MacBook Core 2 Duo Rear Display Bezel Replacement

The rear panel of your display assembly.

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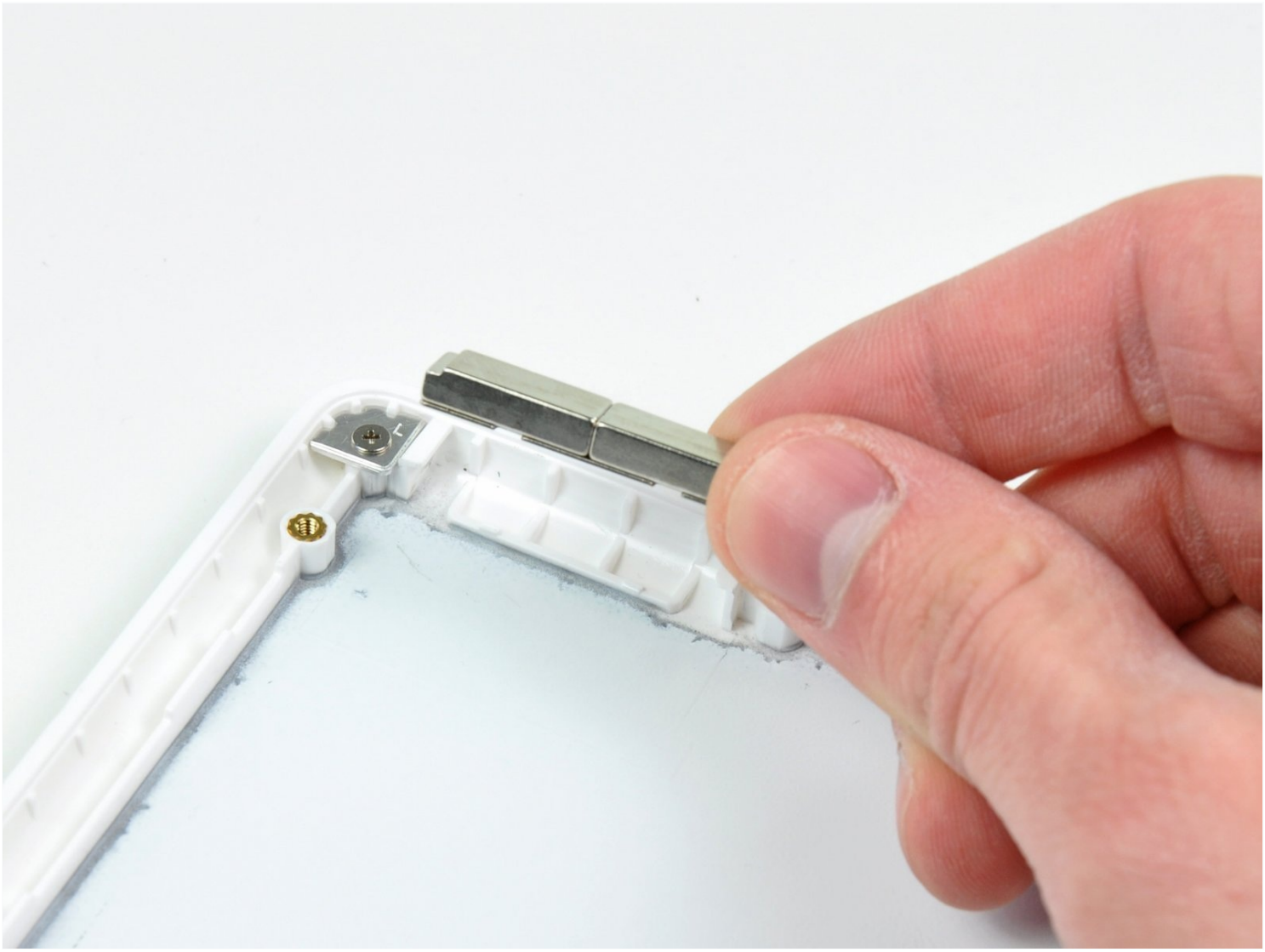


INTRODUCTION

The rear panel of your display assembly.

TOOLS:

Coin (1)
Phillips #0 Screwdriver (1)
Phillips #000 Screwdriver (1)
Phillips #00 Screwdriver (1)
Plastic Cards (1)
Spudger (1)

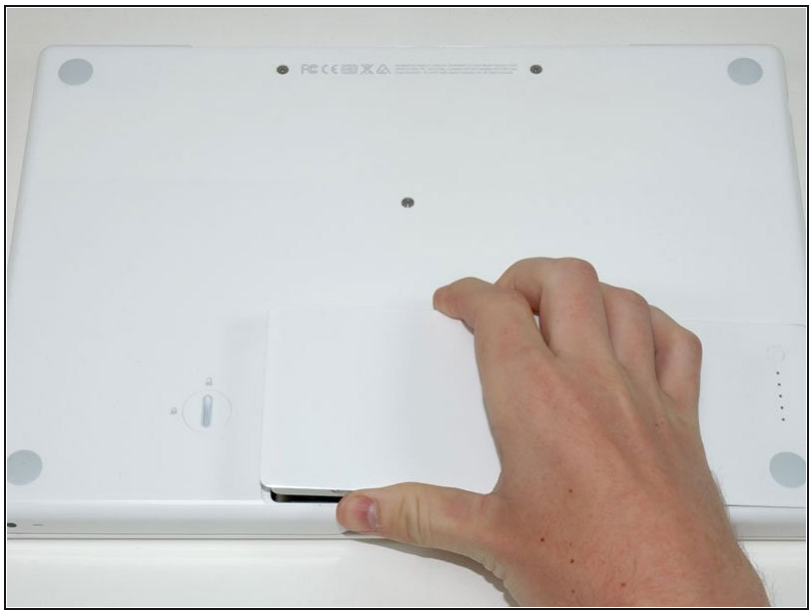
PARTS:

MacBook Rear Display Bezel (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.

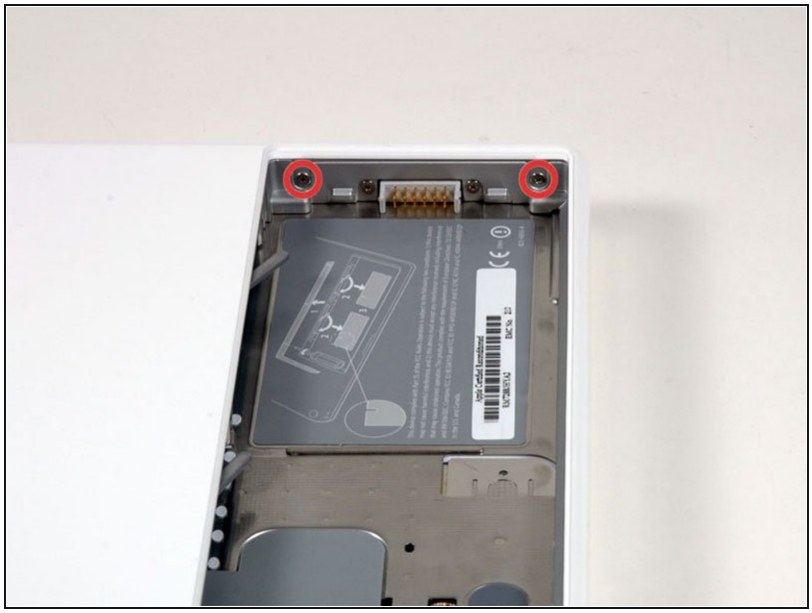
Step 6

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

ⓘ You could use a flexible extension to minimize stripping.

