SECTION—I

Monthly Statistics Required From Government Railways

GENERAL INSTRUCTIONS

1. **Railway** systems have been classified for statistical purposes into:—

(*i*) **Government Railways.**—The Railways under the management of the Government of India, viz., Central, Eastern, Northern, North Eastern, Northeast Frontier, Southern, South Central, South Eastern and Western Railways.

(*ii*) **Non-Government Railways.**—The Railways which are not included in (*i*) above.

2. (*a*) **Except** in respect of earnings and working expenses, the statistics are to be compiled for rail-borne traffic only. One statement is to be furnished for all lines of the same gauge in each system, or for the system as a whole, as stated in the instructions for each statement. **Worked lines** are not to be treated as separate railways.

(*b*) **When earnings** in respect of new lines not opened throughout for traffic are credited to capital account (and, therefore, not included in the figures of earnings shown in the statistical returns), figures of tonne kilometres, train kilometres, vehicle kilometres, passenger kilometres, fuel and oil consumption, etc., relating to such lines should not be included in the statistics.

3. **Figures** for the **full calendar month** are to be included in the monthly statements.

4. **When** any items are not appropriate, or when there has been no work done during the month, the word 'nil' is to be entered againsd such items.

5. **Except** where otherwise stated, all **results** are to be worked out correct to one place of decimal, but those which are less than ten should be worked out correct to two places of decimal.

6. **Rounding off of kilometres.**—Kilometres are to be rounded off to the nearest kilometre at the conclusion of each trip; a trip for this purpose being the throughout journey of an engine in one direction with one class of traffic. Similarly, in working out vehicle kilometres, tonne kilometres, passenger kilometres, etc., the distance between pairs of stations should be rounded off.

7. **Rounding off of amount.**—The fraction of a rupee in freight is to be rounded off to the nearest rupee.

8. **Whenever** any results are calculated on a **percentage** or **average basis** such percentage or average should be fixed on the figures of at least three **representative** months of the year, and should be rechecked at the end of every financial year, or earlier, as soon as any change occurs in the rates, or in the type of traffic, etc., on which the percentage or average basis was fixed.

9. **Cumulative figures** are to be given in all cases, except where it is expressly stated in the detailed instructions that cumulative figures are not required. Cumulative averages are to be worked out from the cumulative figures of fundamental units, and not by adding the average for two or more months and dividing by the number of months.

10. **Adjustments**, i.e., rectification of errors, in the figures of previous months are not to be included in the figures for the month covered by a report, but in the cumulative figures for the period ending with that month. The amount of adjustments so included is to be stated, with suitable explanatory details, in a footnote on the face of the report, or in an attached memorandum. When, however, for unavoidable reasons, the transactions of a month are accounted for by the Audit or Accounts Department in a subsequent month, the statistics thereof should be included in the same month in which the earnings in their connection are accounted for.

11. **When** a railway in exercise of running powers, or under other arrangements, runs its trains on sections owned by another railway by its own engines and crew, the train and engine performance as well as fuel consumption statistics will be included in the statistics of the using railway, but for purposes of deriving density statistics, the using railway will intimate all these statistics to the owning railway; particulars being shown in footnotes on each railway's statements against the items concerned. The accountal of earnings and expenses will, however, be governed by the extant orders on the subject.

12.—Deleted.

13. When a railway has running powers over certain sections of another railway but the trains of the railway having running powers are not worked by its own engine over such sections, but by the engines of the other railway, the relevant statistics will be accounted for as under :—

(*i*) The railway exercising the running powers *will include* in its statistics:—

(*a*) the train and engine kilometres,

(*b*) the train and engine hours, and

(*c*) the engine tare tonne kilometres,

but *will exclude* these while compiling—

(*a*) fuel consumed per engine kilometre,

(*b*) litres of oil consumed per 100 engine kilometres,

(*c*) fuel consumed per 1000 gross tonne kilometres, and

(*d*) engine kilometres per engine failure.

