

THC-2 / MAX200

***Torch Height Control
Retrofit to MAX200***

***Field Installation Bulletin
801510 - Rev. 0***



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Retrofit to MAX200**

**Field Installation Bulletin
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THC-2 / MAX200 RETROFIT

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THC-2 / MAX200 RETROFIT

Purpose

This field installation bulletin will enable a technician to retrofit a MAX200 machine-torch system without torch-height control, to a system with torch-height control using the THC-2 module.

General

The THC-2 system has three basic components: the THC-2 module, a five-foot interconnecting cable, and a voltage divider. The following is a brief description of each component:

THC-2 Control Module

The THC-2 module, together with the torch lifter, torch, workpiece, power supply and voltage divider, form a "closed-loop" feedback control system. It ultimately controls torch-to-workpiece distance by maintaining the voltage between the torch electrode and work equal to the setpoint selected by the operator, +/- 3 volts.

Interconnect Cable

Interfaces between the MAX200 power supply, and the voltage divider.

Voltage Divider

Divides the arc voltage between the torch electrode and the workpiece by 25 and sends this voltage to the THC-2 module.

Customer Required Tools

pencil
screwdrivers (regular head and Philips head)
adjustable wrench
electric drill
#29 drill bit

Hypertherm Parts

Part No.	Description	Qty.
052002	THC-2 Torch Height Control	1
023264	Cable, MAX100/THC-2 5'	1
041007	Voltage divider THC1/THC-2	1
053005	Control module, THC-2	1
800200	IM: THC-2 Torch Height Control	1



WARNING - HIGH VOLTAGE!



Power to the MAX200 system must be disconnected before any retrofitting is attempted.

Voltage Divider Mounting Procedure

1. Move MAX200 line disconnect switch to **Off** position.
2. Remove top panel and both side panels of the MAX200.
3. Remove voltage divider template from page 8 (Figure 5) and punch out the four mounting holes. Check dimensions as provided on template.
4. Place template approximately as shown in Figure 2.
5. Mark the hole locations with a pencil and remove template.
6. Protect the base of the MAX200 (especially the transformer) with a cloth, and drill the four holes using a #29 drill bit.
7. Unscrew the 4 screws from the voltage divider.
8. Mount the voltage divider as shown in Figure 1 with the white wire facing down. Screw the voltage divider in place from the center wall right rear side (see Figure 2).
9. Carefully remove protective cloth and blow out any metal shavings inside of MAX200 power supply with shop or compressed air.

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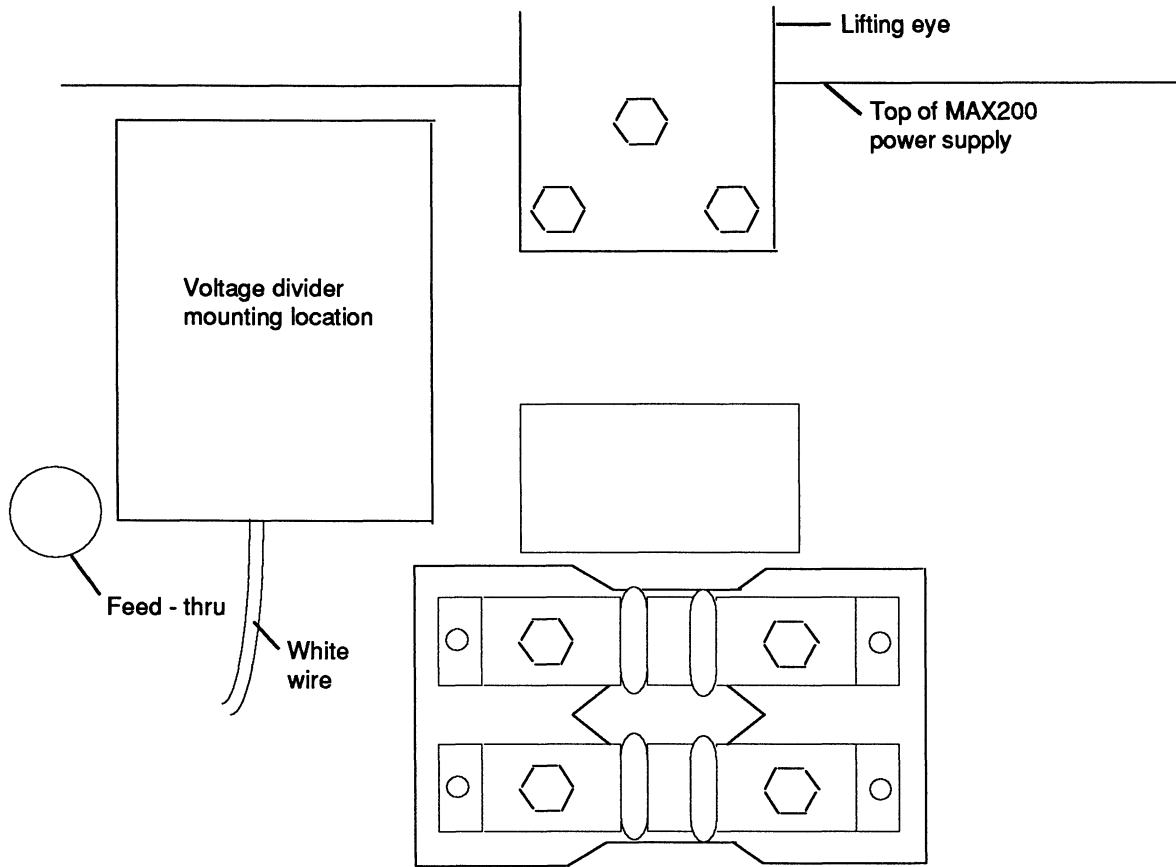


