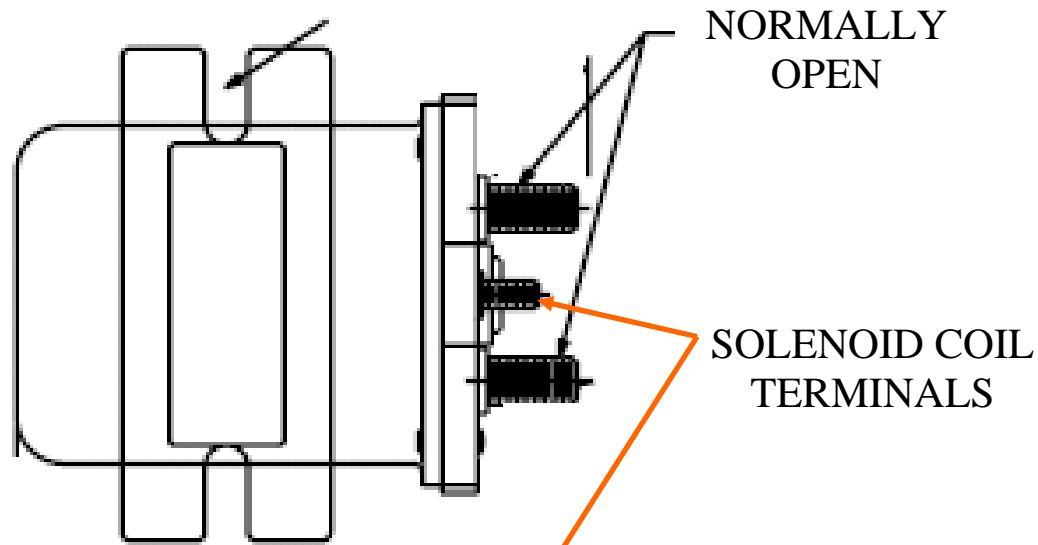


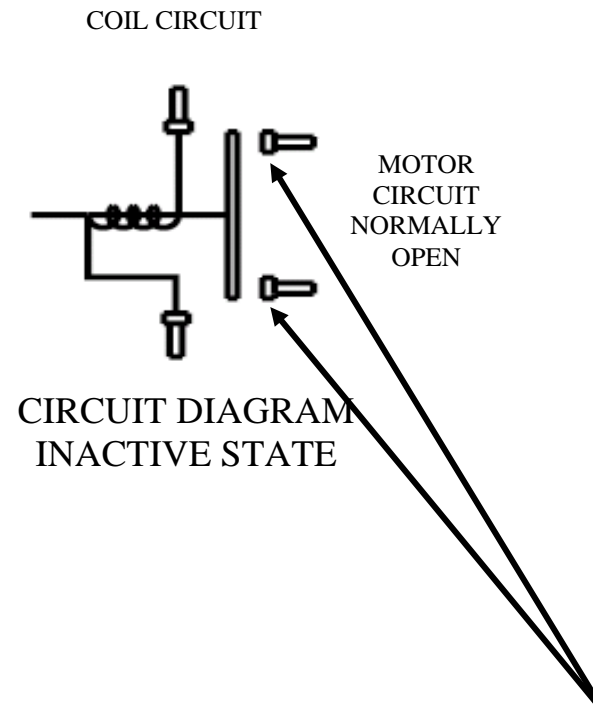
HYDRAULIC SOLENOID FUNCTION

This the solenoid used for the *hydraulic motor control, power strip control* (most hydraulic mills) and as an *accessory solenoid* (supers and remotes only).



