

INSTRUCTION LEAFLET

No. 2386

February, 1928

(SUPERSEDES MARCH, 1923 ISSUE)



No. 4

BRAKE PIPE
VENT VALVE
TEST CODE

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WESTINGHOUSE
AIR BRAKE COMPANY
PITTSBURGH, PA.

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Pittsburgh, Pa., U. S. A.

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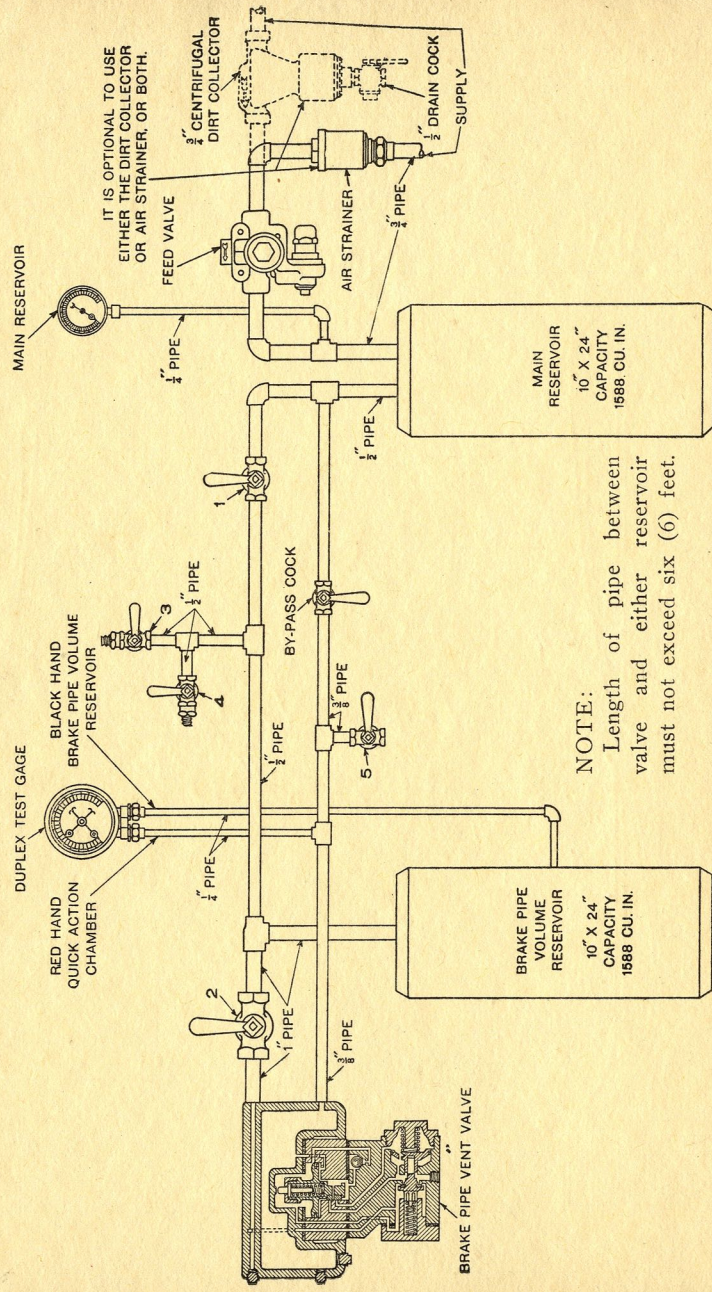
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No. 4 BRAKE PIPE VENT VALVE TEST CODE



No. 4 Brake Pipe Vent Valve Test Rack (Diagrammatic)

Feed Valve should be set to close at 70 pounds.

Before placing Vent Valve on the rack, determine the friction of the piston and the slide valve by using the friction indicator, which is used for determining friction on triple valves. The resistance to movement should not exceed 6 pounds.

Make certain that the gasket between the valve portion and reservoir is in good condition, then place the Vent Valve on the rack.

Charging Test

Commence test with all cocks closed.

Open cock 1 and charge brake pipe reservoir to 70 lbs., then open cock 2 and note rate of buildup on the quick action chamber gage. The charging time should be 0 to 65 lbs. in 45 to 80 seconds. If a less time than 45 seconds is required for charging, check the No. 72 drill hole in the bushing underneath the ball check. If this is of the proper size, the faster charging time indicates ring leakage. At the same time, check the $\frac{1}{16}$ " hole in the cylinder bush. Coat the entire valve with soap suds to detect leakage. If material leakage is found, the charging test should be repeated.

Slide Valve and Emergency Valve Leakage Test

After quick action chamber has been charged to 70 pounds, place a bubble over the valve exhaust. Leakage here indicates either slide valve or emergency valve seal leakage. To determine which valve is leaking, open cock 5, which vents quick action chamber pressure to atmosphere. If blow continues, it indicates emergency valve seal leakage.

Service Stability Test

Close cock 5, open by-pass cock, and recharge quick action chamber to 70 pounds. When recharged, close by-pass cock and cock 1, and open cock 3. This should not produce emergency in a 20 pound drop. If it does, it may be caused by a restricted quick action chamber port in the slide valve, a weak graduating spring, or high friction on the emergency piston. Close cock 3 and place a bubble over the vent valve exhaust. Leakage here indicates that the slide valve is leaking.

Emergency Sensitiveness Test

Open cock 1, by-pass cock, and recharge to 70 pounds. Close cock 1, and by-pass cock. Open cock 4. This should produce emergency, within a 10 pound drop. Failure to produce emergency may be due to a stuck emergency piston or a worn quick action piston ring. When emergency takes place, note the drop in pressure on the quick action chamber gage. This should be from 70 to 5 pounds in not less than 10 seconds nor more than 15 seconds. If less than 10 seconds, it may be due to quick action piston ring leakage. If greater than 15 seconds, it may be caused by a restricted vent hole in the quick action piston. Close cock 4 and open cock 1 slowly, and note that the quick action valve closes after emergency. Failure to close will be indicated by a continuous blow at the quick action exhausts.

Description of Cocks

- Cock 1. $\frac{1}{2}$ " Cut-out cock to air supply, Pc. 29725.
 - Cock 2. 1" Cut-out cock (with side vent), Pc. 51299, to vent valve.
 - Cock 3. $\frac{1}{2}$ " Bleed cock with $\frac{5}{8}$ " choke, Pc. 29726, reduces brake pipe volume (1660 cu in.) from 70 to 50 lbs. in 3 seconds.
 - Cock 4. $\frac{1}{2}$ " Bleed Cock with $\frac{13}{16}$ " choke, Pc. 29726, reduces brake pipe volume (1660 cu in.) from 70 to 50 lbs. in 2 seconds.
 - Cock 5. $\frac{3}{8}$ " Bleed cock from quick action chamber volume, Pc. 51302.
- By-pass Cock. $\frac{3}{8}$ " Cut-out cock used in recharging vent valve reservoir from main reservoir, Pc. 51302.