Installing MacBook Core 2 Duo Dual Hard Drive

There are many benefits to adding a second hard...

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INTRODUCTION

There are many benefits to adding a second hard drive to your laptop such as improved speeds, greater storage space, and less heartache when installing new software. Use this guide to install one using our optical bay hard drive enclosure.

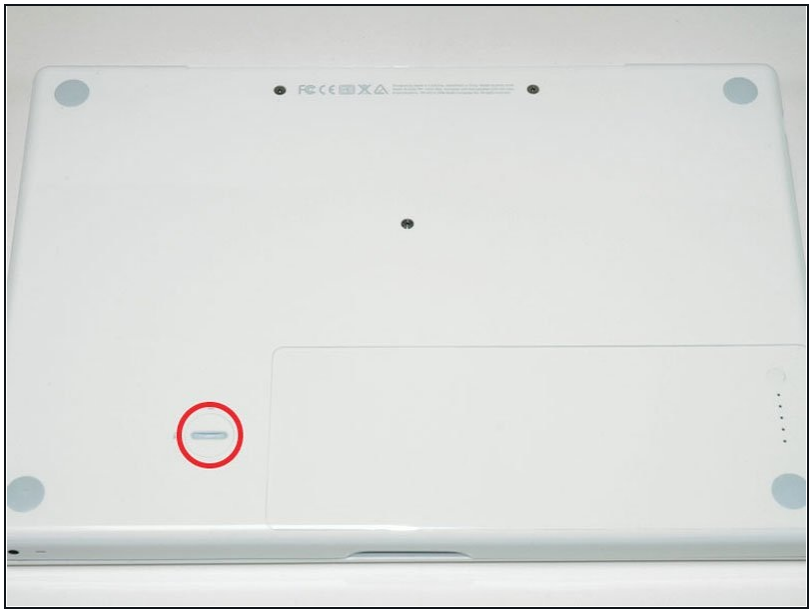
TOOLS:

Coin (1)
Phillips #000 Screwdriver (1)
Phillips #00 Screwdriver (1)
Spudger (1)

PARTS:

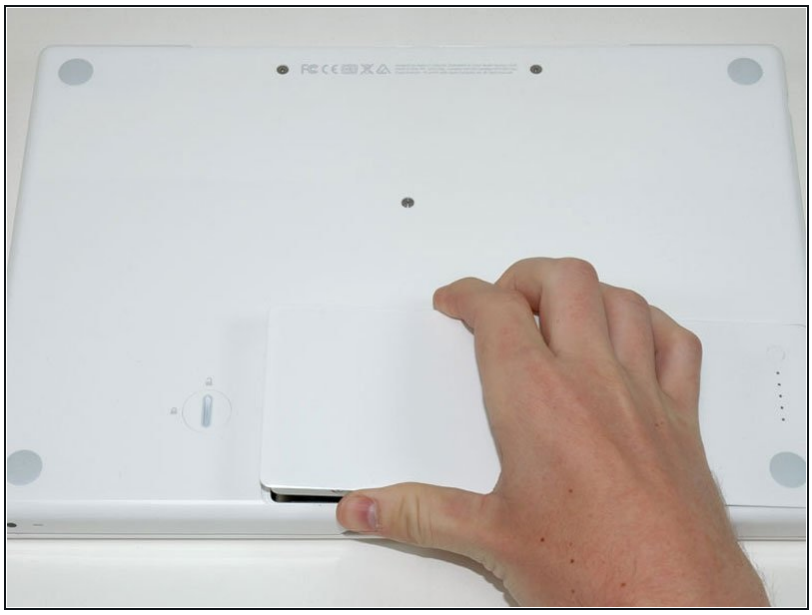
9.5 mm Optical Bay SATA Hard Drive Enclosure (1)
250 GB SSD (1)
500 GB SSD (1)
1 TB SSD (1)

Step 1 — Battery



- Use a coin or spudger to rotate the battery-locking screw 90 degrees clockwise.

Step 2



- Lift the battery out of the computer.

