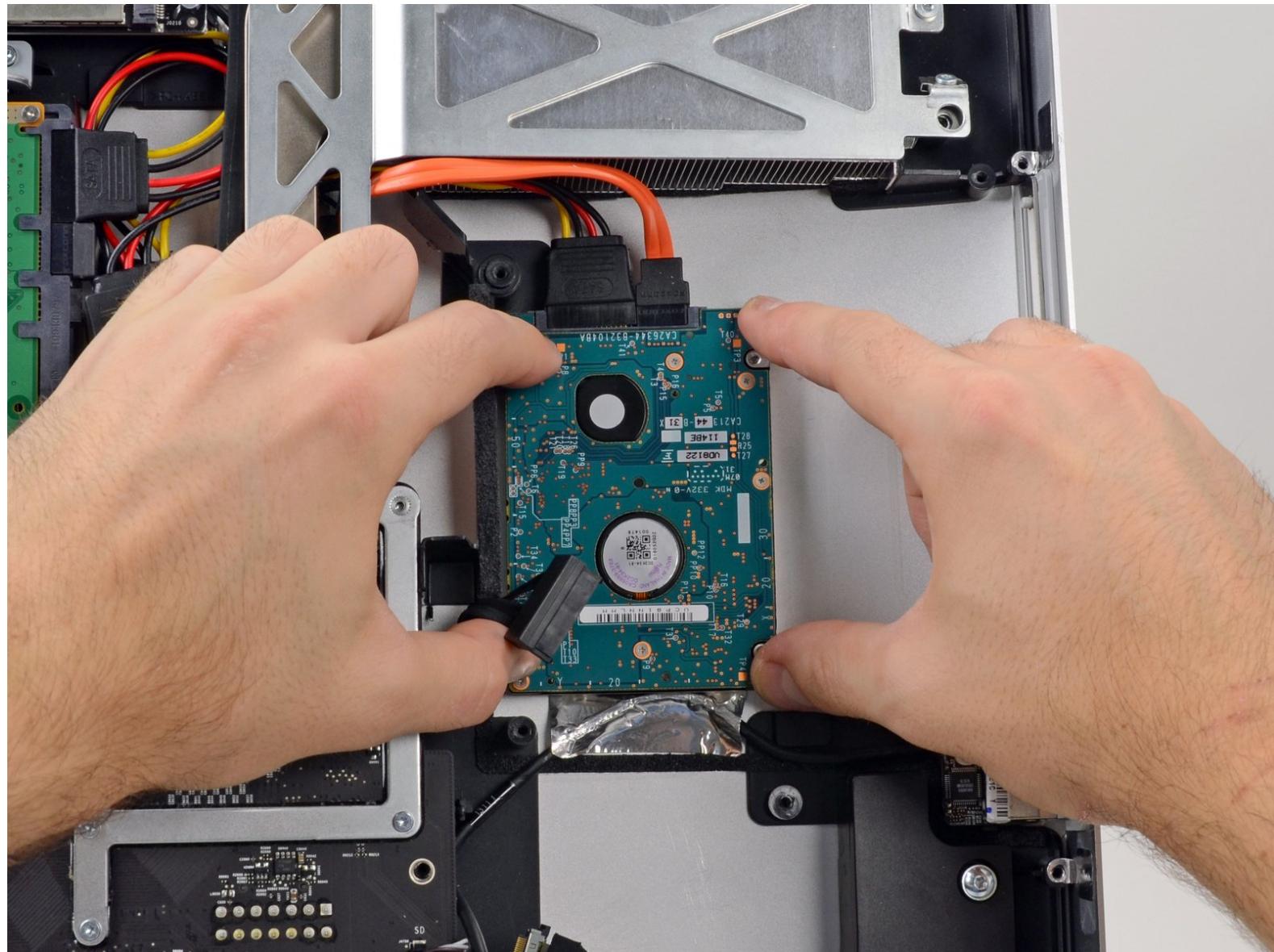




# Installing iMac Intel 27" EMC 2390 Dual HDD or SSD Drive

Installing a secondary HDD or SSD in the mid 2010 27" iMac EMC 2390.

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## INTRODUCTION

Although Apple never sold the 2010 27" iMac with the option of having a second HDD or SSD drive, they did provide the framework for inserting one yourself. Using a secondary SATA port on the logic board and tapping into the power supply, it is very simple to add a second drive into this iMac. Use this guide to install a second drive in the 2010 27" iMac, EMC 2390.

### TOOLS:

- [Phillips #1 Screwdriver \(1\)](#)
- [Spudger \(1\)](#)
- [Heavy-Duty Suction Cups \(Pair\) \(1\)](#)
- [T10 Torx Screwdriver \(1\)](#)
- [Paper Clip \(1\)](#)
- [Tweezers \(1\)](#)

### PARTS:

- [iMac Intel 27" Mid 2010 Dual Hard Drive Kit \(1\)](#)

## Step 1 — Access Door



- Loosen the three Phillips screws securing the access door to the bottom edge of your iMac.
- These screws will remain captive in the access door.
- Remove the access door from your iMac.

★ During reassembly, fasten the access door loosely and align it with the pocket cut into the outer case of the iMac before fully tightening the screws.

## Step 2 — RAM



- Use your fingers or the tip of a spudger to slide the black plastic RAM tray pull tab out of the RAM slot.

## Step 3



- Pull the black plastic tab away from the iMac to eject the RAM chip from its socket.
- The RAM modules are firmly seated and may require a fair amount of force to remove.
- Use your fingers to slide the RAM chip out of its socket.

*(i)* If necessary, repeat this process for the other RAM module(s).

## Step 4 — Glass Panel



- Stick a heavy-duty suction cup near each of the two top corners of the glass panel.
- To attach the [suction cups](#), first position the suction cup with the movable handle parallel to the face of the glass panel (as highlighted in the second picture).
- While lightly holding the suction cup against the glass, raise the movable handle until it is parallel with the other handle (as highlighted by the third picture).
- If your suction cups refuse to stick, try cleaning both the glass panel and the suction cup with a damp soft, lint-free cloth. (Dampen with distilled water, and if needed, an equal ratio of distilled water and white vinegar for best results.)

**⚠** Do not use the suction cups to carry the display glass because if one of them fails to stick, you could drop the screen and break it.

- The original iMac box makes a good place to store the glass panel. Otherwise, a padded horizontal surface, like a towel on a desk will do nicely.

## Step 5



- Gently lift the glass panel perpendicular to the face of the LCD enough to clear the steel mounting pins attached along the underside of the top edge of the glass panel.
- Pull the glass panel away from the lower edge of the iMac and carefully set it aside.

**⚠** Don't use the suction cups to carry the glass panel—if either one loses its grip, the panel could fall and break.

**⚠** After setting the glass panel down safely, be sure to release the suction cups, as the suction force over time can crack the glass.