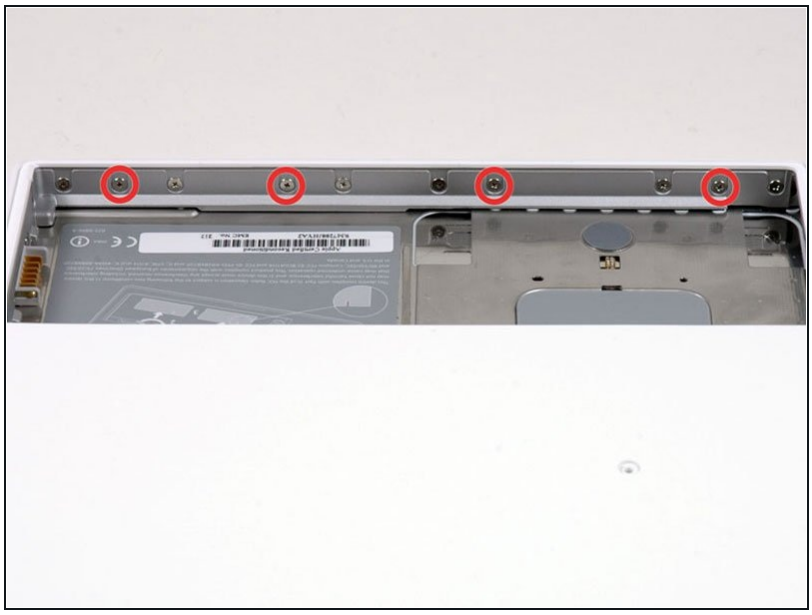
- Remove the following 3 screws from the rear wall of the battery compartment:
  - One 3 mm Phillips #0. (Head: 2.75 mm. dia.)
  - Two 4 mm Phillips #0 on the either side. (Head: 2.75mm dia.)

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.

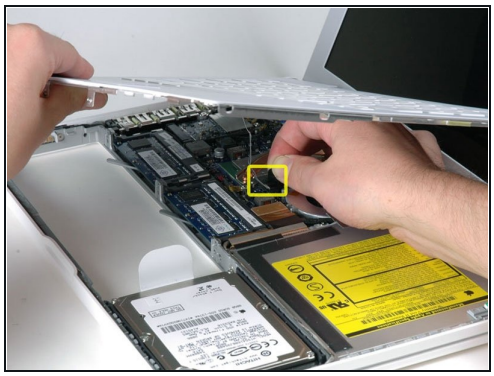
- Use a plastic opening tool, an expired plastic credit, or a similarly-thick card to pry up on the upper case, starting in the upper-left corner and working around to the front of the computer.

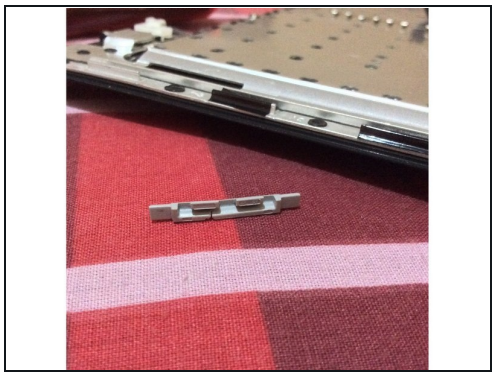
The upper case is likely to stick at its connection above the front edge of the optical drive. If this happens, first free all other sides, then proceed to pull upward on the upper case from either side of the optical drive opening. Here again, inserting a plastic card, guitar pick, etc. can be useful.

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.

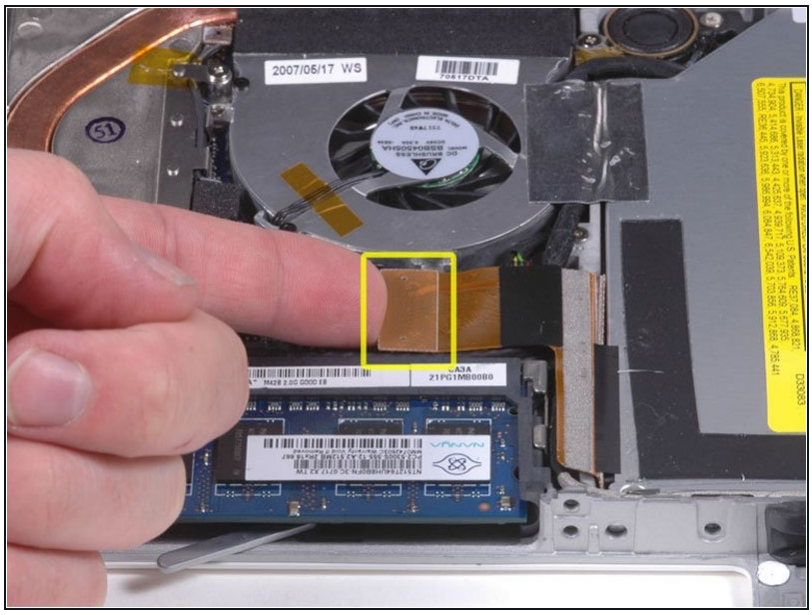
Step 13 — Optical Drive

- 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



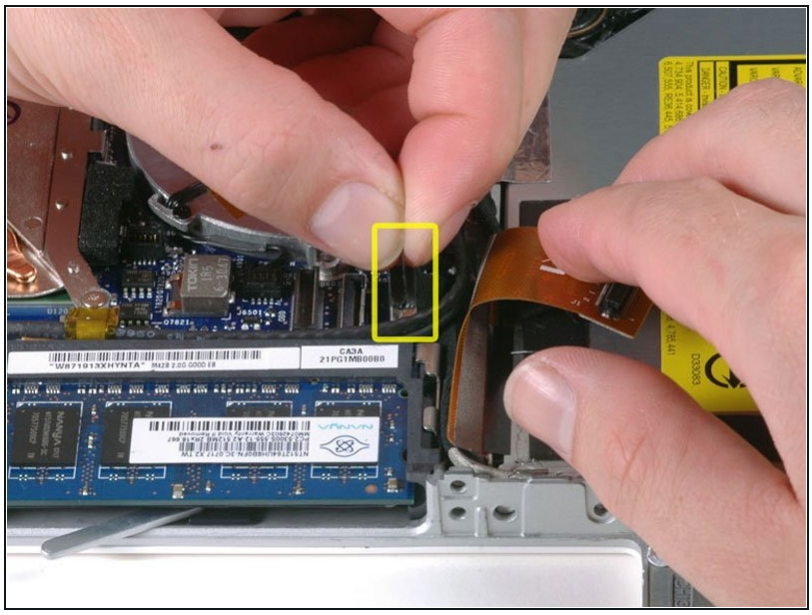
- Disconnect the orange optical drive ribbon cable connector from the logic board by prying it straight up using either a finger or a spudger.

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.

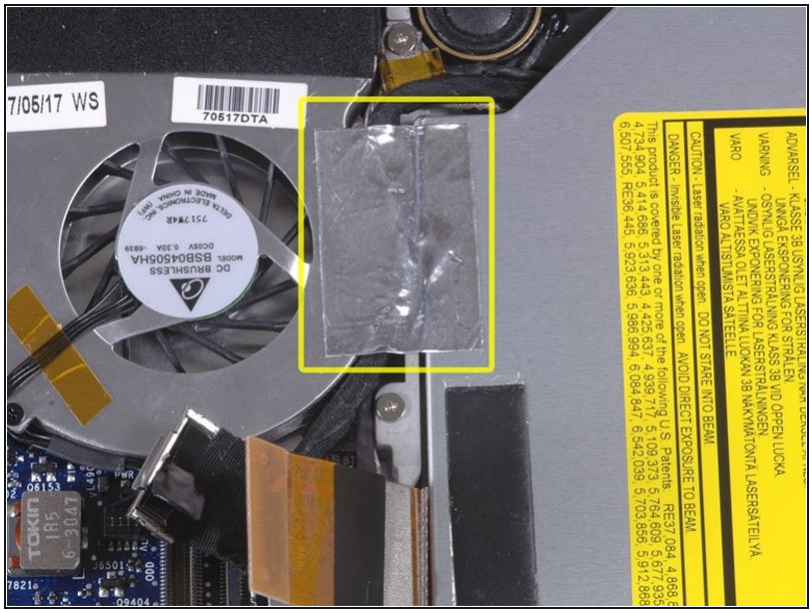
Step 17



- 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.

