

# WELDTRON PIPELINER

## Troubleshooting problems with the Pipeliner Remote Amp Control.

In the event that your Pipeliner remote control does not operate correctly, use the troubleshooting procedures below to determine what the problem is and the solution to take.

**WARNING! FAILURE TO FOLLOW THE SEQUENCE OF THE TROUBLESHOOING PROCEDURES BELOW WILL SEVERELY HAMPER YOUR ABILITY TO FIND THE PROBLEM.**

**NOTE:** When the statement “RUN ENGINE OR WITH ENGINE RUNNING” is stated, it means THE ENGINE IS TO BE RUN AT WELD SPEED ...NOT IDLE SPEED!

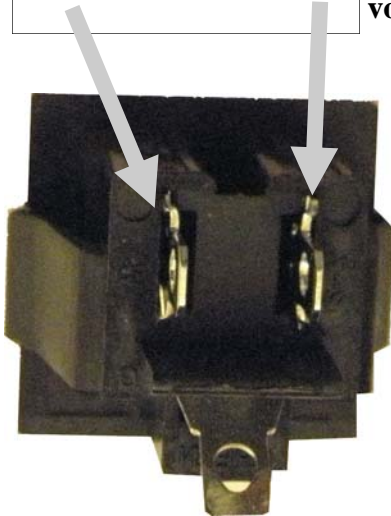
### Step 1: Testing the hand control unit.

Plug the remote hand control into the remote receptacle. Do not use the extension cord at this time. Start the engine and plug an electric tool into the hand control receptacle. Test to see if there is power at the hand control outlet to run the tool. If there is, go to step 3. If not, go to step 2.

### Step 2: Testing the hand control unit at the remote receptacle mounted on the welding machine.

**WARNING!** The receptacle used **MUST** be an isolated ground receptacle. It must be the receptacle we supplied with the machine (Shown below), a 5361-IG series (orange color) or the female end of an extension cord. **NOTHING ELSE.** All other receptacles have internal grounding and will not operate with the remote controller.

Step 2A  
120 volts AC or DC



With the engine running and the remote hand control plugged directly into the remote receptacle (without the extension cord), measure the voltages shown below at the remote receptacle (back side).

If there is NO voltage present, then the problem is within the wiring of the welding machine. If there IS VOLTAGE the hand control unit is defective.

### **NOTE:**

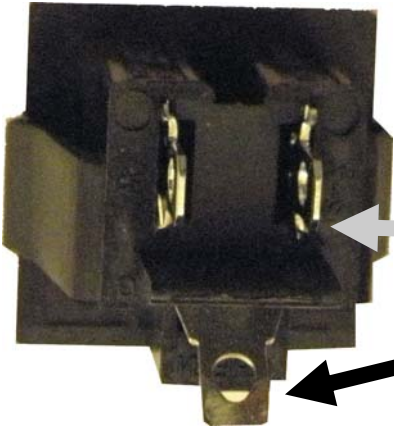
**Over 99% of problems encountered in new installations are due to failure to follow the instructions EXACTLY as written.**

### Step 3: Testing the hand control for operation

With the engine running, make the following tests with the remote hand control plugged into the remote receptacle.

Two measurements will be taken. Step 3A and 3B. Perform both tests by turning the remote dial from 0 to 100% and back. Measure the voltage (DC) at 0 and at 100%. Note that the voltage varies as the knob is turned.

#### Step 3A: Testing one side of the receptacle



Depending on the polarity of the plug, you will record one of two different readings.

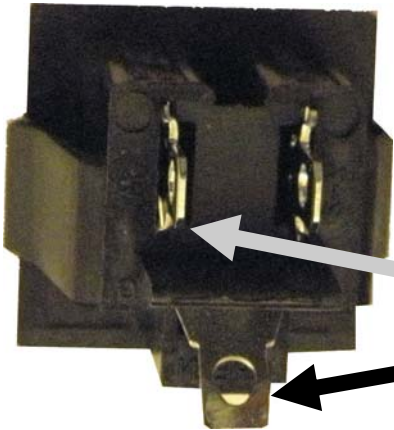
Hand control turned from 0% to 100%

75 to 120 volts DC

Or 0 to 43 volts DC

Either is OK and notice that the voltages vary as the knob is turned on the hand control.