Figure 1 Voltage Divider Mounting Location - MAX200 Center Wall Left Rear

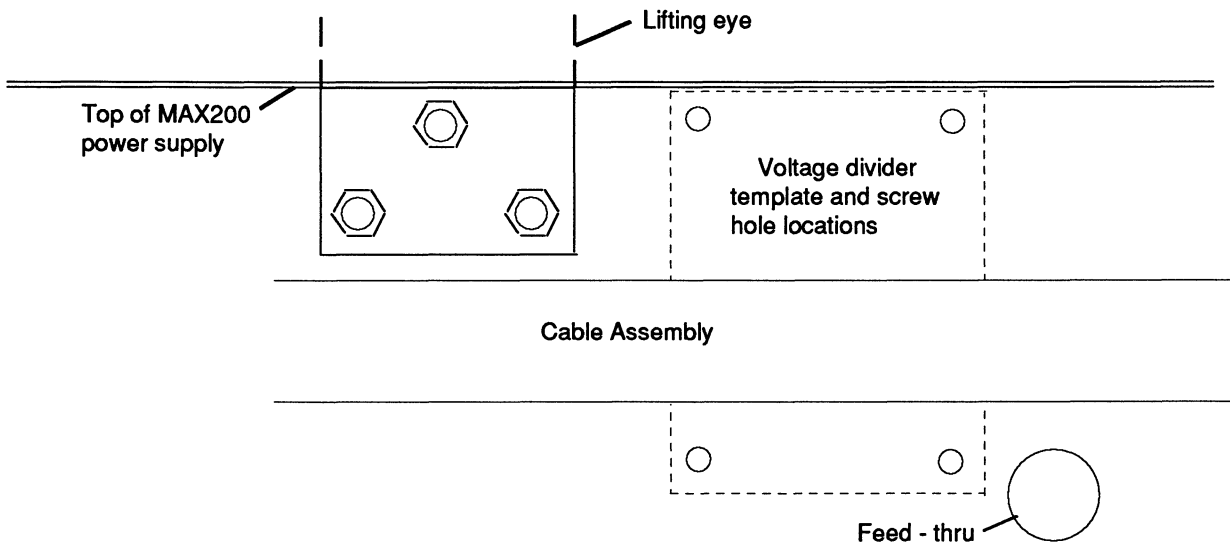


Figure 2 Voltage Divider Template Location - MAX200 Center Wall Right Rear

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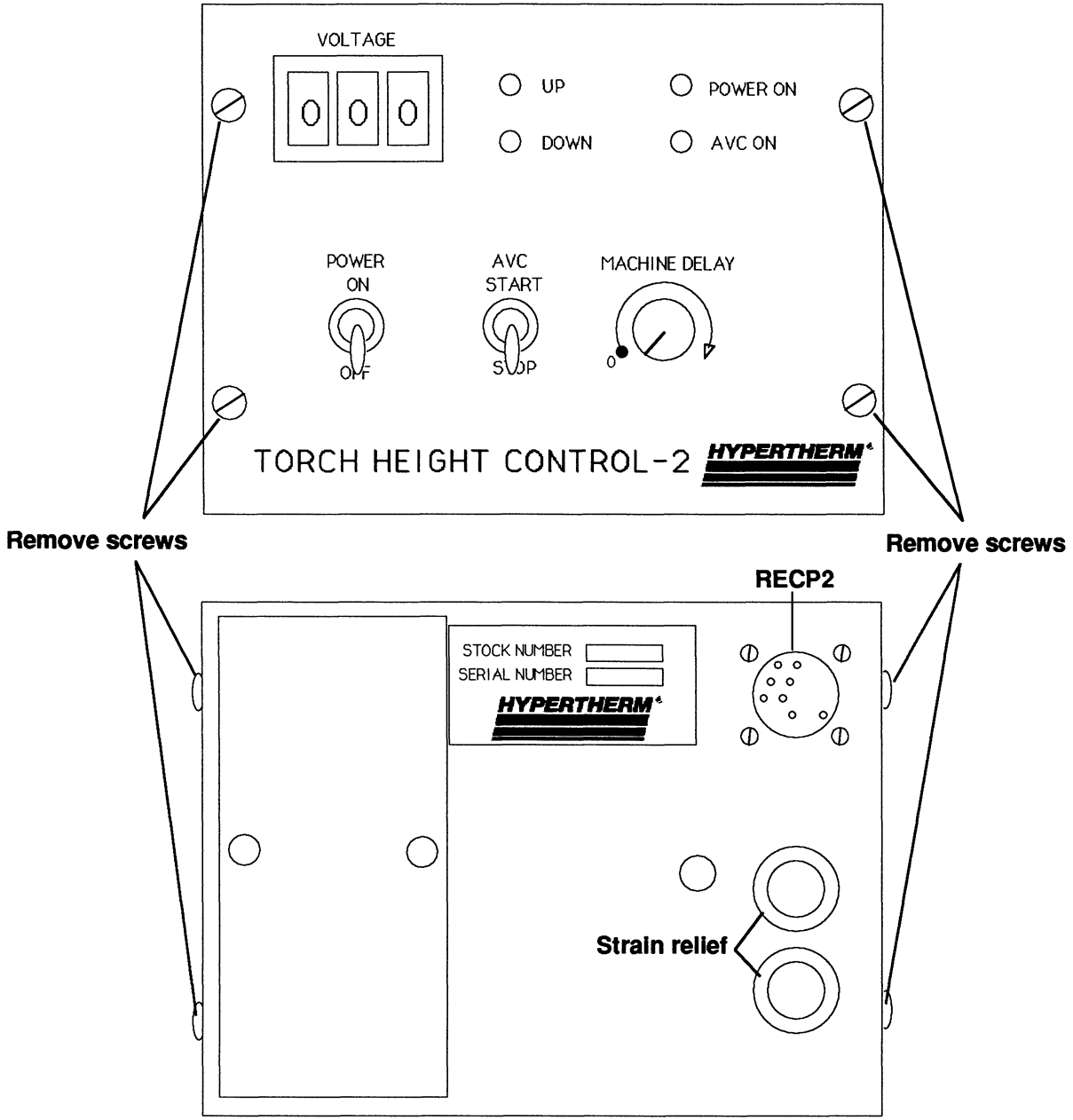


Figure 3 THC-2 Front and Rear Panels

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THC-2 Interconnect to MAX200 & Voltage Divider Procedure

