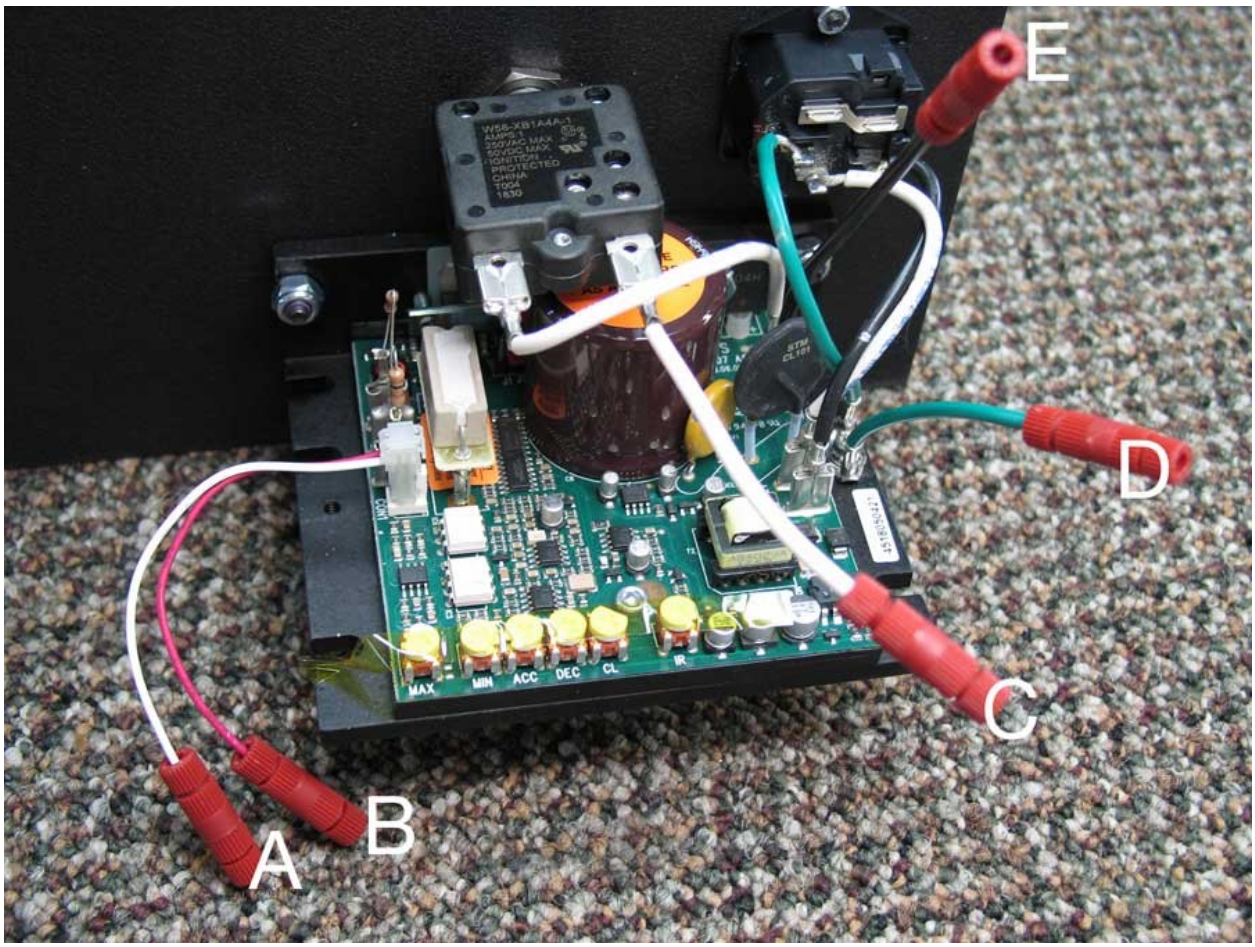
Installation of the M4 motor drive upgrade

The M4 drive board kit arrives with some tools and a new rear cover with the new drive board installed.