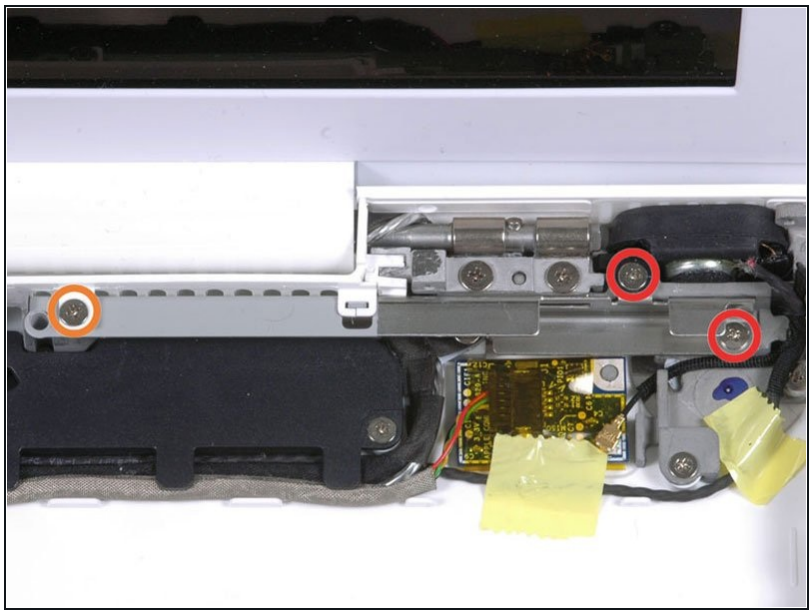
Follow these steps to reinstall the optical drive:

- 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.

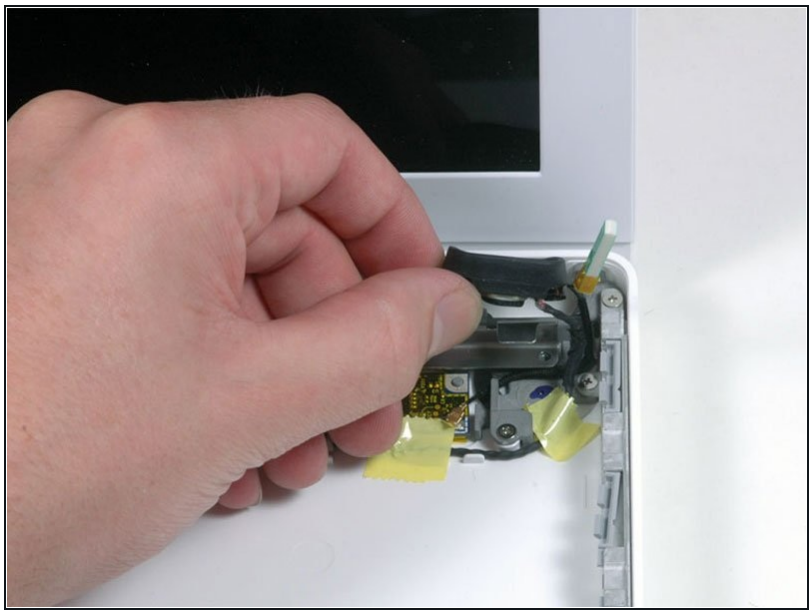
If the front end of the slider isn't bent, it may be slightly too long. Use a pair of fine cutters to clip off the narrower portion of the end of the slider. The optical drive will still remain firmly in place.

Step 24 — C-Channel



- For original Macbook Core Duo and Core 2 Duo models, remove these 3 screws:
  - Two 3 mm Phillips near the right speaker.
  - One 6 mm Phillips threaded through a hole in a plastic finger above the subwoofer.
- When reinstalling the screw above the subwoofer, be careful not to over-tighten it or the subwoofer's plastic could crack.
- For Santa Rosa/Penryn and 2009 models, which don't have a c-channel:
  - Remove only the single 3 mm Phillips screw from the right speaker, and skip step 26.

Step 25



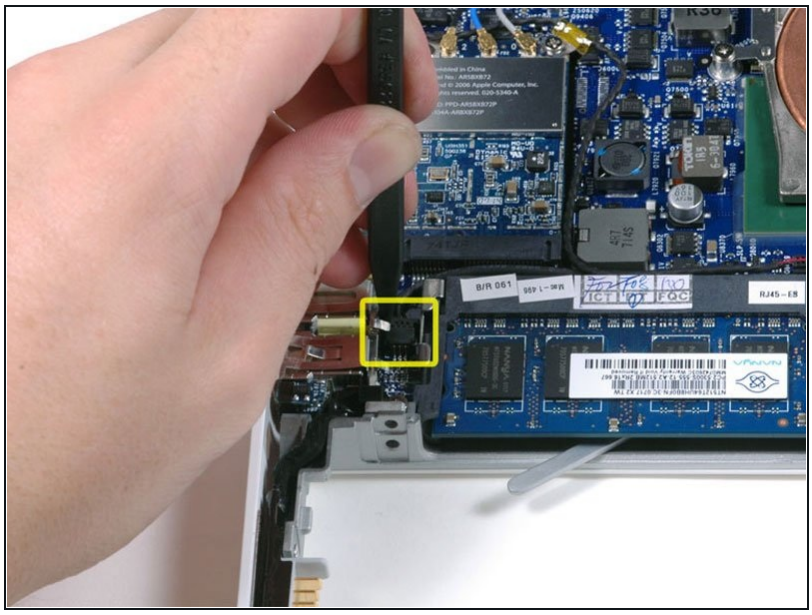
- Lift the right speaker out of its housing and set it to the side.

Step 26

ⓘ If you have a Santa Rosa/Penryn or 2009 model, skip this step.

- Using a spudger, gently pry up the white plastic slot and slide the metal c-channel to the right and away from the display.

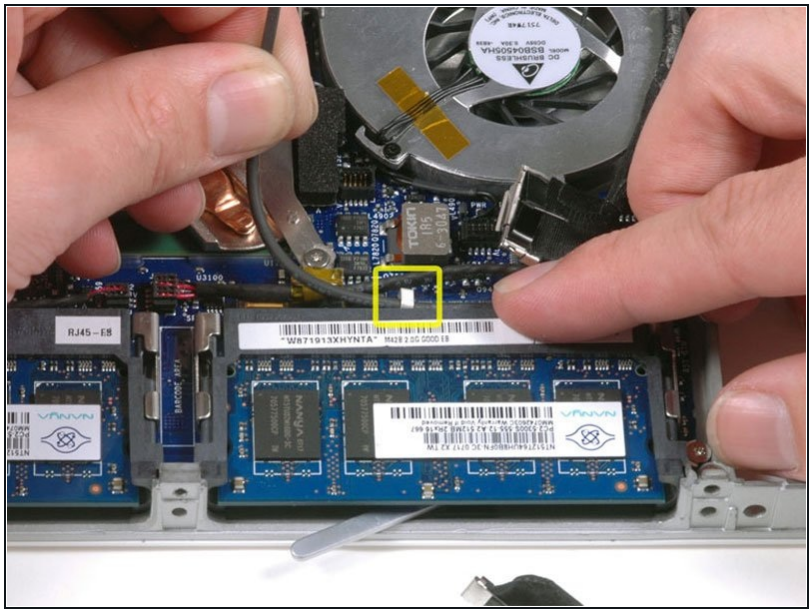
Step 27 — Display



- Use a spudger to carefully disconnect the microphone cable from the logic board. You'll want to work from side to side, and slowly wiggle the plug back and out of its socket.

⚠ Pulling on this plug vertically will break its socket off the logic board. This connector is removed only horizontally by gently pulling the microphone cable toward the screen while working a spudger between the connector and the socket.

