

Descriptive Publication C 16.

“WESTINGHOUSE”



REGISTERED

Type SV Valves

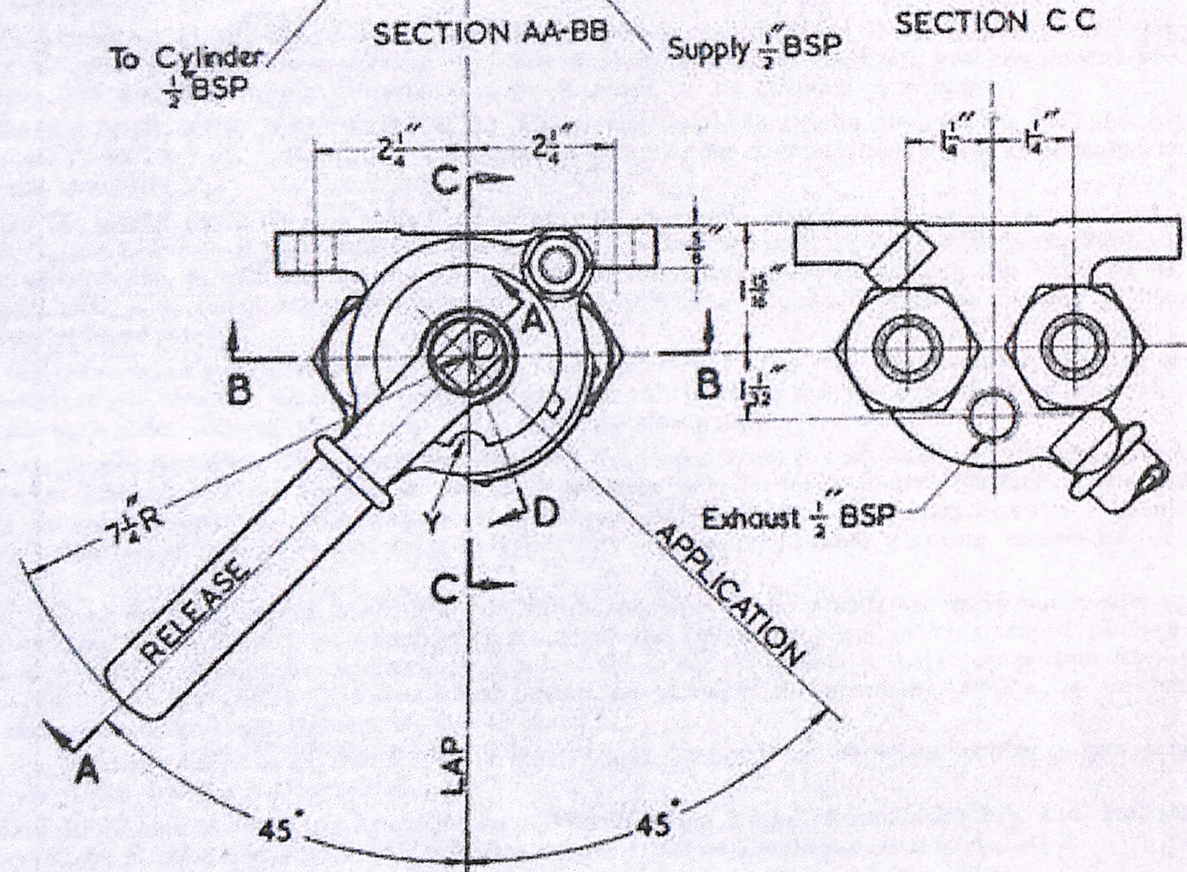
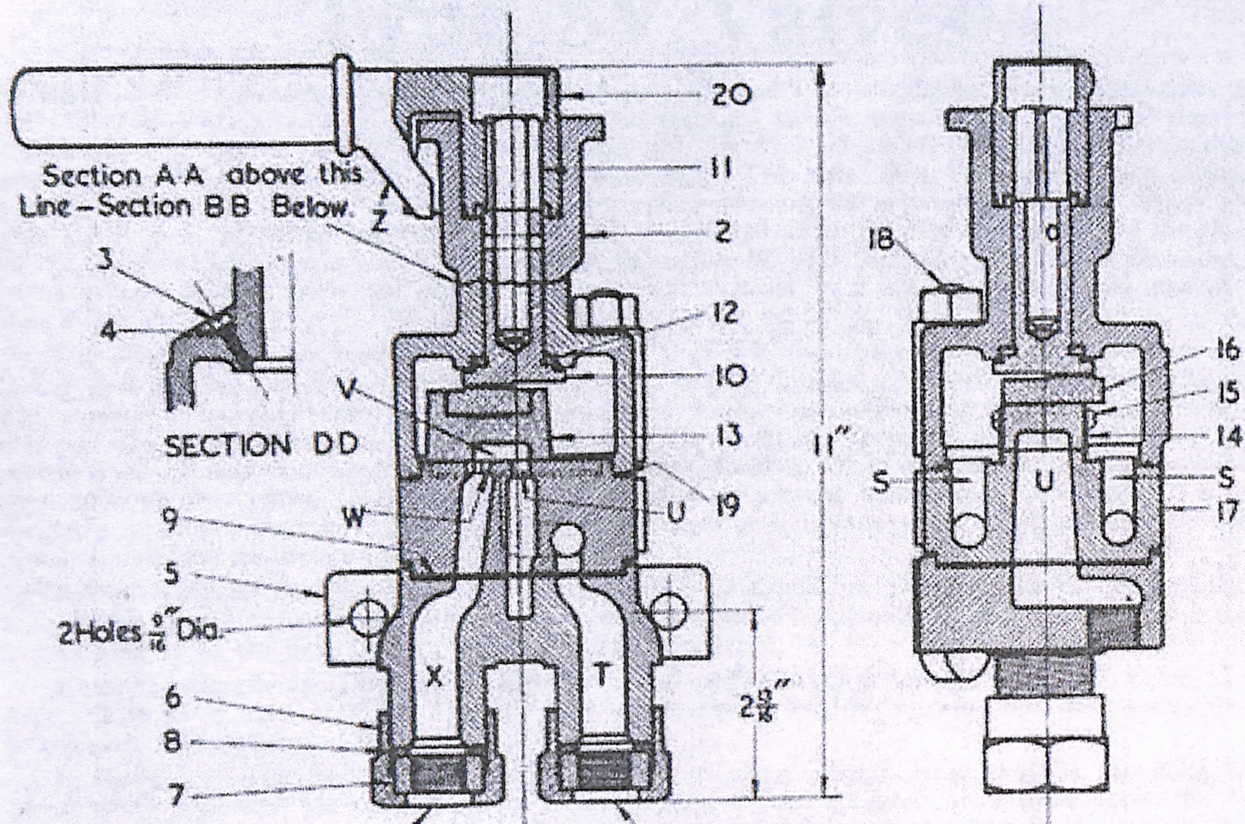
WESTINGHOUSE BRAKE (AUSTRALASIA) PTY. LTD.