(*ii*) The railway supplying the engine *will include* in its statistics:—

(*a*) the accountal of engines against items 1 to 8 of Statement No. 4-A-Rolling Stock (Locomotive) performance,

(*b*) engine failures—number,

(*c*) fuel and oil (kilolitre) consumed, and

(*d*) the relevant engine kilometres while compiling—

engine kilometres per day per engine in use on the relevant service, in use—total, all services, and on line;

engine kilometres per engine failure

fuel consumed per engine kilometre,

litres of oil consumed per 100 engine kilometres, and

fuel consumed per 1000 gross tonne kilometres,

but *will exclude* –

(*a*) the train and engine kilometres,

(*b*) the train and engine hours, and

(*c*) the engine tare tonne kilometres.

(*iii*) The railway exercising the running powers *will also include* :—

(*a*) coaching vehicle kilometres, wagon kilometres and brake van kilometres.

(*b*) tare tonne kilometres of coaching vehicles, wagons and brake vans,

(*c*) net or freight tonne kilometres, and

(*d*) passenger kilometres.

but *will exclude*—

(*a*) these gross tonne kilometres when compiling "fuel consumed per 1000 gross tonne kilometres", and

(*b*) these net tonne kilometres while compiling "net tonne kilometres per goods locomotive day on the line/in use".

The railway supplying the engine will act in the reverse way.

When a railway by arrangement has supplied engines to work other railway trains on sections owned by the latter railway (i.e., where formal running powers are not exercised), the working of such engines may also be accounted for as laid down above.

Both railways should explain in suitable notes against the items concerned as to which figures have been included or excluded in accordance with these instructions.

14. A train is an engine, tender and brake van, with one or more vehicles attached.

NOTE.—A rail omnibus (an engine and a carriage) run for carrying passengers is also to be treated as a train.

15. **Rail cars** (internal combustion engine propelled) (with or without trailers) are not to be treated as trains; their kilometrage is to be shown separately.

NOTE.—For definition of Rail cars see instructions for item 10 of Statement No. 4-B.

16. **An assisting required engine** is an engine which is attached to a train for banking or assisting purposes.

17. **An assisting not required engine** is an engine, running under its own Power attached to a train to prevent its running light, and which is not required for banking or assisting purposes.

18. **A light engine** is an engine and tender, with one or more brake vans attached to it.

NOTE.—When two engines, coupled together, are running light under their own power, double light engine kilometres are to be taken.

19. (*a*) A **double engine train**, i.e., a train running with two engines, each under its own power, is to count as so many train kilometres, and an equal number of assisting required, or assisting not required engine kilometres as the case may be.

(*b*) When, however, one of the engines is **dead**, no engine kilometres are to be taken for it, but for the purpose of gross tonne kilometres, the average weight of engines belonging to that class and gauge is to be taken as weight of dead engine.

20. **Passenger train kilometrage** is to include the kilometrage of:

(*a*) trains scheduled to convey passengers or other traffic booked at coaching rates, and

(*b*) empty trains running to provide necessary stock for passenger and other coaching traffic.

21. **Goods train kilometrage** is to include the kilometrage of:

(*a*) trains conveying traffic booked at goods rates, and

(*b*) empty goods trains.

22. **Mixed train kilometrage** is to include the kilometrage of:

(*a*) trains scheduled to convey passengers and other traffic booked at coaching rates, and also traffic booked at goods rates, and

(*b*) empty mixed trains.

NOTE.—The kilometrage of "mixed" trains is to be divided between "passenger" and "goods" in the proportion of the coaching (excluding brake vans) and goods vehicle kilometres run on them and the same proportion is to be applied for dividing the assisting required, assisting not required and light kilometrage of mixed service.

23. Whenever any **empty coaching vehicles**, not carrying or not intended to carry traffic at the time, are hauled by a goods train, such trains are to be reckoned as purely goods trains. Similarly, passenger trains hauling **empty goods wagons** are to be treated as passenger trains.

