

**GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS
LOK SABHA
UNSTARRED QUESTION NO. 4172
TO BE ANSWERED ON 18.03.2026**

UPGRADATION OF PASSENGER SAFETY MEASURES

4172. SHRI ARVIND GANPAT SAWANT:

Will the Minister of RAILWAYS be pleased to state:

- (a) whether the modernisation initiative has been planned to upgrade passenger safety measures in the country particularly signalling systems and station infrastructure and if so, the details thereof;**
- (b) whether the Government is enhancing the capacity of dedicated freight corridors to meet growing industry demand and reduce congestion on passenger routes and if so, the details thereof; and**
- (c) whether new express/semi-high-speed trains introduced/being introduced on high-demand routes to improve connectivity and travel efficiency and if so, the details thereof?**

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 (upto 28.02.2026)	14 (90% lesser)

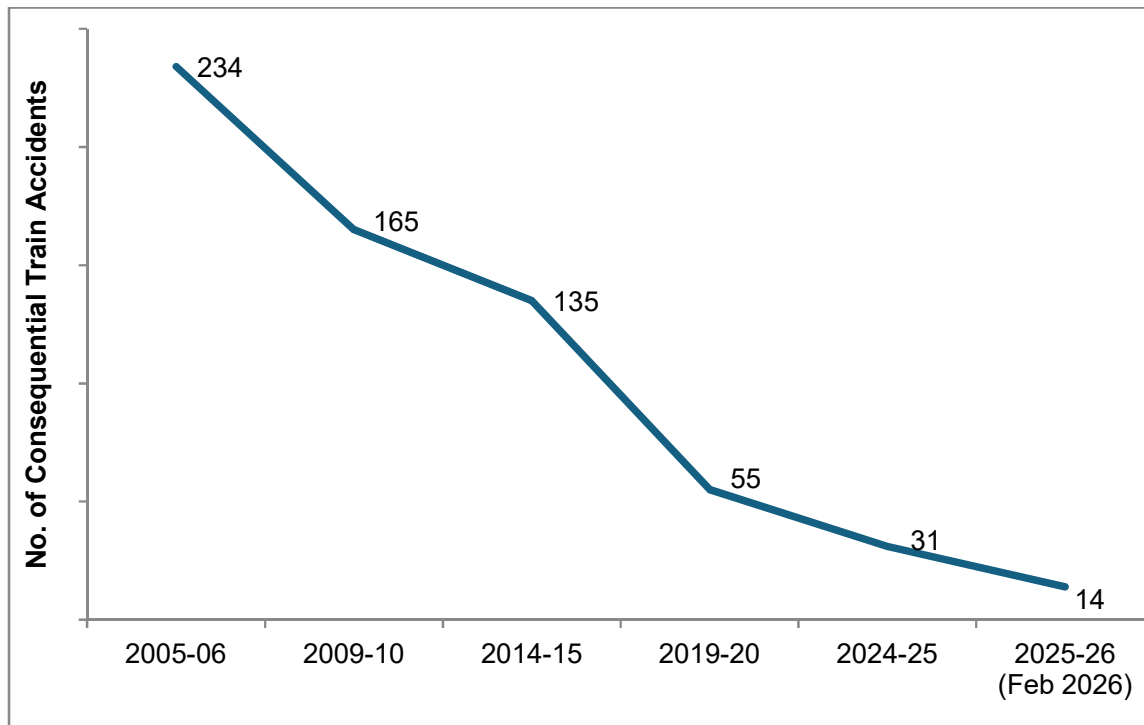
Another important index showing improvement in safety in train operations is Consequential Accident Index, the details of which are as under:-

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.

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



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	2026-27
39,200	87,336	1,01,662	1,14,022	1,17,693	1,20,389

- 2. Electrical/Electronic Interlocking Systems with centralized operation of points and signals have been provided at 6,665 stations up to 28.02.2026 to reduce accidents due to human failure.**
- 3. Interlocking of Level Crossing (LC) Gates has been provided at 10,153 Level Crossing Gates up to 28.02.2026 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 6,669 stations up to 28.02.2026.**
- 5. 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.**
- 6. System of disconnection and reconnection for S&T equipment as per protocol has been re-emphasized.**
- 7. All locomotives are equipped with Vigilance Control Devices (VCD) to improve alertness of Loco Pilots.**
- 8. 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.**
- 9. 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.**
- 10. 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.

