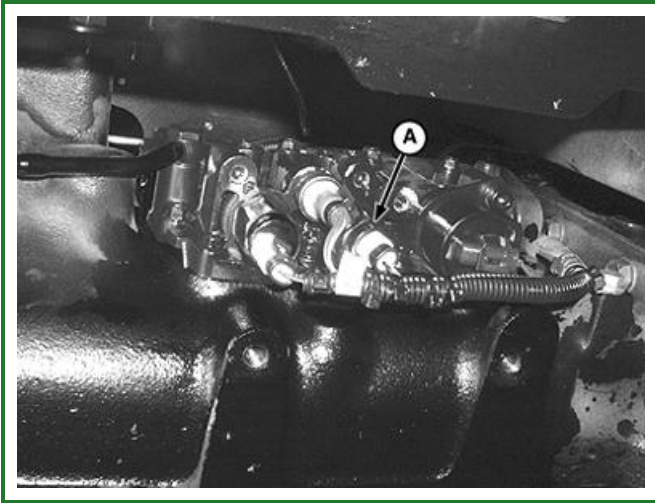


PTR - Reverse Solenoid Theory of Operation



LV11810-UN: PowrReverser™ Valve Reverse Solenoid Valve

LEGEND:

A - Reverse Solenoid Valve

The reverse solenoid valve (A) is located on the PowrReverser™ valve, which is mounted to the left side of the clutch housing.

The reverse solenoid is an on/off solenoid and is provided with current via circuit 6518 from the PTR control unit. The solenoid is grounded via circuit 0010.

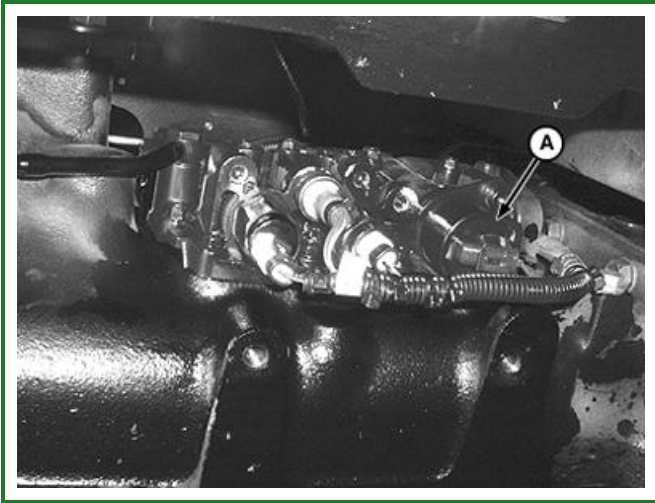
The function of the reverse solenoid is to provide oil flow to the reverse clutch pack.

The reverse solenoid can be turned ON and OFF using PTR Address 008. When the right digit at address 008 is 1, the reverse valve is turned on. The calibrated value that the control unit stores for reverse fill pressure and time can be adjusted to enhance transmission performance at PTR Address 069 and PTR Address 070. It is recommended that these values be set by performing the calibration routine. See [Power Train Reverser \(PTR\) Control Unit Calibration](#) .

Go to [Section_245:Group_PTR](#)

SP21231,0000056-19-20150910

PTR - Clutch Enable Proportional Valve Theory of Operation



LV11813-UN: PowrReverser™ Valve Enable Proportional Valve

LEGEND:

A - Clutch Enable Proportional Valve

The clutch enable proportional valve (A) is located on the PowrReverser™ valve, which is mounted to the left side of the clutch housing.

The clutch enable proportional valve is provided with a pulse width modulated current via circuit 6524 from the PTR control unit. The solenoid is grounded through the control unit via circuit 6525 to test for possible valve or circuit faults.

The function of the clutch enable proportional valve is to control the oil flow to the forward or reverse solenoid valves by varying the opening and length of time to open the enable proportional valve. The PTR calculates the proper modulated oil flow based on countershaft speed and other factors, such as the tractor model configuration. The PTR also monitors the clutch pedal and will reduce oil flow past the enable proportional valve if the clutch pedal is depressed enough so that the clutch pedal position pressure command is less than the normal PTR control unit pressure command.

The clutch enable proportional valve is turned on using PTR Address 008. When the left digit at address 008 is 1, the clutch enable proportional valve is turned on. Valve operation can also be verified by accessing PTR Address 012. The address is used to view the enable pressure as input to the control unit from the clutch enable pressure sensor.

Go to [Section_245:Group_PTR](#)

SP21231,0000057-19-20150910