**📌** During reinstallation, be sure to meticulously clean the inside of the glass panel and the face of the LCD as any dust or fingerprints trapped inside will be annoyingly visible when the machine is turned on.

## Step 6 — Display



- Remove the eight T10 Torx screws securing the LCD to the outer case.

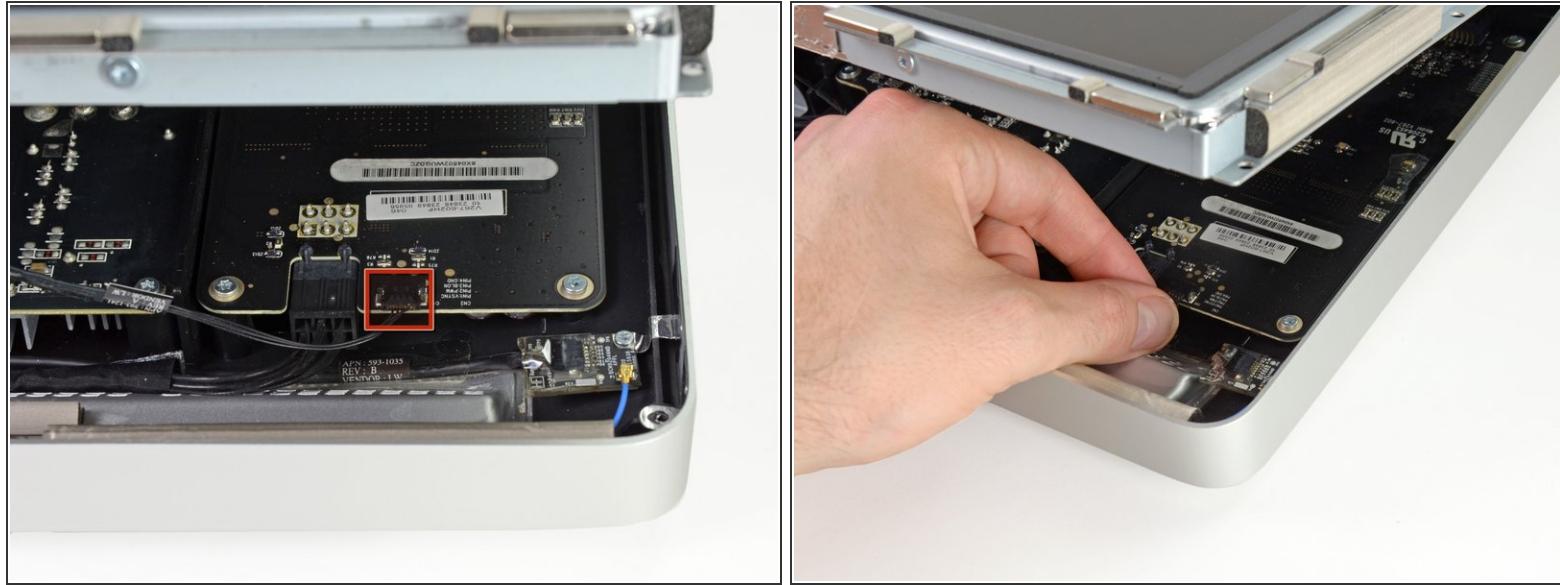
## Step 7



- Carefully lay the iMac stand-side down on a flat surface.
- Due to tight tolerances, you will have to use a thin hooked tool to lift the display out of the outer case. As seen in the third picture, we made one out of a bent paperclip.
- Use a thin hooked tool to lift one side of the top edge of the display by its steel outer frame.
- After lifting the top edge of the display on one side, hold it out of the outer case while you use a hooked tool to lift the other side.

**⚠** Do not lift the top edge of the display out of the outer case too far, as several short ribbon cables still connect the two components.

## Step 8



- Using your fingers, carefully pull the vertical sync cable out of its socket on the LED driver board near the top left corner of your iMac.

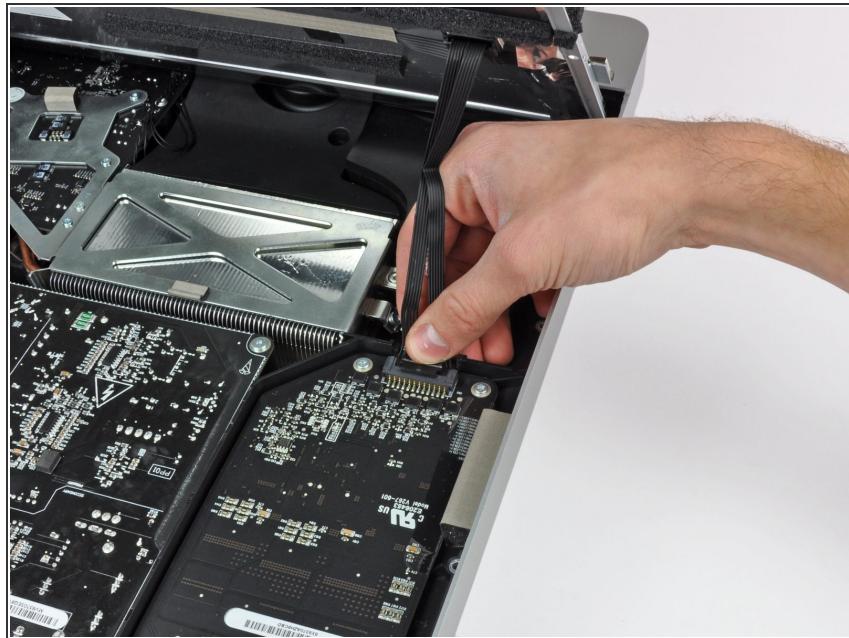
**⚠** Be sure to pull the connector parallel to the LED driver board, straight out of its socket.

## Step 9



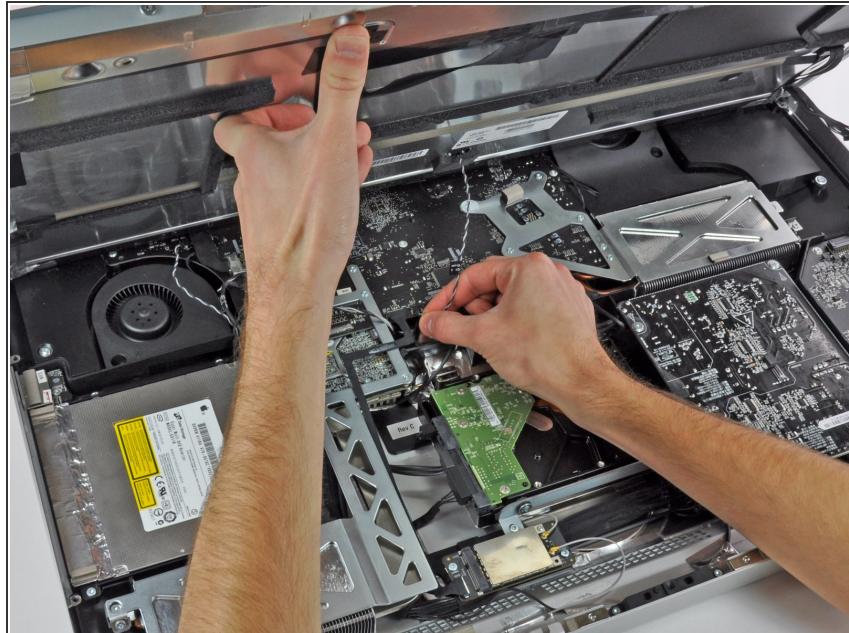
- Squeeze the two display data cable connector arms together to unlock it from its socket on the logic board.
- Pull the display data cable connector away from its socket on the logic board.