Step 3 — Memory Cover

- Unscrew the three evenly-spaced Phillips screws from along the rear wall of the battery compartment.

The screws are captive to the metal memory cover so you cannot lose them.

Using The Flexible Extension sold by iFixit will help with this step.

Step 4

- Grasp the right end of the L-shaped memory cover, then pull it towards you so it clears the battery compartment opening.
- Lift the memory cover up and out of the computer.

Step 5 — Upper Case

- Remove the following 3 screws:
  - One 11 mm Phillips#00 in the middle of the lower case. (Head: 5mm dia. x .75mm thick)
  - Two 14.5 mm Phillips #00 (Head: 5mm dia. x .75mm thick)

If the screws stick in the case, you can use a magnetized screwdriver to draw them out.

The shorter of the three screws goes in the middle of the lower case.

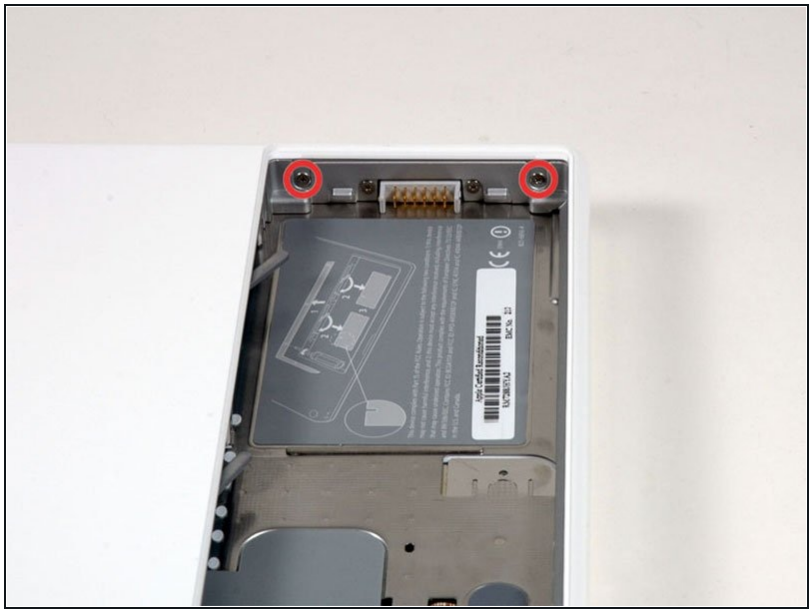
Step 6

⚠ Take extra caution with these screws as they can strip easily!

ⓘ You could use a flexible extension to minimize stripping.

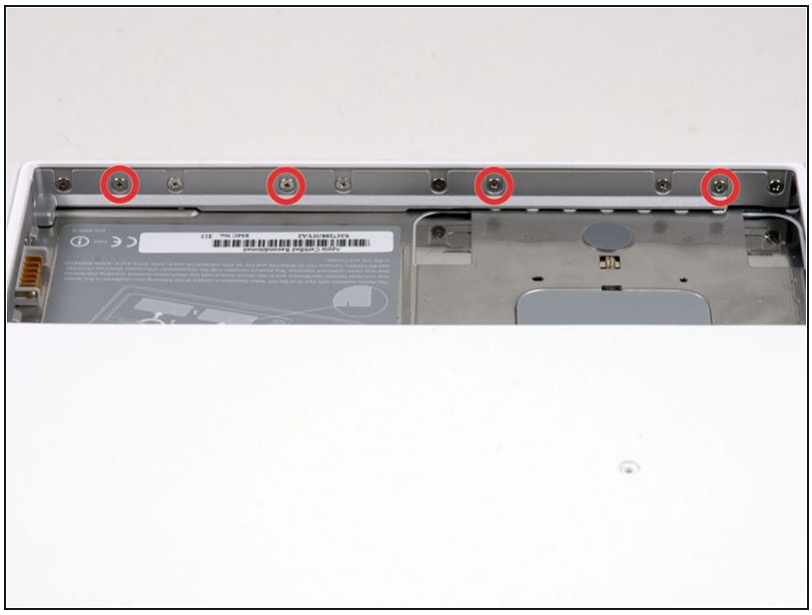
- Remove the following 3 screws from the rear wall of the battery compartment:
  - One 3 mm Phillips #0. (Head: 2.75 mm. dia.)
  - Two 4 mm Phillips #0 on the either side. (Head: 2.75mm dia.)

