



U I C CODE

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VI - TRACTION

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OR

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RULES CONCERNING THE POSITION, TYPE AND  
DIRECTION OF OPERATION OF THE MAIN CONTROL  
EQUIPMENT ON COMBUSTION-ENGINEED  
TRACTIVE STOCK

**NUMERISATION DANS  
L'ETAT DU DOCUMENT**

## 1. Scope of application

1.1. These rules apply to main line locomotives and motor-coaches which are driven by means of combustion engines, as well as to the units comprising combustion-engined motor-coach sets equipped with driving cabs. They do not apply to shunting locomotives.

1.2. These rules are :

- of an *obligatory* character for stock which has yet to be constructed for use on international services and is described under 1.1. above.

- of a *recommendatory* character for all other stock.

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## 2. Movements to be carried out by means of the controls.

- 2.1. The purpose of the power control switch shall be to regulate the tractive effort, and where appropriate, the braking effort provided by the motor.
- 2.2. The purpose of the reverser shall be to control the direction of running.
  - 2.2.1. Intermediate positions, used for special purposes which are independent of the direction of running can be provided between the two end positions controlling the two directions of running.
  - 2.2.2. The reverser and the control switch can be arranged in such a way that mutual interlocking is possible.
- 2.3. The purpose of the driver's brake handle shall be to operate the automatic continuous brake.
- 2.4. The purpose of the direct-acting brake handle shall be to operate the direct-acting brake.
- 2.5. The purpose of the hand brake shall be to operate mechanically the whole or part of the motor brake.

## 3. Position of the control equipment inside the driving cab.

- 3.1. The control equipment shall be arranged either on the left or on the right-hand side of the driving cab, in such a way that the driver can operate the control switch and the brake handles, even whilst watching the rear of the train through the adjacent window.
- 3.2. The power control switch shall be placed either immediately opposite the driver's seat or on the side opposite to the adjacent side window.
- 3.3. The reverser shall be placed in close proximity to the control switch.
- 3.4. The brake handles shall be placed on the same side as the adjacent side window.
- 3.5. The position of the hand brake in the cab shall be such that it is easily accessible.

## 4. Constitution of the parts for operating the control equipment.

- 4.1. In the case of locomotives, the device for operating the control switch shall consist of a wheel; in the case of

motor-coaches and trailers with driving cabs, it can consist either of a wheel or a handle.

- 4.1.1. The axis of rotation of the wheel shall be vertical or slightly inclined.
  - 4.1.2. When use is made of a handle, the full degree of application of the latter from zero to full load - or in cases when the control handle also enables braking efforts to be applied, from the maximum braking position to that of full load - shall not exceed 150°, and the arc described by the handle shall be such as to render the operation as simple as possible.
  - 4.1.3. The power control switch shall be arranged in such a manner that the driver can readily ascertain the position of the operating device, both by reason of the visibility of the marks, and the form itself of the device, which can be determined by the sense of touch, in relative darkness.
  - 4.1.4. If the power control switch provides for the development of a braking effort, the zero position shall be clearly indicated by means of a device obliging the driver to exert considerable pressure on the part involved, in order to bring it to the initial braking position.
  - 4.1.5. If use is made of a wheel, it is recommended that the zero position be arranged in the longitudinal plane passing through the centre of the wheel, and on the side nearest to the driver.
- 4.2. The operating device for the reverser shall consist of a single-arm handle.
- 4.2.1. The axis of rotation of the single-arm handle shall be vertical or slightly inclined.
  - 4.2.2. The operating device can be arranged in such a manner that it can be moved to one of the intermediate positions (centre position).
- 4.3. The operating device for the brake valves shall consist of :
- either a handle, the axis of rotation of which is vertical or slightly inclined,
  - or a lever, the axis of rotation of which is horizontal and perpendicular to the longitudinal axis of the vehicle.
- 4.4. The operating device for the hand brake shall consist of a wheel or a crank.
- 4.4.1. The axis of rotation of the wheel or the crank shall be horizontal or vertical.
  - 4.4.2. It must be possible to immobilise the operating device for the hand brake in the "on" position.

## 5. Direction of operation of control equipment

- 5.1. If the operating device for the power control switch consists of a wheel, the increase in the tractive effort must be obtained by turning the wheel in a clockwise direction; any braking effort must be obtained by turning the wheel in the opposite direction, starting from the zero position.
- 5.2. If the operating device for the control switch consists of a handle, the increase in the tractive effort must be obtained by moving the operating handle forward and away from the driver - in either direction of rotation; any braking effort must be obtained by pulling the operating handle back, i.e. towards the driver, from the zero position.
- 5.3. The operating device for the reverser must be *pushed* forward, i.e. away from the driver, for forward running, and *pulled* backwards, i.e. towards the driver, for reverse running.
- 5.4. The application of the automatic brake and of the direct acting brake shall be ensured :
  - in the case of a handle, by moving the latter in an anti-clockwise direction,
  - in the case of a lever, by pulling the latter to the rear, i.e. towards the driver.
- 5.5. The application of the hand brake shall be ensured by moving the operating device in a clockwise direction.

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## APPLICATION

With effect from 1 January 1961 for obligatory provisions (see point 1) (from 1 January 1967 for points 4.3 and 5.4).

1187 The provisions of this leaflet are only valid for vehicles designed up to 31.12.85. In case of major transformation work on these vehicles, every effort must be made to apply the provisions of Leaflet 651. The provisions to be observed for vehicles designed as from 1.1.86 are those contained in Leaflet 651.

All Railways in the Union.

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RECORD REFERENCES

Latest heading under which the question has been studied:

- Question S/A/FIC - Revision of leaflets (Traction and Rolling Stock Committee, Dublin, June 1985; Paris, June 1986 - Sub-Committee for Motive Power Units, Paris, January 1986; January 1987).