#### Step 3B Testing other side of the receptacle.



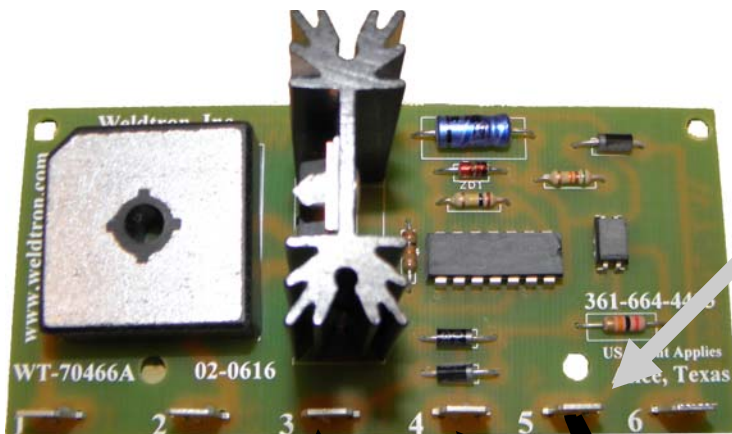
Depending on the polarity of the plug, you will record one of two different readings.

Hand control turned from 0% to 100%

75 to 120 volts DC

Or 0 to 43 volts DC

Either is OK and notice that the voltages vary as the knob is turned on the hand control.



**NOTE:** The same tests can be performed between terminals 5 & 4 and 5 & 3 on the machine circuit board.

**If you don't measure or see the variation in the voltages indicated, the hand control is not operating and must be replaced or repaired.**

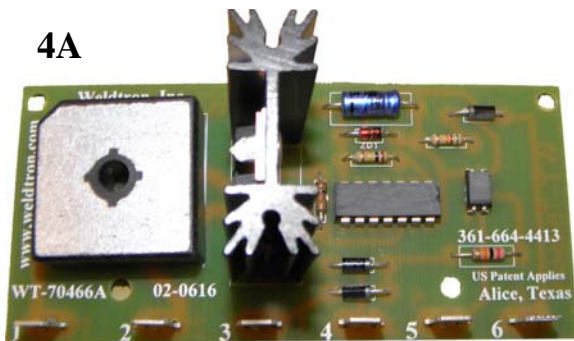
**If the voltages vary as shown, the hand control unit does not have any problems and all further troubleshooting will only be for the machine and machine circuit board.**

Go to step 4.

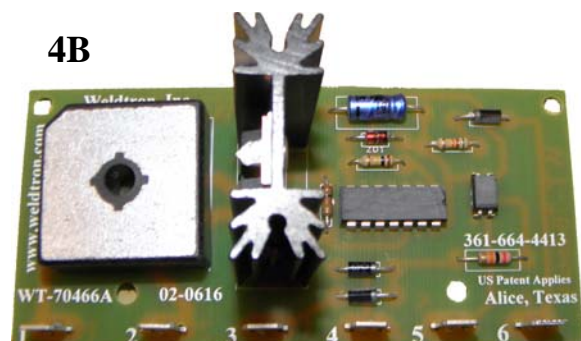
**Step 4: Checking connections to the machine circuit board.**