Step 7



- Remove the two Phillips screws from either side of the right wall of the battery compartment (not the ones closest to the battery connector).
  - Two 6.25 mm Phillips #000. (Head: 4 mm. dia. x .5mm thick)

Step 8



- Remove the four indicated Phillips screws from the front wall of the battery compartment. When working from the left, remove the 2nd, 4th, 7th and 9th screws.
  - Four 3.25 mm Phillips #000. (Head: 4 mm. dia. x 4mm thick)

Step 9

- Remove the following 4 screws from the back of the computer:
  - Two 11 mm Phillips #00, with Shank (2.2mm dia. x 2 mm len.) (Head: 3.2 mm. dia. x .5mm thick)
  - Two 7.25 mm Phillips #00, with Shank (2mm dia. x 3.75 mm len.) (Head: 3.2 mm. dia. x .5mm thick)

During reassembly, the two longer screws go on the inside, and the two shorter screws go on the outside.

Step 10

- Remove the two Phillips screws from the optical drive (right) side of the computer:
  - Two 5.2 mm Phillips #00, with shank (2.3mm dia. x 3.25 mm len.) (Head: 3.2 mm. dia. x .5mm thick)

ⓘ It is not necessary to remove the similar screws on the ports (left) side of the computer.

Step 11

⚠ There's a trackpad and keyboard ribbon cable connecting the upper case to the logic board, so don't pull the upper case off entirely just yet.

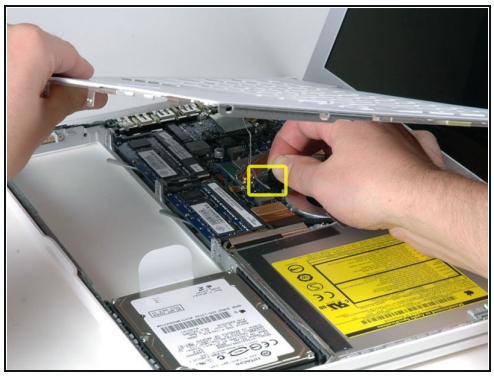
- Use a plastic opening tool, an expired plastic credit, or a similarly-thick card to pry up on the upper case, starting in the upper-left corner and working around to the front of the computer.

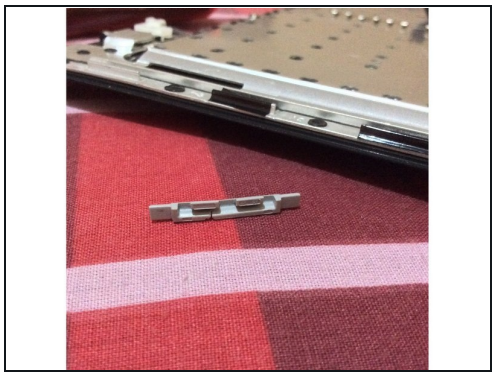
The upper case is likely to stick at its connection above the front edge of the optical drive. If this happens, first free all other sides, then proceed to pull upward on the upper case from either side of the optical drive opening. Here again, inserting a plastic card, guitar pick, etc. can be useful.

If you stand the base of the MacBook on one end to get a better look, you may displace the four grey plastic clips that hold the right side of the upper case in place. Don't panic. They slide into slots at the top rightmost edge of the lower frame, above the front edge of the optical drive.

During reassembly, make sure the clips on the right side, above the optical drive, click firmly into place. They're different from the clips on the left side, and so normally they require a little firmer pressure to click into place.

Step 12





- While holding up the upper case, pull up the black tab on the connector end of the silver ribbon cable away from the connector's socket on the logic board.

