# PC Power Supply Repair

This playbook describes the steps to safely diagnose and replace a faulty power supply in a personal computer. It involves safety measures, diagnostic procedures, and the replacement process.

### Step 1: Safety First

Ensure that the computer is powered off. Unplug the power cable and all other cables connected to the computer's external ports. Press and hold the power button for 5-10 seconds to discharge any residual electricity.

### Step 2: Open Case

Remove the side panel of the PC case to access the internal components. This usually involves unscrewing the panel or releasing a latch depending on the case design.

### Step 3: Inspect Visually

Perform a visual inspection of the power supply unit (PSU) for any signs of damage such as burn marks, swollen capacitors, or unusual smells that might indicate a problem.

### Step 4: Test PSU

Use a power supply tester or a multimeter to test the PSU. Make sure to check the voltage on different connectors to verify that the PSU is delivering consistent power across all outputs.

### Step 5: Remove PSU

If the power supply is determined to be faulty, carefully disconnect all power connectors from the motherboard and other components. Unscrew the PSU from the case and remove it gently.

### Step 6: Install New PSU

Position the new power supply in the case and secure it with screws. Connect all necessary power cables to the motherboard, GPU, drives, and other peripherals, following the connectors' shape and pin configuration to guide you.

### Step 7: Test System

Before closing up the case, perform a power-on test. Plug in the power cable, turn on the switch on the PSU if present, and press the power button on the front of the case to see if the system boots up normally.

### Step 8: Close Case

Once you confirm the system is operating correctly with the new power supply, power off the system, unplug the power cable, and replace the side panel of the computer case.

## General Notes

### Compatibility Check

Before purchasing a replacement power supply, ensure it is compatible with your PC's motherboard, GPU, and has sufficient wattage for all components.

### Warranty Void

Be aware that opening your PC case or replacing parts may void the manufacturer’s warranty. Check your warranty terms before proceeding.

### Static Electricity

Ground yourself prior to handling internal components to prevent static electricity damage. Use an anti-static wrist strap or touch a grounded metal object.