

Quick Release Valve (Air/Hyd.)

QUICK RELEASE VALVE

Description

The quick release valve is located on the chassis near the spring brake actuator.

Its function is to allow air from the spring brake actuator to be exhausted immediately the hand control valve is operated.

Operation

When the hand control valve is operated, compressed air enters the top connection of the valve, holds the diaphragm against the exhaust seat and then depresses the lip of the diaphragm. The air then passes around the edge of the diaphragm and out of the two delivery ports. One port leads to the spring brake actuator, the second port connects to a low pressure warning switch.

When the hand control valve is released, the compressed air on the top of the diaphragm is released from the brake valve. As the diaphragm is against the inlet seat, the compressed air under the diaphragm causes the centre of the diaphragm to lift away from the exhaust seat exhausting all air used for brake actuation to atmosphere through the exhaust port.

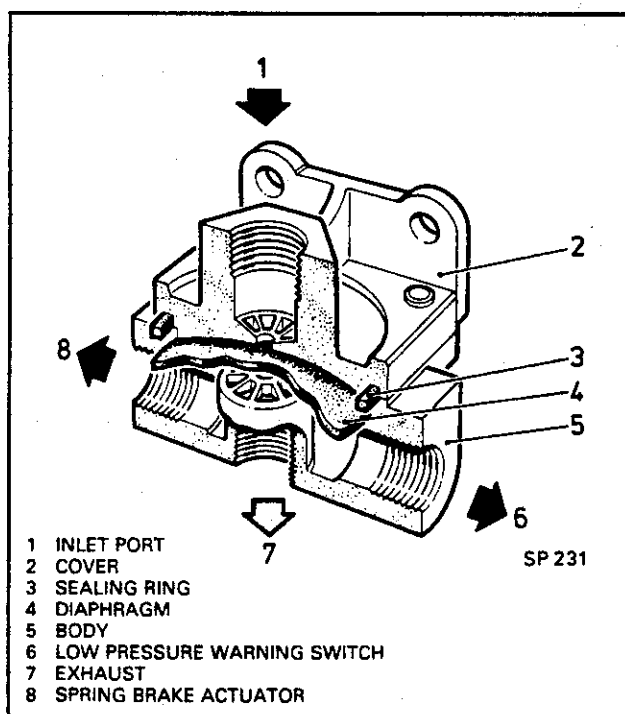


Fig. 1 Quick release valve – sectional view

Maintenance

Check the securing bolts and pipe connections for looseness. Check the pipelines for chafing, kinking and corrosion. Check that the exhaust port is clear.

To Test the Valve

Fully charge the air system and stop the engine.

Apply and release the parking brake several times, using the hand control valve. Check that the brake chamber is applied and released promptly, and that the air is exhausted from the port of the quick release valve.

Release the parking brake. Coat the exhaust port with soap solution. Leakage in excess of a 25mm (1 in.) soap bubble in five seconds is not permissible.

To Remove

Disconnect the battery.

Disconnect the lucar connections to the low pressure warning switch.

Move the hand control valve to the "Park" position.

Note the position of the air line connections and release the unions.

Release the two mounting bolts and earth connection and remove the valve assembly.

To Dismantle

Remove the L.P. switch from the valve body.

Clean the outside of the valve. Mark the relative positions of body and cover.

Remove the four securing screws, spring washers and cover from the body. Lift out the diaphragm and sealing ring.

Quick Release Valve (Air/Hyd.)**Inspection and Overhaul**

The exhaust seat should be free from deep scratches or pitting. Lap the seat face if required.

To Re-assemble

Place a new diaphragm in the body.

Fit a new sealing ring in the cover. Align the match marks, fit the cover to the body and secure with four setscrews and washers.

Refit the low pressure warning switch.

To Refit

Mount the valve and secure with two bolts and earth connection.

Connect the air lines and tighten the unions.

Reconnect the lucar connections to the low pressure warning switch.

Reconnect the battery.

Test the valve for correct operations and air leaks.