Facts and Figures about British Railways

1958 staff edition

Contents

Foreword

This booklet is especially designed to give you, the members of the staff of British Railways, the principal facts and figures about our industry.

Statistically, this edition of the Facts booklet deals mainly with the year 1957. In that year good progress was made with the Modernisation Plan and with various schemes of reorganisation in British Railways. In many important ways modernisation was, in fact, well ahead of the timetable forecast when the Plan was first launched in 1955. The Plan is being pressed forward with vigour and you will find in the pages which follow details of the main achievements and the way the Plan is going.

As well as presenting the facts about British Railways, many other aspects of railway policy, finance and working are dealt with. In giving you an over-all picture of our industry it is hoped that, besides being of interest to you personally, it will also be found useful to those of you who come into contact with the public, in answering criticisms and in meeting genuine requests for information.

The years ahead will be difficult years. They will be fighting years; fighting for traffic, fighting to get the last ounce out of each piece of equipment, fighting to deploy our own efforts in the most effective way. But there is a worthwhile prize at the end – a system of railways second to none in the world, doing the job it is best equipped to do.

Where British Railways stand

It is important that all who work for British Railways should appreciate where our industry stands today in the country's transport set-up.

Let us say for a start that British Railways are a truly national service. They provide a nationwide service for the transport of people and goods. For passengers the service operates on every day of the year; for goods on every working day. No other transport service gives the same national coverage for both passengers and freight. There are many jobs the railways do that no one else could do – coping with suburban passenger traffic; transporting holidaymakers in vast numbers at Bank Holiday weekends and in the peak summer months; distributing over 70 per cent of the deep-mined coal needing transport; transporting millions of tons of raw materials for industry.

Operators of road vehicles are increasingly serious competitors. On the freight side, C-licence vehicles have topped the million mark for the first time. These are the vehicles run by firms to carry their own products. The smaller ones are mainly light delivery vans but there is no doubt that most of the larger vehicles are carrying goods that once went to rail. On the passenger side there is increasing competition from private cars and from small-engined motor cycles, scooters and from air transport.

Despite this growth in road transport, the railways remain the backbone of the country's transport system; they are essential to its economy and to the social life of its people. British Railways stand as a great enterprise, carrying over 1,000 million passengers a year and nearly a million tons of freight every working day. They give employment to more than half-a-million people and, indirectly, through orders for materials and equipment placed with outside industries, to many thousands more.

You and the future

Throughout the country more and more railwaymen and women will have been able to see for themselves that the Modernisation Plan is really beginning to get into its stride.

The Plan, launched in 1955, aims at producing a railway system second to none in the world. National financial difficulties slowed up some of the projects, but now the Plan is going forward, with all the vigour and drive that can be put behind it.

The increasing activity in the field of road transport previously referred to, represents a change in the pattern of the nation's transport. The pattern of the kind of transport we are concerned with is changing too. All the new machines, equipment and plant coming into use represent change – change that will affect most members of the staff.

It is of the utmost importance for the success of our industry in meeting the challenge of the roads, and in getting the utmost benefit from the Modernisation Plan, that we should all be ready to scrap old ideas and adopt new ones – in fact to match physical modernisation with a modern way of thinking and acting.

How British Railways are run

British Railways are divided into six Regions: Eastern, London Midland, North Eastern, Scottish, Southern and Western. In each Region there are departments which can be classified under the headings: service, administration and technical. Reorganisations have been made, or are being made, under which the service departments – Commercial, Operating and Motive Power – are combined in a single Traffic department. The new Traffic department will thus not only be responsible for getting business, it will also be responsible for carrying the traffic, and for providing the

motive power. The administration departments, in addition to general management, are Establishment & Staff, Finance, Public Relations & Publicity, and Estate & Rating. The third group covers the technical departments: Civil, Mechanical & Electrical, Carriage & Wagon, Road Motor and Signal & Telecommunications engineering. Here again reorganisation is being carried out so that there will be only three engineering departments, instead of five.

At the head of each Region is the General Manager, who is responsible for the day-to-day running and for co-ordinating the work of all departments.

Responsible for the overall direction and area policy of the railways in each Region are the Area Boards, composed of men of great industrial, trading and financial experience. They are the on-the-spot representatives of the British Transport Commission. The General Managers of the Regions, and through them their officers, are responsible each to his Area Board.

At the top is the British Transport Commission, which as a corporate body decides the policy for British Railways as a whole. The Commission are responsible not only for the railways but also for the other Divisions and activities of British Transport – British Road Services, London Transport, the Docks, the Waterways, the Hotels & Catering Services, and the Tilling and Scottish Bus Groups.

The British Railways Division is by far the largest of the Commission's activities. The Commission's headquarters organisation includes Advisers and specialist officers who advise the Commission on matters of policy affecting all Regions.

All Divisions and activities need certain specialist services performed for them on a 'common user' basis. This need is met by the Central Services which cover such matters as Legal, Police, Research, Stores, Paper & Printing, Films, Commercial Advertising, and Records and Relics.

You and Your Colleagues

The total staff of British Railways at the end of 1957 was 573,499, of whom 33,842 were women. The principal groups are administrative, technical and clerical (75,594); guards, signalmen, shunters, porters, ticket collectors, etc. (108,130); drivers, firemen, motormen and cleaners (83,157); goods and cartage (50,064); permanent way (50,801); and workshops (128,275). Among the staff of British Railways are representatives of a large proportion of all the trades and professions and some, such as locomotive drivers, signalmen, lengthmen, which are peculiar to railways.

Trade Unions

The following trade unions are concerned with the principal sections of the staff of British Railways (i.e., salaried, conciliation and workshop staff).