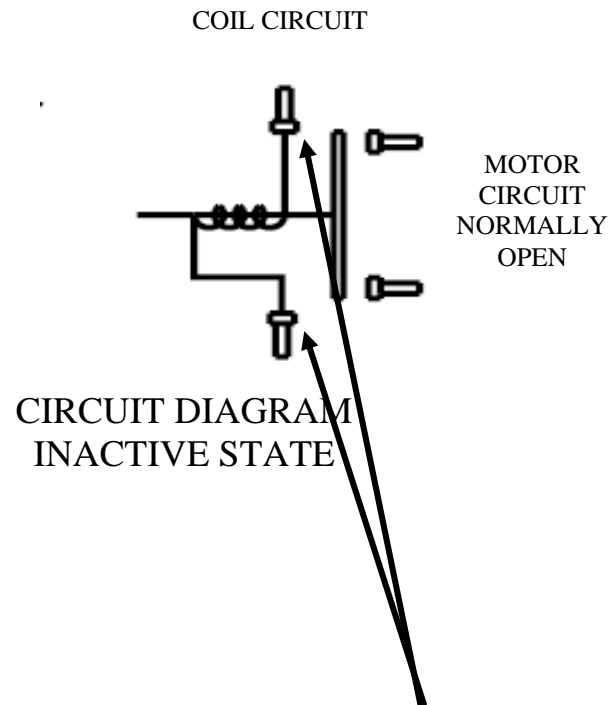
SOLENOID INTERNAL COMPONENTS

These diagrams show the internal components of the solenoids



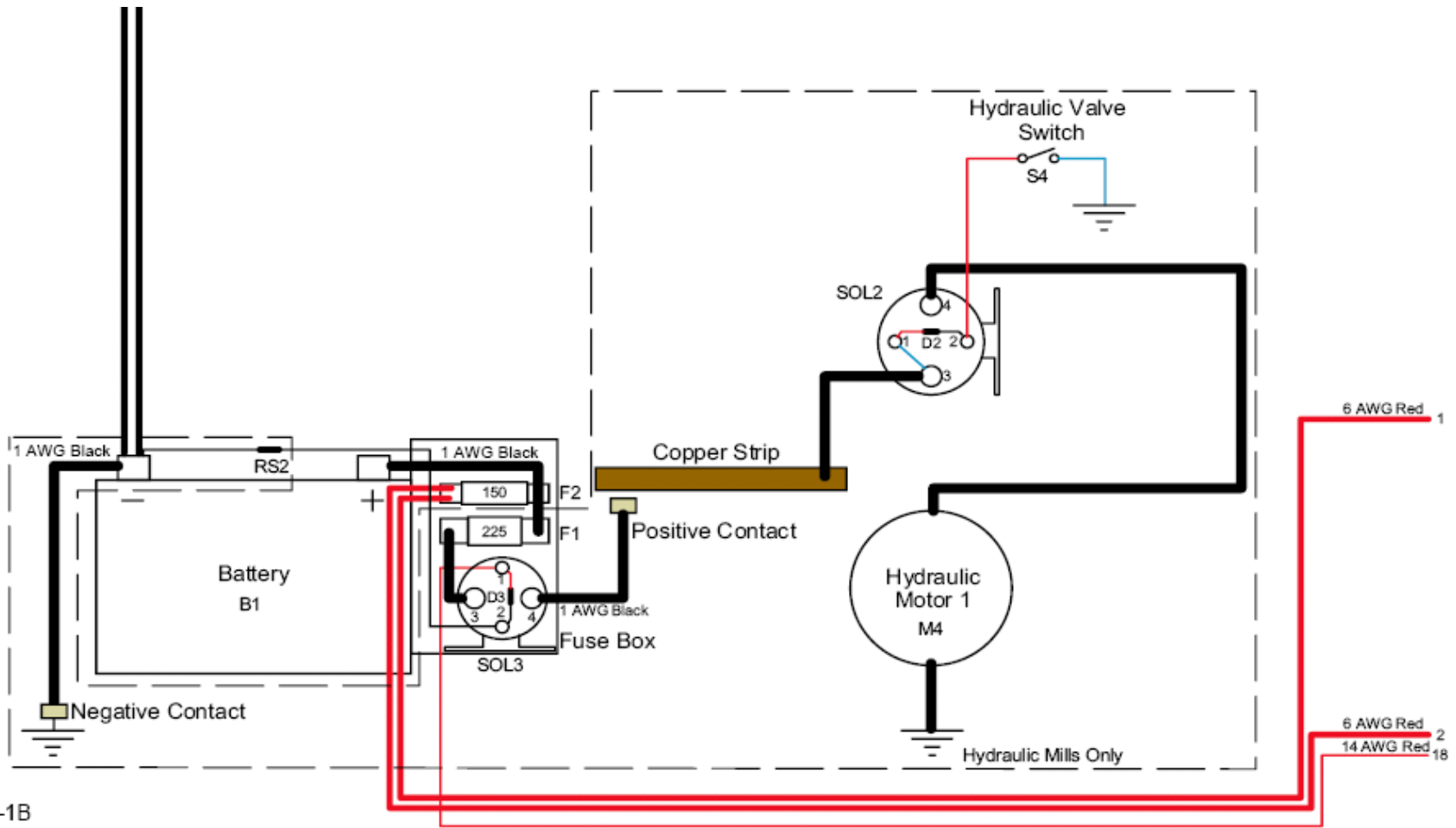
These are the contacts of the solenoid which carry the current to the motor.

These diagrams show the internal components of the solenoids.