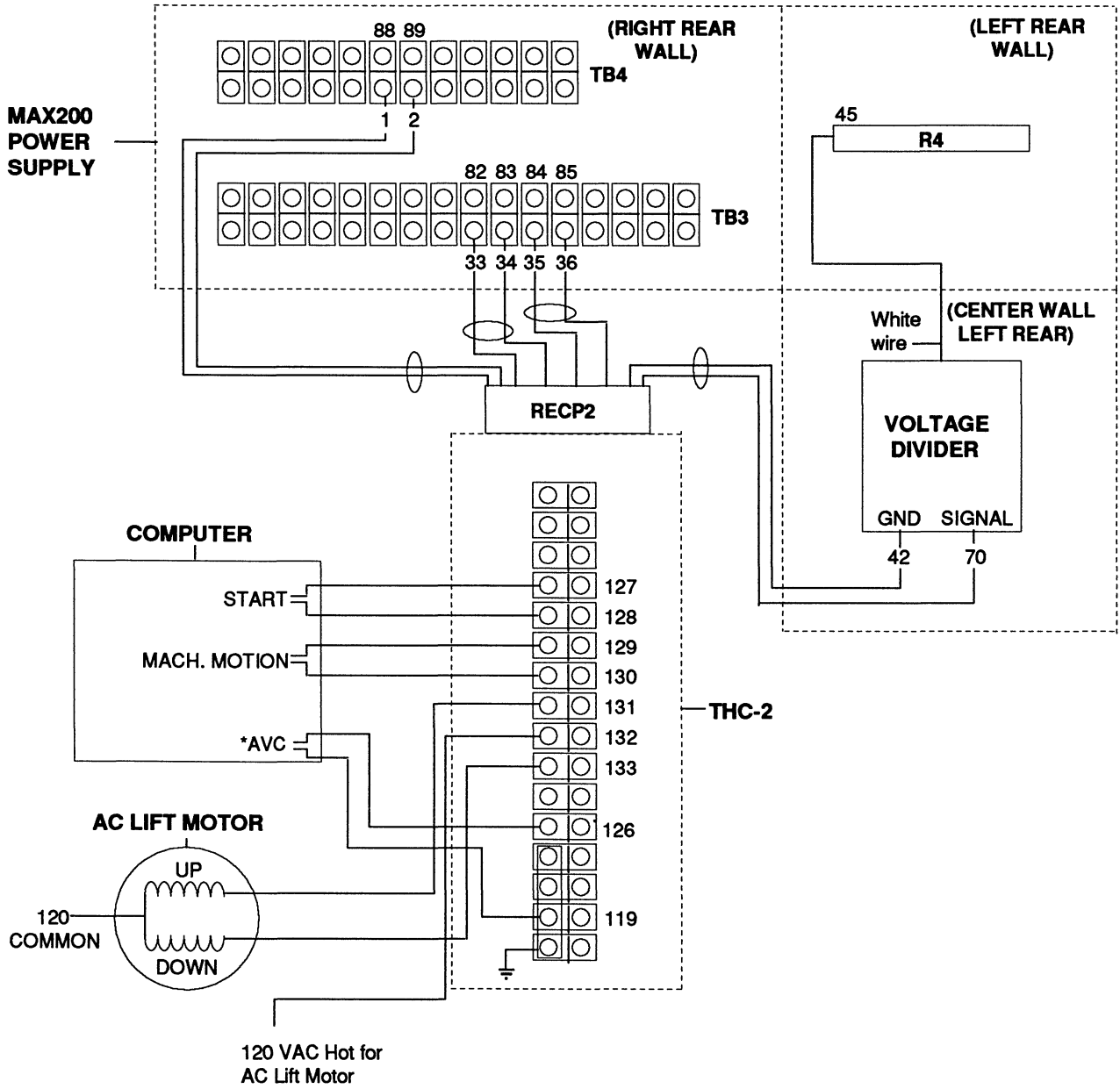
1. Remove the eight screws on the THC-2 Control module (see Figure 3) and remove the top panel. Locate the THC-2 module near the MAX200 power supply.
2. Connect the interface cable to RECP2 on the THC-2 module (see Figure 3).
3. Loosen the adjustable strain relief on the rear of the MAX200 power supply where the primary power cable enters.
4. Thread the other end of the interface cable through this strain relief and make connections to TB4, TB3 and voltage divider as shown in the Figure 4 wiring diagram. Note: Push wires 42 and 70 through the center wall feed-thru to get to voltage divider. See Figure 2 for location of feed-thru.
5. Connect the white wire from the voltage divider to location #45 on R4 which is located on the left rear wall of the MAX200 power supply. See Figure 5-6 in instruction manual IM98 for location of R4, if necessary.

THC-2 Interconnect to Computer and Torch Lifter Procedure