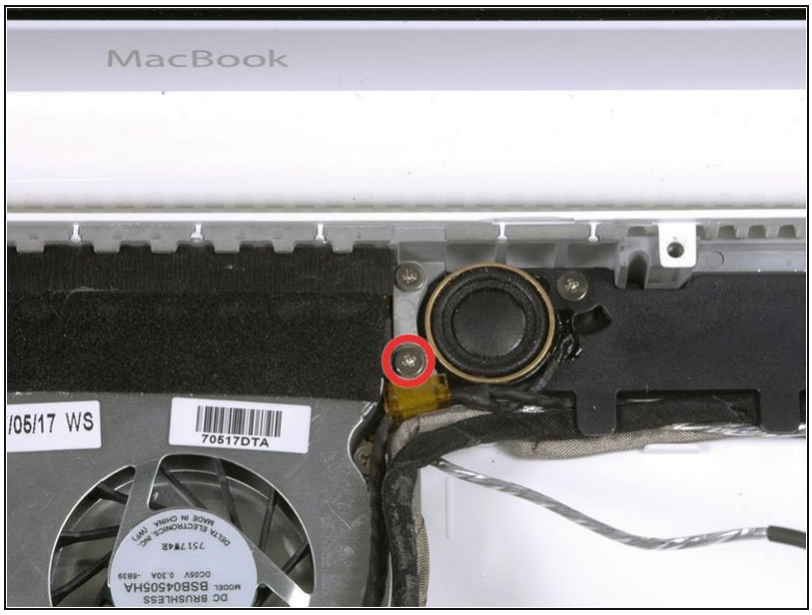
Step 28



- Lift up on the black right speaker cable with one hand, and deroute the microphone cable from the silver metal clip just above the right RAM slot.

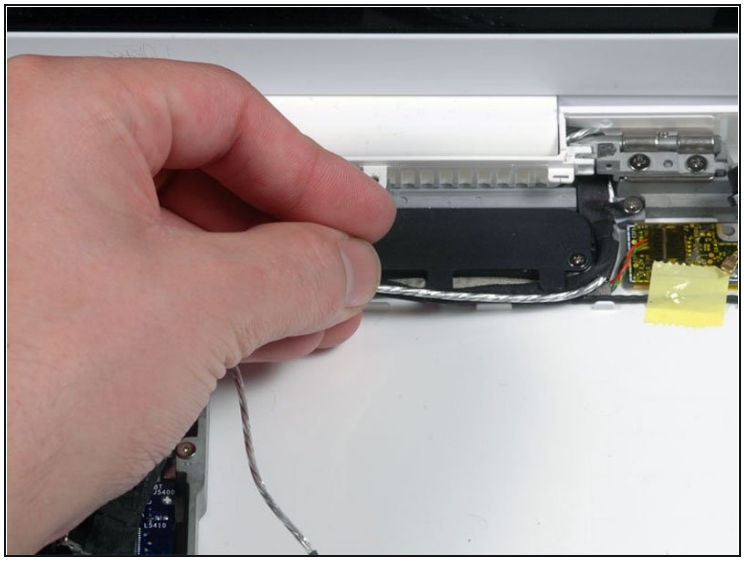
ⓘ This metal clip may not be present in all models. Be sure that the cable is free from any hold downs around this area before proceeding.

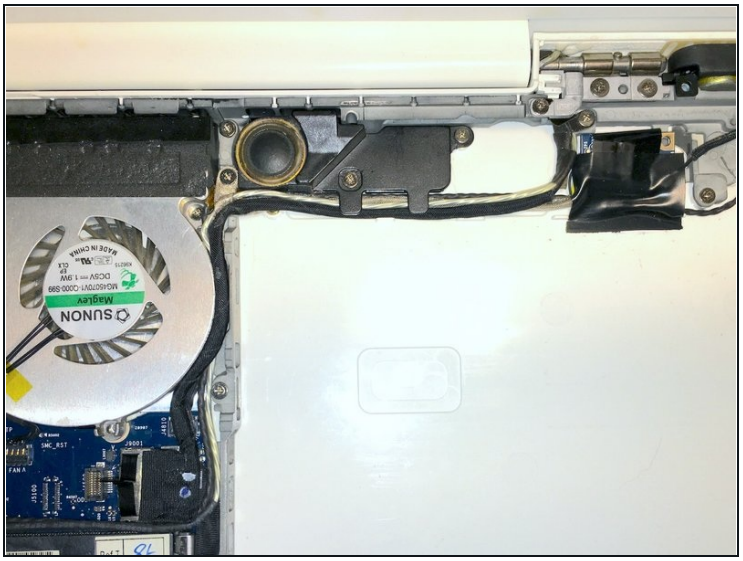
Step 29



- If you didn't remove the ground lug retaining screw in step 20 above, remove it now. It's a 7mm (may be 4mm or 3mm in Santa Rosa/Penryn and 2009 models) Phillips screw securing the ground lugs on the right speaker cable and microphone cable to the metal frame.

Step 30

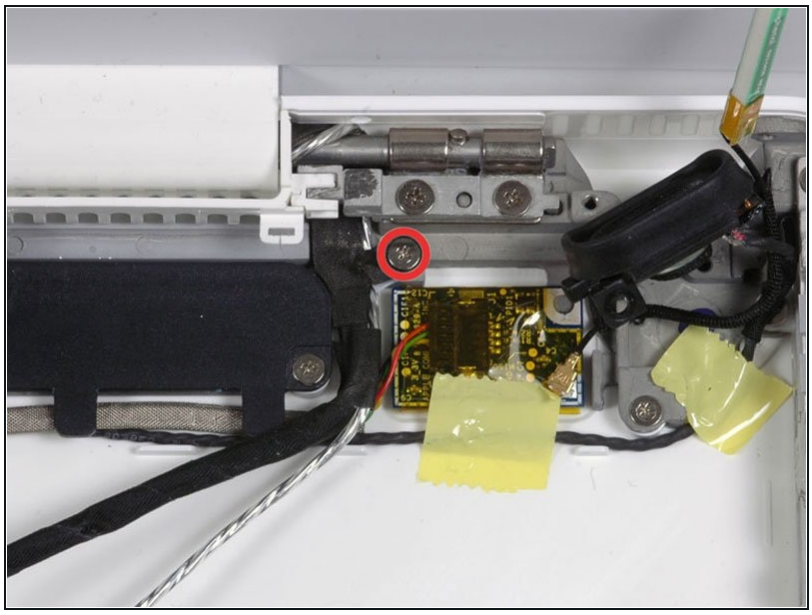




- Deroute the microphone cable and the black display data cable from the tabs at the bottom of the subwoofer.

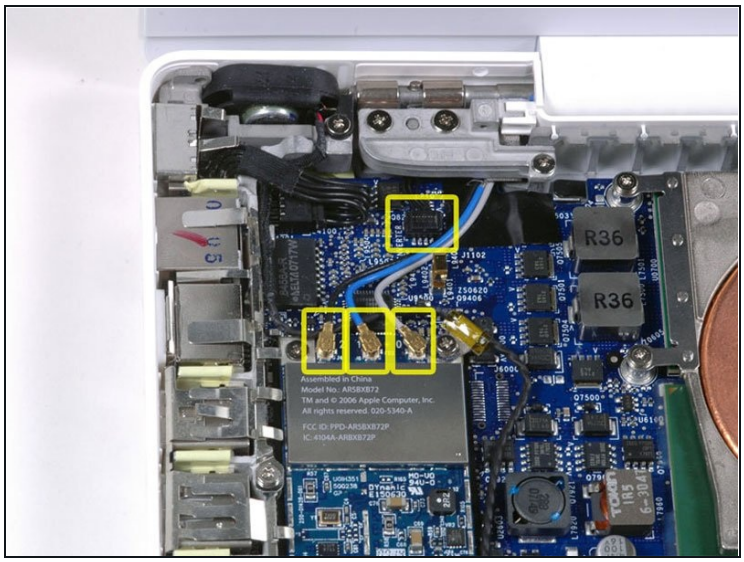
During reassembly, while there may seem to be more than one way to route the cables, the best way is as shown in photo 2. Click on the photo for a larger view.