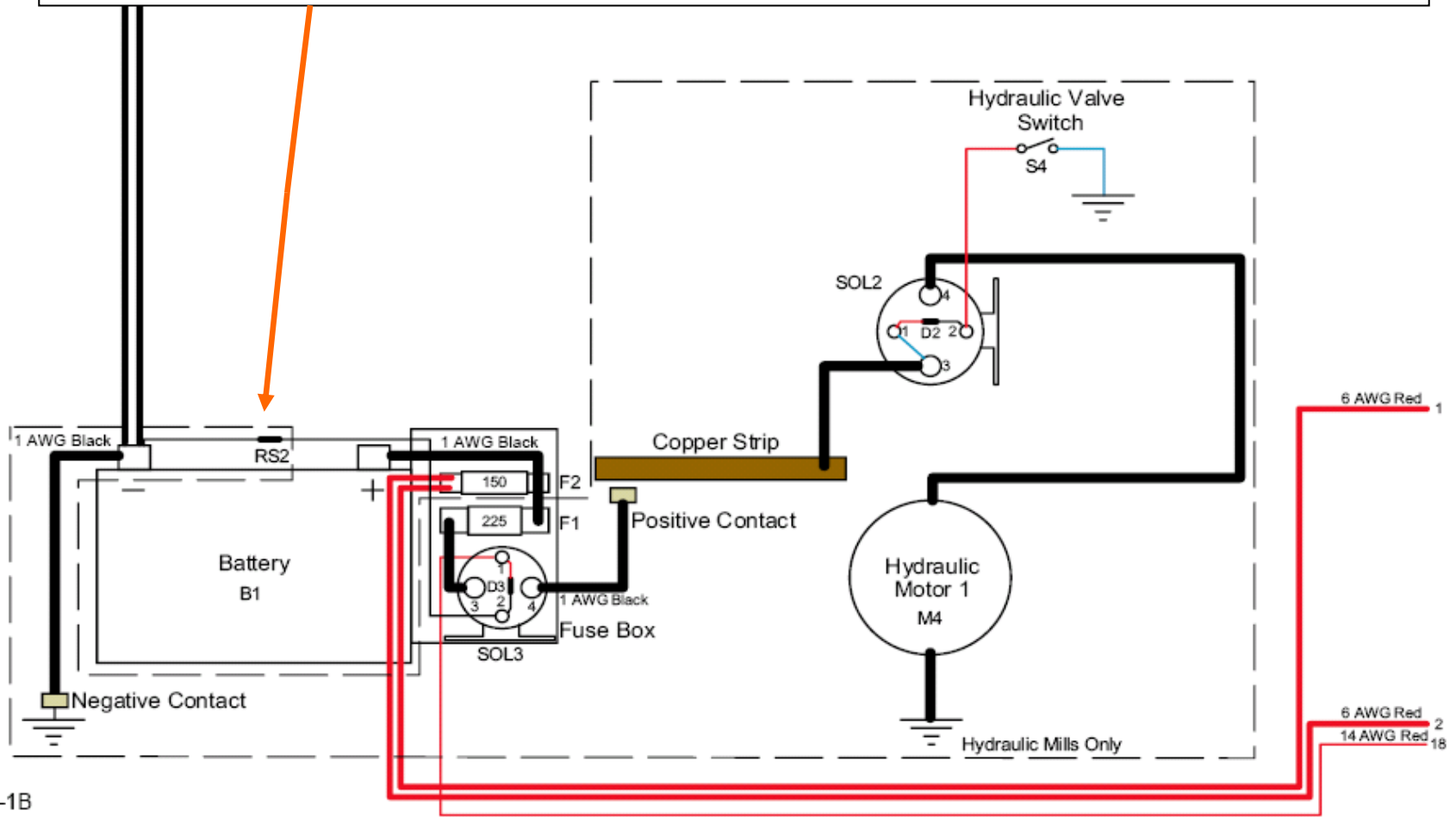
These are the solenoid coil terminals.

The diagram below shows a standard hydraulic wiring schematic.



