

Reversing or Back Up Solenoids for Trailers

There are two types of reversing solenoids used in the trailer industry. Solenoids are typically seen on boat trailers that have hydraulic disc brakes installed or a type of hydraulic drum brake called Uniservo (not free backing). These types of braking system do not know when a trailer is being put into reverse or is actively braking as the hydraulic coupler acts off compression.

The reversing solenoid is wired into a five-pole trailer plug that then plugs into the tow vehicle. This fifth (typically blue or black) wire receives a signal when the tow vehicle is put into reverse and actively blocks the hydraulic fluid from entering the brake lines which will cause the trailer brakes to activate.

Blocking Solenoid



This solenoid is named appropriately as it will “Block” the fluid from leaving the master cylinder of the coupler and entering the brake lines. The solenoid is easy to install as it only needs to screw into the opening of the master cylinder and the brake lines then screw into the solenoid. This solenoid is highly effective and is used on many disc brake applications. However, if you try to back up in an uphill configuration it may cause partial activation of the surge coupler due to the compressive forces being applied between the tow vehicle and trailer prior to backing up. This could drastically impede the ability to back up the hill, and you may want to convert to the bleed solenoid listed below.

Bleed, Back Flow, or Kip Solenoid



This solenoid is named after the way it acts as well. The unit blocks the fluid, but then dumps the hydraulic fluid back into the master cylinder. To do this, the master cylinder must have a port or opening in the back to attach the back flow hose. If your unit does not have the opening, then it is possible to drill and tap an opening into the master cylinder and install the nipple. This is the solenoid that is preferred if backing uphill or going through hilly and mountainous terrain is one of your towing considerations.

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