ⓘ If there is no black tab, you can also use a spudger to gently pry the connector out of its socket on the logic board. This connector is tall, so be sure to pry straight up.

ⓘ If you happen to break your upper case cable when removing the upper case, we stock the cable individually and we have a guide that makes replacing it easy.

ⓘ While you have the upper case removed, it's a good time to remove dust, hair, etc. It's best to use a can of compressed air, though if you use a brush, make sure that its bristles are made of a material (usually animal hair) that doesn't generate static electricity, which can destroy electronics.

ⓘ Upon reassembly, there are 4 grey plastic clips installed in slots running along the top of the frame in front of the optical drive (refer to second and third pictures). These clips must be installed in their slots for their mating tabs on the underside of the right side of the upper case to snap into them.

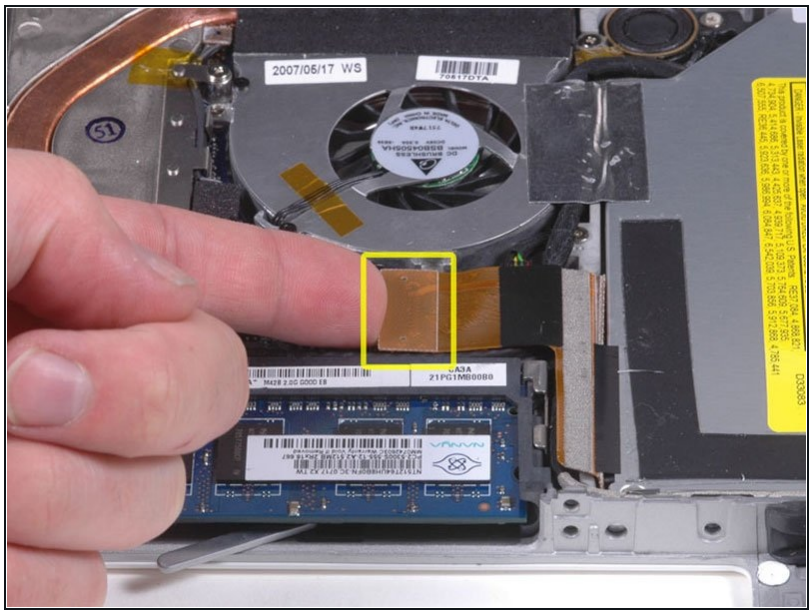
Step 13 — Optical Drive

- Grasp the white plastic tab attached to the hard drive and pull it to the left, removing the hard drive from the computer.

Step 14

- Remove the two Phillips screws from the side of the optical drive.
  - Two 3.25 mm Phillips #000 (head: 4 mm. dia. x .3 mm thick)

Step 15



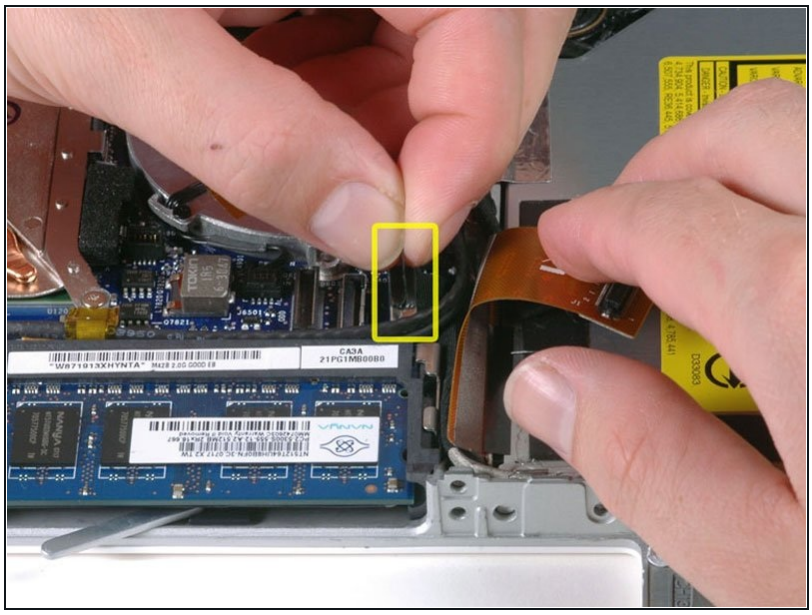
- Disconnect the orange optical drive ribbon cable connector from the logic board by prying it straight up using either a finger or a spudger.