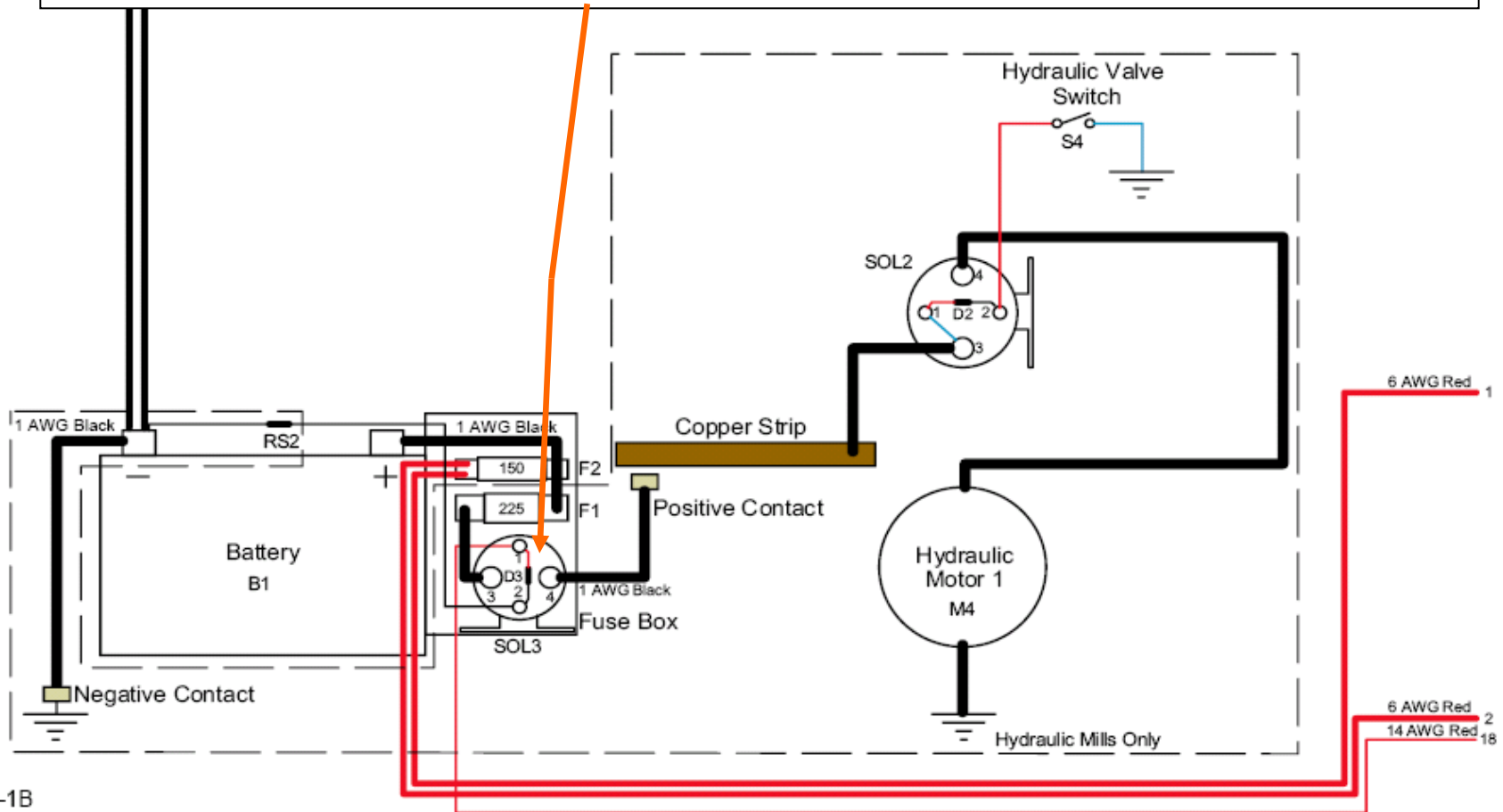
i3-1B

The **RS2** is a diode to drop the voltage to the power strip solenoid. When the engine is running we are producing **14.5** to **14.7** volts dc to the battery. We use this diode to drop that voltage down to about **11** volts dc to keep the solenoid coil from wearing out prematurely. It is connected to the ground side of the solenoid.



