WESTINGHOUSE

AIR BRAKES FOR TRAMWAYS

Protected by Letters Patent

GENERAL DESCRIPTION

THE WESTINGHOUSE BRAKE & SAXBY SIGNAL Co LTD.
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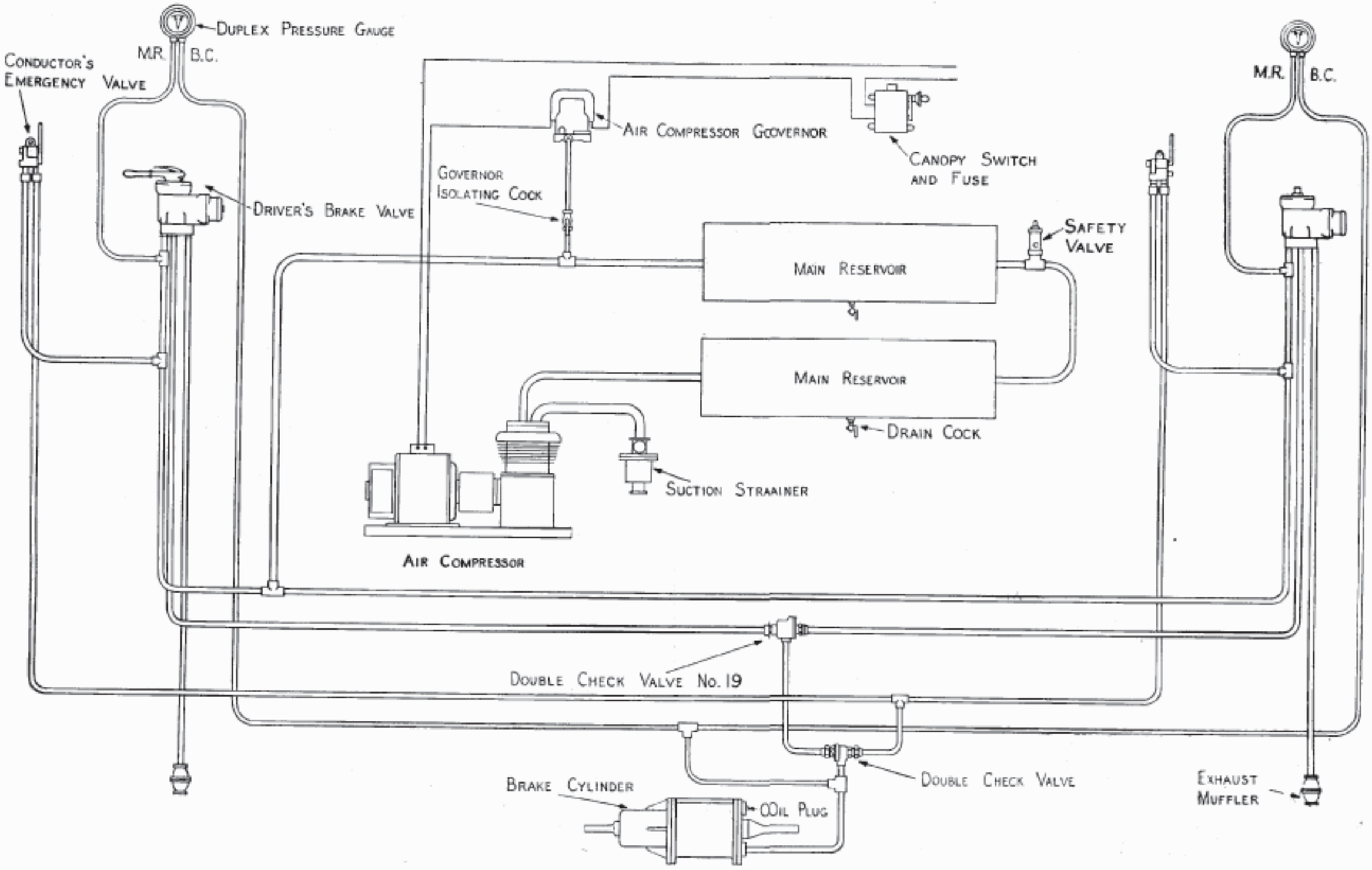
DUPLEX PRESSURE GAUGE
M.R.
B.C.
CONDUCTOR'S EMERGENCY VALVE
DRIVER'S BRAKE VALVE
GOVERNOR ISOLATING COCK
AIR COMPRESSOR GOVERNOR
CANOPY SWITCH AND FUSE
SAFETY VALVE
MAIN RESERVOIR
MAIN RESERVOIR
DRAIN COCK
SUCTION STRAAINER
AIR COMPRESSOR
M.R.
B.C.
DOUBLE CHECK VALVE No. 19
BRAKE CYLINDER
OIL PLUG
DOUBLE CHECK VALVE
EXHAUST MUFFLER

AIR BRAKES FOR TRAMWAYS

The Westinghouse tramway brake equipment is designed to give a very precise control of braking together with the most rapid rates of brake application and release ; and is operated by means of an improved type of driver's brake valve, which regulates the degree of braking exactly as desired.

Pneumatic sanding and conductor's emergency valves can be included in the equipment, if required.

The motor-driven air compressor delivers air into the main reservoirs and is automatically controlled by a type ES.16 governor, which makes and breaks the motor circuit according to the pressure in the reservoirs. A safety valve is fitted on the reservoir system.

An antifreezer can be fitted in the compressor suction pipe to prevent freezing of moisture in the system during cold weather, if desired.

Air from the main reservoirs passes to the driver's brake valve at each driving position, and thence to the brake cylinder through a double check valve, which blanks off the brake valve at the non-driving end of the car.

The brake valves are of an improved regulating type in which the degree of braking depends only on the position of the handle. The valves are of robust mechanical design in keeping with the severe duties of tramway service.

A single handle is provided for the two valves on a car, and this is taken from end to end when changing the driving position. It is removable from the brake valves only in the full application position, and this ensures that the brake is applied while the driver moves from one end of the car to the other. To take control at the new driving position the handle is simply placed on the brake valve and moved to the release position.

Either a duplex gauge or two separate gauges are installed adjacent to each brake valve for indicating to the driver the main reservoir and the brake cylinder pressures.

Sanding.

Sanding, when installed, is controlled by a trigger on the driver's brake valve handle, the sanding valve being an integral part of the brake valve.

Conductor's Emergency Valve.

A conductor's emergency valve is fitted at each end of the car, and by means of this the conductor can apply the brake if the necessity arises, the movement of the conductor's valve admitting air from the reservoirs to the brake cylinder.

The valves are so connected that after the brake has been applied by the conductor it can be released only by the driver ; this arrangement ensuring that the driver has control of the car when the brake is released. In order to release the brake after the conductor's valve has been returned to its normal position it is necessary for the driver to move the driver's brake valve handle to emergency position and then back to release position.

A double check valve is used to blank off the pipe from the driver's brake valve during a conductor's valve application.

When sanding is installed on the car, the conductor's valve also can be so arranged, when the emergency brakes are applied, to operate the sanding gear.

Quick Release Valve.

In cases where a very rapid release of the brakes is required a Westinghouse quick release valve is fitted. This valve has a special safety feature which positively ensures that the valve will be closed when it is required to apply the brakes. It operates only when a quick release is required ; during intentionally slow graduations of the release it does not operate. Thus not only is maximum safety provided, but also sensitive control.

Magnetic brake.

Where tramcars are provided with magnetic track brakes the equipment can be arranged to cut out the air brake when the magnetic track brake is applied. By means of this device skidding is avoided.

For detailed descriptions of parts see separate pamphlets.