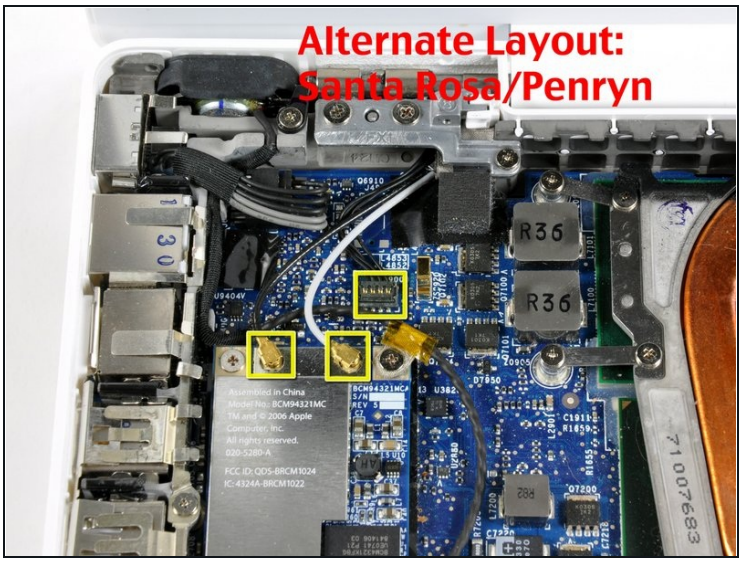
Step 31



- Remove the single 3 mm Phillips screw securing the ground lug in the display data cable located just above the Bluetooth board. This screw may also be securing a ground lug in the speaker cable.

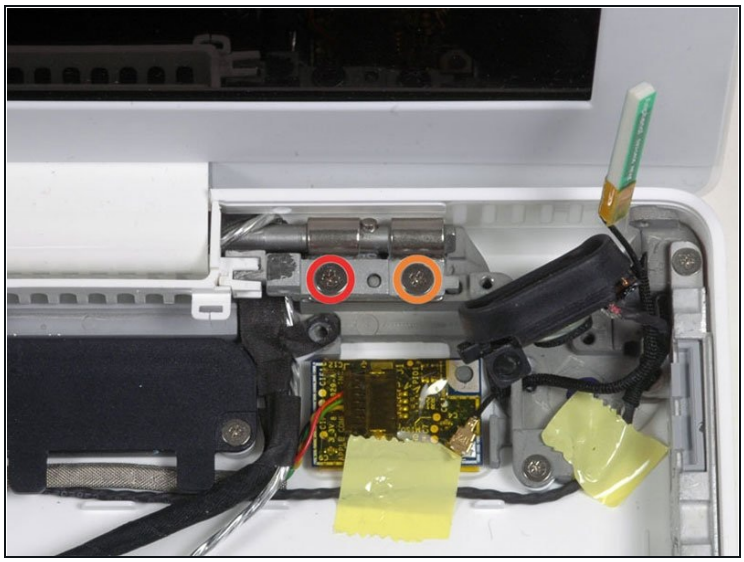
Step 32

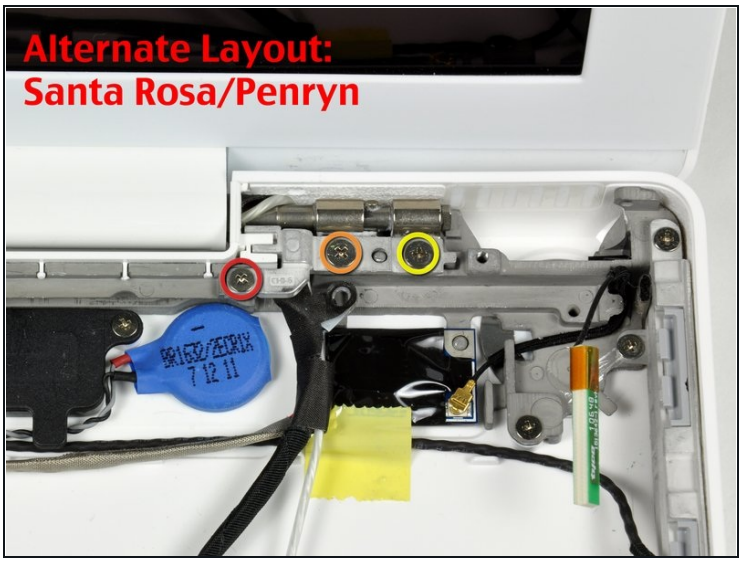




- Disconnect the antenna cables from the Airport card:
  - If you have an original MacBook Core Duo or Core 2 Duo model, see the first picture, which shows that there are three antenna cables.
  - If you have a MacBook Core 2 Duo Santa Rosa/Penryn or 2009 model, there are only two antenna cables, and the plug/socket for the black inverter cable is in a different location. There may be a square foam piece over the plug/socket for the inverter board connector.
- Disconnect the inverter cable from its socket by inserting a spudger between the right or left ends of the plug and the socket, and prying gently vertically. Do NOT pry up on the socket--you must pull up on the plug alone, vertically out of the socket. Do not pull in the direction of the cable wires or you will tear the socket off the logic board.

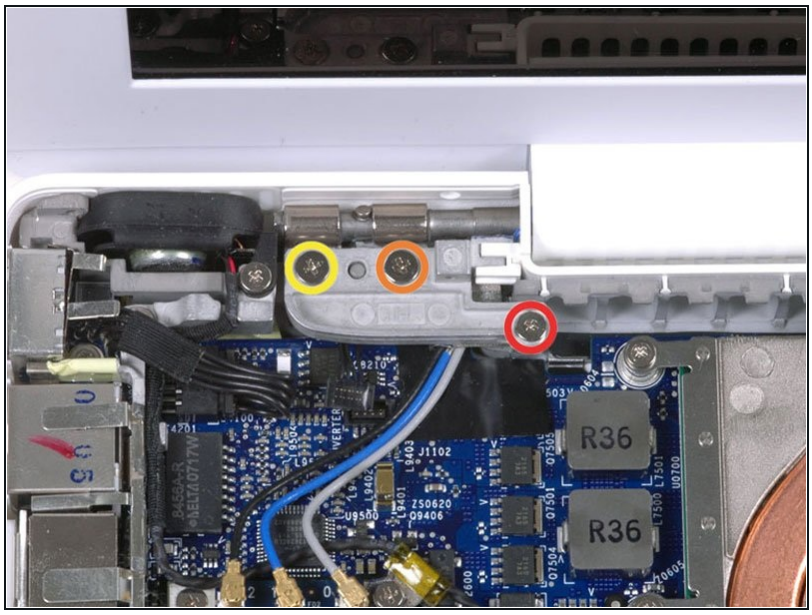
Step 33





- For original Macbook Core Duo and Core 2 Duo models, see first picture and remove the following 2 screws from the right hinge mount:
  - One 6 mm Phillips on the left side of the hinge mount.
  - One 10 mm Phillips on the right side of the hinge mount.
- For Santa Rosa/Penryn and 2009 models, see second picture and remove the following 3 screws from the right hinge mount:
  - One 3 mm smalller diameter Phillips on the far left.
  - One 5.2 mm larger diameter, 4.2 mm head Phillips in the middle.
  - One 10 mm larger diameter, 4.2mm head Phillips from the far right.
- Before removing the right hinge mount, take care to see how its pieces fit together, including the small white plastic piece. Knowing how the mount pieces fit together will help with reassembly. Lift the right hinge mount with the small white plastic piece out of the computer.

Step 34



- Hold the display with one hand while removing the following 3 screws from the left hinge mount:
  - One 7.2 mm smaller diameter Phillips from the right side.
  - One 5.2 mm larger diameter Phillips from the middle.
  - One larger diameter 10 mm Phillips from the left side.

ⓘ Before removing the left hinge mount, take care to see how its pieces fit together, including the small white plastic piece. Knowing how the mount pieces fit together will help with reassembly.

ⓘ In 2009 models, the shape of the left hinge mount may be different than shown in the photo, but the locations and sizes of its screws are the same.

- Lift the left hinge mount with white plastic piece out of the computer.
- Check that the cables coming out of the right end of the left hinge are not trapped under other cables.

Step 35

- Grasp the display assembly on either side and lift it up and out of the computer, taking care that the cables attached to the display don't snag on parts in the lower case.

Step 36 — Front Display Bezel

ⓘ The following steps should be identical for both white and black MacBooks.

- Use a thin plastic card to release the tabs and their clips holding the front display bezel to the display assembly. There are five tabs along the left side of the display bezel.

ⓘ You may find some display bezels are easier to remove if you work from their inside edges, directly adjacent to/above the LCD panel.

⚠ Don't use a card that cannot be replaced if damaged. The clips can be difficult to remove and the card can bend and break, rendering it useless.

Step 37

- Continue to free the tabs along the the top edge of the display assembly.

⚠ Be careful when working near the iSight camera.