HEAD OFFICE AND WORKS:

CONCORD WEST, N.S.W.

Postal Address: P.O. Box 21, Burwood, New South Wales.

1952.



Type SV Valves

DESCRIPTION: Referring to the sectional views AA, BB and CC, the device consists essentially of a Slide Valve 13 with a cavity V in its lower side, so arranged that it registers at the proper time with suitable ports W and U in the Valve Seat 17, to supply air to or release air from the cylinder or volume connected to the left hand side of the Pipe Bracket 5. The Valve Seat 17 contains ports connected respectively with the cylinder or volume to be supplied with air, the exhaust, and the air supply. The Slide Valve 13 is moved by turning the removable Handle 20 which fits over the top end of the Handle Pin 11 and to which is rigidly attached the Slide Valve Key 10. The bottom end of the Slide Valve Key 10 forms an eccentric with the Slipper Piece 16 which slides in a slot formed in the top of the Slide Valve 13.

The total handle movement is 90°, and removal or insertion of the Handle 20 can only take place in Lap position because of the Safety Lug Z, which can pass through the notch Y only in Lap position. This removable handle feature provides a very effective means of interlocking a group of valves so that only one may be operated at a time, because if only one handle is provided obviously only one valve may be operated and this valve must be restored to Lap position before the handle can be removed to apply it to another valve. Furthermore, if it is desired to prevent unauthorised operation of a valve or group of valves during absence of the regular operator it is only necessary to remove the handle or handles and secure these under lock and key.

OPERATION: With the Handle 20 in its extreme left hand position as shown in the plan view, the Slide Valve 13 will connect the cylinder or volume to exhaust via passage X, port W, Slide Valve Cavity V, and port U to the exhaust tapping in the Pipe Bracket 5.

