

Basic troubleshooting

The following table provides an overview of the most common problems that can arise when using the Powermax system and explains how to solve them.

Note: Fault icons and corresponding fault codes appear in the LCD display. Refer to page 8-6 *Fault codes and solutions*.

If a fault occurs while using a generator, turn OFF the power supply, wait 30 to 45 seconds, and turn ON the power supply.

If you are unable to fix the problem by following this basic troubleshooting guide, or if you need further assistance:

1. Call your Hypertherm distributor or authorized Hypertherm repair facility.
2. Call the nearest Hypertherm office listed in the front of this manual.

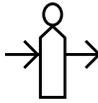
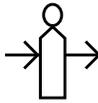
Problem	Solutions
The ON/OFF power switch is set to ON (I), but the power ON LED is not illuminated.	<ul style="list-style-type: none">▪ Verify that the power cord is plugged into the receptacle.▪ Verify that the power is ON at the main power panel or at the line-disconnect switch box.▪ Verify that the line voltage is not too low (more than 15% below the rated voltage).▪ Verify that the circuit breaker has not been tripped.
The arc does not transfer to the workpiece.	<ul style="list-style-type: none">▪ Clean the area where the work clamp contacts the workpiece to ensure a good metal-to-metal connection.▪ Inspect the work clamp for damage and repair as necessary.▪ The pierce-height distance may be too large. Move the torch closer to the workpiece and fire the torch again.

Problem	Solutions
The arc blows out, but re-ignites when the torch trigger is pressed again.	<ul style="list-style-type: none">▪ Inspect the consumable parts and replace them if they are worn or damaged. See page 8-3 <i>Inspect the consumables</i>.▪ Replace the air filter element if it is contaminated. See page 8-10 <i>Replace the air filter element and air filter bowl</i>.▪ Make sure the gas pressure is at the proper level.
The arc sputters and hisses.	<ul style="list-style-type: none">▪ The air filter element is contaminated. Replace the element. See page 8-10 <i>Replace the air filter element and air filter bowl</i>.▪ Inspect the gas line for moisture. If necessary, install or repair the gas filtration to the power supply. See the <i>Power Supply Setup</i> section.
The cut quality is poor.	<ul style="list-style-type: none">▪ Verify that the torch is being used correctly. See the <i>Basic System Operations, Hand Cutting, or Mechanized Cutting</i> section.▪ Inspect the consumables for wear and replace as necessary. See 8-3 <i>Inspect the consumables</i>.▪ Check the air pressure and air quality.▪ Verify that the cutting mode switch is in the proper position for the cutting operation.▪ Verify that the correct consumables are installed.

Fault codes and solutions

A label with descriptions for these common fault codes can be found inside the front cover of this manual. Peel off the label and place it on the rear of the power supply for reference.

Note: If a fault occurs while using a generator, turning the power switch quickly to OFF and then to ON again (sometimes called a “quick reset” or “quick restart”) may not clear the fault. Instead, turn OFF the power supply and wait 30 to 45 seconds before turning ON again.

Fault code	Description	Power LED	Fault LED	Fault icon	Solutions
0-12	Low input gas pressure or unstable gas pressure: Warning (the system continues to operate)	On	Off		<ul style="list-style-type: none"> Adjust the gas inlet pressure as needed.
0-13	AC input unstable: Warning (the system continues to operate)	Blinks (3 Hz)	Off		<ul style="list-style-type: none"> Correct the power source.
0-19	Power board hardware protection. One or more power board hardware faults (or noise) detected.	On	On		<p>The inverter shuts down and does not fire again for several seconds. If the fault is caused by electrical noise, the fault clears in a few seconds and the machine operates normally.</p> <p>A true 0-19 fault may display for up to 60 seconds before fault code 0-99 displays on the operator screen. A qualified service technician must service the system. Contact your distributor or authorized repair facility.</p>
0-20	Low gas pressure	On	On		<ul style="list-style-type: none"> Check the input gas supply. Adjust the gas pressure to the acceptable range using Manual mode. See the <i>Basic System Operations</i> section. Perform a quick restart.
0-21	Gas flow lost while cutting	On	On		<ul style="list-style-type: none"> Restore the gas inlet pressure and restart the power supply. Check the torch lead for leaks or kinking. Change consumables.
0-22	No gas input	On	On		<ul style="list-style-type: none"> Connect the gas source and restart the power supply.

Fault code	Description	Power LED	Fault LED	Fault icon	Solutions
0-30	Torch consumables stuck This indicates either a "torch stuck open" or a "torch stuck closed" situation.	On	On		<ul style="list-style-type: none"> ▪ If the consumables became loose or were removed while the power supply is ON, turn OFF the power supply, correct the problem and then turn ON the power supply to clear this fault. ▪ Change consumables. ▪ If the consumables appear to be installed correctly, the torch may be damaged. Contact your Hypertherm distributor or authorized repair facility.
0-32	End of consumable life	On	On		<ul style="list-style-type: none"> ▪ Replace the electrode and nozzle. ▪ Check the remaining consumables for wear and replace as needed.
0-40	Over/under temperature	On	On		<ul style="list-style-type: none"> ▪ Leave the power supply on to allow the fan to cool the power supply. ▪ If the internal temperature of the power supply approaches -30° C (-22° F), move the power supply to a warmer location.

MAINTENANCE AND REPAIR

Fault code	Description	Power LED	Fault LED	Fault icon	Solutions
0-50	Retaining cap off	On	On		<ul style="list-style-type: none"> Turn OFF the power supply. Verify that the consumables are installed and restart the power supply. If the consumables appear to be installed correctly, the torch may be damaged. Contact your Hypertherm distributor or authorized repair facility.
0-51	Start/trigger signal on at power up This situation indicates that the power supply is receiving a start signal. It is sometimes referred to as a "stuck start."	On	On		<ul style="list-style-type: none"> If the power supply is turned on while the torch trigger is pressed, the system is disabled. Release the trigger and recycle the power switch.
0-52	Torch not connected	On	On		<ul style="list-style-type: none"> Plug a torch lead into the FastConnect receptacle on the front of the power supply and recycle the power switch.

Fault code	Description	Power LED	Fault LED	Fault icon	Solutions
0-60	AC input voltage error	On	On		<ul style="list-style-type: none"> ▪ Phase loss: Check all input phases and fuses. ▪ Over voltage: Check the line, decrease the voltage. ▪ Under voltage: Check the line, increase the voltage.
0-61	AC input unstable: Shutdown	On	On		<ul style="list-style-type: none"> ▪ The incoming line current is unstable. Power down and correct the line problem before continuing.
0-98	Internal communication failure	On	On		<ul style="list-style-type: none"> ▪ Power down, wait 20 seconds, power up. ▪ A qualified service technician must open the power supply case and check the ribbon cable between the control board and the DSP board.
0-99	System hardware fault — service required Indicates a major fault with the system.	On	On		<ul style="list-style-type: none"> ▪ A qualified service technician must service the system. Contact your distributor or authorized repair facility.