Section of Staff	*Trade Unions*
Salaried staff (clerical and administrative), in receipt of salaries up to £985 a year	Transport Salaried Staff's Association (TSSA) National Union of Railwaymen (NUR) Associated Society of Locomotive Engineers & Firemen (ASLE & F)
Conciliation staff (other than footplate staff and locomotive shed staff)	NUR
Conciliation staff (footplate staff and locomotive shed staff)	ASLE & F NUR
Workshop staff	NUR Confederation of Shipbuilding & Engineering Unions (CS & EU)

The senior staff – those with salaries above £985 up to £2,230 a year – are covered by a Joint Committee on which they are represented by the British Transport Officers' Guild (BTOG) and TSSA.

The Management and You

The railway Machinery of Negotiation and Consultation between management and staff is one of the most comprehensive in the country. Its structure has been carefully built up on two principles; first, that every grade of employee should have, through freely elected representatives, a point of contact with management, and that matters of common interest and concern should be considered at the appropriate level. The latter principle has a twofold purpose. It avoids clogging the machinery at the top with a lot of detail, and, at the other end of the scale, prevents local committees wasting time in discussing problems they have not the power to settle. On the other hand, local matters that can be settled locally can be resolved without delay.

Machinery of Negotiation

The purpose of the Machinery of Negotiation is to consider and to deal with matters relating to salaries and wages, hours of duty and conditions of service.

Various bodies have been set up in agreement with the trade unions for salaried and for conciliation staff. *Local Representatives* are elected to deal with local matters at places where there are less than 50 staff. *Local Departmental Committees*, composed of four staff and four management representatives, cover places where more than 50 staff are employed. They deal with local working conditions and arrangements but are not empowered to deal with anything that contravenes national agreements. The next 'step up' is the *Sectional Council*. There are five of them in each Region. Each is composed of not more than 12 persons representing the staff and the same number representing management. They deal with the application of national agreements.

The first body to deal with these matters at national level is the *Railway Staff Joint Council*, of which there are four sections: salaried, locomotive, traffic and general. If major issues cannot be agreed by this body they are referred to the *Railway Staff National Council.* This is composed of eight representatives of unions (4 NUR, 2 ASLE & F, 2 TSSA) and eight representatives of management.

The final arbitrators in the Machinery of Negotiation are the *Railway Staff National Tribunal.* It consists of three members: one nominee each from the railways and the unions, selected from a previously nominated panel, and a chairman. The chairman is either appointed by agreement or is nominated by the Minister of Labour & National Service after consultation with the parties. The members of this impartial Tribunal are appointed for a particular issue, and the chairman may be appointed similarly or for a term.

Separate arrangements exist for other sections of the staff – railway workshops, electrical, workshop supervisory and professional and technical staff. While not on exactly the same lines, they are similar in principle to those outlined above.

Joint Consultation

Very simply, Joint Consultation is a means by which representatives of all who work on British Railways can get together round a table and exchange ideas on the working of the industry and the best and most satisfactory ways to get things done.

In order to give full weight to the importance attached to Joint Consultation, the British Transport Joint Consultative Council was formed. It acts in an advisory capacity. It is composed of members of the British Transport Commission, representative members from each of the

Commission's undertakings (British Railways, British Road Services, the Tilling and the Scottish Bus Groups, the Docks, the Waterways, Hotels & Catering, and London Transport) and representatives of the NUR, the ASLE & F, the TSSA, the Transport & General Workers' Union, and the Confederation of Shipbuilding & Engineering Unions.

The British Railways Productivity Council, to which reference is made later, also plays an important part in Joint Consultation at National level.

For convenience, the same representatives who deal with matters connected with the Machinery for Negotiation also deal with Joint Consultation.

There are also arrangements for consultative meetings between Regional headquarters and the headquarters of the union or unions concerned.

Training and Education

Opportunities for training and education are today more numerous than ever. Besides residential colleges and works training and other vocational schools, there are a variety of ways in which railwaymen and women can learn more about their jobs or about railway transport in general.

Evening classes covering a variety of subjects are organised. Subject to satisfactory attendance, British Railways refund fees paid to Local Education Authorities for courses appropriate to the railway job the individual is doing. For staff unable to attend railway evening classes, correspondence courses are provided; where it is not possible to attend Local Educational Authority classes, correspondence fees may be refunded.

The training and educational programmes naturally reflect the need for up-to-date knowledge about the modern equipment coming into use as a result of the Modernisation Plan. A wing at the Derby College, for instance, gives

instruction in the operation and maintenance of diesel engines. The recruitment and training of engineers – civil, mechanical, electrical and signal – has been intensified, and among the special provisions is a Sandwich Course for engineering students and selected apprentices in mechanical and civil engineering.

Films and filmstrips, produced by British Transport's own Film Unit, are widely used for training purposes.

A British Railways Joint Training & Education Advisory Committee, established in 1949 and consisting of representatives of the management and of the unions, keeps this important subject under review and advises about matters concerned with it.

Productivity

The British Railways Productivity Council was set up in 1955. Fierce competition from other forms of transport and the impact of the Modernisation Plan have made it imperative that the railways should be run with the greatest possible efficiency. The Council was established to consider ways and means in which this could be achieved.

The Council have publicly emphasised that they are convinced that a sense of confidence through the staff is essential to progress. The management and trade union representatives who serve on the Council are alike agreed that 'planned productivity through work study can play an important part in increasing efficiency on British Railways'.

During 1957 plans for the application of Work Study techniques in British Railways developed rapidly. A Work Study Training Centre was started at The Grove, Watford, where courses are run designed to provide a thorough grounding in Work Study for those who are either to organise or direct Work Study activities.