24. When **departmental vehicles** are run with ordinary trains, no deduction is to be made from the public traffic train kilometres on their account.

25. **Departmental train kilometrage** is to include the kilometrage of trains run for the Revenue or Capital works of an open line, and also of workmen's and inspection trains, pilot or patrol trains run in front of trains for the protection of the latter, etc. The kilometrage of trains referred to in this rule is to be shown separately only when entire trains are run on departmental account. Railway coal trains are, however, not to be treated as departmental trains but as public traffic trains.

NOTE.—Pilot engines which run for the protection of trains are to be included under "other engine kilometres—departmental" provided no charges are realised for running them. If charges are recovered, such engines are be treated as in para 18.

26. (*a*) **Empty stock specials.**—The train and vehicle kilometrage of empty stock specials proceeding to or returning from **shops**, is to be included under departmental kilometrage.

(*b*) When an empty stock special to and from **shops** carries both coaching and goods vehicles, the train and vehicle kilometrage thereof are to be treated as mixed departmental kilometrage.

27. **Engine with break-down train.**—No kilometrage is to be charged for this work beyond the kilometrage to and from the place of accident, and the kilometrage thus charged is to be treated as departmental. The vehicle kilometrage of such trains is also to be calculated and classified accordingly.

28. **Maintenance or ballast trains.**—(*a*) The kilometrage for ballast train for the Engineering Department for works charged to Capital and Revenue is to be calculated on a uniform rate of 13 kilometres an hour and for fractions thereof at the rate of one kilometre for every 5 minutes or part of 5 minutes, calculated from the time the train is booked to leave or the engine is put on to the train, whichever is later, to the time it is released therefrom. The Departmental engine hours for the purpose of item 5.06 of St. 2 is, however, to include the whole of the time the engine is in service counting from the time the engine left shed until it returned to shed on completion of its duty. The 'light running' of the engine between shed and station and vice versa before and after working the ballast train, will be accounted for in item 3.06 of St. 2, provided the distance is 1.6 kilometres or more. The minimum daily kilometrage is to be reckoned at 64 kilometres.

(*b*) When trains are run on open line for independent construction projects, they are to be treated as departmental trains and their kilometrage, etc., is to be accounted in statistics as for other maintenance or ballast trains eventhough such trains are owned and run by the construction department, or hire of stock and other charges in their connection are borne by the construction department. The kilometrage, etc., of trains run on unopened line is, however, to be excluded from statistics.

(*c*) The wagon kilometres of a ballast train are to be calculated by multiplying the ballast train kilometres by the number of wagons on the ballast train at the time it leaves the starting station.

(*d*) The tonne kilometres of ballast trains are to be calculated on the actual kilometrage run, and not on the uniform rate of 13 kilometres per hour. The actual kilometrage for this purpose will be the distance from the station from where the ballast train starts, to the further of the two stations between which it works, irrespective of whether the train works to the further station or not. If a train reaches the further station and returns, double kilometrage is to be taken. If, however, a train makes more than one trip between two stations without reaching the further station, only single kilometrage is to be taken, irrespective of the number of trips performed by it. In the case of ballast trains working in **station yards** or sidings, no tonne kilometres are to be calculated.

Example

A ballast train of 40 trucks leaves station A towards B, distance 13 kilometres. At 3.75 kilometres, 5 trucks are unloaded and the train returns to A with 35 loaded and 5 empty trucks. It leaves again, and unloads 20 more trucks 6 kilometres away and returns to A with 15 loaded and 25 empty trucks. Again the same day it leaves A with 15 loaded and 25 empty trucks, and unloads the 15 trucks at a distance of 7 kilometres and returns to the starting station with 40 empty trucks.