Step 16

- Disconnect the newly revealed display data cable's plug from the logic board by pulling it upward using its black pull-tab.

ⓘ If there is no pull-tab on top of the plug, it may be helpful to use a spudger to disconnect this plug.

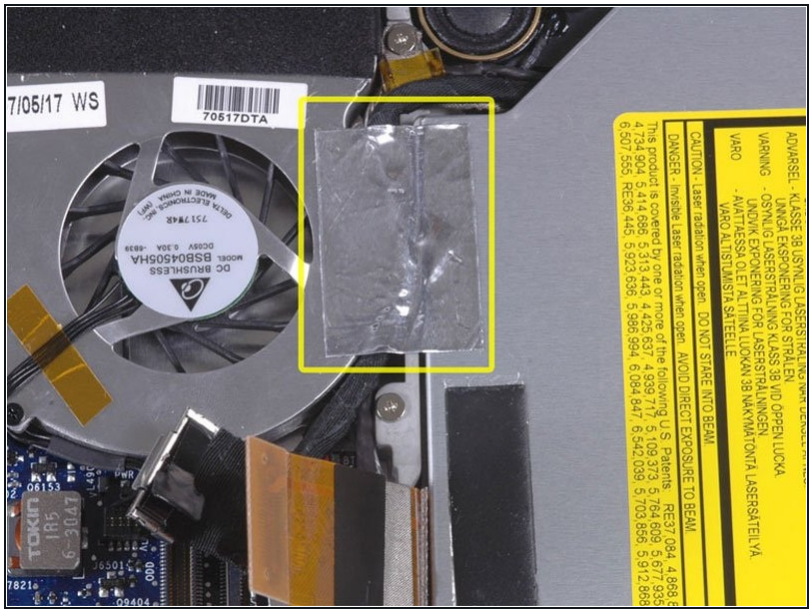
Step 17



- Disconnect the newly-revealed hard drive cable's plug from the logic board by pulling it upward using its black tab.

ⓘ When reconnecting the hard drive cable's plug to the logic board, make sure the plug is routed under the cables for the right speaker and the microphone, or else the plug won't sit flush with the logic board, which will prevent the plug from fully engaging with its socket on the logic board.

Step 18



- Peel up the foil tape between the fan and the optical drive. Lift the foil tape from the fan side, leaving it attached to the optical drive.

- During reassembly, be sure to route the cables beneath the tape before reattaching it.

ⓘ If the adhesive on this foil tape no longer sticks, you can hold it in place using a regular piece of tape, but don't block the fan intake.

Step 19

- Pull up the display data cable from along the edge of the optical drive to reveal a silver Phillips screw.

Step 20

- Remove the 2 mm Phillips #00 screw securing the rear corner of the optical drive.

  When reinstalling this screw, make sure none of the cables nearby get caught under the screw's head.

- The silver-jacketed Bluetooth cable may be covering the screw. If so, carefully push it aside. You may need to remove the screw holding the ground shield lugs for the two nearby cables before you can move the Bluetooth cable aside sufficiently. This screw is 7mm in earlier models, and may be 4.2mm in Santa Rosa/Penryn and 2009 models.

Step 21

- Lift the Bluetooth antenna board from the front edge of the optical drive.

Step 22

- Deroute the hard drive cable from under the clips along the near side of the optical drive.

During reassembly, reroute the cable under these clips.

Step 23

- Lift the side of the optical drive closest to you, then slide the drive towards you, and up and out of the computer.

