

Following the introduction of the automatic air brake, a number of changes have had to be made to the rule book. This sheet sets out those changes, and also replaces the sheet of amendments issued in February 1977; it is to be read together with the Fourth (February 1973) edition of the Rule Book, and with the list of amendments published in April 1976. The status of all rules which have been changed since the Fourth edition of the Rule Book was published is as set out below:

Rules 11, 17, 19, 22, 32, 44, 49, 52, 56, 57, 86, 87, 88, 103 and 163, and the new rules 75(a) and 84(a) are as amended or defined by the April 1976 Revision.

Rule 15: between the two sentences add "The driver is to take note of the condition of all visible parts of the locomotive whilst preparing it and whilst it is in steam. Faults such as steam leaks from the boiler, fittings, valve spindles, steam pipes or joints, or parts which appear to be damaged, defective, broken or missing (particularly split pins or cotters) must be reported immediately to the Mechanical Engineer or his deputy, and if there is any doubt as to the safety of its condition the locomotive must not be used."

Rule 24: amended to read "The number of persons travelling in any vehicle must be restricted to that which can be carried in safety. Not more than three persons may travel on the guard's verandah of the brake van, and apart from the rostered guard (and trainee guard, if any) the only persons who may travel on this verandah on passenger trains are:

(a) Officers of the railway, in the course of their duties, and

(b) Such other persons, not necessarily being members of the railway, as may from time to time be required by the Railway Inspectorate or similar body to travel on the railway for official purposes.

The guard must ensure that other persons do not impede access to the brakes or other controls."

Rule 26: amend to read "On any steam locomotive, or diesel locomotive operating a passenger train, the maximum number of persons allowed is three. In addition to the rostered locomotive crew, the only categories of person allowed are:

(a) those defined in categories (a) and (b) of rule 24, and

(b) such members as may have been issued by the Operating Superintendent with footplate passes for the day in question. Such passes will only be issued to persons who have satisfied the Council as to their fitness to travel in safety on the footplate of a locomotive, but who would not in the ordinary course of events be able to qualify as a fireman, and who nevertheless are considered to have a good claim to be allowed to ride on a particular locomotive on a particular occasion (e.g. by virtue of ownership of the locomotive in question).

At all times the driver must ensure that those on the footplate are in positions of safety, and that they do not obscure his vision, or the controls of the locomotive."

Rule 46: the amendment made in April 1976 has been cancelled, and the rule reverts to its status as originally printed.

Rule 47: has been amended again, and now reads "Whenever possible, hand signals will be used in preference to whistles when working trains other than passenger trains. When operating passenger trains the automatic bell system must be used, and the bell codes to be used are

Two indicating Start the train

Three indicating Stop.

The signal to start must be given both by bell signal and display of a green flag; either of these signals on its own must be ignored by enginemen."

Between rules 47 and 48 insert a new rule "With the automatic bell system a continuous ringing indicates an emergency stop; it may result from the train becoming divided. On trains descending the line the driver, on receiving such a signal, must check that the train is not divided



- before applying the brakes, and if it is must ensure that his braking does not allow the broken away part of the train to come into violent contact with the part remaining under his control."
- Rule 79: has been amended again, and now reads "Trains carrying visitors may not consist of more than two vehicles (in addition to the locomotive), of which the leading vehicle when propelling the train must be a brake van. The automatic brake and bell systems must be operative on all such trains."
- Rule 149: The April 1976 revision added a paragraph (d); this paragraph has been amended, and now reads "(d) if it is a passenger train, the automatic bell and brake systems are connected and working correctly."
- Rules 183 and 184 were amended in February 1977; for convenience they are reprinted again here.
- Rule 183: The person in charge of any lineside works must inform the drivers of any trains which are to be run of the work that is to be undertaken. If necessary, flags are to be displayed at a suitable distance from the site of the work.
- Rule 184: When any work is being carried out within six feet of the running rails while trains are operating, a lookout must be provided at all times, equipped with red and green flags and a means of audible warning. Upon the approach of a train the lookout must take all necessary steps to warn the persons under his protection to stand clear of the line, and having satisfied himself that the persons and any materials are clear, he must give the "all clear" signal to the train crew.

