieve the best method of coach usage to achieve maximum demand fulfillment.

The following actions are taken in this regard…

Temporary Augmentation: Based on the availability of room in the formation, coaches available are attached for clearing the wait list passengers. This is subject to

i) *Restricted trains:* Additional carriage is attached to trains only with permission of the Railway Board/ PCOM/CPTM.
ii) *Prohibited Trains:* Additional coach cannot be attached by these trains. This prohibition may be for a portion of journey or throughout to ensure punctuality.

Permanent Augmentation: Based on the demand and temporary augmentation done continuously for some of the trains, coaches can be permanently augmented for that service. This will be included in the coach composition and fired in the PRS.

Coach composition review: Based on occupancy, changing nature of demand, passenger profile, coach composition may be reviewed and optimized.

Rake Link review: As rake link based train services have come up, some of the limitations of one train service are passed on to the linked train. Hence it is better to link similar train services having similar demand. Even within the limitations, the following action shall be taken for improving coach utilization and better passenger satisfaction.

i) Standardization of rakes with similar demand/loads reducing lie over period at originating/destination stations.
ii) Extension/ running of train service in case of lie over period is more at secondary maintenance stations.