## Step 10



- Rotate the display out of the outer case enough to disconnect the LED backlight power cable from the LED driver board.

## Step 11



- Lift the display for enough clearance to disconnect the LCD thermal sensor cable connector from its socket on the logic board.

**i** If your fan is spinning full speed after completion, check this connection or the hard drive's thermal sensor cable.

## Step 12



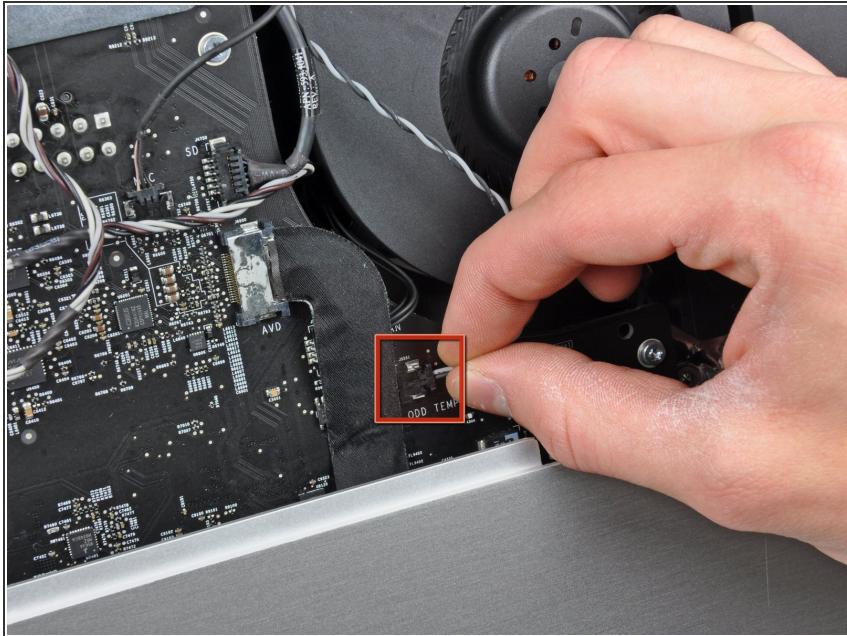
- Carefully pull the display toward the top edge of your iMac and lift it out of the outer case.

## Step 13 — Optical Drive



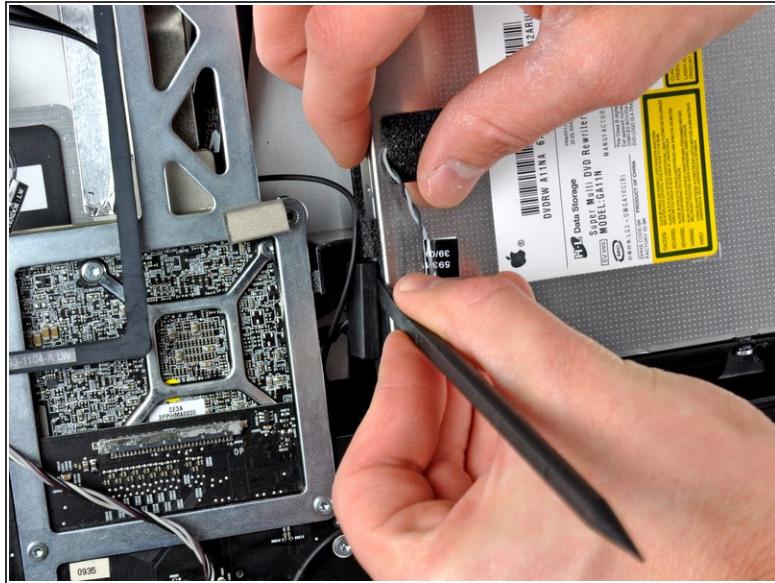
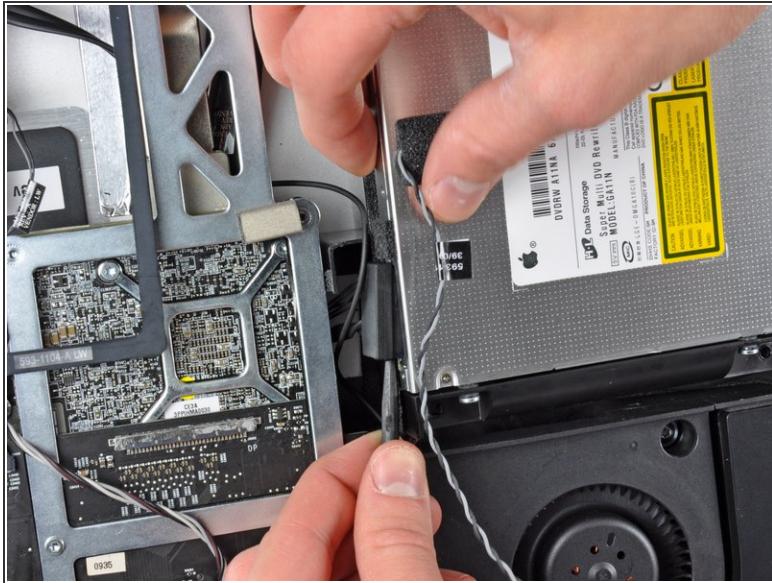
- Remove the four T10 Torx screws securing the optical drive to the outer case.

## Step 14



- Pull the optical drive thermal sensor connector straight away from its socket on the logic board.

