

**GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS**

**LOK SABHA
UNSTARRED QUESTION NO. 877
TO BE ANSWERED ON 04.02.2026**

PREVENTION OF SERIOUS TRAIN ACCIDENTS

†877. Shri Mansukhbhai Dhanjibhai Vasava:

Will the Minister of RAILWAYS be pleased to state:

- (a) the steps taken/proposed to be taken by the Government to prevent serious train accidents;**
- (b) whether the Government proposes to constitute a committee to suggest preventive measures and if so, the details thereof and if not, the reasons therefor; and**
- (c) the details of the accidents that occurred at unmanned railway crossing including the number of persons injured and the amount of compensation paid during the last three years and the current year?**

ANSWER

**MINISTER OF RAILWAYS, INFORMATION & BROADCASTING AND
ELECTRONICS & INFORMATION TECHNOLOGY**

(SHRI ASHWINI VAISHNAW)

(a) to (c): Safety is accorded the highest priority on Indian Railways. As a consequence of various safety measures taken over the years, there has been a steep decline in the number of accidents.

Number of Consequential Train Accidents has reduced as shown in the table below:-

| Year | Consequential Accidents |
|----------------------------|--------------------------------|
| 2014-15 | 135 |
| 2025-26 (Till date) | 12 (90% lesser) |

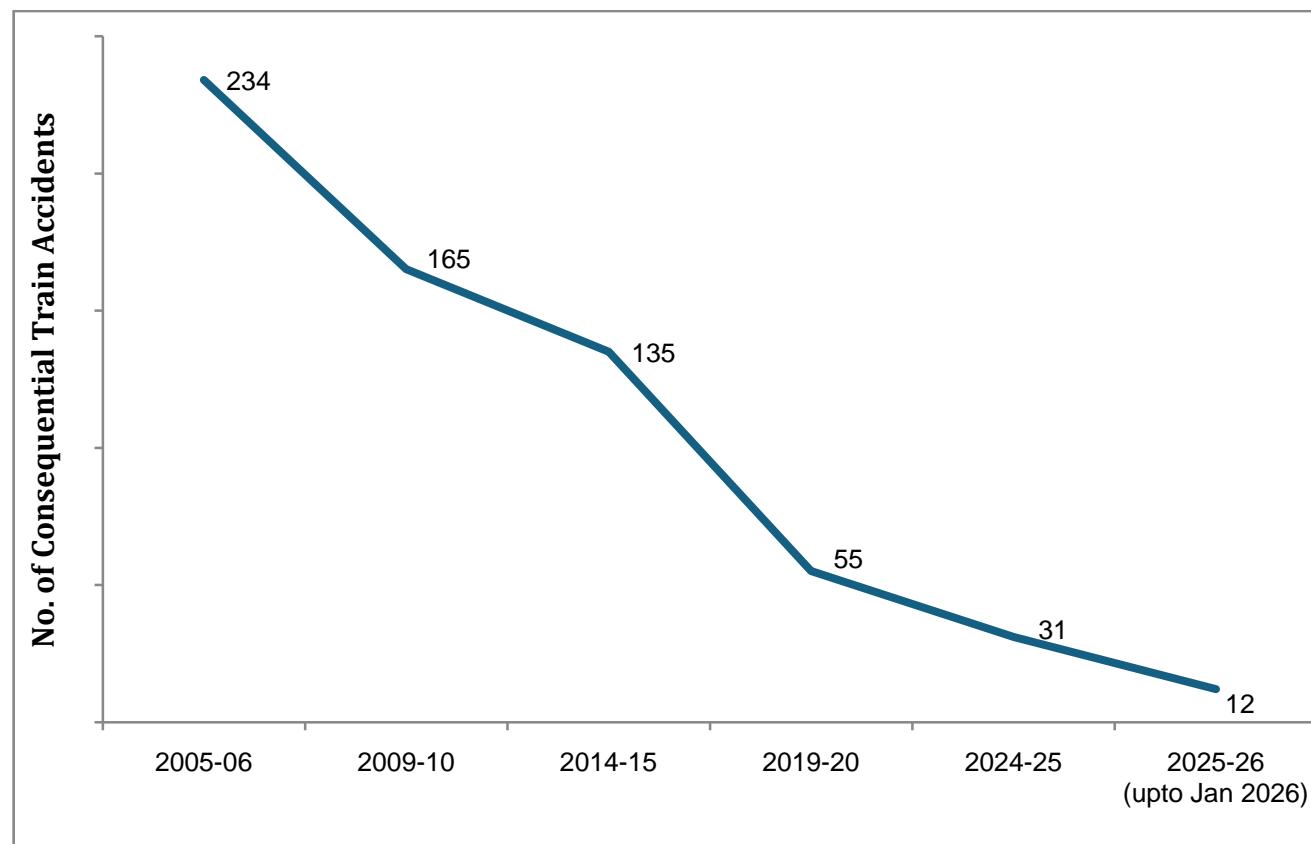
Another important index showing improvement in safety in train operations is Consequential Accidents Index, the details of which are as under:-