Work Study schools have been established in each of the Regions. Grades for which these schools cater include station, yard and locomotive-shed masters; inspectors, foremen, draughtsmen; clerical staff and comparable grades, some of whom will be employed full-time in Work Study activities. Staff representatives who serve on Sectional Councils or LDCs are also invited to attend.

Many Work Study schemes are already in operation, and more are being investigated. Work Study people say that the activities of British Railways represent one of the richest fields for Work Study that could be found.

For Your Welfare

Determined efforts are being made to improve working conditions for railway staff. The task is a tremendous one. The early development of the railways means that many structures, erected over 100 years ago, cannot be considered adequate in the light of modern conditions. One of the first jobs of the Joint Advisory Council for Welfare, consisting of 18 members drawn from the railways, the three railway unions and the Railway Shopmen's National Council, was to agree and set out standard amenities which would apply in all modernised and new buildings. The Welfare Council keeps under constant review the general welfare of all grades of the staff. This includes, in addition to amenities in staff premises, canteens, hygienic facilities, the welfare of women and junior staff, social and recreational facilities, accident prevention and first aid.

Welfare officers, for both men and women, are employed in all the Regions, as also are medical officers.

Railwaymen and women continue to show a keen interest in first aid. In 1957 over 21,000 passed examinations in this subject; nevertheless, recruits are still wanted. Competitions are held annually and culminate in Regional and National

finals. The winners, and runners-up compete with teams drawn from other major industries and services for the Grand Prior's Trophies of the Order of St John.

The British Railways Staff Association caters for the social, sporting and recreational leisure-time activities of the staff. Membership at a cost of fourpence a week (which can be deducted through the paybills) is open to all grades of the staff; this subscription also covers wives and children. Retired staff and widows of former staff can join. The Association also organises sporting and other events on an area, Regional and inter-Regional basis covering such interests as football, cricket, shooting, golf, drama, and arts and crafts. International events against railwaymen of other countries are organised through the Union Sportive International des Cheminots. Free travel and time off is arranged for contestants in Regional, inter-Regional and approved international events.

Keeping You 'In the Picture'

As the staff are scattered throughout the length and breadth of the land, it is particularly important that they should be kept informed of the latest progress and developments within the industry. In addition to personal contacts between local representatives of management and the staff, information is also supplied through meetings for Joint Consultation.

By far the largest amount of information is, however, transmitted through the printed word and through the medium of the film. The *British Railways Magazine* is printed in six editions, one for each Region of British Railways. It is sold for 3d. a copy. A monthly wall sheet, *Staff News*, exhibited on notice boards throughout most Regions, gives the latest information about modernisation projects. For the more serious students of transport, the

British Transport Review, published three times a year at the nominal charge of 1s. a copy, includes articles by eminent authorities in the field of transport generally. Each year the British Transport Commission make a report to the Minister of Transport & Civil Aviation. The main contents of this report are conveyed to the staff by the issue of a newspaper-style publication called *Transport News*. An abridged version of the Report is also made available to any of the staff who want it.

In addition to these regular publications, messages, leaflets and booklets on various subjects are issued for the information of the staff on a variety of subjects from time to time.

Films have been used for many years for the purpose of giving members of the staff graphic pictures of the activities and progress of the railways. Film shows are organised in all the big railway centres, to which railwaymen, their relations and friends are invited.

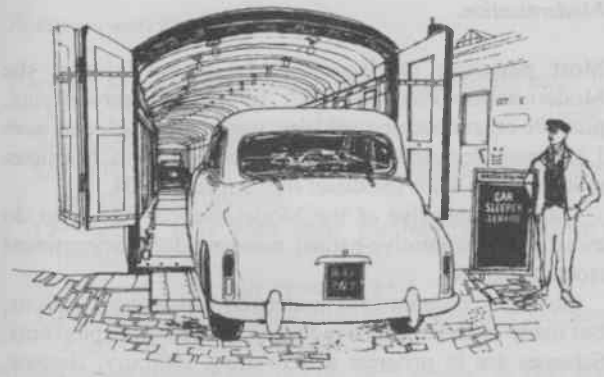
Passenger Services

Trains

Over 23,000 trains run each weekday.
Over 1,000 million passengers carried in a year.
Passenger services are continually being improved. In the summer of 1958 197 trains were speeded up giving from 10 to 165 minutes saving in journey times. Start-to-stop runs at 60 mph or over totalled 119; 35 more than in the previous summer.

Charges

The average fare per passenger mile is just over double the pre-war charge; few things have gone up less.



Luggage

Free Allowance is 100 lb second class, 150 lb first class for ordinary, circular-tour or season-ticket holders. Luggage can be sent in advance at cheap rates.

Safety

No passengers were killed in train accidents in 1954 and 1956. Between 1943–1956 passengers travelled 782 million miles for each fatality in train accidents.

Parcels

British Railways nationwide parcels service last year handled 82½ million consignments.

Carriages

British Railways own 41,827 passenger-carrying vehicles providing seats and berths for 2,446,284 people. They operate 467 sleeping cars with 8,796 berths.

Most passenger carriages will be renewed under the Modernisation Plan. In 1957, 1,964 passenger-carrying, plus 596 other coaching vehicles, were built. Included were 1,337 main-line carriages of all-steel construction. Multiple-unit carriages built for diesel trains totalled 904.

Ultimate objective of the Modernisation Plan is to do away with locomotive-hauled non-corridor compartment stock altogether.

Plans have been made to modernise 50 passenger stations, but many of them will have to wait because of capital cuts. Schemes are in progress at Coventry, Banbury, Barrow, Plymouth, Chichester, Weymouth, Swindon and Huddersfield. A large number of stations are being improved by repainting, good lighting, better amenities particularly waiting rooms, up-to-date booking and enquiry offices, modernised buffets.