11. Mechanisation of track laying activity through use of track machines like PQRS, TRT, T-28 etc. to reduce human errors.

12. Maximizing supply of 130m/260m long rail panels for increasing progress of rail renewal and avoiding welding of joints, thereby improving safety.

13. Ultrasonic Flaw Detection (USFD) testing of rails to detect flaws and timely removal of defective rails.

14. Laying of longer rails, minimizing the use of Alumino Thermic Welding and adoption of better welding technology for rails i.e., Flash Butt Welding.

15. Monitoring of track geometry by OMS (Oscillation Monitoring System) and TRC (Track Recording Cars).

16. Patrolling of railway tracks to look out for weld/rail fractures.

17. The use of Thick Web Switches and Weldable CMS Crossing in turnout renewal works.

18. Inspections at regular intervals are carried out to monitor and educate staff for observance of safe practices.

19. 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.

20. Detailed instructions on issues related with safety of Track, e.g. integrated block, corridor block, worksite safety, monsoon precautions, etc. have been issued.

21. Preventive maintenance of railway assets (Coaches & Wagons) is undertaken to ensure safe train operations.

22. Replacement of conventional ICF design coaches with LHB design coaches is being done.

- 23. All unmanned level crossings (UMLCs) on Broad Gauge (BG) route have been eliminated by January 2019.**
- 24. 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.**
- 25. 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.**
- 26. 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.**
- 27. Regular counselling and training of staff is undertaken.**
- 28. 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.N.	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

Implementation of Kavach:

- Kavach is an indigenously developed Automatic Train Protection (ATP) system. Kavach is a highly technology intensive system, which requires safety certification of highest order (SIL-4).**

- 2. Kavach aids the Loco Pilot in running of trains within specified speed limits by automatic application of brakes in case Loco Pilot fails to do so and also helps the trains to run safely during inclement weather.**
- 3. The first field trials on the passenger trains were started in February 2016. Based on the experience gained and Independent Safety Assessment of the system by Independent Safety Assessor (ISA), three firms were approved in 2018-19, for supply of Kavach Ver 3.2.**
- 4. Kavach was adopted as National ATP system in July, 2020.**
- 5. Implementation of Kavach System involves following Key Activities:**
 - a. Installation of Station Kavach at each and every station, block section.**
 - b. Installation of RFID Tags throughout the track length.**
 - c. Installation of telecom Towers throughout the section.**
 - d. Laying of Optical Fibre Cable along the track.**
 - e. Provision of Loco Kavach on each and every Locomotive running on Indian Railways.**
- 6. 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.**
- 7. Kavach version 4.0 covers all the major features required for the diverse railway network. This is a significant milestone in safety for Indian Railways. Within a short period, IR has developed, tested and started deploying Automatic Train Protection System.**
- 8. Major improvement in Version 4.0 includes increased Location Accuracy, Improved Information of Signal Aspects in bigger yards, Station to Station Kavach interface on OFC and Direct Interface to**

existing Electronic Interlocking System. With these improvements, Kavach Ver.4.0. is planned for large scale deployment over Indian Railways.

9. After extensive and elaborate trials, Kavach Version 4.0 has been successfully commissioned on 1452 Route Kilometres, covering the high density Delhi- Mumbai and Delhi-Howrah routes as below:

SN	Section	Progress (Route Km)
(1)	Delhi-Mumbai route:	
i	Junction cabin – Palwal – Mathura – Nagda section	667
ii	Vadodara - Ahmedabad section	96
iii	Vadodara - Virar section	336
(2)	Delhi – Howrah route:	
i	Gaya Sarmatanr section	93
ii	Chota Ambana - Bardhaman – Howrah section	260

10. Further, track side Kavach implementation work has been taken up on 24,427 RKM covering all GQ,GD,HDN and identified sections of Indian Railways.