Consequential Accident Index:-

| Year | Accident Index |
|----------------|--------------------------|
| 2014-15 | 0.11 |
| 2024-25 | 0.03 (73% lesser) |

This index measures number of consequential accidents as a ratio of total running kilometers of all trains.

$$\text{Accident Index} = \frac{\text{No. of consequential accidents}}{\text{No. of trains} \times \text{million kilometers run}}$$



Unmanned Level Crossings on Broad Gauge on Indian Railways have been eliminated by 2019. Therefore, there is no accident on Unmanned Level Crossings during the last three years and the current year.

The various safety measures taken to enhance safety in train operations are as under:-

1. On Indian Railways, the expenditure on Safety related activities has increased over the years as under:-

| Expenditure/Budget on Safety related activities (Rs. in Cr.) | | | | |
|---|----------------|-----------------|-----------------|-----------------|
| 2013-14 | 2022-23 | 2023-24 | 2024-25 | 2025-26 |
| 39,200 | 87,336 | 1,01,662 | 1,14,022 | 1,17,693 |

2. Electrical/Electronic Interlocking Systems with centralized operation of points and signals have been provided at 6,660 stations up to 31.12.2025 to reduce accidents due to human failure.

3. Interlocking of Level Crossing (LC) Gates has been provided at 10,097 Level Crossing Gates up to 31.12.2025 for enhancing safety at LC Gates.

4. Complete Track Circuiting of stations to enhance safety by verification of track occupancy by electrical means has been provided at 6,665 stations up to 31.12.2025.

5. Kavach is a highly technology intensive system, which requires safety certification of highest order. Kavach was adopted as a National ATP system in July 2020. Based on deployment of Kavach version 3.2 on 1465 Rkm on South Central Railway and experience gained, further improvements were made. Finally, Kavach specification version 4.0 was approved by RDSO on 16.07.2024.

After extensive and elaborate trials, Kavach Version 4.0 has been successfully commissioned on 1297 Route Kilometres, covering the high density Delhi - Mumbai and Delhi - Howrah routes. On the Delhi - Mumbai route Kavach ver 4.0 has been commissioned on Junction cabin - Palwal - Mathura - Nagda section (667 Rkm) & Ahmedabad - Vadodara - Virar section (432 Rkm) and on the Delhi - Howrah route on

Gaya – Sarmatanr (93 Rkm) and Bardhaman - Howrah section (105 Rkm).

- 6. Detailed instructions on issues related with safety of Signalling, e.g. mandatory correspondence check, alteration work protocol, preparation of completion drawing, etc. have been issued.**
- 7. System of disconnection and reconnection for S&T equipment as per protocol has been re-emphasized.**
- 8. All locomotives are equipped with Vigilance Control Devices (VCD) to improve alertness of Loco Pilots.**
- 9. Retro-reflective sigma boards are provided on the mast which is located two OHE masts prior to the signals in electrified territories to alert the crew about the signal ahead when visibility is low due to foggy weather.**
- 10. A GPS based Fog Safety Device (FSD) is provided to loco pilots in fog affected areas which enables loco pilots to know the distance of the approaching landmarks like signals, level crossing gates, etc.**
- 11. Modern track structure consisting of 60kg, 90 Ultimate Tensile Strength (UTS) rails, Prestressed Concrete Sleeper (PSC) Normal/Wide base sleepers with elastic fastening, fan shaped layout turnout on PSC sleepers, Steel Channel/H-beam Sleepers on girder bridges is used while carrying out primary track renewals.**
- 12. Mechanisation of track laying activity through use of track machines like PQRS, TRT, T-28 etc. to reduce human errors.**
- 13. Maximizing supply of 130m/260m long rail panels for increasing progress of rail renewal and avoiding welding of joints, thereby improving safety.**
- 14. Ultrasonic Flaw Detection (USFD) testing of rails to detect flaws and timely removal of defective rails.**