Taking the load of each truck as 4,000 kilograms, the tonne kilometres would be :—

$$\frac{13 \times 40 \times 4{,}000}{1{,}000} = 2{,}080 \text{ tonne kilometres.}$$

NOTE.—In the above example, if the train worked for 12 hours altogether, the wagon kilometres would be $12 \times 13 \times 40 = 6{,}240$ loaded wagon kilometres and no empty wagon kilometres.

29. (*a*) **The kilometrage of regular steam shunting engines** is to be reckoned at 8 kilometres an hour for the time engines used for shunting remain in steam for traffic purposes. The kilometrage for fractions of an hour for such engines is to be calculated at the rate of 1 kilometre for every 8 minutes, or part of 8 minutes.

(*b*) **The kilometrage of diesel/electric shunters** is to be reckoned at 12 kilometres an hour for the time the diesel/electric engines are used on shunting services. The kilometrage for fractions of an hour for such engines is to be calculated at the rate of 1 kilometre for every 5 minutes, or part of 5 minutes.

30. If a regular shunting engine works short trips with a train, such as workmen's train, or a **shuttle** service, beyond what are considered the limits of the traffic yard, credit is to be taken under **train kilometres** for the actual distance run, and the engine treated as train engine for the time so occupied.

31. (*a*) If a shunting engine is required for less than three hours, but the Loco Department have to be credited with a minimum allowance of three hours (vide para. 44), the time actually occupied in shunting and the extra time required to make up the minimum allowance should be entered separately in the Shunting Order and the Engine Ticket, the former being treated as shunting hours and the latter as Other engine hours (See para. 42)

(*b*) When a shunting engine is laid by in a traffic yard for short periods insufficient to justify the return of the engine to its shed, the time for which it is laid by should be treated as "shunting hours."

32. (*a*) **Shunting kilometrage of train engines.**—When shunting is performed by a train engine during the train run, the first fifteen minutes the engine is so employed are not to be reckoned, but for work extending beyond fifteen minutes and not exceeding thirty minutes, a certificate is to be granted by the Station Master for fifteen minutes shunting, and every or any portion of fifteen minutes in excess of thirty minutes is to be similarly treated.

(*b*) The booked time of stoppage of a train at a station is not to be taken into account when issuing shunting orders, i.e., even if the shunting is completed within the fixed time of stoppage of a train at a station, shunting order is to be issued if the time spent on shunting exceeds fifteen minutes. Time thus employed in shunting is to be converted into kilometres as for regular shunting engines.

33. Shunting by engines before and after working trains, is to be treated in the same manner as shunting by regular shunting engines, but the kilometrage is to be included in **train engine shunting.**

34. If the shunting has to be **stopped** owing to the reception of another train in the yard, etc., the broken period between the two periods of shunting is to be included in the shunting order, and shunting kilometres calculated for it.

35. If train engines are detained in the traffic yard, not for shunting purposes, after the arrival of the train, and **detention mema** issued, such mema are to be treated as shunting certificates, but the time is to be included under Other engine hours (See para. 42).

36. As a general rule, shunting kilometres should not be worked out for individual engines, but from the total of the shunting hours during the period concerned.

37. The rules in paragraphs 29 to 36 and 41 (*b*) and 41 (*c*) also apply to shunting engines working in **departmental yards** and on other departmental services.

38. Shunting done at joint stations is to be allocated to the railways using the joint station on the basis of the number of vehicles dealt with for each railway [See paragraph 41 (*c*).]

The relevant statistics will be accounted for as under :—

(*a*) All railways other than the railway supplying the engine will act in the manner detailed in Paragraph 13 (*i*) and

(*b*) The Railway supplying the engine will act in the manner detailed in Paragraph 13 (*ii*).

39. **Engine hours.**—Engine hours are to include all time of steam engines in steam and diesel and electric engines under their own power calculated from the time the engine starts from the shed at the commencement of its daily work till it returns to the same or another shed on completion of day's work.