11. Progress of key items of Kavach on High density routes including Delhi- Mumbai & Delhi- Howrah corridors as on 14.03.2026 are as under:

SN	Item	Progress
i	Laying of Optical Fibre Cable	8570 Km
ii	Installation of Telecom Towers	1100 nos
iii	Station Data Centre	767 station
iv	Installation of Track side equipment	6776 Rkm
v	Provision of Kavach in Loco	4211 nos

- 12. The sections mentioned above also includes sections which pass through states of Andhra Pradesh, Maharashtra & Madhya Pradesh.**
- 13. In addition, work for installation of Kavach in 8979 Locomotives and 1200 EMU/MEMU has been taken up.**
- 14. Specialized training programmes on Kavach are being conducted at centralized training institutes of Indian Railways to impart training to all concerned officials. By now more than 55,000 technicians, operators and engineers have been trained on Kavach technology. This includes about 47,500 Loco Pilots & Assistant Loco Pilots. Courses have been designed in collaboration with IRISSET.**
- 15. The cost for provision of Track Side including Station equipment of Kavach is approximately Rs. 50 Lakhs/Km and cost for provision of Kavach equipment on locomotives is approximately Rs. 80 Lakh/Loco.**
- 16. The funds utilized on Kavach works so far up to Feb'26 is Rs. 2,763.90 Crores. The allocation of funds during the year 2025-26 is Rs. 1673.19 Crores. Requisite funds are made available as per the progress of works.**

Amrit Bharat Station Scheme:

Ministry of Railways has launched Amrit Bharat Station Scheme for redevelopment of stations with a long-term approach.

The scheme involves preparation of master plans and their implementation in phases to improve the stations. The master planning includes:

- Improvement of access to station and circulating areas**
- Integration of station with both sides of city**
- Improvement of station building**

- **Improvement of waiting halls, toilets, sitting arrangement, water booths**
- **Provision of wider foot over bridge/air concourse commensurate with passenger traffic**
- **Provision of lift/escalators/ramp**
- **Improvement /Provision of platform surface and cover over platforms**
- **Provision of kiosks for local products through schemes like ‘One Station One Product’**
- **Parking areas, Multimodal integration**
- **Amenities for Divyangjans**
- **Better passenger information systems**
- **Provision of executive lounges, nominated spaces for business meetings, landscaping, etc. keeping in view the necessity at each station.**

The scheme also envisages sustainable and environment friendly solutions, provision of ballastless tracks etc. as per necessity, phasing and feasibility and creation of city centre at the station in the long term.

So far, 1,338 stations have been identified for development under the Amrit Bharat Station Scheme.

Completed stations:

Development works at railway stations under Amrit Bharat Station Scheme have been taken up at a good pace. Till now, works have been completed at 180 stations. Names of stations completed so far are as following:

Alnavar, Amb Andaura, Ambikapur, Amgaon, Anandpur Sahib, Anara, Angamali For Kaladi, Ayodhya Dham, Badami, Bagalkot, Baijnath Paprola, Balrampur, Bantawala, Barabhum, Baramati, Bareilly City, Baripada, Barmer, Barpali, Begumpet, Beohari, Bhanupratappur, Bhilai, Bhind, Bijnor, Bimalgarh, Bommidi, Bundi, Chanda Fort, Chalakudi, Changanassery, Chennai Park, Chhindwara, Chidambaram, Chinchpokli, Chinna Salem, Chirayinkeezh, Cuttack, Dakor, Derol, Deshnoke, Devlali, Dharwad, Dhule, Dongargarh, Fatehabad, Fatehpur, Fatehpur Shekhawati, Ferok, Gadag, Gangapur City, Godda, Godhra Jn., Gogameri, Gokak Road, Gola Gokarnath, Gomti Nagar, Govardhan, Govind Garh, Govindpuri, Govindpur Road, Hafizpeta, Haibargaon, Haldia, Hapa, Harpalpur, Hathras City, Hodal, Idgah Agra Jn., Izzatnagar, Jaisalmer, Jam Jodhpur, Jam Wanthali, Joychandi Pahar, Junnor Deo, Kakinada Town, Kalyani Ghoshpara, Kamakhyaguri, Kanalus Jn., Karaikkudi Jn., Karamsad, Karimnagar, Katni South, Kedgaon, Khairthal, Khambhaliya, Khalilabad, Koppal, Kosamba Jn., Kulitturai, Kuttipuram, Lasalgaon, Limbdi, Lohardaga, Lonand Jn., Mahe, Mahuva, Mailani, Mandal Garh, Mandawar Mahwa Road, Madhupur, Mambalam, Manaparai, Mandi Dabwali, Mangalagiri, Mannargudi, Matunga, M.C.S. Chhatarpur, Mithapur, Morappur, Morbi, Muktsar, Munirabad, Muri Jn., Murtizapur Jn., Nainpur Jn., Nandura, Narmadapuram (Hoshangabad), Netaji Subhash Chandra Bose Itwari Junction, Nidadavolu Jn., Nilambur Road, Okha, Orchha, Palitana, Panagarh, Panki Dham, Parel, Parlakhemundi, Pirpainti, Piska, Pokhrayan, Pollachi Jn., Polur, Porbandar, Rajgarh, Rajmahal, Rajula Jn., Ramagundam, Ramghat Halt, Rayanpadu, Saharanpur Jn., Sahibzada Ajit Singh Mohali, Sahebgunj, Samakhiyali, Samalpatti, Sanchi, Sankarpur, Savda, Seoni, Shahad, Shajapur, Sholavandan, Shoranur Jn., Shridham, Siddharth Nagar, Sihor Jn., Siuri, Sri Bala Brahmeswara Jogulamba, Srirangam, Srivilliputtur, St. Thomas Mount,

Sullurpeta, Suraimanpur, Swaminarayan Chappia, Talcher, Tamluk, Thawe, Thiruvarur Jn., Tiruvannamalai, Tripunithura, Tuni, Ujhani, Urkura, Utran, Vadakara, Vadala Road, Vidisha, Vriddhachalam Jn., Wadakancheri, Warangal.

The activities for development at other stations have also been taken up at good pace and progress of some of the above stations is as given below:

- **Tirupati station: The structural framework of new second entry station building on South side, 2 nos. air concourses and sewage treatment plant have been completed. The finishing works of new second entry station building on South side and air concourses, structural work of station building on North side, platform shelter, lift, escalator etc. have been taken up.**

- **Nellore station: The structural framework, brickwork and plastering of station building on both East and West sides have been completed. The finishing works of station building on both East and West side and air concourse, extension work of subway, parking, water tanks and sewage treatment plant have been taken up.**

- **Bangalore Cantonment station: The works of diversion road on South side, training centre, hostel on North side, electric substation building have been completed. The works of South side station building, North side station building, circulating area and Foot Over Bridge have been taken up.**

- **Kota Junction station: The structural works of front departure hall, front arrival hall and rear side station building have been completed. The finishing works of front departure hall, rear side**

station building, air concourse, through roof, circulating area have been taken up.

- **Bhubaneshwar station: The structural work of new station building at East and West side and air concourse have been completed. The structural work of elevated driveway at East and West side station, extension of Foot Over Bridge and platform shelter have been taken up. The finishing works of new station building at East and West side, works of MEP (Mechanical, Electrical and Plumbing), HVAC (Heating, Ventilation and Air Conditioning) and escalators have been taken up.**

Further, development / redevelopment / upgradation / modernisation of stations on Indian Railways is a continuous and ongoing process and works in this regard are undertaken as per requirement, subject to inter-se priority and availability of funds. Development / redevelopment / upgradation / modernisation of a station is carried out based on category of station/condition/traffic handled etc.