Step 38

- Next, free the five tabs securing the display bezel on the right side.

Step 39

- Lift up the front display bezel from the top and use your plastic card to free the tabs along the bottom edge of the display bezel.

ⓘ Make sure that your card is between the metal frame around the LCD panel and the display bezel and not touching the LCD panel itself.

- After freeing all holding tabs, lift the front display bezel away from the display assembly.

ⓘ When reinstalling the front display bezel onto the display housing, you may find it easier to get the tabs and clips to connect if you push on the four sides of the bezel in this order: top, bottom, then the sides (left or right). You may have to apply extra pressure along the bottom side of the bezel to get it to snap into place firmly.

Step 40

ⓘ Sometimes when removing the front display bezel, the retaining clips that should remain captive in the LCD brackets come out with the front display bezel. Follow this and the next step to transfer the clips back to the LCD bracket.

- Use a metal spudger or another thin tool to carefully pry the gray plastic clips off the tabs molded into the front display bezel. A 0.8mm flat screwdriver may be useful for this step. You may find that it's easier to remove some of these clips by prying up on their long sides.

⚠ Be careful, as the clips are made of thin plastic and are inherently delicate.

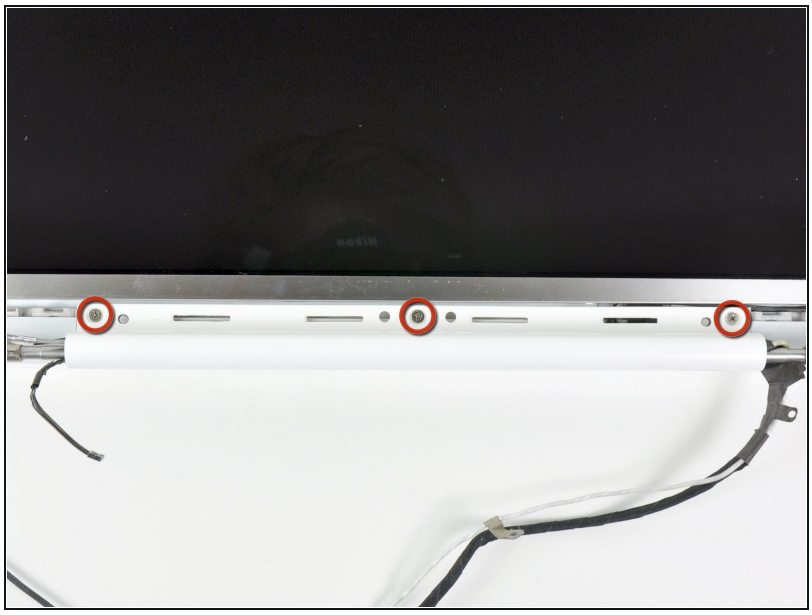
Step 41

- Insert one end of the retaining clip beneath the edge of its recess cut into the LCD bracket.
- Use the edge of a spudger to push the short hook tab on the underside of the other end of the retaining clip into the recess cut into the LCD bracket.

ⓘ The second picture shows a retaining clip properly installed.

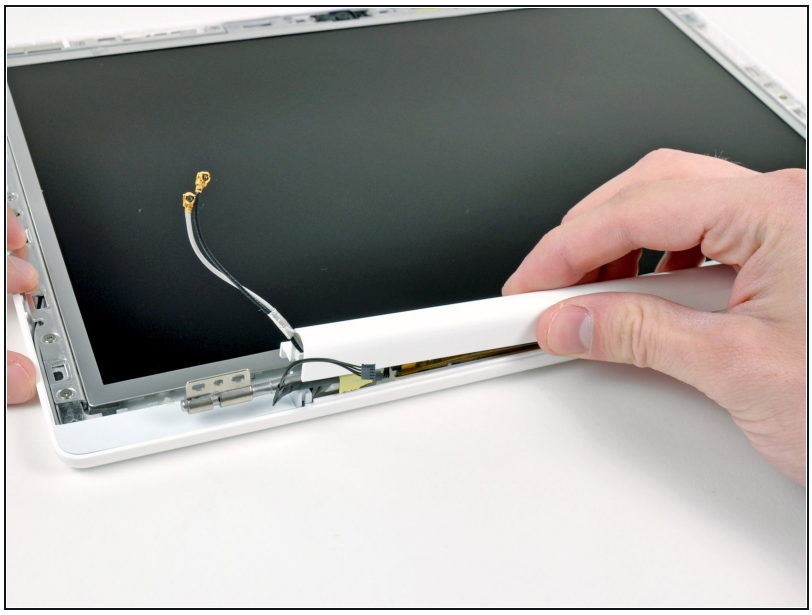
ⓘ You may find it easier to get the short hook tabs on the underside of each end of the clip to fit down inside their cutout in the LCD bracket by first very slightly bending down the two ends of the clip, but be careful not to bend the clips too much--only a slight bend is needed, and too much force will break them.

Step 42 — Clutch Cover



- Remove the three 4.2 mm Phillips screws securing the clutch cover.

Step 43



- While holding the display down with one hand, use your other hand to lift the left end of the clutch cover off the clutch hinge and guide the inverter cable and AirPort cables through the gap in the clutch cover. If the cables snag on the two hooked tabs on the inside end of the clutch cover, free them carefully.

It may help to wiggle the clutch cover as you pull it up from the display.

During reassembly, make sure not to pinch the black inverter cable or the Airport wires when snapping the left end of the clutch cover back into place. To avoid pinching, it may help to lift up and hold these cables and wires in place at the top of the hinge, rather than leaving them running along the sides of the hinge.

Step 44

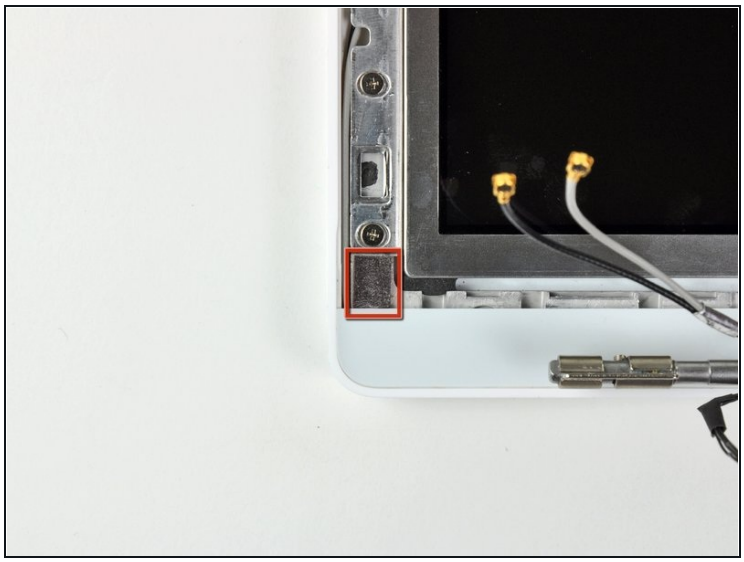
- Lift up the right end of the clutch cover while guiding the display data and iSight cables through the gap and the two hooked tabs at the right end of the clutch cover. If the cables snag on the two hooked tabs, free them carefully.

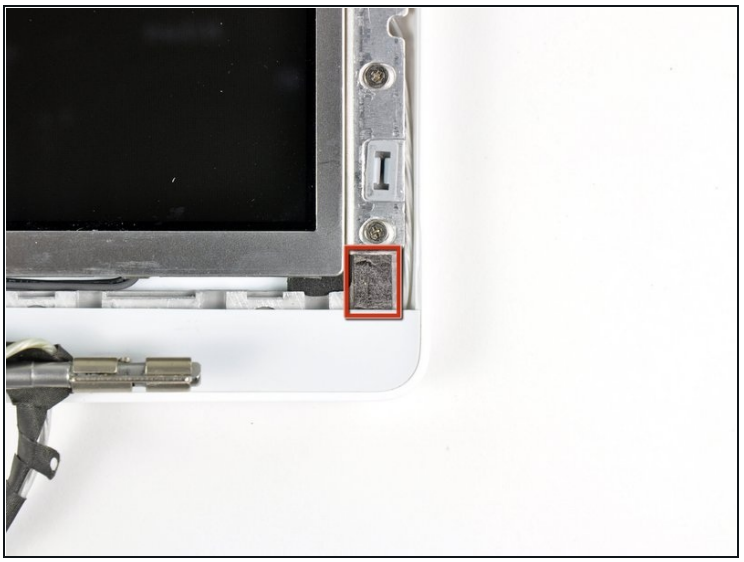
- Lift the clutch cover off of the display assembly.