In the case of diesel/electric engines, if they are not sent to the diesel/electric sheds on completion of the day's work for want of a shed or in the exigencies of work and are stabled in traffic yard, or sent to a shed other than a diesel/electric shed the whole period till they are employed on any service will be treated as idling and reckoned under 'Other engine hours', except when these engines get shed facilities. Further, when such engines which are surplus to traffic requirement but are fit for use and are stabled at specific sheds/out station points for a consecutive period of 12 hours or more, the first twelve hours in such cases will be reckoned under 'Other engine hours'.

Note.—Engine hours of mixed service, except in the case of shunting, are to be divided between coaching and goods in the same proportion as mixed train kilometres.

40. **Train engine hours.**—Train engine hours are to show the hours during which engines are employed on trains, counting in each case from the time the engine starts with the train, until it reaches the station at which engine terminates its run with the train. The time occupied in halts at stations is to be included, but that occupied in shunting *en route* is to be excluded and shown under shunting hours.

Note.—A train on changing its classification *en route*, without changing its engine is to be considered a new train for the purpose of calculating Train engine hours.

41. (*a*) **Shunting hours** are to include the time occupied in shunting by regular shunting engines and by train engines before and after working a train, as well as during the train run. Similarly **shunting kilometres** are, to include all shunting, whether performed by regular shunting engines, or train engines before and after working trains, or during the train run.

(*b*) The division of shunting hours of regular shunting engines and train engine shunting before and after working trains between coaching and goods is to be fixed for each yard on a percentage basis, after an examination of the work done, and this percentage is to be revised from time to time, as laid down in paragraph 8 of the General Instructions. Where, however, daily records are kept of the working of shunting engines according to hours spent in shunting (*i*) coaching vehicles and (*ii*) goods wagons, the actual time spent on each is to be allocated to the service concerned.

(*c*) Shunting hours of engines shunting during the train run are to be apportioned to goods and coaching according to the number of goods and coaching vehicles shunted. For example, if 5 hours are used to shunt 100 vehicles as under :—

30 Passenger vehicles for passenger trains,
20 Goods vehicles for mixed trains,

10 Passenger vehicles for mixed trains,
40 Goods vehicles for goods trains,

the total shunting hours will be divided as follows :—

Passenger	..	.. 1.5 Shunting hours.
Mixed ..	Passenger proportion	.. 0.5 Shunting hours.
	Goods proportion	.. 1.0 Shunting hours.
Goods	..	.. 2.0 Shunting hours.
	Total	.. 5.0 Shunting hours.

42. **Other hours** are to include all time of steam engines in steam, except when occupied on train service, shunting or siding. The time occupied by light, assisting required and assisting not required engines is also to be included under this head. In respect of diesel and electric engines, this will include time of availability of engines in the Traffic Department, other than in train, light, assisting required, assisting not required, shunting and siding services. (see also paras 35, 39, 43 and 44).

NOTE.—The time taken by an engine in travelling between shed and station is also to be included under other engine hours. If possible the actual time from and to shed should be taken, but if on account of local conditions this is not practicable an approximate time which an engine would ordinarily take to travel between shed and station and in waiting before the departure of a train, should be fixed for each shed and that time should be included under Other engine hours. If the engine is kept waiting on account of its train starting late or on account of the line being blocked while returning to shed, the actual extra time should also be taken into account.

43. When steam engines with **banked fire** and diesel or electric engines are stabled for short periods between trips, the time of stabling whether in a shed or outside it, is to be included under "Other engine hours" provided the crews are paid for these periods. If however, a steam engine with banked fires and diesel or electric engine is in shed (for that traction) in charge of the shed staff, such time should not be included in the "Other engine hours" (See also para 39 and detailed instruction for Monthly Statement No. 4-A).

44. If any engine is lighted up by order of the Traffic Department, **but not used for less than three hours** a minimum allowance of three hours is to be made to the Locomotive Department and included under Other engine hours. (See also para. 31).

45. No record is to be kept of the time occupied in **lighting fires**, or for engines employed in marshalling engines, except whole-time shunting engines employed in Locomotive yards, or for other 'purposes within the limits of the Locomotive yards.