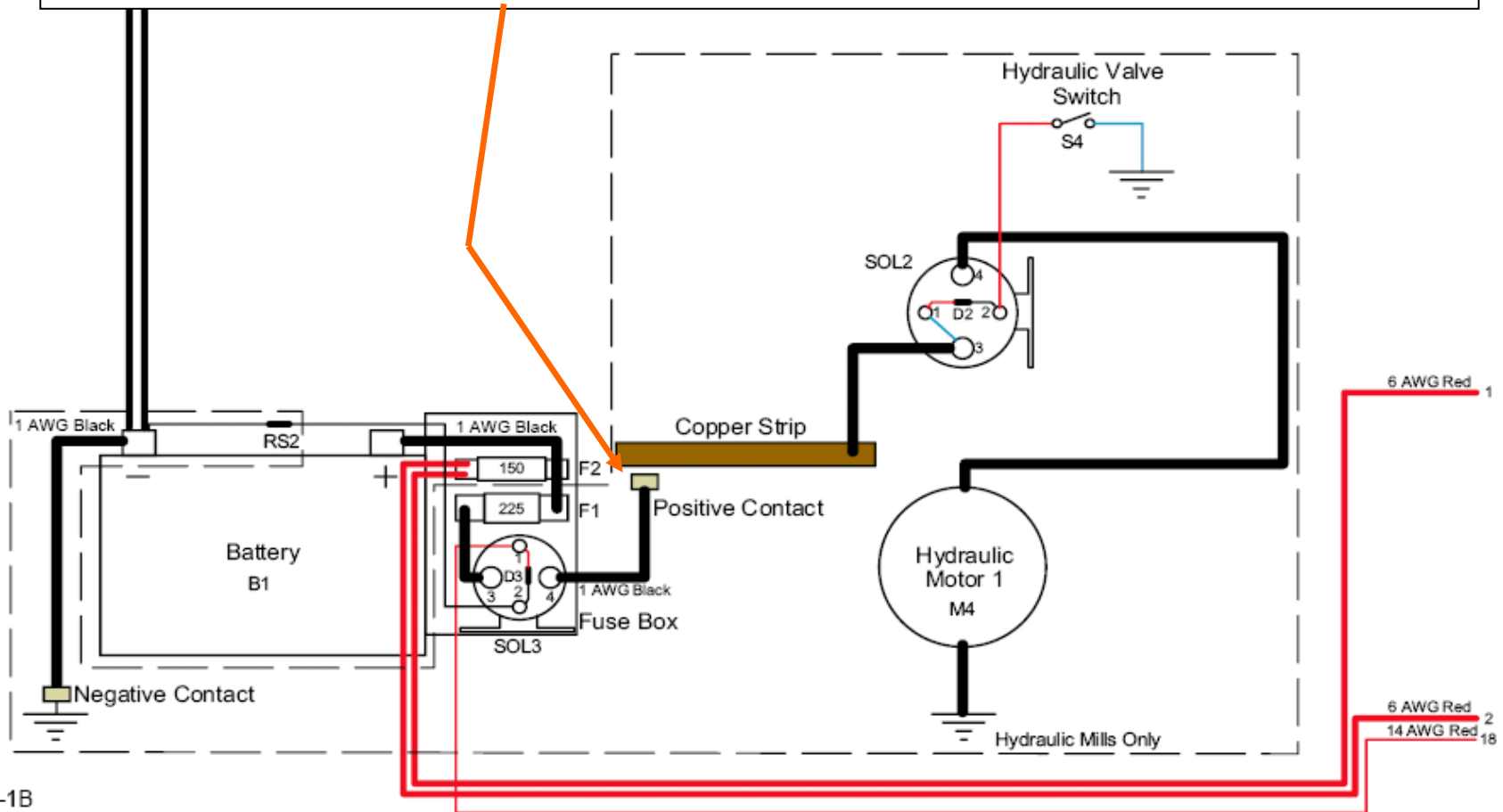
i3-1B

The solenoid is used to supply voltage to the positive contact block only when the key is on. This solenoid is 12 volt dc activated. This is a safety function that keeps the hydraulics from accidentally being operated while the key is off while the mill is being worked on. With the key on the small red wire has 12 volts dc. The small black wire is ground. The two large terminals of the solenoid will have 12 volts dc when the solenoid is activated.



