

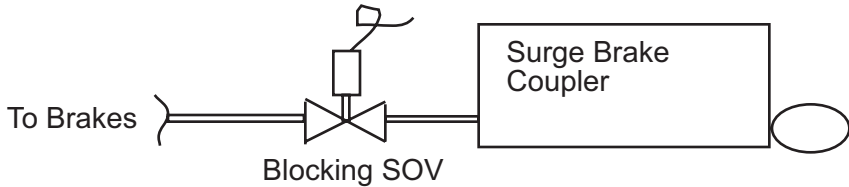
**FAQ – Subject - Solenoid valves used for trailer hydraulic brake systems.**

Solenoid valves are used on hydraulic trailer brake systems to lock the brakes out while backing up.

[1] What is the difference between a blocking solenoid and a bleed type solenoid valve?

\*\*\*Blocking solenoid valves are inline [ normally open valves] that close when 12 VDC is applied. This locks out the potential for any further brake pressure to be induced into the brake tubing system while the solenoid is electrically activated.

This type of valve does not require a return line back to the master cylinder reservoir. One potentially negative feature of this type of valve is that if brake fluid pressure was trapped between the master cylinder and the wheel brake devices before the electrical activation of the solenoid, this brake pressure will remain trapped and may inhibit the trailer from being backed up.



\*\*\*\*\* BLEED SOLENOID valves are typically 3 way [ 3 port] valves. Three way bleed solenoid valves allow free passage of brake fluid thru the valve during normal braking operations, when not electrically activated.

The third port of the valve is connected to a return line back to the master cylinder reservoir. This port is closed when the valve is not electrically activated.

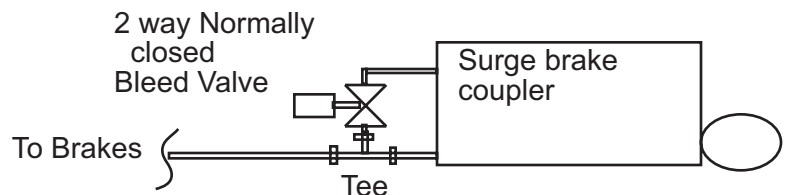
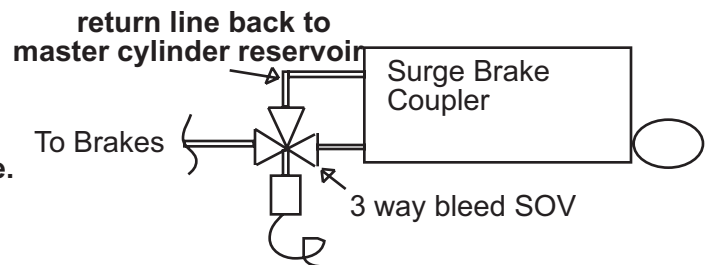
When electrically activated, this third port opens allowing release of pressure back to the reservoir & atmospheric pressure [ 0 PSI gage pressure].

Because this bleed valve releases all brake line pressure, it is an excellent choice for applications where backing uphill are necessary. However, it does require a return port machined in the master cylinder reservoir.

\*\*\*\*\* 2 way bleed SOV - It is possible to install a 2 way normally closed valve into the system by installing a TEE in the brake line tubing & using one port of the SOV to connect to the return line back to the reservoir. Again when electrically activated this valve opens & pressure is released.

If the master cylinder in your brake coupler is made from a composite material & is not metal then you will need to provide a ground wire connection directly to the brass body of the solenoid valve.

Solenoid valves do not operate well if there is a poor ground or a poor connection of the 12VDC power to the valve.



Champion Trailers\* cannot control the user's application of the information contained herein, & is not responsible for the user's application of that information. It is the responsibility **of the user** to determine the applicability of the information contained herein, as it applies to his trailer or system.

All Technical information & Specifications Contained herein are the property of Champion Trailers\* & may not be reproduced with out specific written permission.

[www.championtrailers.com](http://www.championtrailers.com)