When the Handle 20 is moved through 45° to its middle or Lap position the Slide Valve 13 will have moved to its mid position, and all ports are blanked. In this position only, the Handle 20 may be removed and replaced.

If now the Handle 20 be moved further towards its extreme right hand position, the Slide Valve 13 will uncover port W allowing Supply pressure to flow to the cylinder or volume from the space surrounding the Slide Valve and which is always in communication with the Supply via passage T and twin passages S.

Consideration of the above will show that by suitable manipulation of the Handle 20, any charging or release rate from extremely slow to very fast may be achieved as required, and any desired pressure between zero and full supply pressure may be obtained in the cylinder or volume.

INSTALLATION AND MAINTENANCE: The device should be rigidly mounted on a suitable bracket by means of the two $\frac{1}{2}$ " holes in the Pipe Bracket 5; under no circumstances should it be supported on the pipe connections.

On the side of the Body 2 is located an oiling port normally closed at its outer end by the Screw 3 and Gasket 4, and it is recommended that this oil port be filled with a good grade of very light mineral oil at such periods as will prevent the Key Washer 12 becoming dry and causing the Valve to be stiff in operation. Too much oil is detrimental. The Key Washer 12 should be renewed when its thickness becomes reduced to $\frac{1}{16}$ ".

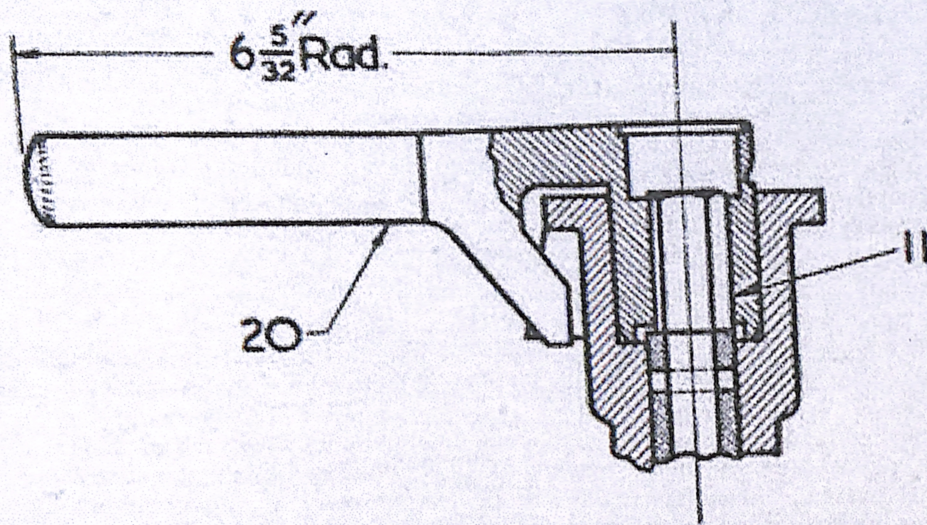
The use of oil or grease for the Slide Valve 13 and Valve Seat 17 is not recommended; the best results will be obtained from the use of dry powdered graphite rubbed on to the Valve and Seat with a small piece of chamois leather secured to the end of a small wooden paddle.

Care should be taken to see that when applying the Union Nuts 6, only sufficient tightening be done to prevent leakage past the Gaskets 8; too much pressure only causes premature failure of the gaskets, which should be replaced when they become reduced to $\frac{1}{8}$ " thick. The Pipe Ferrules 7 should be tight on their respective pipes and preferably put on with some suitable jointing compound on the threads.

It will be seen that there is no need to disturb the pipe joints in order to carry out repairs to the valve; removal of the Bolts 18 will enable the whole of the operating parts to be removed as required. If plant shutdown cannot be tolerated it is advisable to have available a spare top portion (consisting of all parts above the gasket 9) so that when repairs are necessary the operating portion can be changed in a few moments, and operations promptly resumed.

Care should be taken to see that the Valve Seat 17 and Gasket 9 are replaced in the correct position after the valve has been dismantled.

Standard Replacement Parts are available from Westinghouse Brake (Australasia) Pty. Ltd. and should be ordered by NAME and PIECE NUMBER as shown in Part Catalogue Section 4, List 3.



Many early SV valves having handles as shown above are in service, but no difference in operation results from this fact.