Development / Upgradation of railway stations is complex in nature involving safety of passengers & trains and requires various statutory clearances such as fire clearance, heritage, tree cutting, airport clearance etc. The progress also gets affected due to brownfield related challenges such as shifting of utilities (involving water/sewage lines, optical fibre cables, gas pipe lines, power/signal cables, etc.), infringements, operation of trains without hindering passenger movement, speed restrictions due to works carried out in close proximity of tracks and high voltage power lines, etc. and these factors affect the completion time.

Further, development / upgradation / modernization of stations including Amrit Bharat Station Scheme is generally funded under

Plan Head-53 'Customer Amenities'. The details of allocation and expenditure under Plan Head-53 are maintained Zonal Railway-wise and not work-wise or station-wise or state-wise. The fund allocation of ₹ 12,120 crore has been made for the financial year 2025-26 under Plan Head-53 and expenditure (up to February, 2026) of ₹ 11,892 crore has been incurred so far.

Dedicated Freight Corridors

Ministry of Railways has taken up construction of two Dedicated Freight Corridors (DFC) viz. Eastern Dedicated Freight Corridor (EDFC) from Ludhiana to Sonnagar (1337 Km) and the Western Dedicated Freight Corridor (WDFC) from Jawaharlal Nehru Port Terminal (JNPT) to Dadri (1506 Km).

The work on EDFC has been completed and commissioned. In WDFC, 1404 Rkm out of total 1506 Rkm has been completed and commissioned. The balance work on WDFC from Vaitarna-JNPT section (102 Rkm) has been taken up.

DFC has contributed to creating additional paths on the conventional network by diverting freight traffic to EDFC and WDFC. Presently, 443 average trains per day are being run on these corridors.

A New Dedicated Freight Corridor i.e., Dankuni - Surat, has been announced by the Govt. of Bharat in the Budget 2026. The work of preparation/updation of DPR for the DFC has been assigned to DFCCIL. Alignment and Financing model are under finalisation.

Vande Bharat (Chair Car), Vande Bharat (Sleeper), Amrit Bharat Trains, Namu Bharat Rapid Rail

Indian Railways (IR) constantly endeavours to augment the travelling facilities for the passengers inter alia by introducing new train services. Indian Railways, during the period during 2020-2021 to 2025-2026 (upto Feb, 2026), introduced 1078 new train services on its network. These services include 158 Vande Bharat (Chair Car) services, 02 Vande Bharat (Sleeper) services, 54 Amrit Bharat services and 04 Namo Bharat Rapid Rail services.

Indian Railways, with a view to improve travel experience of the passengers, have introduced indigenously designed and manufactured Vande Bharat trains with modern coaches, advanced safety features and passenger amenities. These new Vande Bharat Chair Car Trains have the following features:

- **Jerk Free Semi-Permanent couplers.**
- **Fitted with KAVACH**
- **Centrally controlled Automatic Plug Doors and Fully Sealed wider gangways.**
- **Emergency Alarm Push buttons and Talk Back Units on all Coaches.**
- **Improved fire safety – Aerosol based fire detection and suppression system in electrical cabinets and lavatories.**
- **Higher acceleration with design/operating speed of 180/160 KMPH.**
- **Driver-Guard communication with voice recording facility & Crash hardened memory.**
- **Air conditioning units provided with indigenously developed UV-C lamp based disinfection system for deactivating 99% harmful bacteria from conditioned air to improve the hygiene standards inside the passenger area.**
- **Better Ride Comfort.**
- **CCTVs in all Coaches.**

- For Divyangjan passengers special lavatory in the driving coaches on each end.
- Coach condition monitoring System (CCMS) display with remote monitoring

As on 12.03.2026, the following 162 Vande Bharat train services (Chair Car) are being operated on the Indian Railways network.