Passenger-carrying Figures

Here are some figures about journeys passengers made in 1957:

300 million travelled at full fares

325 million were at fares of other descriptions, most at less than the full fares

139 million were with early morning or workmen's tickets

312 million were with season tickets

1,076 million was the total number of passenger journeys originating on British Railways.

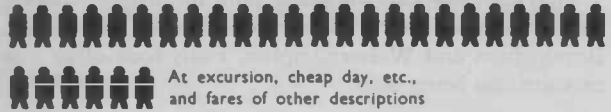
The average amount received for each journey in 1957 was 2s. 6¼d. For each mile it was 1½ pence. Before the war the figures were 11¼d and ¾d, so people on average are travelling farther. The amount per mile bears out that fares are little more than double pre-war.

Out of every 100 passengers who travelled on British Railways in 1957 there were:

At full fares

At early morning fares

At season ticket rates



At excursion, cheap day, etc., and fares of other descriptions

Hotels & Catering

British Transport Hotels & Catering Services is the largest concern of its kind in Europe, with a turnover (1957) of nearly £22 million. They operate 36 hotels, refreshment services at 370 stations and 716 restaurant cars on regular summer trains. Restaurant cars, cafeteria cars or compartment service is also provided on 13,000 special trains each year. During 1957 11¼ million set meals were served in railway catering vehicles.

Modernised refreshment services were last year introduced at Barrow, Chester, Crewe, Waterloo (Horseshoe Bar), Inverness, Sheffield Victoria, Southampton Central, Southend Central, Taunton, Plymouth and Blackfriars High Level. The tea room at Perth was also modernised.

A new kind of miniature buffet, built centrally in an ordinary second-class open passenger carriage was developed in 1957. Twelve vehicles are being equipped with these buffets so far.

Hotels & Catering Service laundries handle nearly 35 million pieces of linen a year.

Pullman Car Services

The Pullman Car Company own and operate 204 Pullman cars on British Railways; 38 are all-electric operating in the Southern Region; 166 are steam-hauled operating in Regions other than the London Midland. Also operated in the Southern Region are 46 non-supplement buffet cars. There are 12 all-Pullman car trains. During 1957 1½ million passengers travelled in Pullman cars and nearly four million meals and light refreshments were served.

Thirty-six new cars are being built for five new diesel-electric trains which will serve London, Bristol, Manchester, Birmingham and Wolverhampton. Forty-four other new cars are also being built.

Freight Services

In 1957 British Railways carried 274 million tons of freight – nearly a million tons every normal working day of the year. This total was made up of 42 million tons merchandise and livestock, 65½ million tons minerals and 166½ million tons coal-class traffic. The merchandise and livestock carried was nearly a million tons less than 1956 and over five million tons less than in 1938.

Some of the principal commodities carried in bulk in 1957 include over 18½ million tons of iron ore, 22½ million tons of iron, steel and scrap, over 2¼ million tons of manure, 8 million tons of lime and limestone and nearly 4 million tons of pig iron.

Of the total freight traffic carried about 15 per cent was merchandise and livestock, 24 per cent was minerals and 61 per cent was coal and coke.

The 1957 net ton-miles (tonnage multiplied by distance carried) at 20,878 million was greater than the highest figure achieved between the wars. The average lengths of hauls were just over 130 miles for merchandise and livestock, 72 miles for minerals and 55 miles for coal-class traffic.

On average, for all traffic, British Railways earned a little over 3¼d for each ton carried one mile.

Every 100 tons of traffic carried on British Railways in 1957 was divided into these categories :

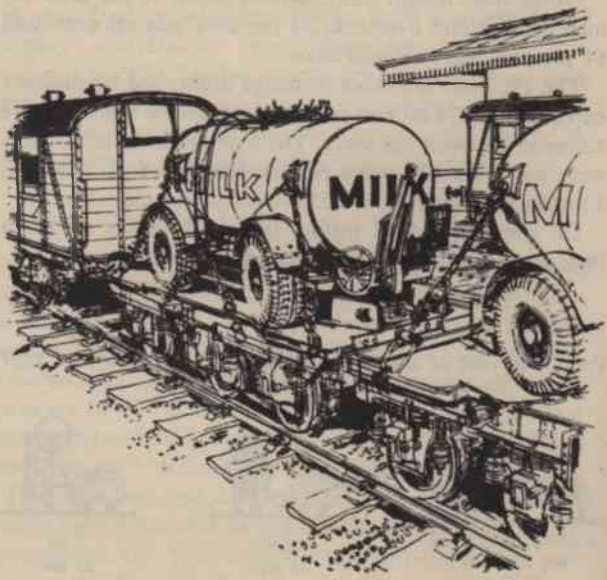
General Merchandise and Livestock
15 tons

Minerals
24 tons

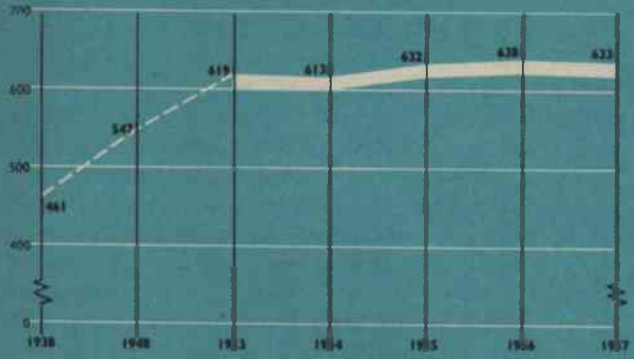
Coal
61 tons

Modernisation of marshalling yards is being pressed forward. Plans provide for 27 new yards and improvements to 26. Against these, 158 yards are scheduled for closing and 37 for partial closing. The new and improved yards will be equipped with the latest mechanical and electronic contrivances to speed the handling of wagons. New yards have been completed at Alloa and Thornton; work is in progress at Temple Mills, Ripple Lane (Barking), Millerhill (Glasgow) and Port Talbot (Margam).