## Step 15



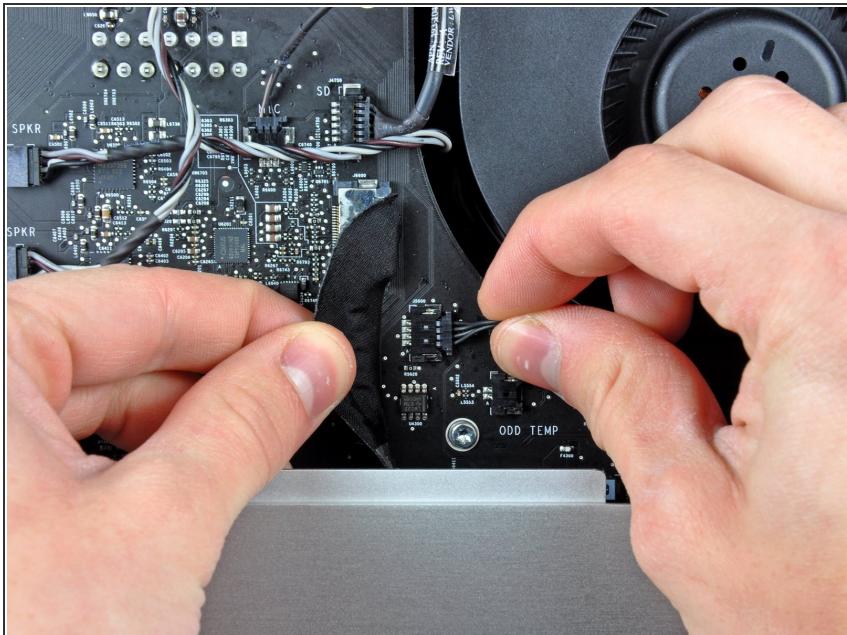
- Insert a spudger between the optical drive connector and the optical drive.
- Twist the spudger to slightly separate the optical drive connector from the optical drive, then use your fingers to pull the connector away from the drive.

## Step 16



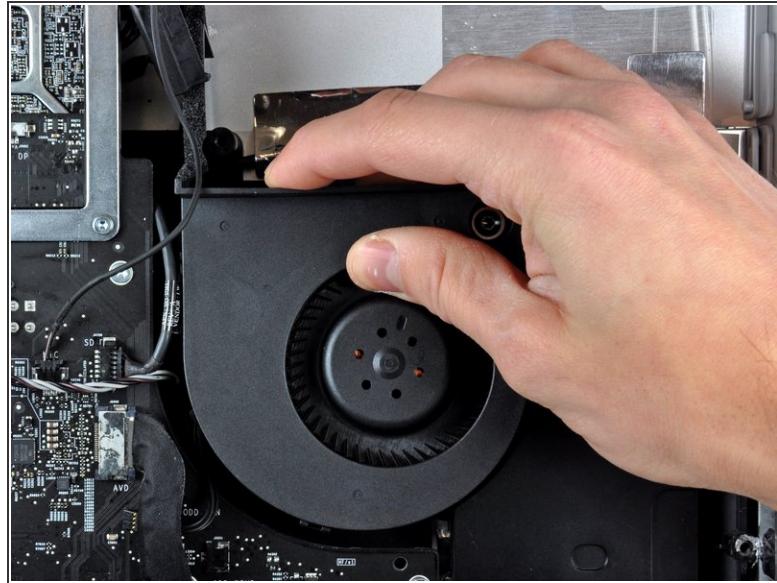
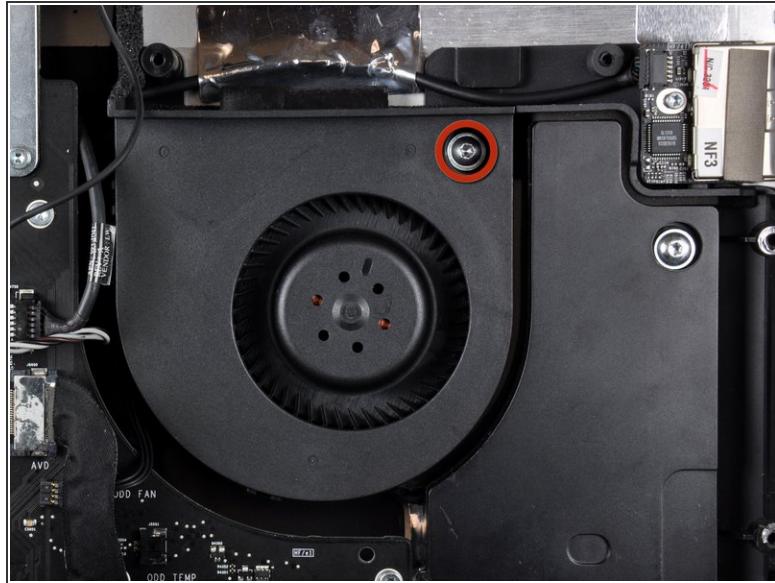
- Lift the left edge of the optical drive slightly and pull it away from the right side of the outer case.
- During reassembly, note that there are two holes in the optical drive face plate into which two stubby plastic posts must engage for proper positioning.

## Step 17 — Optical Drive Fan



- Carefully move the rear I/O board ribbon cable to reveal the optical drive fan connector hidden underneath.
- Disconnect the optical drive fan by pulling its connector away from the socket on the logic board.

## Step 18



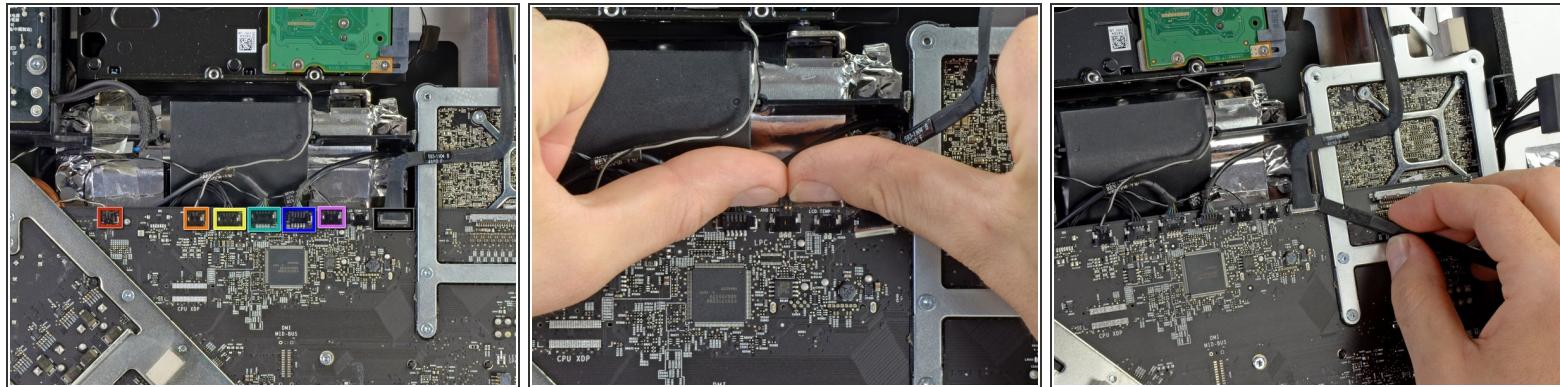
- Remove the single T10 Torx screw securing the optical drive fan to the outer case.
- Pull the optical drive fan away from the outer case to lift it off the three plastic posts around its perimeter.
- Carefully maneuver the optical drive fan out of the iMac, minding any cables that may get caught.