SN	Train No. and Name
1	22435/22436 New Delhi - Varanasi Vande Bharat Express
2	22439/22440 Sri Mata Vaishno Devi Katra - New Delhi Vande Bharat Express
3	20901/20902 Gandhinagar Capital - Mumbai Central Vande Bharat Express
4	22447/22448 Amb Andura - New Delhi Vande Bharat Express
5	20607/20608 Mysuru - MGR Chennai Central Vande Bharat Express
6	20825/20826 Nagpur - Bilaspur Vande Bharat Express
7	22301/22302 New Jalpaiguri - Howrah Vande Bharat Express
8	20833/20834 Secunderabad - Visakhapatnam Vande Bharat Express
9	22223/22224 Sainagar Shirdi - Chhatrapati Shivaji Maharaj (T) Vande Bharat Express
10	22225/22226 Solapur - Chhatrapati Shivaji Maharaj (T) Vande Bharat Express
11	20171/20172 Nizamuddin - Rani Kamlapati Vande Bharat Express
12	20701/20702 Tirupati - Secunderabad Vande Bharat Express

13	20643/20644 Coimbatore - Chennai Vande Bharat Express
14	20977/20978 Chandigarh - Ajmer Vande Bharat Express
15	20633/20634 Thiruvananthapuram- Kasargod Vande Bharat Express
16	22895/22896 Puri - Howrah Vande Bharat Express
17	22457/22458 Dehradun - Anand Vihar Vande Bharat Express
18	22227/22228 Guwahati - New Jalpaiguri Vande Bharat Express
19	20911/20912 Nagpur - Indore Vande Bharat Express
20	22229/22230 Madgaon - Chhatrapati Shivaji Maharaj (T) Vande Bharat Express
21	22349/22350 Ranchi - Patna Vande Bharat Express
22	20661/20662 Dharwar - Bengaluru Vande Bharat Express
23	20173/20174 Rewa - Rani Kamlapati Vande Bharat Express
24	22549/22550 Gorakhpur - Prayagraj Vande Bharat Express
25	12461/12462 Sabarmati - Jodhpur Vande Bharat Express
26	22925/22926 Okha - Ahmedabad Vande Bharat Express
27	20665/20666 Tirunelveli - Chennai Egmore Vande Bharat Express
28	20677/20678 Narsapur - Chennai Vande Bharat Express
29	20703/20704 Yesvantpur - Kacheguda Vande Bharat Express
30	20631/20632 Thiruvananthapuram- Mangaluru Vande Bharat Express
31	26963/26964 Udaipur - Asarva Vande Bharat Express
32	22347/22348 Patna - Howrah Vande Bharat Express
33	20835/20836 Puri - Rourkela Vande Bharat Express

34	20897/20898 Ranchi - Howrah Vande Bharat Express
35	22415/22416 New Delhi - Varanasi Vande Bharat Express
36	20641/20642 Coimbatore - Bengaluru Cant Vande Bharat Express
37	20645/20646 Mangaluru - Madgaon Vande Bharat Express
38	20705/20706 Chhatrapati Shivaji Maharaj (T) - Nanded Vande Bharat Express
39	22477/22478 Sri Mata Vaishno Devi Katra - New Delhi Vande Bharat Express
40	22425/22426 Anand Vihar - Ayodhya Cantt. Vande Bharat Express
41	22487/22488 Amritsar - Delhi Vande Bharat Express
42	22962/22961 Mumbai Central - Ahmedabad Vande Bharat Express
43	20707/20708 Visakhapatnam - Secunderabad Vande Bharat Express
44	20663/20664 Chennai - Mysuru Vande Bharat Express
45	22233/22234 Patna - New Jalpaiguri Vande Bharat Express
46	22470/22469 Khajuraho - Nizamuddin Vande Bharat Express
47	22231/22232 Bengaluru - Kalburagi Vande Bharat Express
48	20841/20842 Visakhapatnam - Bhubaneswar Vande Bharat Express
49	22345/22346 Gomti Nagar - Patna Vande Bharat Express
50	20887/20888 Varanasi - Ranchi Vande Bharat Express
51	22545/22546 Dehradun - Lucknow Jn Vande Bharat Express
52	22490/22489 Varanasi - Meerut City Vande Bharat Express