Many freight depots are scheduled for modernisation but here again financial difficulties will slow up the work.



Net Ton-Miles per Total Engine-Hour



Express Freight Trains—Daily Average Number

Express Freight Trains

At the end of 1957 there were 223,000 freight-carrying vehicles fitted with continuous brakes. By the end of 1959 the figure will have grown to 337,000.

British Railways are now running 756 express freight trains each day, over 450 more than before the war. The diagram illustrates the way the services have developed.

Since its introduction in 1956, the Export Express Service giving assured next-day service to full-load export traffic from important industrial centres to the principal London docks, has been extended to embrace still more centres and to include the docks at Liverpool, Manchester and Hull. There is an assured next-day service in Scotland between Glasgow, Dundee and Aberdeen and most Regions are now issuing public freight timetables. The 'Green Arrow' Service, for registered transits, has been extended to cover full-load consignments, anywhere in Britain.

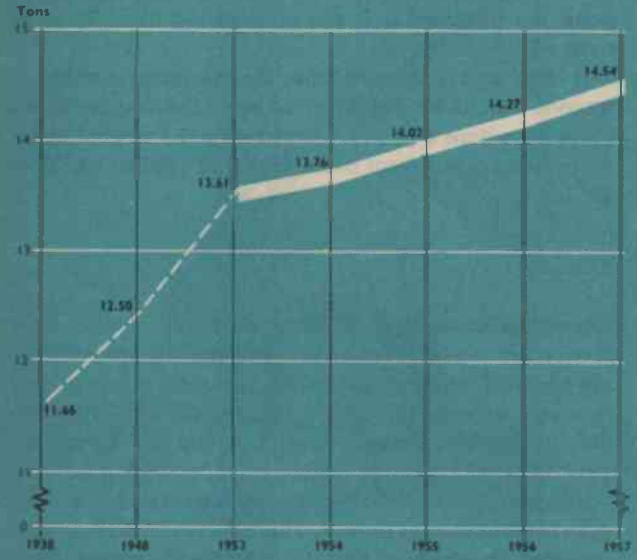
Wagons

Nearly 1,090,000 wagons with a capacity of nearly 16 million tons are owned by British Railways. They include 301,901 open merchandise type, 149,799 covered merchandise, 571,553 mineral, 9,960 cattle trucks, 56,901 rail timber and special wagons. In addition there are a number of brake vans and service vehicles.

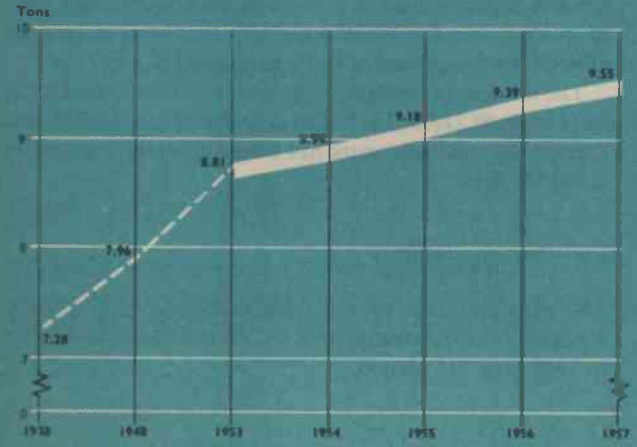
New wagons built in 1957 totalled 59,687 of which 33,024 were all-steel 16-ton coal wagons. At the end of the year there were 305,000 of these wagons in service. Among the larger wagons built were 4,566 hoppered wagons with a coal-carrying capacity of 21 tons. Also included were 1,303 25½-ton iron ore wagons and 534 of 33-ton capacity.

It will thus be seen that bigger wagons are being built today. The average capacity has gone up from 11½ tons in

Wagons—Average Capacity



Wagons—Average Load at Starting Point



1938 to 14½ tons in 1957. The average load at starting point has increased over the same period from 7¼ to 9½ tons.

It is, of course, essential that the maximum number of wagons should be available for use. The wagon repair shops have done a good job in reducing the number under or awaiting repair from over 115,000 in 1948 to 63,389 in 1957.

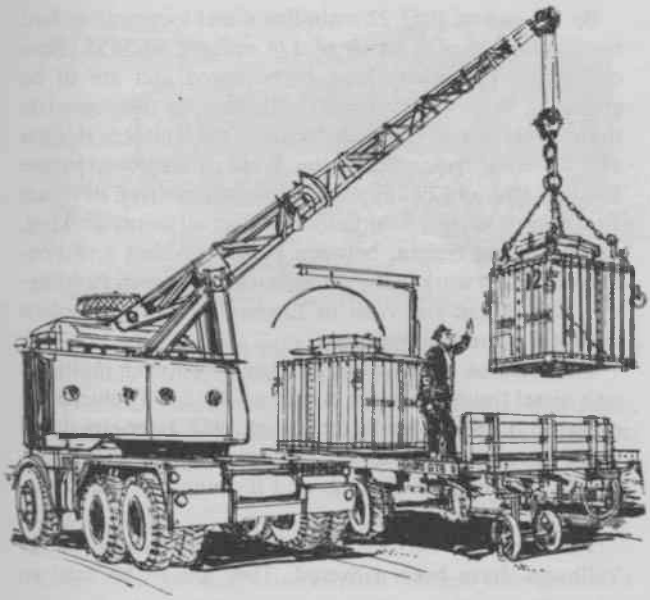
Containers

Open and covered containers, providing door-to-door service, are available for a variety of traffics. Special types are provided for particular traffics, including ventilated and insulated containers. A drive is being made to add considerably to the fleet. Recently introduced are the 'L' and the 'SW'. The 'L' is a small container – but of 4-ton capacity – with a lid and bottom doors, for the transport in bulk of such commodities as cement. The 'SW' is a small container mounted on wheels so that it can be readily moved about firms' premises while being loaded and unloaded. There are also highly insulated containers for commodities such as quick frozen foods and ice cream that need to be kept at very low temperatures while in transit.