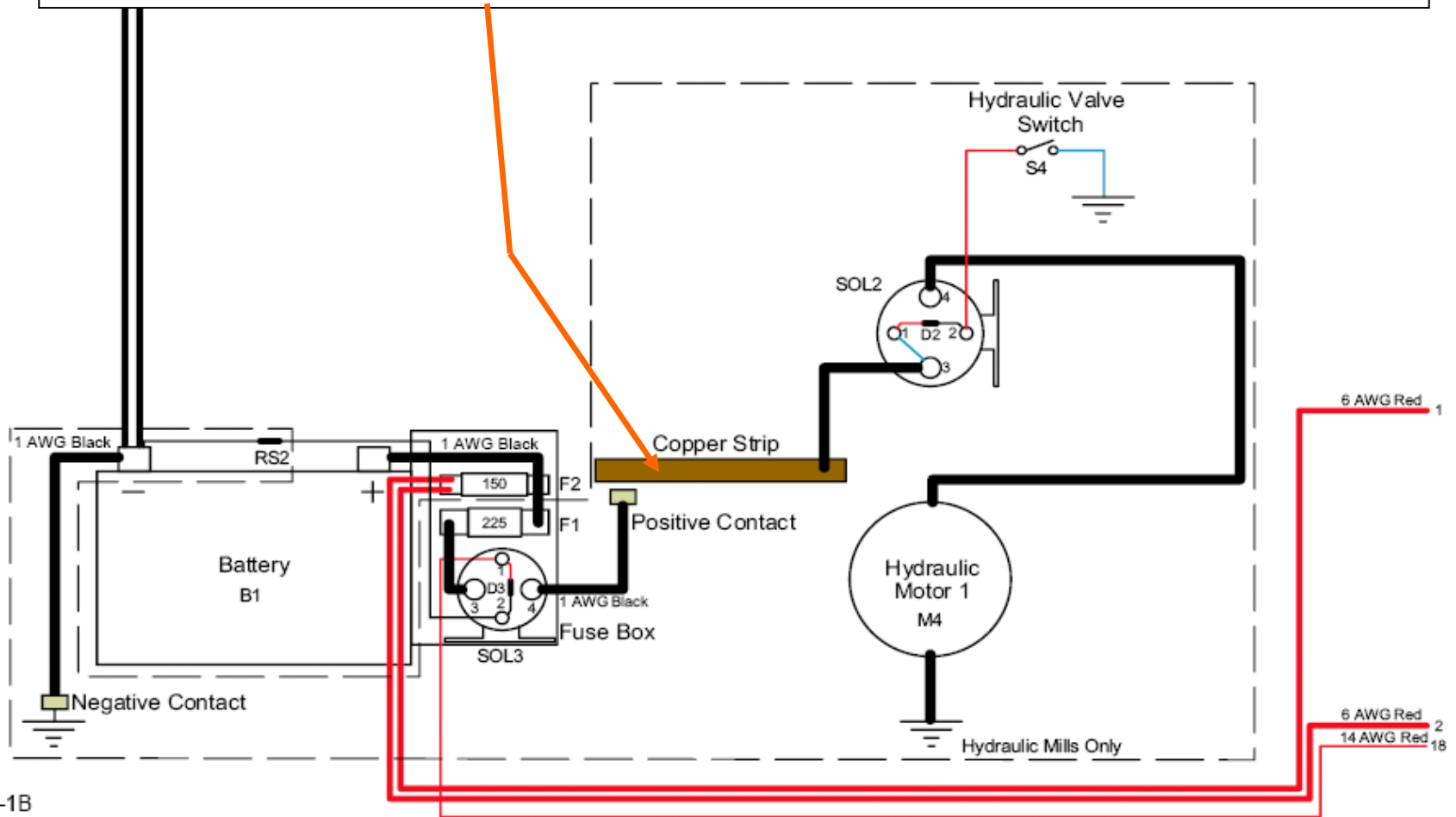
i3-1B

The positive contact block contacts the power strip when the head is at the hitch end of the mill. This keeps the hydraulics from being operated while sawing. Periodic inspection of the block is required. A dirty or unevenly worn block will cause a poor connection and arching on the strip. To adjust the block: loosen the bracket mounting bolts. Pull the bracket away from the strip until the block is no longer touching. Move the bracket toward the strip until the block contacts the strip. Push the bracket 1/8" more and tighten the bolts. This will give the block the correct spring pressure against the strip.