Follow these steps to reinstall the optical drive:

- First, slide its side nearest to the rear of the Macbook under the edge of the rear frame to the left of the hinge, while also sliding the optical drive's mounting tab at its upper left corner under the cables at this location.
- Lower the drive partially into the lower housing. Keep the hard drive cable away from the optical drive bay.
- Before dropping the drive fully in place, use a spudger to push forward (towards the front of the drive) on the screw hole in the drive's mounting tab.
- Push forward the slider, which runs along the far side of the drive, to insert the end of this slider into a small channel in the lower case's frame. This helps hold the drive in place.

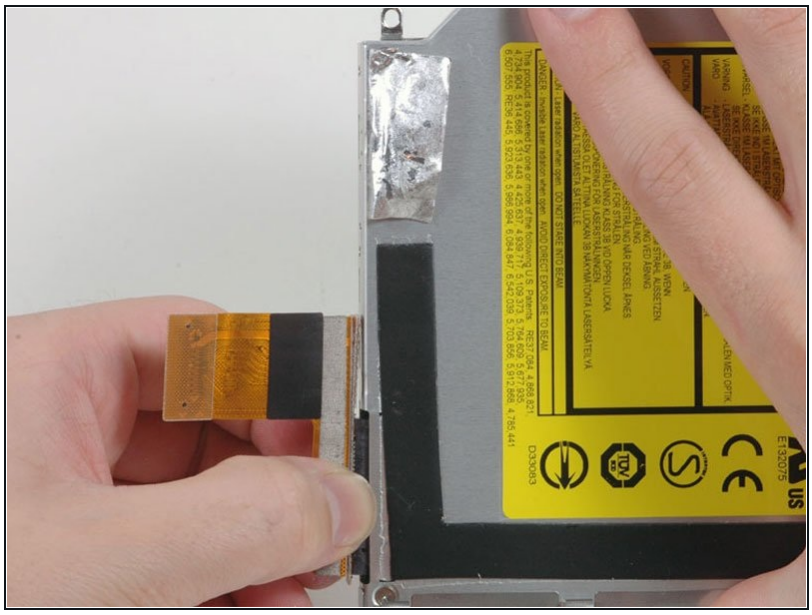
When you push the slider forward, if the screw hole in the drive's mounting tab doesn't line up over its threaded brass insert in the lower case, the front end of the slider hasn't fully inserted into its channel in the frame. Keep trying, but if the slider won't move further to the right, remove the drive to see if the end of the slider is bent.

If the front end of the slider isn't bent, it may be slightly too long. Use a pair of fine cutters to clip off the narrower portion of the end of the slider. The optical drive will still remain firmly in place.

Step 24 — Optical Drive Cable

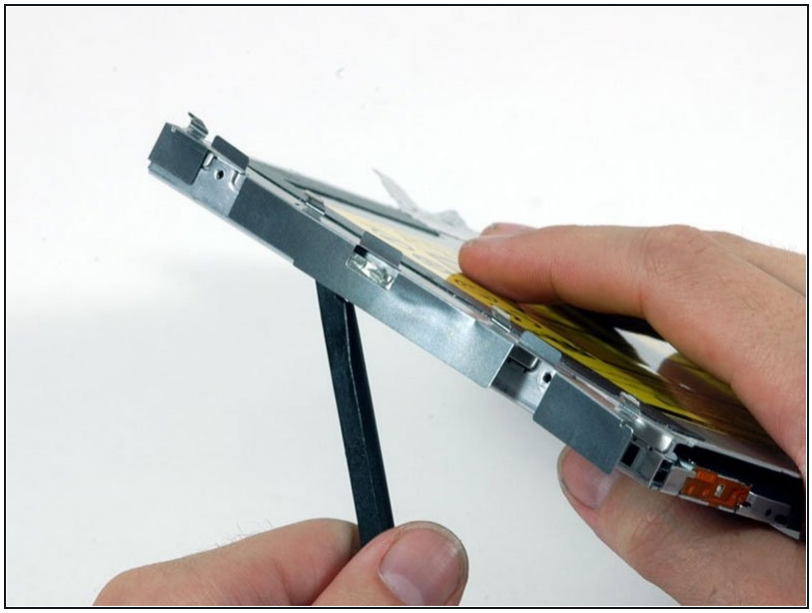
- Peel up the black tape partially covering the orange optical drive cable.