**TESTS WITH MACHINE ENGINE TURNED OFF.**

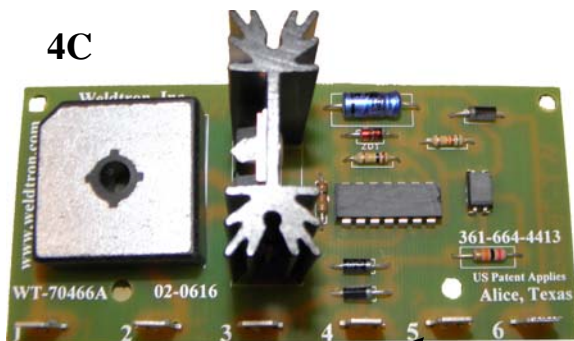
**NOTE: REMOTE HAND CONTROL IS NOT PLUGGED IN FOR TESTS 4A, 4B, AND 4C.**



**“0” ohms with machine rheostat set at maximum (100%).**



**63 ohms with machine rheostat set at minimum (0%).**



**You should NOT READ ANY resistance to machine frame or any other part of the machine other than the ground terminal on the remote receptacle.**

**Tests 4A through 4C are resistance tests. Use a multimeter....not a continuity tester (light bulb tester).**

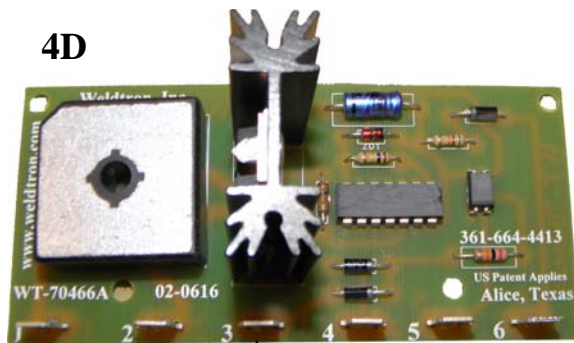
**If tests 4A or 4B fail, there is a wiring problem in the installation or failure of wiring in the machine.**

**Go back and connect the wiring EXACTLY as shown on the Pipeliner connection diagrams.**

**If test 4C fails, you have not installed the isolated ground receptacle supplied with the unit. The receptacle you installed is a standard INTERNAL grounded receptacle and will call a malfunction of the remote control. If you need an isolated ground receptacle use a generic IG5361 receptacle obtained at a local electrical hardware store.**

The following tests are performed with the ENGINE RUNNING.

These are electrical tests so observe all electrical safety rules.



**120 Volts (AC or DC) depending on the type of voltage present at your machine's standard electrical receptacle.**

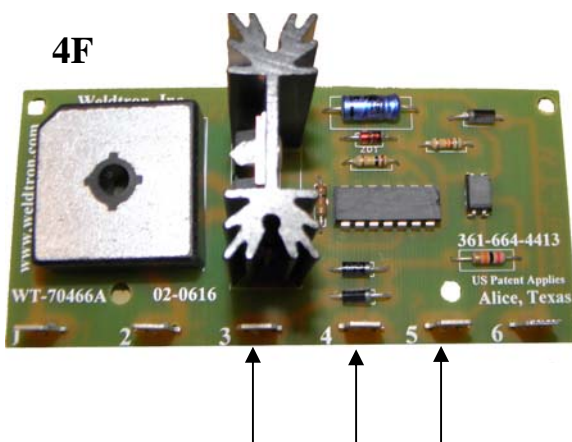
**SA-200, Classic I and old SA-250 machine will read DC.**

**All others will read AC.**



**Read the voltage between terminal 1 and 6 and then from terminal 2 and 6.**

**One of the terminals (or both) read 120V DC (not AC) with terminal 6 being the + (Positive) terminal.**



**Variable voltage test.**

**Plug the hand control into the remote control receptacle and perform the tests shown in STEP 3, page 2.**

**Terminals 3, 4, and 5**

**If step 4D fails the problem will be that the 120V connection to the machine's electrical receptacle has not been made. Connect the wiring correctly and the problem will be solved.**

**If step 4E fails, wiring has been installed incorrectly. Go back over the instructions and install properly.**

**If step 4F fails, the problem is either with the remote receptacle, the wiring to it, or the hand control unit. Go to Step 3, page 2 for further help.**



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## Schematic for connection of Weldtron Pipeliner to all machines