During reassembly, avoid pinching the display data and iSight cables. While guiding the right end of the clutch cover into place, but before snapping it down, guide these cables between the two hooked tabs inside the right end of the clutch cover, and up into the curved area of the clutch cover, above the hinge.

Also avoid pinching the backlight wires (with the white connector on the end, plugged into the right end of the inverter). They should run under the upper right edge of the clutch cover. In some models, the two wires are gray and black, and in others they're white and pink. They lead into a hole in the lower right edge of the LCD to the backlight.

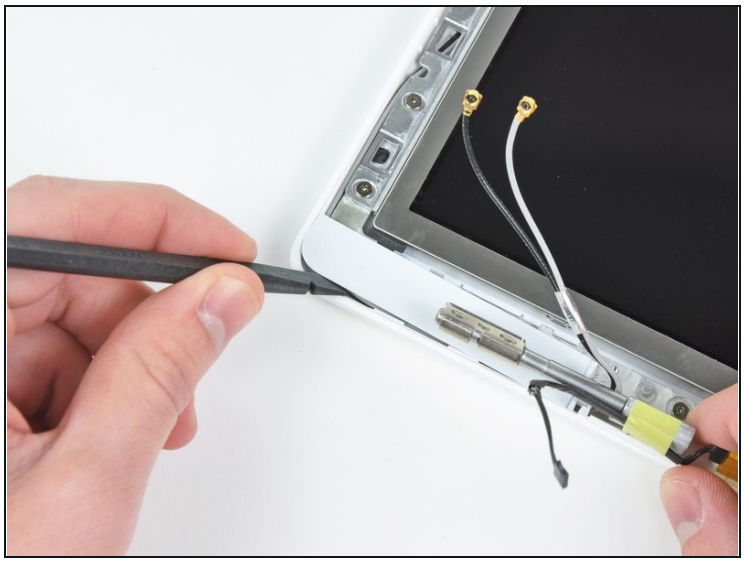
Step 45 — LCD Assembly

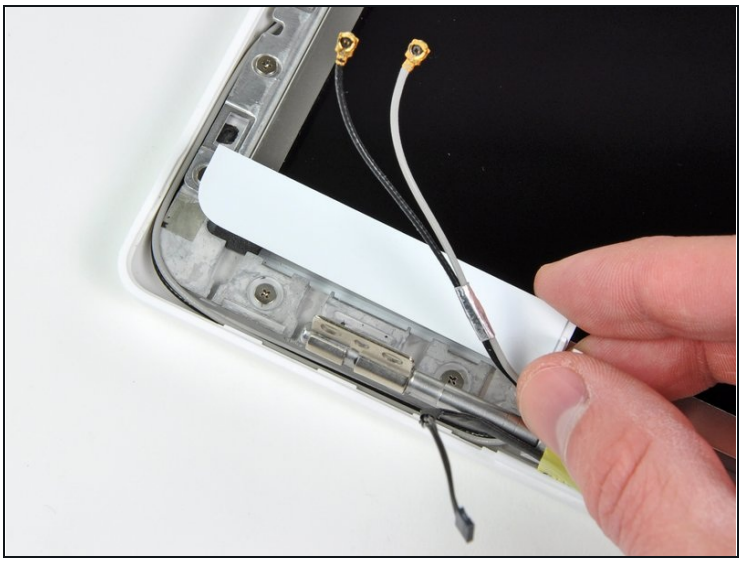




- Remove the small piece of foam tape stuck down above each of the bezel covers, at the lower left and right corners.

Step 46





- Use a spudger to slide the left bezel cover towards the LCD panel.

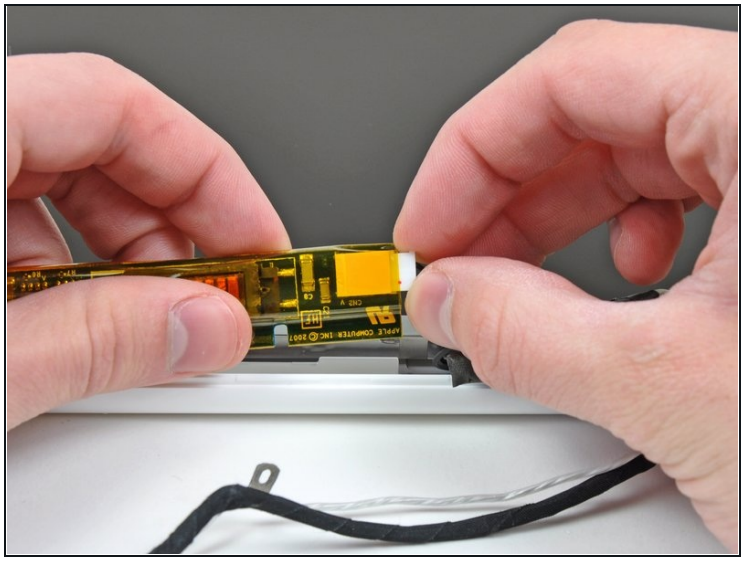
⚠ Do not lift up vertically on the cover! Unlike the large display bezel, this one has horizontal hooks to keep it in place. These will break easily.

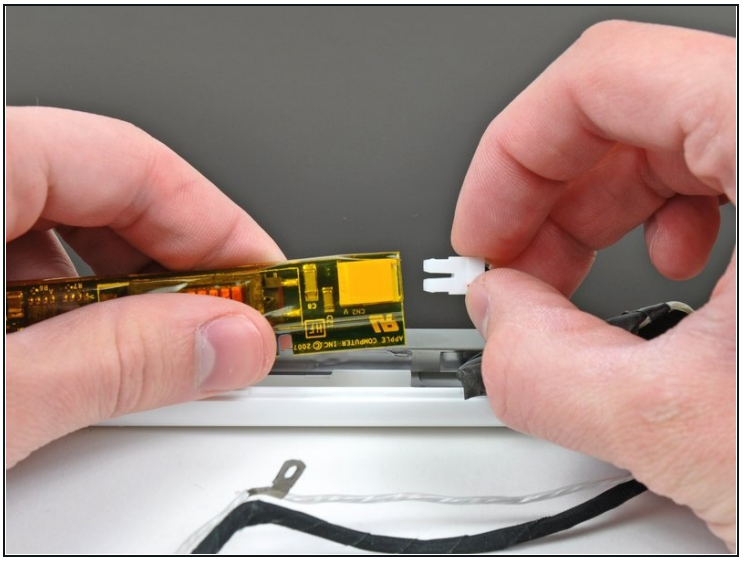
- Lift the left bezel cover off the display assembly.

Step 47

- Use a spudger to slide the right bezel cover toward the LCD panel.
- Lift the right bezel cover off the display assembly.

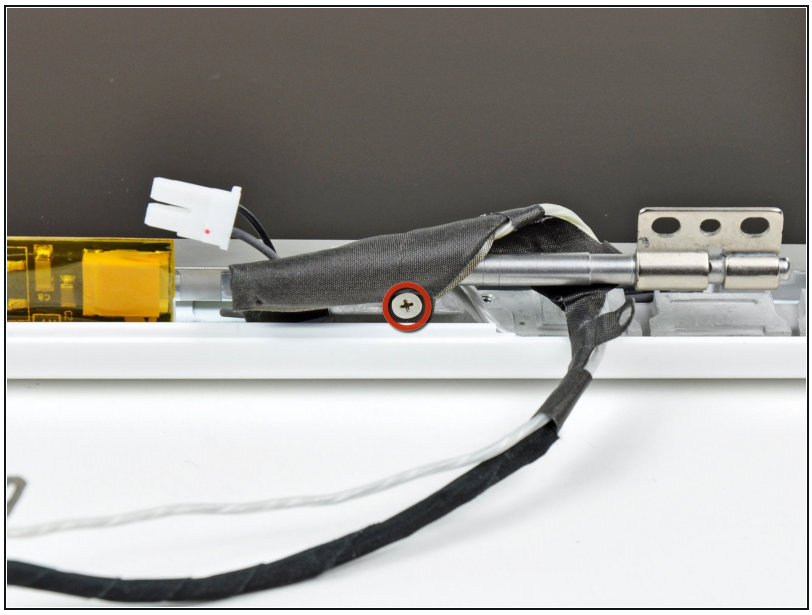
Step 48





- Lift the inverter out of the display slightly and disconnect the backlight cable from its right side.
- Place the inverter back down in its recess.