Step 25



- Disconnect the orange cable from the optical drive.

Step 26 — Optical Drive



- Use a spudger to carefully pry the silver metal bracket off the left side of the optical drive. Be careful not to bend the bracket, as it is very thin and bends easily. If the bracket doesn't come free easily, heating the adhesive may make prying the bracket off easier.

Step 27

- Peel up the L-shaped piece of black tape from the top of the drive.

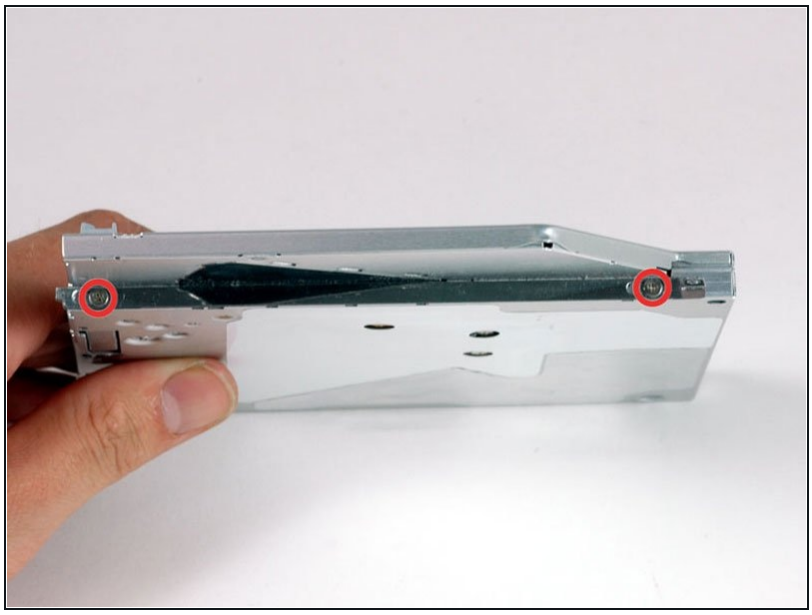
- You'll want to reapply this tape in the same position on your replacement drive.

Step 28

- Peel up the silver foil tape from the optical drive.

- You'll want to reapply this tape in the same position on your replacement drive.

Step 29



- Remove the two Phillips screws securing the mounting bracket to the right side of the optical drive.

This bracket is designed to slide back and forth slightly, so don't tighten the screws so much that the bracket is unable to slide.