53	20627/20628 Nagercoil - Chennai Egmore Vande Bharat Express
54	20671/20672 Bengaluru Cantt - Madurai Vande Bharat Express
55	22500/22499 Deoghar - Varanasi Vande Bharat Express
56	22309/22310 Jamalpur - Howrah Vande Bharat Express
57	20871/20872 Rourkela - Howrah Vande Bharat Express
58	20893/20894 Patna - Tatanagar Vande Bharat Express
59	20892/20891 Tatanagar - Brahmapur Vande Bharat Express
60	22303/22304 Gaya - Howrah Vande Bharat Express
61	20669/20670 Pune - Hubballi Vande Bharat Express
62	20673/20674 Pune - Chhatrapati Shahu Maharaj (T) Vande Bharat Express
63	20101/20102 Secunderabad - Nagpur Vande Bharat Express
64	20829/20830 Visakhapatnam - Durg Vande Bharat Express
65	21893/21894 Patna - Tatanagar Vande Bharat Express
66	21895/21896 Patna - Tatanagar Vande Bharat Express
67	20176/20175 Banaras - Agra Cantt. Vande Bharat Express
68	26901/26902 Veraval - Sabarmati Vande Bharat Express
69	26401/26402 Srinagar - Shri Mata Vaishno Devi Katra Vande Bharat Express
70	26403/26404 Srinagar -Shri Mata Vaishno Devi Katra Vande Bharat Express
71	26502/26501 Patliputra - Gorakhpur Vande Bharat Express
72	26751/26752 KSR Bengaluru - Belagavi Vande Bharat Express

73	26406/26405 Amritsar - Shri Mata Vaishno Devi Katra Vande Bharat Express
74	26101/26102 Pune - Ajni Vande Bharat Express
75	26302/26301 Jogbani - Danapur Vande Bharat Express
76	26481/26482 Delhi Cantt - Jodhpur Vande Bharat Express
77	26471/26472 Delhi Cantt - Bikaner Vande Bharat Express
78	26462/26461 Delhi - Firozpur Cantt. Vande Bharat Express
79	26651/26652 Ernakulam - KSR Bengaluru Vande Bharat Express
80	26506/26505 Khajuraho - Banaras Vande Bharat Express
81	26504/26503 Saharanpur - Gomtinagar Vande Bharat Express

Further, to cater to long distance travel, IR has introduced the sleeper variant of Vande Bharat Express. Presently, 2 Vande Bharat Sleeper services are in operation on the Indian Railway network.

SN	Train No. and Name
1	27575/27576 Howrah - Kamakhya Vande Bharat Sleeper Express

Broad Technological advancements and safety features provided in the Vande Bharat Sleeper Trains are as below:

- **Jerk-Free Semi permanent couplers and Anti Climbers.**
- **Fitted with KAVACH.**
- **Higher acceleration with design/operating speed of 180/160 KMPH.**
- **Crashworthy Design of Car body complying with EN standards.**
- **Fire barrier doors at the end of each coach for compliance of Fire Safety standards.**

- **Aerosol based fire detection and suppression system in electrical cabinets and lavatories.**
- **Regenerative braking system for energy efficiency.**
- **Air conditioning units provided with indigenously developed UV-C lamp based disinfection system for deactivating 99% harmful bacteria from conditioned air to improve the hygiene standards inside the passenger area.**
- **Centrally controlled Automatic Plug Doors and Fully Sealed wider gangways.**
- **CCTVs in all coaches.**
- **Emergency talk-back unit for communication between Passenger and Train Manager/Loco Pilot in case of emergency.**
- **For Divyangjan passengers special lavatory in the driving coaches on each end**
- **Centralized Coach Monitoring System for better condition monitoring of passenger amenities such as Air conditioning, Saloon Lighting etc**
- **Ergonomically designed ladder for ease of climbing on to upper berths.**

Railways have developed fully non-AC modern train named as Amrit Bharat express. Presently, 58 services are in operation. These modern trains comprise of 11 General Class coaches, 8 Sleeper Class coaches, 01 Pantry car and 02 Luggage cum Divyangjan coaches.

