

# 016371 Solenoid Function

We use a variety of solenoids.  
Their activation and usage varies as well.

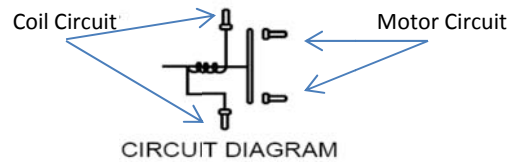
Solenoid, 200 amp, Single Pole-Single Throw, Continuous Duty, Contacts N.O.

Used in the Hydraulic Box for Hydraulic Motors.

Used in the Operators Control Box as an Accessory Solenoid.

Used in the Remote Power Box as an Accessory Solenoid.

Used in the Fuse Box for power to the Hydraulic Contact Strip.



## Hydraulic Box

Used to supply power to the hydraulic motors

It does not matter where the 12v or gnd wires go on the coil circuit.

It does not matter where the motor or contact strip 12v wires go on motor circuit.

*What does matter is which big stud does the 12v wire go on, the diode wire and micro-switch installation.*

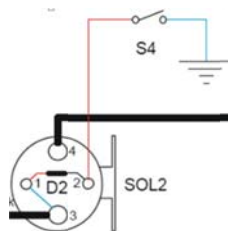
The 12v wire MUST go on the stud powered by the contact strip.

The diode red wire MUST go on the 12v small terminal.

The black diode and micro-switch wire MUST be together on the opposite small terminal.

The other micro-switch wire MUST be grounded to the frame.

Failure to do this will cause the solenoid to not operate correctly and damage to the micro-switch.



## Fuse Box

### Used to supply power to the contact strip

It does not matter where the 12v or gnd wires go on the coil circuit.

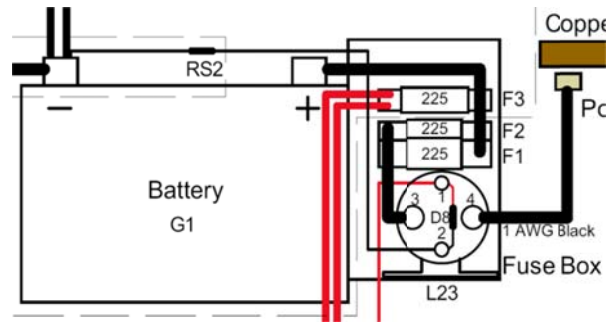
It does not matter where the 12v or contact strip wires go on motor circuit.

*What does matter is how the diode wire and voltage drop wires are installed.*

The diode red wire MUST go on the 12v small terminal.

The black voltage drop and black diode wires MUST be together on the opposite small terminal.

Failure to do this will cause the solenoid to not operate correctly and damage to the voltage drop wire.



## Operators Control Box/Remote Power Box

### Used to supply power to the sawmill controls

It does not matter where the 12v or gnd wires go on the coil circuit.

It does not matter where the 12v or sawmill control wires go on motor circuit.

*What does matter is how the diode wire and voltage drop wires are installed.*

The diode red wire and the voltage drop wire MUST go on the same small terminal.

The black ground wire and black diode wire MUST be together on the opposite small terminal.

Failure to do this will cause the solenoid to not operate correctly and damage to the voltage drop wire.



# 016371 Solenoid Testing

## Hydraulic Box

*Electrical troubleshooting relies on the fact that the battery and alternator are in working order.*

A digital voltmeter is required.

12v test can be used but voltage will be unknown.

With the key on, verify there is 12v on the big terminal supplied by the contact strip.

If no 12v troubleshoot the contact strip, solenoid in the fuse box and fuses.

If 12v is at the terminal, operate a hydraulic function and the 12v should stay.

If 12v drops off, troubleshoot the contact strip, solenoid in the fuse box and fuses.

If 12v stays at the terminal, verify there is 12v on the motor terminal of the solenoid.

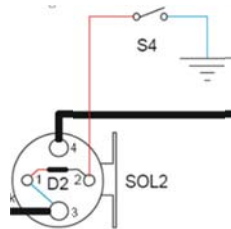
If there is 12v on motor terminal, check for bad motor or brushes.

If no 12v on motor terminal, check for 12v on the small terminal with the jumper to big terminal.

If there is 12v, ground the opposite small terminal.

If the solenoid engages, do a continuity check on the micro-switch.

If solenoid does not engage, replace the solenoid.



## Fuse Box

With the key on, verify there is 12v on the big terminal supplied by the fuse.

If no 12v, check for blown fuse, fuse connections or dead battery.

If 12v is at the terminal, check for 12v at the terminal that supplies the contact block.

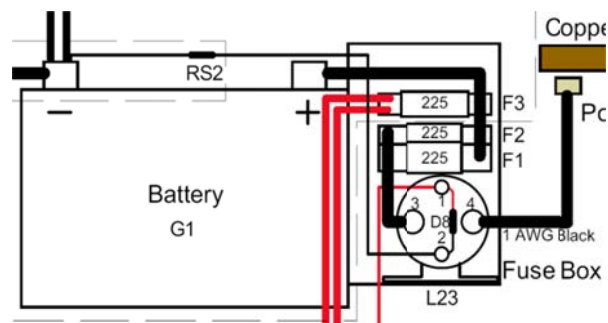
If no 12v, verify there is 12v on the small terminal with the red wire.

If 12v is at that the small terminal, verify the opposite terminal has gnd.

If no gnd, check the voltage drop wire.

If gnd is good, replace the solenoid.

If no 12v at small with the red wire, check wire connections or tripped breaker.



## Accessory Solenoid

With the key on, verify there is 12v on the big terminal supplied by the battery.

If no 12v, check for blown fuse, fuse connections or dead battery.

If 12v is at the terminal, check for 12v at the big terminal that powers the functions.

If no 12v, verify there is 12v on the small terminal with the red wire.

If 12v is at that the small terminal, verify the opposite terminal has gnd.

If no gnd, check the gnd wire.

If gnd is good, replace the solenoid.

If no 12 volts at small terminal with red wire, check diode wire and connections.