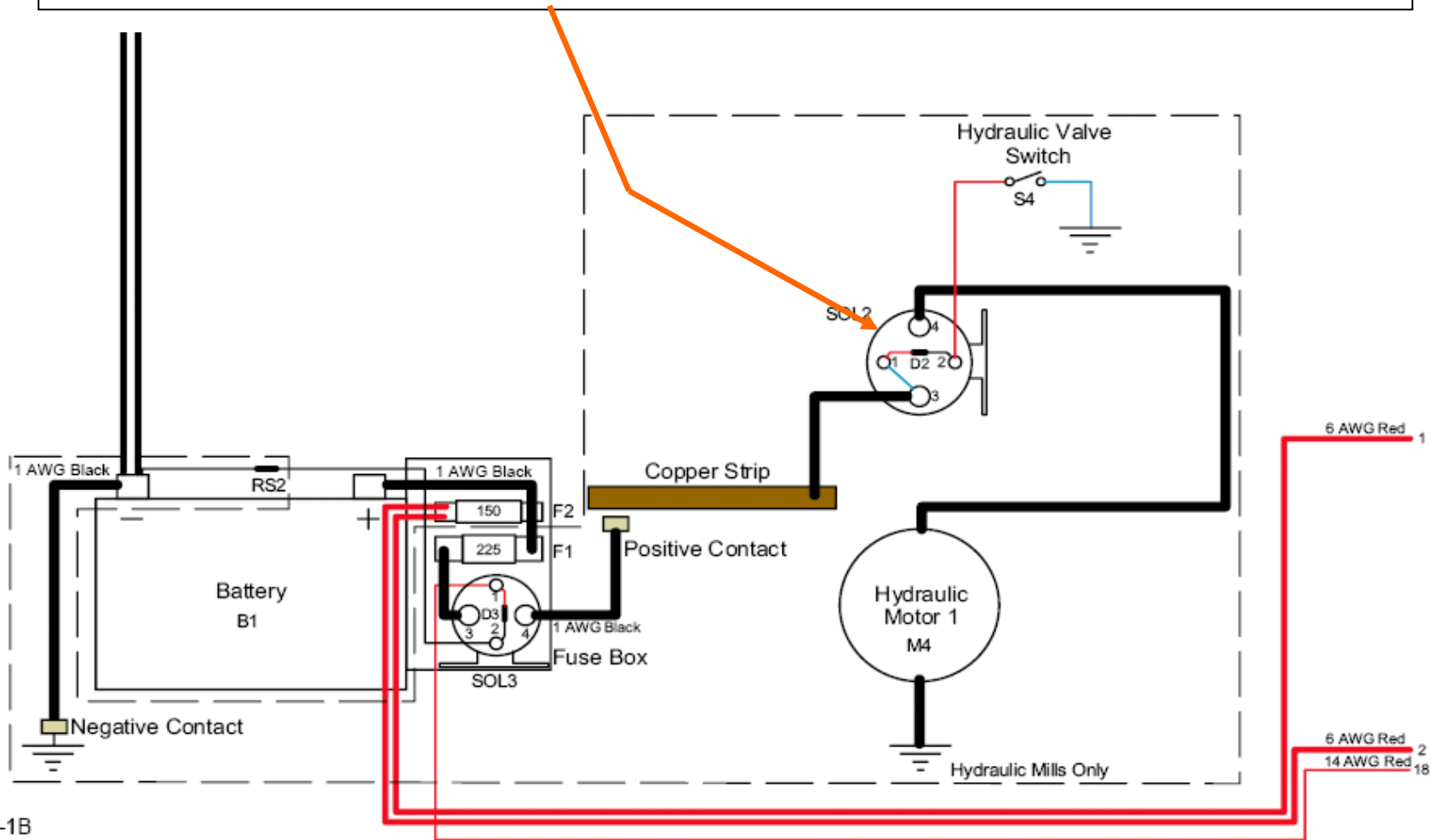


i3-1B

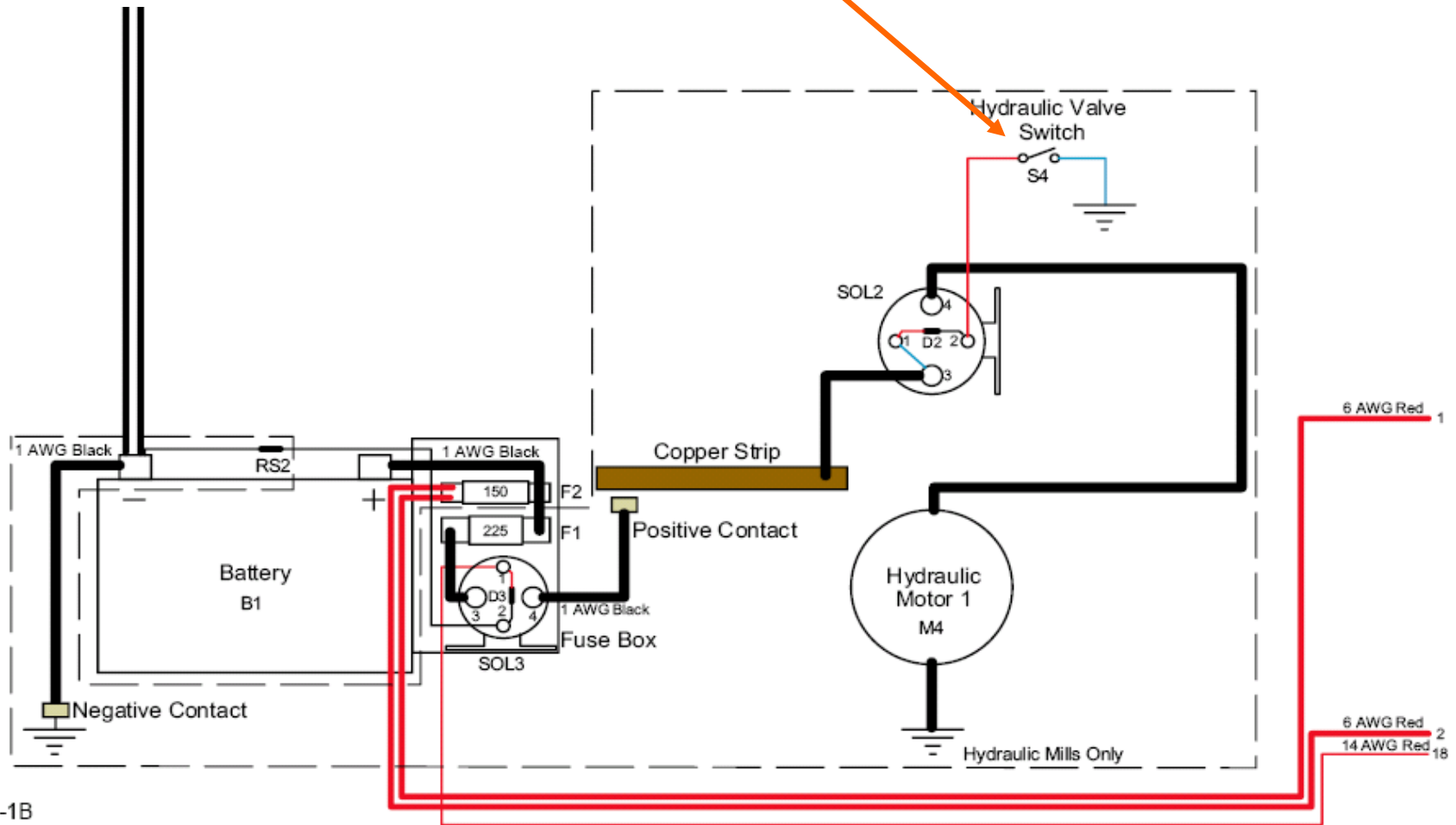
The power strip is located at the hitch and of the mill to allow operation of the hydraulics when not in the cutting position. Periodic inspection of the strip is required. A dirty or corroded strip will cause loss of hydraulic function. Use regular steel wool to shine the strip and clean off any corrosion. The bolt that attaches the cables to the strip is plastic. If replaced with a regular bolt, the positive contact block may touch it and arc, blowing the fuses.