The cables running from the THC-2 control module to the cutting machine computer and AC lifter motor must be supplied and fabricated. Hypertherm recommends a 7 - conductor 24-gauge shielded cable to interface with the computer, and a 4 conductor 24-gauge wire to interface with the lifter motor.

1. Thread the cables through the strain reliefs located on the back panel of the THC-2 module. See Figure 3.
2. Make connections to the THC-2 terminal board as shown in Figure 4.
3. Make connections to the lift motor and the computer as shown in Figure 4. Consult your cutting machine schematics, or call the cutting machine manufacturer for actual connections on the cutting machine.
4. After all connections have been made, replace THC-2 top panel, and MAX200 top and side panels.

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*AVC: Automatic Voltage Control

Figure 4 Wiring Diagram - THC2 to MAX200, Voltage Divider, Computer, and AC Lift Motor

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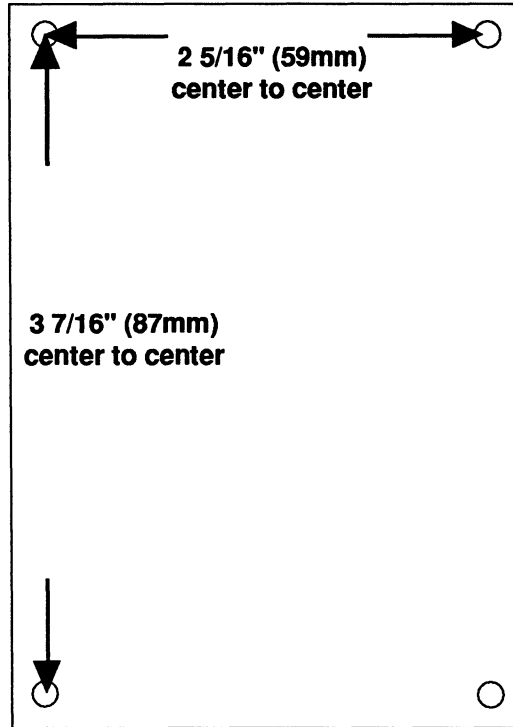


Figure 5 Voltage Divider Mounting Template and Screw - Hole locations