

## LONG HAUL TRAINS – GUIDELINES & OPERATIONS

### Definition / परिभाषा

- **Long Haul Train:** A train formed by **combining two or more standard rakes**.
- **Standard Rake:** A block rake composition as **notified by Railway Board**.

 उदाहरण | Examples of standard rake sizes: BOXN – 59, BCNHL – 58, BTPN – 50 etc.

### Famous Long-Haul Rakes / प्रमुख लॉन्ग हॉल ट्रेनें

#### Name      Zone Highlights

**Trishul**      SCR 3 freight trains (177 wagons)

**Garuda**      SCR 2 combined freights

**Super Vasuki** SECR 295 wagons (3.5 km long)

**Sheshnag**      SECR Heavy haul

**Rudrastra**      ECR 2025 trial

 भारत की सबसे लंबी मालगाड़ी “सुपर वासुकी” लगभग 3.5 किमी लंबी है।

### Technical Terminology / तकनीकी संक्षेप नाम

#### Term      Full Form      Function

**DPCS**      Distributed Power Control System      Diesel locos via RF control

**DPWCS**      Distributed Power Wireless Control System      Electric locos via RF communication

**WMUCS**      Wireless Multiple Unit Coupler System      Old system for diesel

### Types of Python Rakes / पायथन रेक के प्रकार

- **Python-M:** Manual control without DPWCS.
- **Python-W:** Wireless control through DPWCS.  
 “M = Manual Control, W = Wireless Control.”

### Formation Conditions for Long Haul / गठन के नियम

Permitted Combinations: Both loaded / both empty / one loaded + one empty.

Not Permitted: Empty front + loaded rear.

BTPN / BTPGLN / Hazardous wagons not allowed.

 Formation usually at **TXR point with Cover BPC**.

Where no TXR staff is available, LP & TMR may jointly form rake with proper checks and whistle codes.

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### Precautions / सावधानियाँ

- Rear portion must have **Brake Van and Train Manager** with BP/FP gauge.
  - Proper walkie-talkie communication between LP and TMR mandatory.
  - **Twin-pipe rule:** If both rakes are twin-pipe → work in twin-pipe mode; if one single-pipe → operate in single pipe only.
  - CBC lock must be secured before starting.
  - On gradient lines, use **hand brakes + wedges + loco brake** for safety.
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### Speed Restrictions / गति सीमा

- Loaded long haul → **Max 55 km/h.**
- Speed of Python rake = lowest permitted speed of constituent train.

 RB Letter No. 2022/M(N)/60/3 dated 17-01-2023.

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### DPWCS Enabled Trains / डीपीडब्ल्यूसीएस सक्षम ट्रेनें

Conventional Train	DPWCS Enabled Train
Tractive effort only from front loco	Synchronised power control via radio link
No communication between locos	Locos can be placed anywhere in consist
Uneven draft forces	Lower draft/buff forces

 DPWCS reduces coupler stress and improves braking response.

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### Rules & Provisions / संबंधित नियम

- **GR 3.84:** Leading LP responsible for signals when multiple locos attached.
  - **GR 4.33:** LP must ensure proper electrical and brake coupling after combining units.
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## Crew & Training / स्टाफ प्रशिक्षण

1. LP, ALP & TMR to undergo one-day familiarization training.
  2. Long-haul fitness to be part of refresher curriculum.
  3. Station staff to be sensitized on handling long rakes.
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## Abnormal Situations / असामान्य स्थिति

- CBC breakage / wagon damage due to excess pull → investigate and report.
  - Update rake identity in FOIS & COA with separate long-haul tag.
  - Asset failure → book under *miscellaneous account*.
  - Punctuality loss → incident account.
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## Under Trial / Experimental Operations (2025)

- Two empty rakes or BLC rakes can run with middle loco de-energized (piped vehicle).
  - No LP/ALP required in middle loco.
  - On DFC / multiple tracks, may run without intermediate loco but with right powering.
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## Test Your Knowledge (Revision Corner

- 1** Formation of > 1 rake → **Long Haul Train**
  - 2** Permitted conditions → All types (loaded / empty / mixed)
  - 3** Not permitted → Empty front + loaded rear
  - 4** Max Speed → **55 KMPH**
  - 5** On walkie-talkie failure → Terminate at next station
  - 6** DPWCS → Locos can be anywhere in train consist
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## Key Takeaways / मुख्य बिंदु

- Efficient use of locos & paths.
- Higher throughput with same infrastructure.
- Strict adherence to BPC & communication protocols for safety.
- Crew awareness and coordination are the core pillars of long haul success.