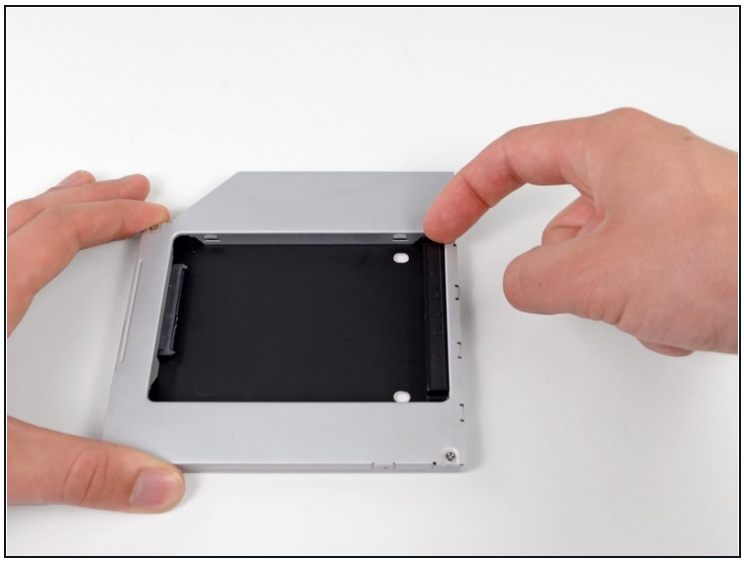
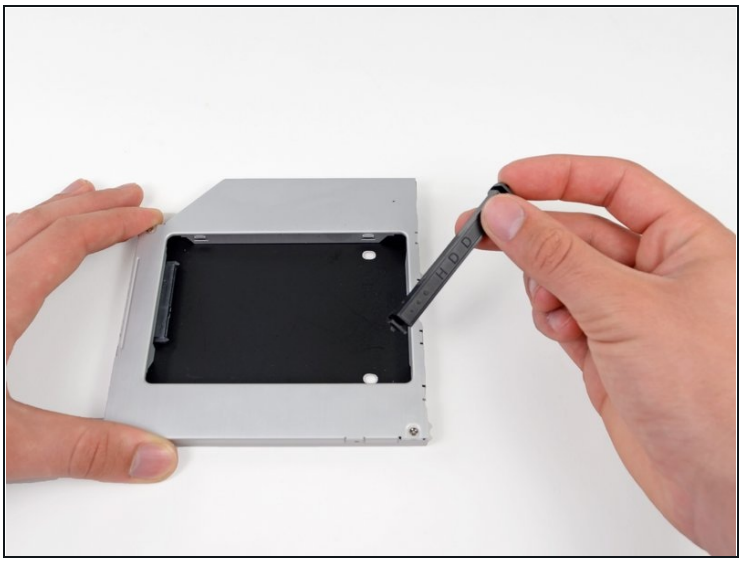
Step 30

- Use a spudger to pry the gray Bluetooth antenna holder off the top of the optical drive.

You'll want to reapply this piece in the same position on your replacement drive.

If you have a CD or any other object jammed in your optical drive, we have an optical drive repair guide.

Step 31 — Dual Hard Drive

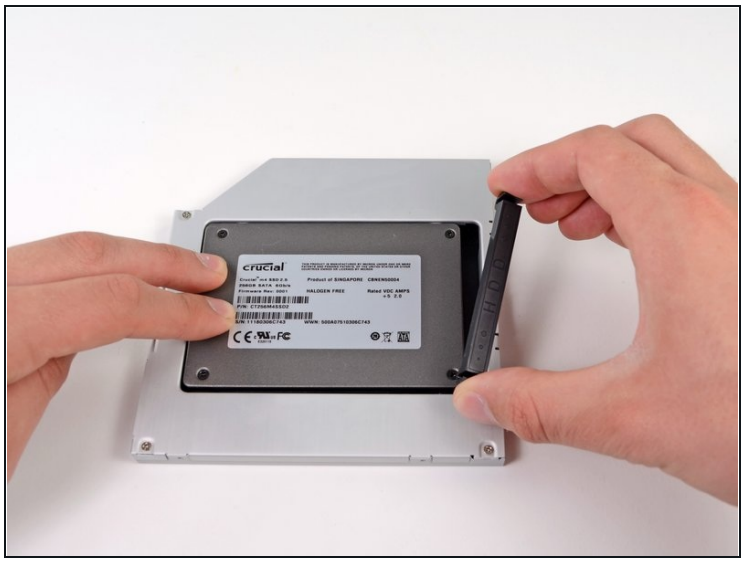
- Remove the plastic positioner from the optical bay hard drive enclosure by pressing in on one of the clips on either side and lifting it up and out of the enclosure.

Step 32



- Make sure that the hard drive connectors are facing down before placing it into the enclosure.
- Gently place the hard drive into the enclosure's hard drive slot.
- While firmly holding the enclosure in place with one hand, use your other hand to press the hard drive into the enclosure connectors.

Step 33



- Once the hard drive is snug, reinsert the plastic positioner while holding the hard drive against the bottom of the enclosure.
- Reconnect any cables you have removed from the original optical drive onto the optical bay enclosure.

To reassemble your device, follow these instructions in reverse order.