## Step 19 — Dual Drive Kit



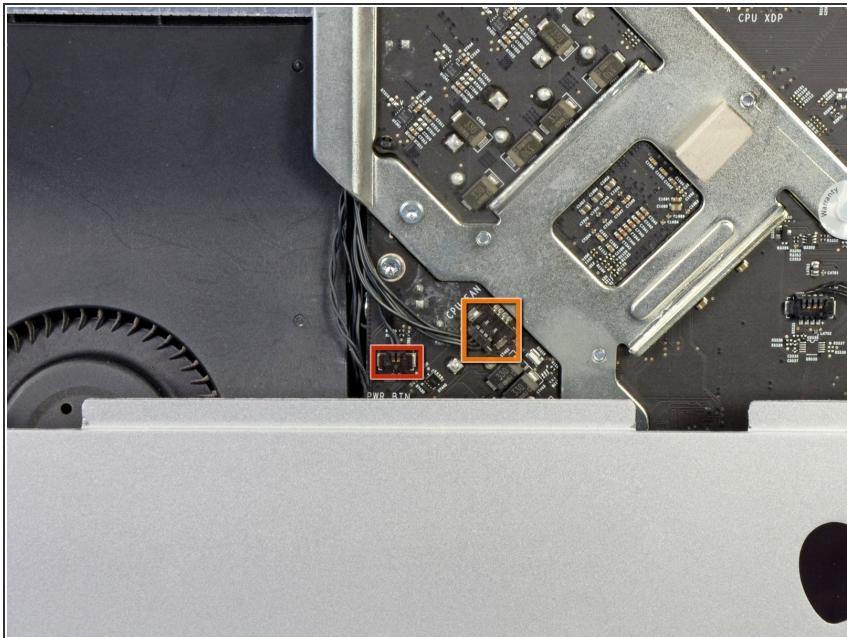
- Using your fingernails or the flat end of a spudger, remove the three connectors from the right side of the logic board.
  - SD card reader
  - Rear I/O board
  - Left and Right Speakers

## Step 20



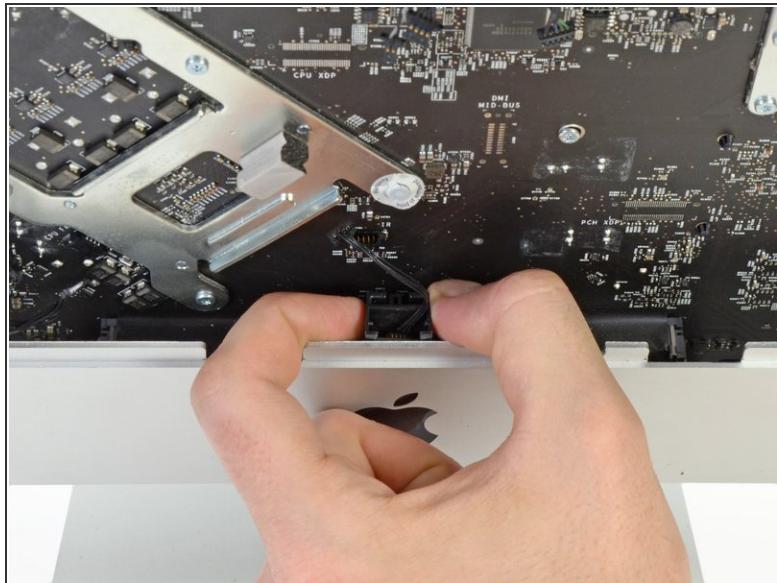
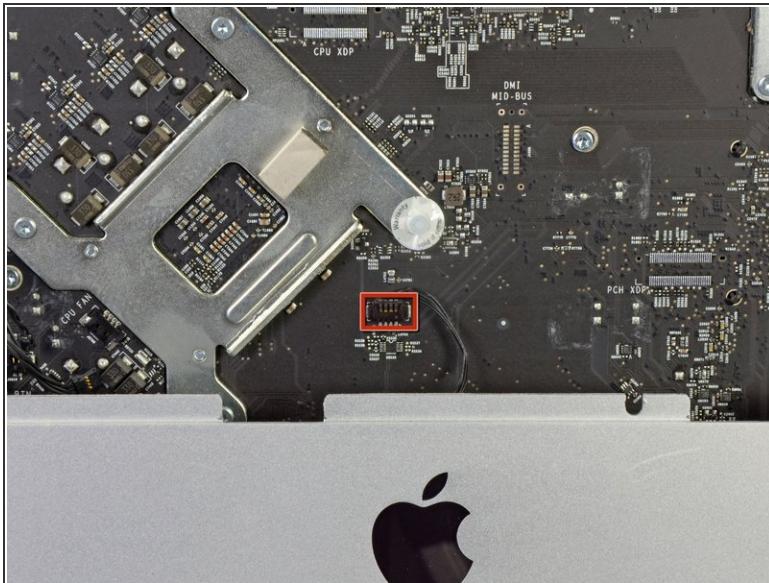
- Remove the six parallel connectors from the top of the logic board using your fingernails, pulling parallel to the logic board.
  - Skin Temperature
  - Hard Drive Temperature
  - Hard Drive Fan
  - Camera
  - Bluetooth
  - Ambient Temperature Sensor
- Remove the airport cable from the logic board by prying straight up with a spudger.

## Step 21



- In the same manner described above, use your fingernails to remove the two cable connectors from the left side of the logic board.
  - Power Button
  - CPU Fan

## Step 22



- In the same manner described above, remove the IR sensor board cable from its socket on the logic board.
- Carefully pull the IR sensor board straight up, out of the iMac.

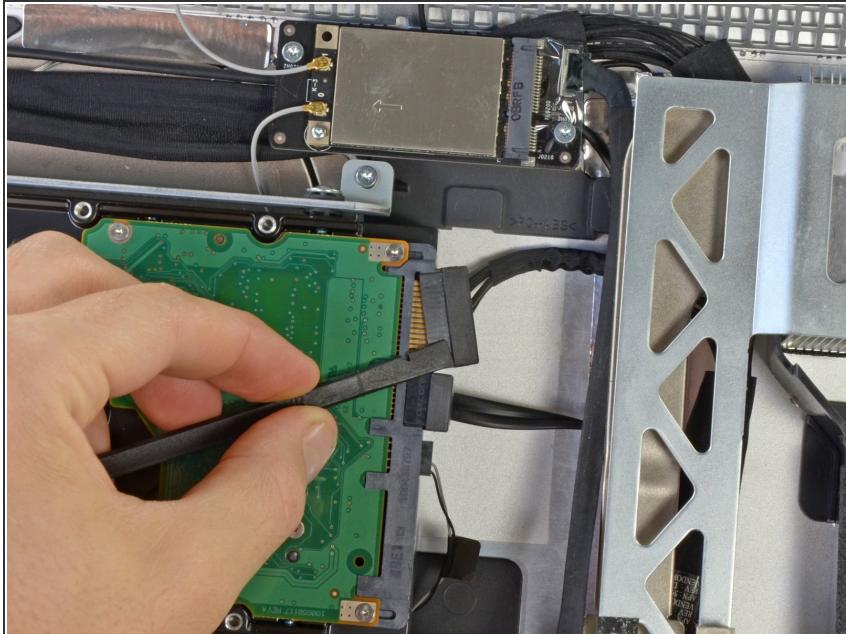
## Step 23



- Remove the following eight T10 Torx screws securing the logic board to the iMac:
  - Four 25 mm screws
  - Two 21.4 mm screws
  - One 7.2 mm screw
  - One 9.3 mm screw