SN	Train No. and Name
1	11015/11016 Lokmanya Tilak (T) - Saharsa Amrit Bharat Express
2	13697/13698 Gaya - Delhi Amrit Bharat Express
3	15293/15294 Muzaffarpur - Charlapalli Amrit Bharat Express

4	15557/15558 Darbhanga - Anand Vihar (T) Amrit Bharat Express
5	15561/15562 Darbhanga - Gomtinagar Amrit Bharat Express
6	15567/15568 Bapudham Motihari - Anand Vihar (T) Amrit Bharat Express
7	22361/22362 Rajendranagar (T) - New Delhi Amrit Bharat Express
8	13433/13434 SMVT Bengaluru - Malda Town Amrit Bharat Express
9	13435/13436 Malda Town - Gomtinagar Amrit Bharat Express
10	15133/15134 Chhapra - Anand Vihar (T) Amrit Bharat Express
11	14047/14048 Sitamarhi - Delhi Amrit Bharat Express
12	14627/14628 Saharsa - Chheharta Amrit Bharat Express
13	19623/19624 Madar - Darbhanga Amrit Bharat Express
14	16601/16602 Erode - Jogbani Amrit Bharat Express
15	19021/19022 Udhna - Brahmapur Amrit Bharat Express
16	15671/15672 Kamakhya - Rohtak Amrit Bharat Express
17	20609/20610 New Jalpaiguri - Tiruchchirappalli Amrit Bharat Express
18	16597/16598 SMVT Bengaluru - Alipurduar Amrit Bharat Express
19	11031/11032 Panvel - Alipurduar Amrit Bharat Express
20	16107/16108 Tambaram - Santragachi Amrit Bharat Express
21	13065/13066 Howrah - Anand Vihar (T) Amrit Bharat Express
22	22587/22588 Sealdah - Banaras Amrit Bharat Express
23	20603/20604 New Jalpaiguri - Nagercoil Amrit Bharat Express
24	15949/15950 Dibrugarh - Gomti Nagar Amrit Bharat Express
25	16121/16122 Tambaram - Thiruvananthapuram Central Amrit Bharat Express

26	16329/16330 Nagercoil - Mangaluru Amrit Bharat Express
27	17041/17042 Charlapalli - Thiruvananthapuram North Amrit Bharat Express
28	16619/16620 Podanur - Dhanbad Amrit Bharat Express
29	16357/16358 Nagercoil - Charlapalli Amrit Bharat Express

These trains have following enhanced features and amenities:

- **Better aesthetics of seat and berths with enhanced look & feel on the lines of Vande Bharat Sleeper.**
- **Jerk Free Semi-Automatic Couplers.**
- **Improved Crashworthiness in coaches by provision of crash tube.**
- **Provision of CCTV system in all coaches.**
- **Improved designs of toilets.**
- **Improved design of Ladder for ease of climbing on to the berth.**
- **Improved LED Light fitting & Charging Sockets.**
- **Provision of EP assisted braking system.**
- **Aerosol based fire suppression system in toilets and electrical cubicles.**
- **USB Type-A and Type-C mobile charging sockets.**
- **Emergency Talk Back system for two-way communication between Passenger and Guard/Train Manager.**
- **Non-AC pantry with enhanced heating capacity.**
- **Fully sealed gangways with quick release mechanism for easy attachment and detachment.**

Namo Bharat Rapid Rail has been introduced to enhance the travelling experience of suburban and regional commuters for inter-city short distance movement by harnessing the features of Vande Bharat Trains.

Presently, 4 Namo Bharat Rapid Rail services are in operation on the Indian Railway network.

SN	Train Number and Name
1	94801/94802 Ahmedabad-Bhuj Namo Bharat Rapid Rail
2	94803/94804 Jaynagar-Patna Namo Bharat Rapid Rail

The prominent features of Namo Bharat Rapid Rail are as follows:

- **Centrally controlled Double Leaf Automatic Sliding Doors.**
- **CCTVs for safety and passenger surveillance.**
- **Modular interior with Cushioned Seats and Sealed Flexible Gangway.**
- **Emergency Talk back System.**
- **Continuous LED lighting with Energy Efficient Lighting system.**