In addition to the above, the following set of instructions have been issued as an appendix to the Rules and Regulations.

#### The Use and Operation of the Automatic Air Brake.

1. The automatic air brake is primarily intended to ensure that vehicles carrying passengers are brought to a safe halt automatically in the event of the train becoming divided. It should only be used as a service brake in addition to the other train brakes, if these are not felt to be adequate.
2. The automatic air brake must never be used to hold a train at rest, as this will result in a gradual loss of pressure in the main reservoir; instead the handbrakes must be applied and the air brake released.
3. The brake van brake will be automatically applied if the train pipe is broken, or it may be applied manually by moving one of the application valves (situated in the guard's compartment and in the locomotive cab) from the "brake off" to the "brake on" position. Note that the train alarm bells will ring when the train pipe pressure is zero.
4. To release the brake move the application valve back to the "brake off" position. The brake will be fully released in about twenty seconds, and when the train pipe pressure gauge shows 50 lb/in<sup>2</sup>. To release the brake more rapidly the guard should hold down his "quick release" valve until the train pipe pressure is 50 lb/in<sup>2</sup>.
5. If the main reservoir pressure falls below 55 lb/in<sup>2</sup> the brake will not release fully. In this situation the brake can be released by holding down the "emergency release" valve (situated beneath the right-hand solebar of the brake van) until the train pipe pressure reaches 50 lb/in<sup>2</sup>.
6. Before the train departs from Dartmouth Yard the brake must be charged, as follows:
  - (i) the guard must:
    - (a) Check that the drain valves on the reservoirs are closed.
    - (b) Ensure that the jumper hoses between vehicles are connected and that all application valves are in the "brake off" position.
    - (c) Connect the flexible charging hose to the socket beneath the right-hand solebar of the brake van, and start the workshop compressor.
    - (d) When the main reservoir pressure reaches 75 lbs/in<sup>2</sup> stop the compressor and disconnect the flexible hose, first from the brake van and then from the supply pipe.
    - (e) Check that the train pipe pressure gauges at both ends of the train show 50 lb/in<sup>2</sup> and that the brake is off.

(ii) The driver must then:

- (a) Visually examine all pipework for signs of damage or leaks, and check that the main reservoir pressure is not falling rapidly.
- (b) Fill the compressor chain lubricator with oil.

Any faults noted while carrying out the above operations must be reported immediately to the Mechanical Engineer or his appointed deputy.

7. Whenever the screw couplings have been tightened after coupling up the train, the brakes must be connected and checked as follows:

- (a) The guard must ensure that all application valves are in the "brake off" position.
- (b) The guard must ensure that all the jumper hoses between vehicles are connected. When hoses are being connected, they must be connected first to the vehicle furthest from the brake van, and then to the vehicle nearer the brake van.

(c) The driver and guard must check that the train pipe pressure gauges at both ends of the train show 50 lb/in<sup>2</sup> and that the brake is off.

(d) The train alarm must be connected and tested, as described in the regulations.

(e) The guard must apply the brake using his application valve; the guard and driver must then check that the train pipe pressure gauges at both ends of the train fall to zero and that the train alarm bells ring.

(f) The guard must restore his application valve to the "brake off" position; the guard and driver must then check that the train pipe pressure gauges at both ends of the train rise to 50 lb/in<sup>2</sup> and that the train alarm bells stop ringing.

(g) Steps (e) and (f) must be repeated, but with the driver using his application valve.

Any faults noted while carrying out the above tests must be reported immediately to the Mechanical Engineer or his appointed deputy.

8. Whenever vehicles fitted with the brake are to be uncoupled, the following procedure must be carried out before the screw couplings are loosened:

(a) The guard must apply the brake.

(b) The guard must ensure that the jumper hoses are disconnected between the vehicles to be uncoupled, with the end of the hose nearest to the brake van being disconnected first.

(c) The guard must then release the brake.

9. At the conclusion of the day's operation, the guard must:

(a) Briefly open all the drain valves and clear any water from them, and open the valve on the compressor supply pipe so as to allow any water to drain away.

(b) Close all valves.

(c) Ensure that all the jumper hoses are disconnected, as described in section 8 above.