46. As a general principle, the **allocation** of engine hours to each service is to follow the engine kilometres i.e., the service for which a light, or assisting not required, engine is sent to work, or has worked, is to determine the allocation.

47. When an engine is occupied on **more than one class** of services in one turn of duty without break, the time at which the engine ceases duty with one service is to be the commencing time for changing to the succeeding service.

48. When the figures of vehicles, wagons, electric motor coaches or trailers are to be shown in terms of four-wheelers :—

A six-wheeler	= 1.5 four-wheelers.
A bogie	= 2 four-wheelers.
A twelve-wheeler	= 3 four-wheelers.
A bogie open high capacity B. G. Wagon BOBX type (combined central and side discharge)	= 3 four-wheelers.
A bogie open high capacity B. G. Wagon BOBS type (side discharge and inclined floor)	= 3 four-wheelers.
A bogie open high sided B. G. Wagon of high capacity BOX type	= 2.5 four-wheelers.
A bogie open high sided B. G. Wagon BKCX type	= 2.5 four-wheelers.
A bogie ballast hopper B. G. Wagon BOB type	= 2.5 four-wheelers.
A bogie Rail high capacity B.G. Wagon BRS/BRH type	= 2.5 four-wheelers.
A BMKM type B. G. wagon	= 2 four-wheelers.
A bogie open "Gondola" B.G. Wagon of high capacity "BOI" type for iron ore	= 2.5 four-wheelers
A bogie hopper B. G. Wagon KOH/BKH Non-IRS type (carrying capacity 65 tonnes)	= 3 four-wheelers.

Type	*Carrying capacity (Tonnes)*	*Will be equated to*
BWL ..	50	2 four-wheelers.
BWT ..	55	2.5 four-wheelers.
BWH ..	90	4 four-wheelers.
BWS ..	130	6 four-wheelers.
BCX ..	55.37	2.5 four-wheelers
BOY (bogie open B. G. wagon).	71.6	3 four-wheelers.
CRT (4-wheeler covered B. G. wagon).	27.54	1 four-wheeler.
BFKX (bogie container flat).	45.2	2 four-wheelers

49. **Trailers** attached to ordinary or inspection trains are to be treated as ordinary vehicles.

50. The instructions in the preceding paragraphs should be read with the detailed instructions laid down for compiling each item of the monthly statements and *vice-versa*. All **doubtful** cases as well as those not provided for herein, should be referred to the Railway Board for orders.

विवरण 1-क
Statement I-A

रेलवे बोर्ड
RAILWAY BOARD

.....रेलवे
RAILWAY

(रिपोर्ट भेजने वाली रेलवे का पूरा नाम)
(Full name of reporting Railway)

बड़ी लाइन
Broad Gauge
मीटर लाइन
Metre Gauge

(सवारी गाड़ियों का कार्य-निष्पादन)
PASSENGER TRAIN PERFORMANCE

(समय पालन के आंकड़े)
(*Punctuality Statistics*)

मास.....19 के आंकड़े मास.....19 की तुलना में

For the month of .....19 , compared with the month of..... 19

नोट—प्रमाणित किया जाता है कि अलग अलग गाड़ियों का समय-पालन दिये गये आंकड़ों के अनुरूप है जैसा कि गार्ड के जरनल में दर्शाया गया है। लापता जरनलों का प्रतिशत.....है।

N.B.—Certified that the figures reported are in consonance with the punctuality performance of individual trains as indicated in the guards' journals. The percentage of missing journals is .....

मद Item	19...	19...
1	2	3
. सवारी और मिलीजुली गाड़ियों का चालन (यातायात)– Running of passenger and mixed trains (Traffic)–		
(क) डाक और एक्सप्रेस गाड़ियां– (*a*) Mail and express trains–		
1 01 चालित गाड़ियों की कुल संख्या .. Total number of trains run.		