- 15. Laying of longer rails, minimizing the use of Alumino Thermic Welding and adoption of better welding technology for rails i.e., Flash Butt Welding.**
- 16. Monitoring of track geometry by OMS (Oscillation Monitoring System) and TRC (Track Recording Cars).**
- 17. Patrolling of railway tracks to look out for weld/rail fractures.**
- 18. The use of Thick Web Switches and Weldable CMS Crossing in turnout renewal works.**
- 19. Inspections at regular intervals are carried out to monitor and educate staff for observance of safe practices.**
- 20. Web based online monitoring system of track assets viz. Track database and decision support system has been adopted to decide rationalized maintenance requirement and optimize inputs.**
- 21. Detailed instructions on issues related with safety of Track, e.g. integrated block, corridor block, worksite safety, monsoon precautions, etc. have been issued.**
- 22. Preventive maintenance of railway assets (Coaches & Wagons) is undertaken to ensure safe train operations.**
- 23. Replacement of conventional ICF design coaches with LHB design coaches is being done.**
- 24. All unmanned level crossings (UMLCs) on Broad Gauge (BG) route have been eliminated by January 2019.**
- 25. Safety of Railway Bridges is ensured through regular inspection of Bridges. The requirement of repair/rehabilitation of Bridges is taken up based upon the conditions assessed during these inspections.**
- 26. Indian Railways has displayed Statutory “Fire Notices” for widespread passenger information in all coaches. Fire posters are provided in every coach so as to educate and alert passengers regarding various Do's and Don'ts to prevent fire. These include messages regarding not**

carrying any inflammable material, explosives, prohibition of smoking inside the coaches, penalties etc.

27. Production Units are providing Fire detection and suppression system in newly manufactured Power Cars and Pantry Cars, Fire and Smoke detection system in newly manufactured coaches. Progressive fitment of the same in existing coaches is also underway by Zonal Railways in a phased manner.

28. Regular counselling and training of staff is undertaken.

29. Concept of Rolling Block introduced in Indian Railways (Open Lines) General Rules vide Gazette notification dated 30.11.2023, wherein work of integrated maintenance/repair/replacement of assets is planned up to 52 weeks in advance on rolling basis and executed as per plan.

The details of the Safety related works related to better maintenance practices, Technological improvements, better infrastructure and rolling stock etc. undertaken by Railways are tabulated below:-

| S. No. | Item | 2004-05 to 2013-14 | 2014-15 to 2024-25 | 2014-25 Vs. 2004-14 |
|-------------------------------------|---|--------------------------------|------------------------------------|----------------------------|
| Technological Improvements | | | | |
| 1. | Use of high-quality rails (60 Kg) (Km) | 57,450 Km | 1.43 Lakh Km | More than 2 times |
| 2. | Longer Rail Panels (260m) (Km) | 9,917 Km | 77,522 Km | Nearly 8 times |
| 3. | Electronic Interlocking (Stations) | 837 Stations | 3,691 Stations | More than 4 times |
| 4. | Fog Pass Safety Devices (Nos.) | As on 31.03.14: 90 Nos. | As on 31.03.25: 25,939 Nos. | 288 times |
| 5. | Thick Web Switches (Nos.) | Nil | 28,301 Nos. | |
| Better Maintenance Practices | | | | |
| 1. | Primary Rail Renewal (Track Km) | 32,260 Km | 49,941 Km | 1.5 times |

| | | | | |
|--|--|------------------------------|--|--------------------------------|
| 2. | USFD (Ultra Sonic Flaw detection) Testing of Welds (Nos.) | 79.43 Lakh | 2 Crore | More than 2 times |
| 3. | Weld failures (Nos.) | In 2013-14: 3699 Nos. | In 2024-25: 370 Nos. | 90% reduction |
| 4. | Rail fractures (Nos.) | In 2013-14: 2548 Nos. | In 2024-25: 289 Nos. | More than 88% reduction |
| Better Infrastructure and Rolling Stock | | | | |
| 1. | New Track KM added (Track Km) | 14,985 Km | 34,428 Km | More than 2 times |
| 2. | Flyovers (RoBs)/Underpasses (RUBs) (Nos.) | 4,148 Nos. | 13,808 Nos. | More than 3 times |
| 3. | Unmanned Level crossings (Nos.) on BG | As on 31.03.14: 8,948 | As on 31.03.24:Nil (All eliminated by 31.01.19) | Removed |
| 4. | Manufacture of LHB Coaches (Nos.) | 2,337 Nos. | 42,677 | More than 18 times |