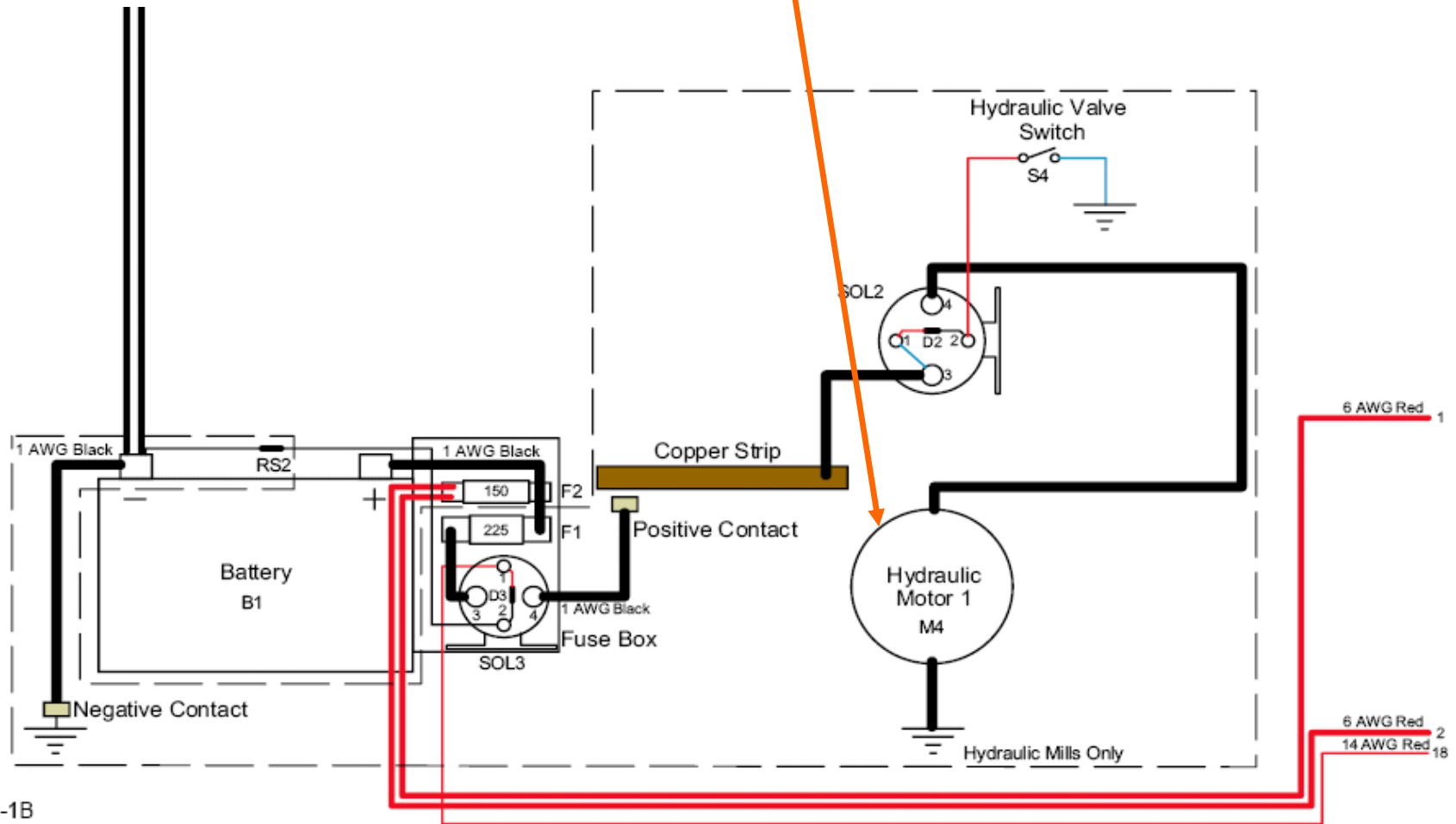
This solenoid is for the hydraulic motor control. This solenoid is ground activated. The small blue wire connected to the large terminal is 12 volts dc. The other small terminal is ground. The two large terminals have 12 volts dc when the solenoid is activated.



This is the micro switch. It is used to complete the ground circuit to the solenoid. The is a normally open switch. It will have no continuity when deactivated and continuity when activated.



The hydraulic motor is supplied it's voltage from the solenoid. The motor is chassis grounded. If you have 12 volts dc at the motor and a good ground, and the motor does not run, you will need to check the motor brushes.



3-1B

THE END