The number of containers in use has grown from 15,511 in 1938 to 40,212 in 1957. The construction of 13,000 new units in the next two years has been authorised, including 5,500 SW type.

Collection and Delivery

The mechanisation of the road collection and delivery services is virtually complete. Of the 7,606 horses employed in 1948 only 132 remain.



Road vehicles carried in 1957 over 25 million tons of freight and over 167½ million parcels.

The fleet is made up of 15,839 motor-powered vehicles and there are 30,004 trailers.

Maintenance and repair is carried out at 18 depots and 210 outstations.

Method of Traction

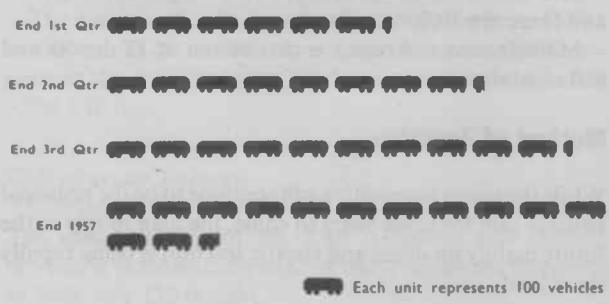
While the steam locomotive will continue to be the principal haulage unit for some years to come, the plan to rely in the future mainly on diesel and electric traction is being rapidly developed.

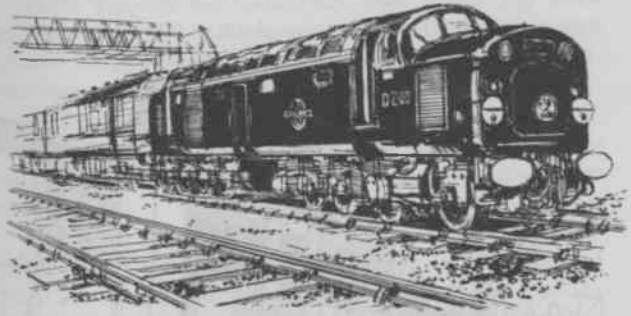
By the end of 1957 22 main-line diesel locomotives had been delivered of a batch of 174 ordered in 1955. New orders for 183 others have been placed and are to be allocated, 38 diesel-electric to the Eastern, 18 diesel-electric to the Scottish and 45 diesel-electric to the Southern Region and 82 diesel-hydraulic to the Western Region. On the Western Region 129 diesel-hydraulic locomotives, of which 96 are on order, will eventually take over all steam working, passenger and freight, between Newton Abbot and Penzance and will work many through trains between Paddington, Bristol and the West of England. They will replace over 200 steam locomotives.

The drive to increase the number of popular multiple-unit diesel trains in service continues. Of 2,786 vehicles on order 1,351 were in use by the end of 1957. Inter-city diesel trains have been introduced between Glasgow and Edinburgh, London and Hastings and Birmingham and Swansea.

The first few of 22 lightweight, four-wheeled diesel 'railbuses' have been delivered. They are to be used to

Diesel Vehicles in Service in Multiple-Unit Trains in 1957





test whether services with this cheaper-to-operate unit can profitably be maintained on certain branch lines.

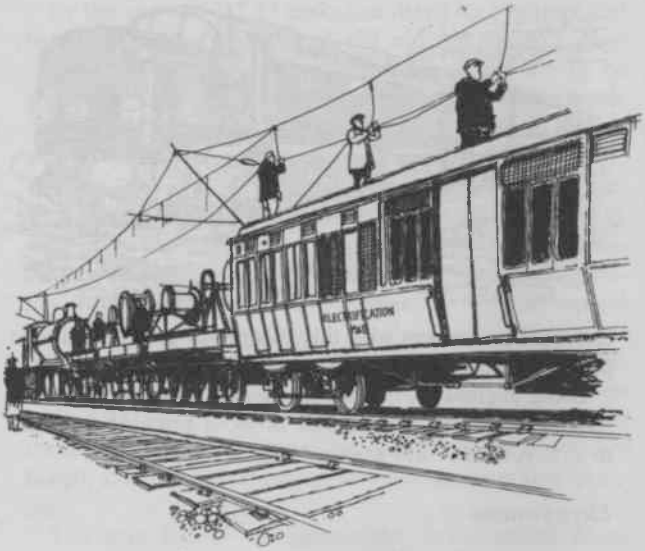
Diesel engines are rapidly taking over all shunting duties. Another 175 went into service in 1957, bringing the total to 775. A further 679 are on order.

Electrification

Every effort is being made to push forward with electrification. To date projects are proceeding well, so well, in fact, that it has been possible to examine additional projects on which work could start in the next three decades.

Running trials start this year on sections of two main-line schemes. They take place on the Styal line, part of Euston, Crewe – Manchester and Liverpool electrification and on the Colchester – Clacton – Walton line, part of the plan to extend the Liverpool Street – Chelmsford electrified lines to Ipswich, including the Clacton, Harwich and Felixstowe branches. These are pilot schemes using the new standard 50-cycle ac overhead system and will provide opportunities for testing equipment and for training staff.