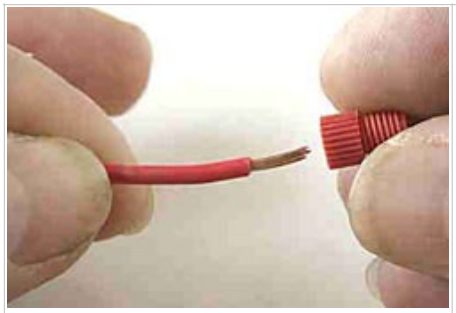
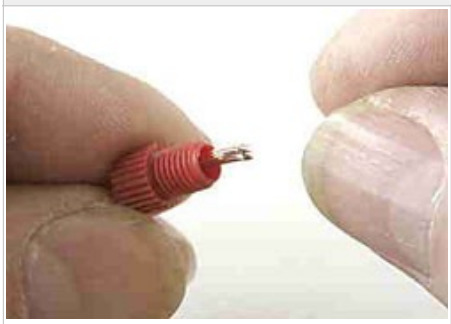
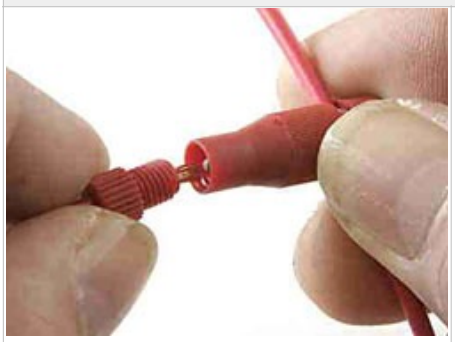
The first part of making the upgrade is to remove the old parts. To do this, first unplug the grinder from power. Using the correct hex wrench remove the four button head fasteners holding the rear cover in place. Using the supplied screwdriver remove the wires going into the green terminal block that is part of the old drive board. Using the correct hex wrench now remove the single screw holding the old board to the baseplate. Discard the old rear cover and the old drive board, screw and spacer.

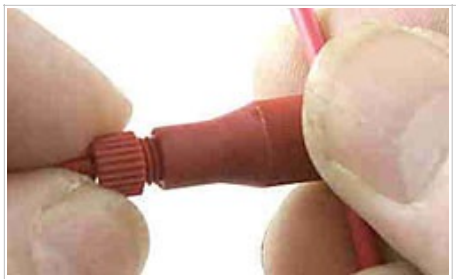
There are five connections to be made with the new drive board. They are to be made with the special connectors already in place on five wires. The connections are listed in the picture as ABCDE.



The board has 6 tiny trim pots covered in tape. Please do not alter the settings.

The following illustrates how to use the connectors. Your grinder may have the wire ends soldered to make them more solid which worked well in the terminal strip, but if too stiff won't work well with these connectors. If that is the case you must cut the end off the wire and strip about 3/8" of insulation off.

	Unscrew the cap and insert the wire end. Be careful to get all the strands through the cap.
	Tweak the strands to one side with your thumbnail.
	Insert the wire strands into one side of the metal core.



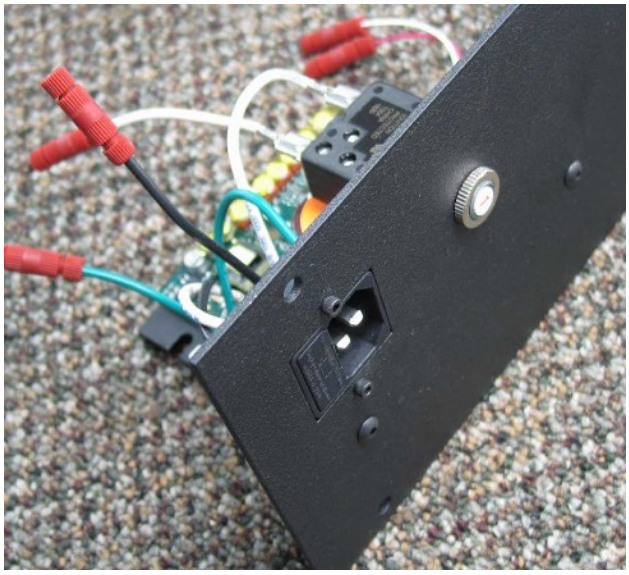
Push and turn until the threads catch, then screw in tightly by hand - make sure the wire does not slip back in the cap.

On the small Posi-locks tighten firmly by hand, but if you are very stong, you can strip the threads so don't overtighten the small Posi-Locks.

The wires marked A and B are to be connected to the two wires (usually red) from the front panel switch. The C connector goes to the white motor wire, D to the green/yellow striped ground wire of the motor and E to the black motor wire.

Be careful putting the rear cover back on there are a lot of excess wire to be stuffed in. The motor cable on some grinders is very long. It is best to push this down and towards the bottom front cover.

Note also that the new drive electronics includes a circuit breaker. On the rear cover is now a white button. This circuit breaker is protection for the motor only not the drive electronics which is still protected by the fuse in the connector for power on the rear cover.



This circuit breaker will trip if the motor stalls for more than a few seconds. If it trips the white button will pop out. Let it stay for a couple minutes until the internal elements of the breaker cool down, then push the button back in.