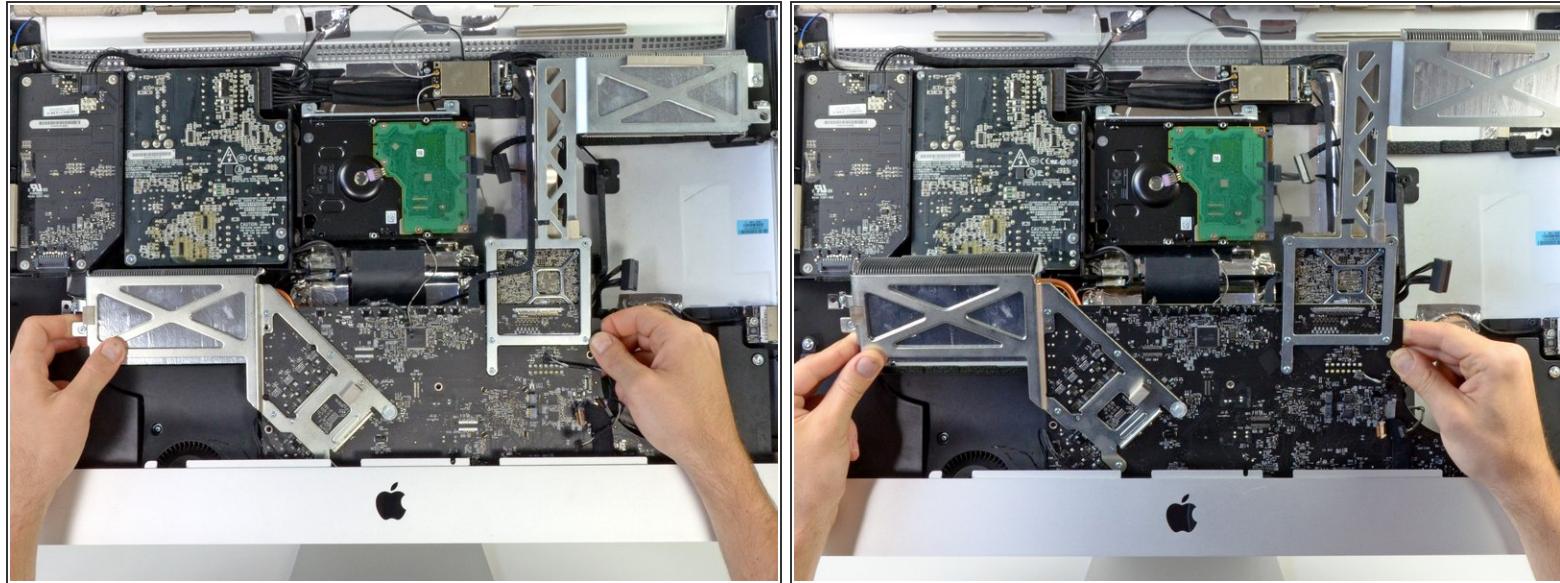
 When reassembling the iMac, make sure that none of the cables are trapped underneath the logic board before replacing the screws.

## Step 24



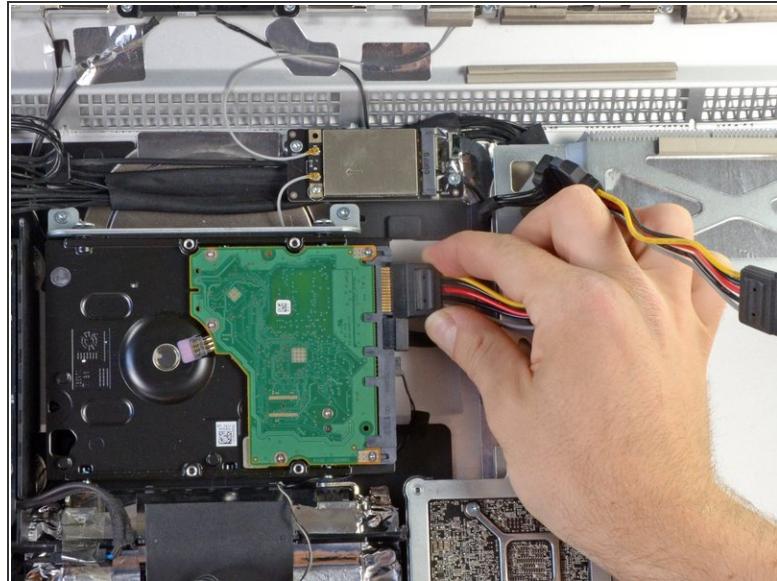
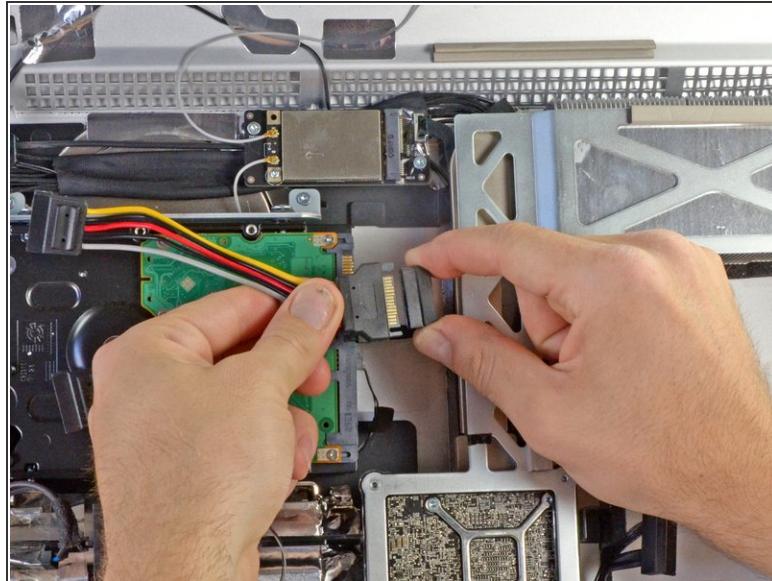
- Using the flat end of a spudger, remove the SATA power cable from its socket on the hard drive.

## Step 25



- Simultaneously, lift and rotate the logic board out of the iMac.
- ⚠ Do not try to completely remove the logic board. It is still attached by several cables on the back side.
- Carefully lean the logic board against the front of the iMac, so that it leans out of the iMac.