Work is going on in strengthening track at various points in readiness for the electrification of the King's Cross, Leeds and York line.



In the Southern Region, the extension of their third-rail system from Gillingham to Sheerness, Margate and Ramsgate, and from Faversham to Dover is making excellent progress. Completion is fixed for June next year.

The substantial engineering works involved in the electrification of the London, Tilbury and Southend line are progressing well. They involve the reconstruction of Barking station and signalbox, the provision of two new maintenance depots and the reconstruction of 20 bridges.

Preparation work for the first stage of the electrification of Glasgow suburban lines is up to schedule and contracts have been made for overhead line equipment.

Preliminary electrification work is also being undertaken on the Enfield, Chingford, Hertford and Bishop's Stortford lines.

These projects will ultimately need about 370 locomotives and 2,000 multiple-unit vehicles. Orders have been placed for the earliest requirements, including 100 main-line locomotives and the equipments for 308 multiple-unit electric trains.

The King's Cross and Moorgate to Hitchin and Letchworth lines, including the Hertford Loop, are also to be electrified.

On British Railways there are 2,671 miles of electrified track. Electric coaching train-miles run in 1957 totalled 52,472,000; electric freight train-miles added up to 1,695,000. There are 71 electric locomotives, 2,290 powered carriages and 2,723 trailing carriages. Over 1,000 million units of electricity are used in a year.

Steam Traction

The total stock of standard gauge steam locomotives is 16,954. Their average weight, including tender, is 70·89 tons. There are 5 non-standard gauge steam locomotives and 52 service locomotives.

Work Done

The miles run in 1957 by all types of traction were 532,156,000.

Traction units are doing more work than they did before the war. Net ton-miles in 1957 were 20,878 million (16,672 million in 1938) and passenger-miles were 22,591 million (19,702 million in 1938).

Locomotives are using less coal. The miles per ton have gone up from 35·26 in 1948 to 38·37 in 1957.

The locomotive shop and running shed staffs have also done a good job. Since 1953 the miles between mechanical failures has increased: 31,534 miles in 1953; 48,078 in 1957.

Stationary plants for testing locomotives up to the highest speeds are located at Rugby and Swindon. A testing train with electrically operated equipment is used to obtain data under actual running conditions. It comprises a dynamometer car and three braking units each absorbing 1,500 hp. Both methods are used to obtain the relationship between fuel consumption, power output and speed.

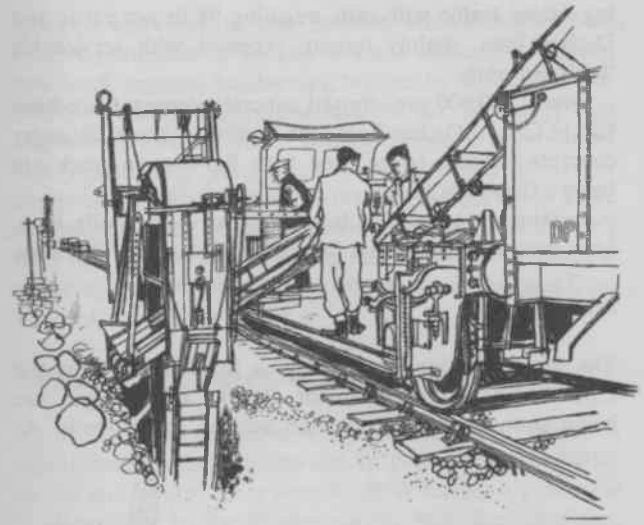
Two new laboratories are being planned; one for engineering investigations at Derby, and the other concerned with chemical and allied work in the London Area.

Ships and Ferries

British Transport ships operating on sea services carried, in 1957, 4,447,000 passengers, 329,000 head of livestock, 180,000 vehicles and 1,701,000 tons of other cargo. Estuarial services to the Isle of Wight, in the Firth of Clyde and elsewhere, also carried an important traffic which included nearly 15 million passengers, as well as vehicles and cargo.

Ships owned total 116. There are also eight ships jointly owned, and six operated but not owned.

Six new vessels were brought into service in 1957. At the end of that year 18 were under construction or on order.



Permanent Way

British Railways lines extend for 18,965 route miles; single track miles total 51,079. In 1957 2,006 miles of track were completely or partially renewed. Materials used included 2,421,000 cubic yards of ballast, 275,000 tons of rails and 4,150,000 sleepers.

There are between 2,112 and 2,288 sleepers to the single-track mile; they are 8 ft 6 in long, 10 in wide and 5 in thick. To each yard of line there are 9 cubic feet of top ballast. The maximum permitted weight per axle on main lines is 22½ tons.

Flat-bottom track is standard and since 1949, when it was adopted, 7,000 miles have been laid with it. Railway tracks are classified A and B for heavy fast traffic, in which rails weighing 109 lb per yard are used; C-class lines carry-

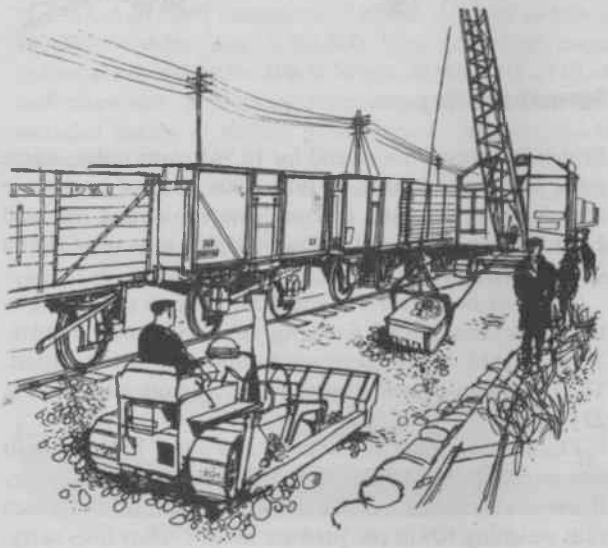
ing lighter traffic with rails weighing 98 lb per yard; and D-class lines, mainly freight, renewed with serviceable 'bullhead' rails.