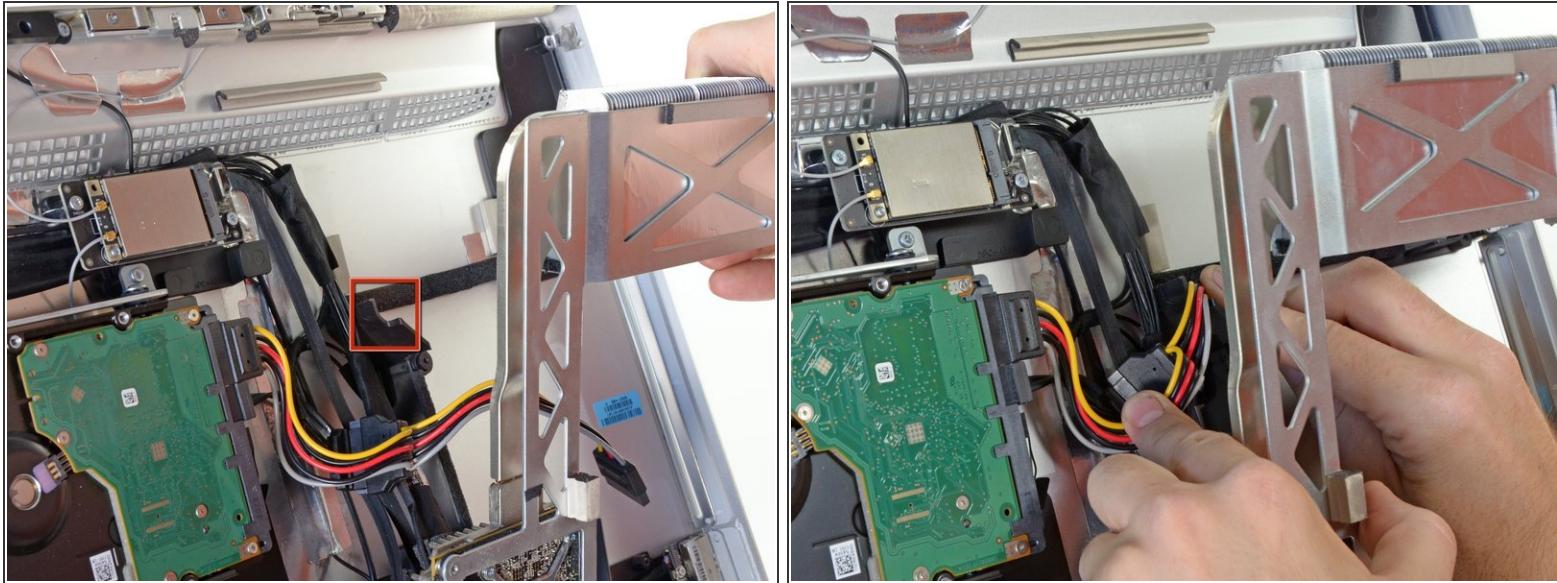
## Step 26



- Attach the male junction of the SATA power splitter to the original hard drive power cable.
- Plug one of the branches into the hard drive.

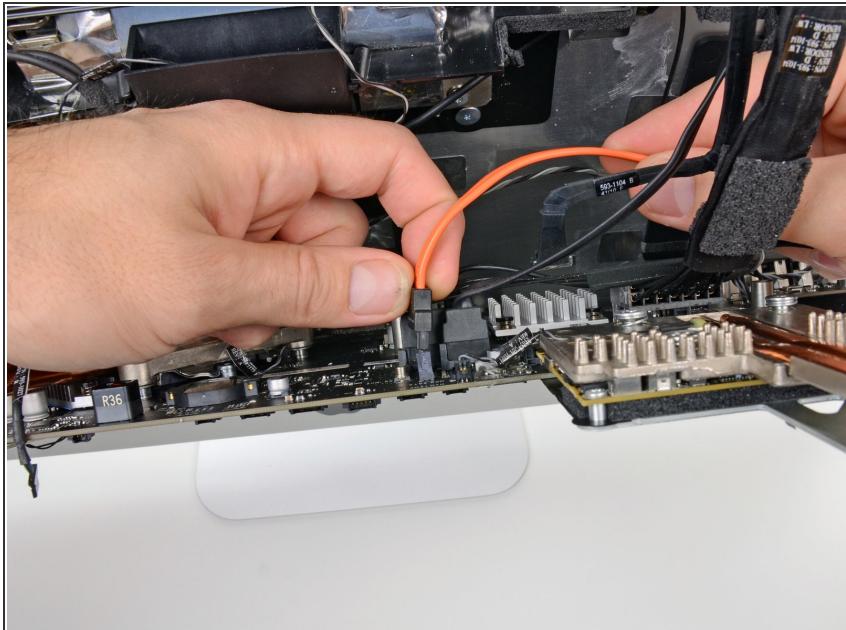
***i*** The cable is shaped so that it can only be attached in a certain orientation. Do not try to force the cable onto the hard drive.

## Step 27



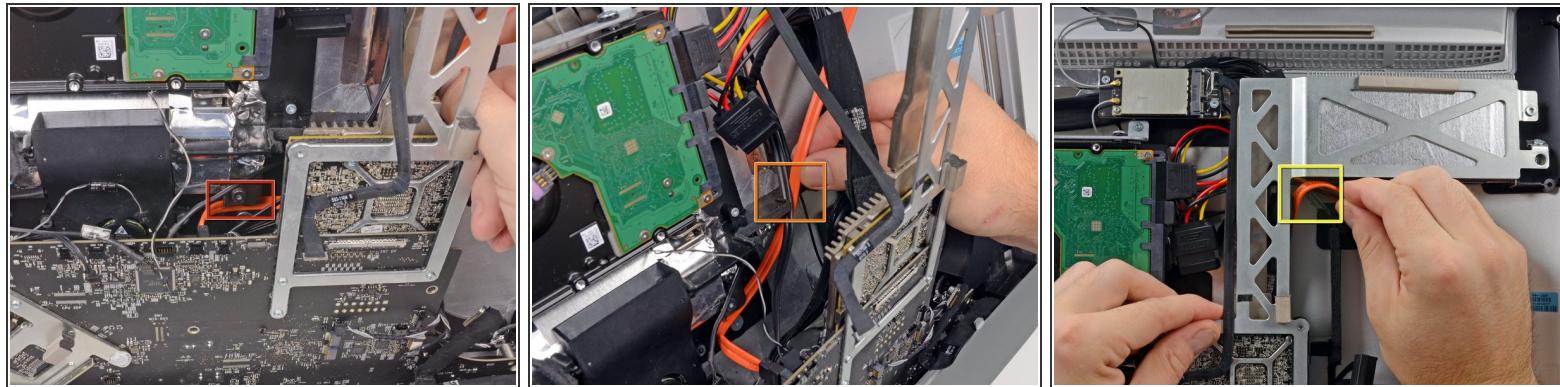
- Carefully route the other branch of the SATA power splitter underneath the GPU heat sink.
- There is a cutaway in the plastic near the optical drive frame. Route the power cable through this cutaway.

## Step 28



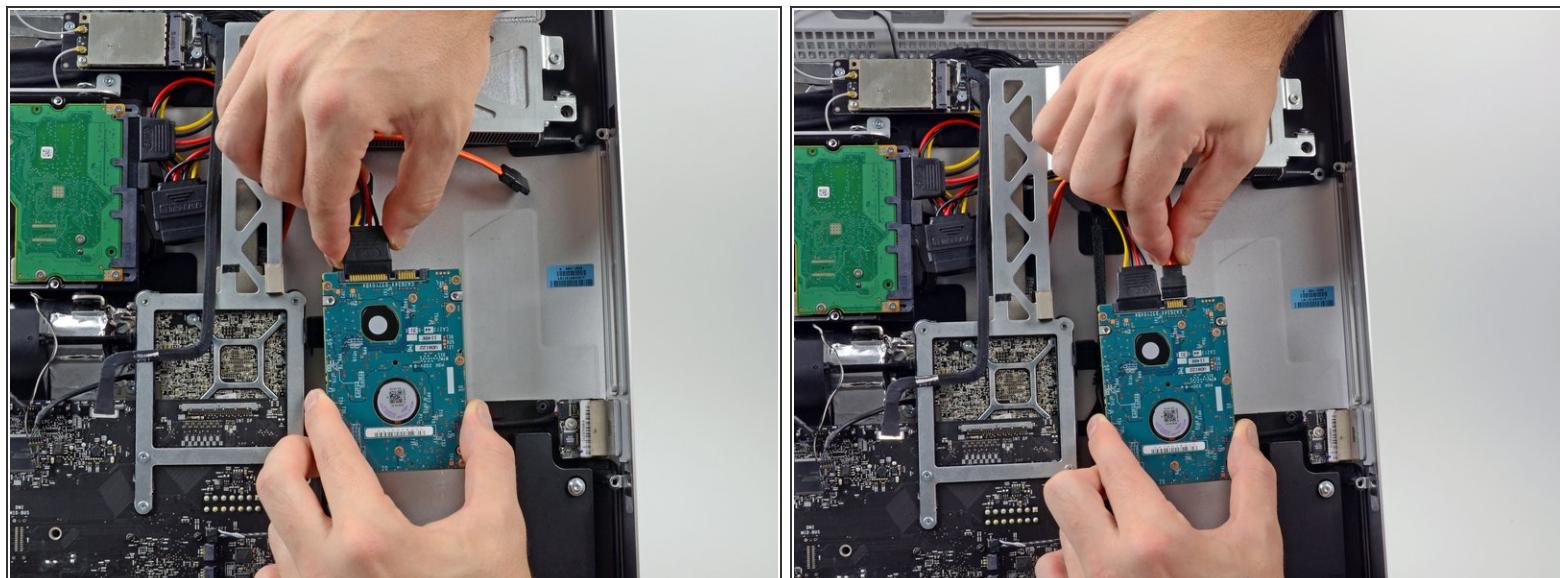
- Carefully lean the logic board forward, just enough to access the rear side.
- Connect one end of the SATA data cable to the secondary SATA data socket on the logic board.

## Step 29



- Start leaning the logic board back into the iMac.
- Route the SATA data cable underneath the edge of the metal plate behind the logic board.
- Continue routing the SATA cable up through the cable slot in the plastic frame.
- Finish routing the SATA cable though the cutaway in the plastic frame near the optical drive, just below the GPU heat sink.
- *(i)* The SATA data cable should be laid over the SATA power cable that is already routed through this cutaway.

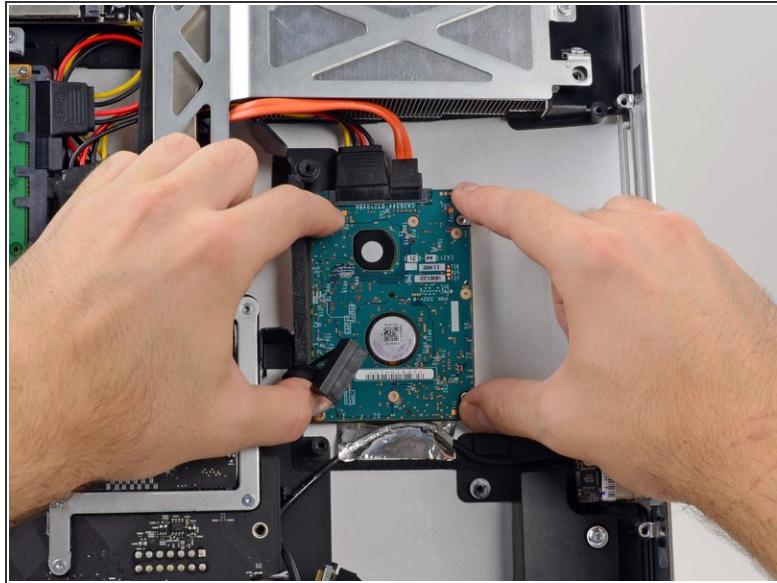
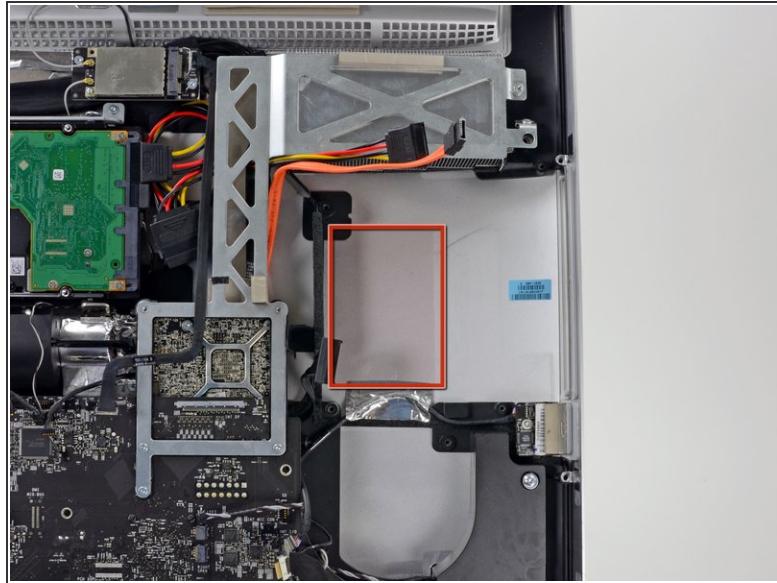
## Step 30



- Connect the SATA power and data cables to the secondary hard drive.

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## Step 31



- After removing the backing from the adhesive pads, press the secondary hard drive firmly against the aluminum frame of the iMac.

To reassemble your device, follow these instructions in reverse order, starting from [Step 20](#)