Over 2,500,000 pre-stressed concrete sleepers have been laid in C- and D-class lines with 'bullhead' track. Stronger concrete sleepers to be used with flat-bottom track are being extensively tested.

Continuous welded rails, in lengths over ¼-mile long, have been laid, extending for a total distance of 50 miles.

Modernisation

The Modernisation Plan is calling for big efforts by the Civil Engineering department. Tracks and bridges are being strengthened to take the heavier, faster loads. As



reported elsewhere in this booklet, electrification plans entail big engineering works – new and modernised depots, new track layouts, heightening bridges to make room for overhead electric equipment, and so on. Similarly, civil engineering forms a major part of the work in providing new marshalling yards and in modernising passenger stations and freight depots. Work is progressing on three new tunnels being driven between New Barnet and Potter's Bar; they are part of a plan, together with some other track widenings, which will remove a bottleneck on the lines from King's Cross to the North.

Signalling and Telecommunications

More and more colourlight signals and power-operated signalboxes are coming into use. In 1938 there were 3,000; by the end of 1957 there were 9,320. A further big increase is allowed for in the Modernisation Plan. Besides giving a clearer indication, particularly in bad weather, colourlight signals permit of greater track occupation.

Fewer signalboxes are needed where they are power-operated. At St Pancras, for instance, where the signalling has recently been modernised, one signalbox does the work of three. With another scheme in the Dumfries area the work of five signalboxes has been concentrated in one. A power-operated signalbox at York has the largest route relay interlocking scheme in the world.

Automatic Train Control is installed on 1,356 route miles of the former GWR system, on 37 route miles of the London, Tilbury and Southend line, and on 105 route miles of track between Grantham and London. A new system, employing electro-magnetic principles, has been developed and is to be installed on five principal routes out of London. An initial order has been placed for 2,000 sets of ground and locomotive equipment.

Financial Considerations

The 1957 Working Results of British Railways are shown in the figures which follow and are compared with previous years' results in the graph.

The 1957 working deficit of just over £27 million takes no account of interest and other central charges amounting to £41 million. The other Activities of British Transport made a net surplus of £4½ million. This, deducted from the net loss on the railways of £68 million, means that £63½ million is the sum which was borrowed in 1957. This figure exceeds that expected, but not by much.

It will be remembered that Parliament authorised British Transport to borrow £250 million over a period of years starting in 1956 to enable them to bridge the gap until the Modernisation Plan and other remedial measures started to bring financial benefits.

The financial situation came under review when discussions on salaries and wages took place in May, 1958. As a result, three lines of action were determined upon:

- A quickening of the pace of the Modernisation Plan so that the financial benefits it will bring can be secured earlier (National financial difficulties had previously checked the progress of the Plan).

- A very considerable reduction to be made in expenditure, involving severe pruning of little-used and duplicated services, increasing productivity, and doing with fewer staff.

- An all-out drive to be made to secure more traffic, both passenger and goods, and taking the fullest advantage of the new Merchandise Charges Scheme.

British Railways Receipts and Expenses 1948 and 1953–57

The 1956 and 1957 Gross Receipts and Working Expenses reflect changes caused by the revised Accountancy Classification introduced from 1 January 1957.

Summary of Facts and Records 1957

Passenger	
Originating journeys made in the year	1,076,133,000
Number of trains run each weekday	23,000
Stations	5,410
Freight	
Tons carried in the year	274,283,000
Number of trains run each weekday	17,600
Stations	6,077
Marshalling yards	935
Locomotives	
Total (excluding service)	17,833
Steam (including non-standard gauge)	16,959
Electric	71
Diesel and gas-turbine	803
Passenger Carriages	
Total	41,827
Seating and berth capacity: locomotive-hauled stock	1,965,766
Seating capacity: diesel and electric multiple-unit stock	480,518
Total seating and berth capacity	2,446,284
Restaurant and buffet cars (included above)	779
Seats (included above)	23,954
Sleeping cars (included above)	467
Berths (included above)	8,796
Wagons	
Total including brake vans but excluding service vehicles	1,104,891
Road-rail containers	40,212
Road motor vehicles	15,839
Track and Structures	
Total track miles (standard gauge)	51,079
Route miles, standard gauge (including 1,007 miles electrified)	18,965
Tunnels	1,049
Level Crossings	24,368

Water Troughs (No. of Sites)	59
Signalling and Telecommunications	
Signalboxes	9,560
Colourlight signals	9,320
Track circuits	39,700
Telephone instruments	113,200
Telephone exchanges	465
Telegraph and telephone wires	miles 272,000
Telegraph poles	539,200
Public-address installations at stations and yards	480
Total Staff	573,499
Female staff (included in above)	33,842
Stores	
Coal used (all purposes)	*tons* nearly 12,400,000
Coal for locomotives	*tons* 11,573,000
Steel rails used	*tons* 275,000
Sleepers used (number)	(timber and concrete) 4,150,000
Iron and steel scrap salvaged	*tons* 681,757

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Southern	Waterloo Station London SE1 (Passenger Enquiries) (All other Departments)	 Waterloo 5100 Waterloo 5151
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Facts and Figures about British Railways

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