Step 49

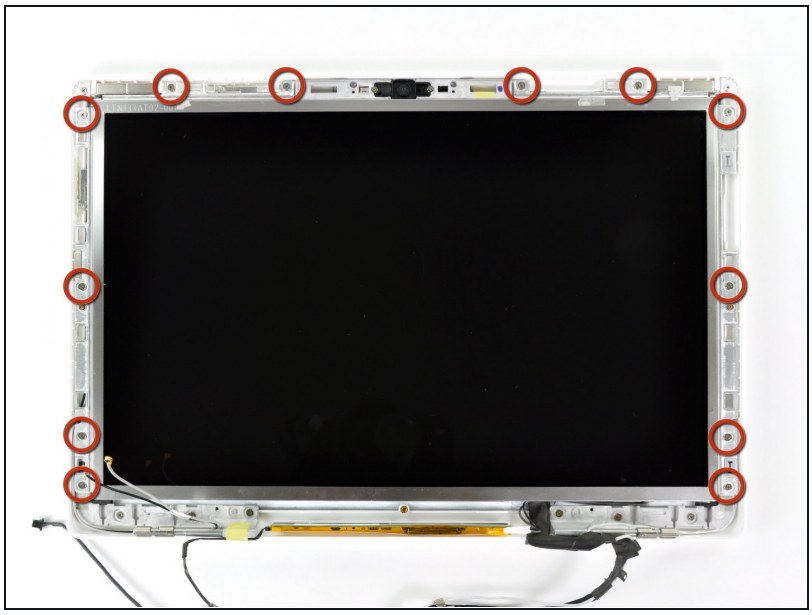


- Remove the single 3.2 mm Phillips screw securing the display data cable to the right clutch hinge.

Step 50

- Move the display data cable out from under the mounting arm of the right clutch hinge.

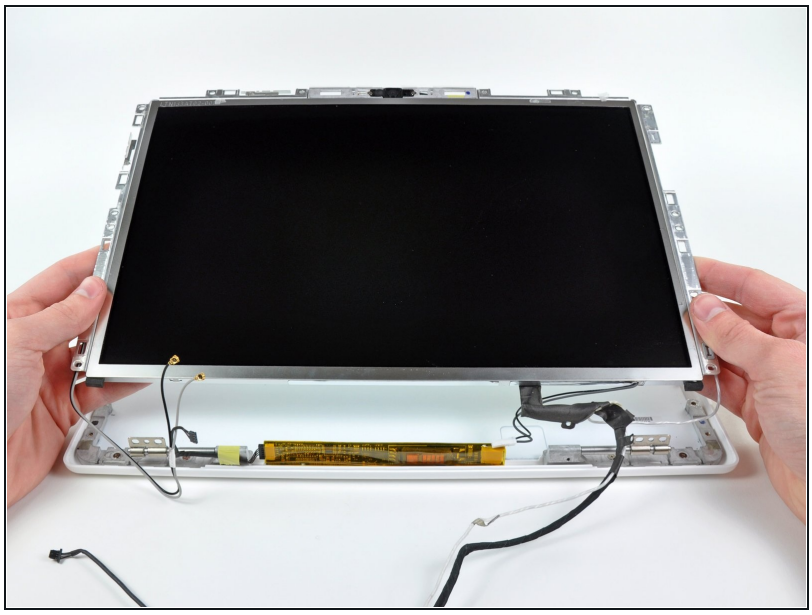
Step 51



- Remove the twelve 4.2 mm Phillips screws securing the LCD assembly to the rear display bezel.

ⓘ Make sure you pay attention to how the microphone cable (and antenna cable on some models) are routed around the outside of the two screws at the bottom left and right corners of the screen. It's easy to damage the cables if not routed properly when reinstalling these screws. To see the cable routing more clearly, click on the photo and zoom in.

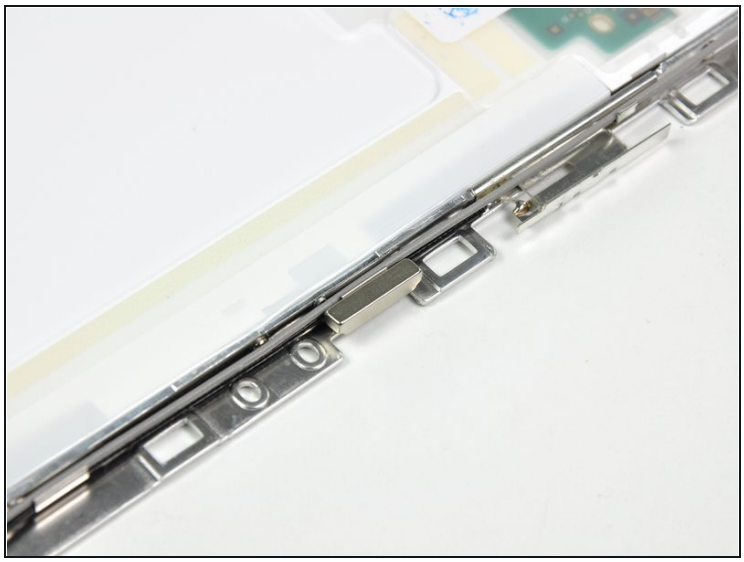
Step 52



- Raise the bottom edge of the LCD assembly slightly, then slide it down slightly to free its upper edge from a slight overhang in the rear display bezel.
- Lift it out of the rear display bezel, minding any cables that may get caught.

When reinstalling the LCD assembly back into the rear display bezel, before you tighten down any of its frame mounting screws, make sure the short brass posts, one each on the left and right sides of the bezel, fit into their corresponding holes in the LCD assembly frame.

Step 53

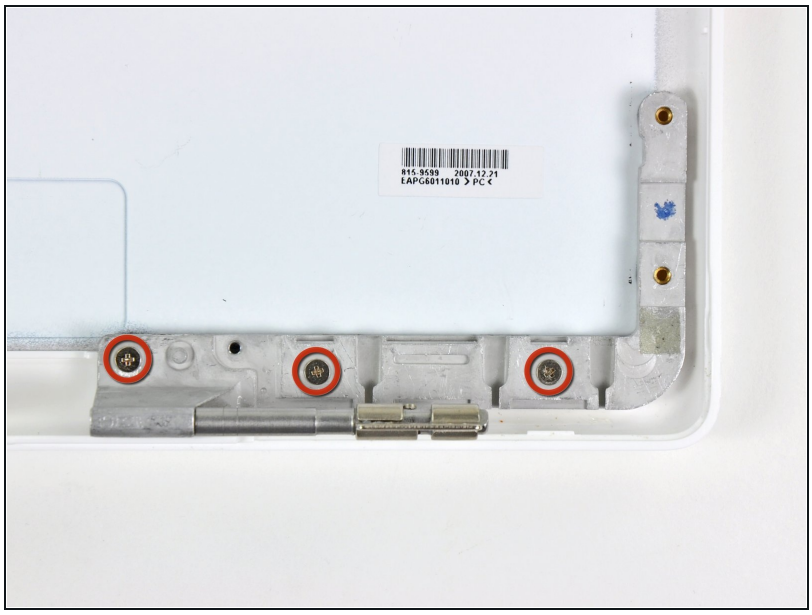


Be sure to keep track of the small magnet along the left side of the display. It may be stuck to the LCD frames or to the rear display bezel.

When the display lid is closed, this magnet comes in proximity to a sensor on a small circuit board at the bottom end of the I/O board, to tell the Macbook that the display has been closed, so that the Macbook can go into clamshell sleep mode.

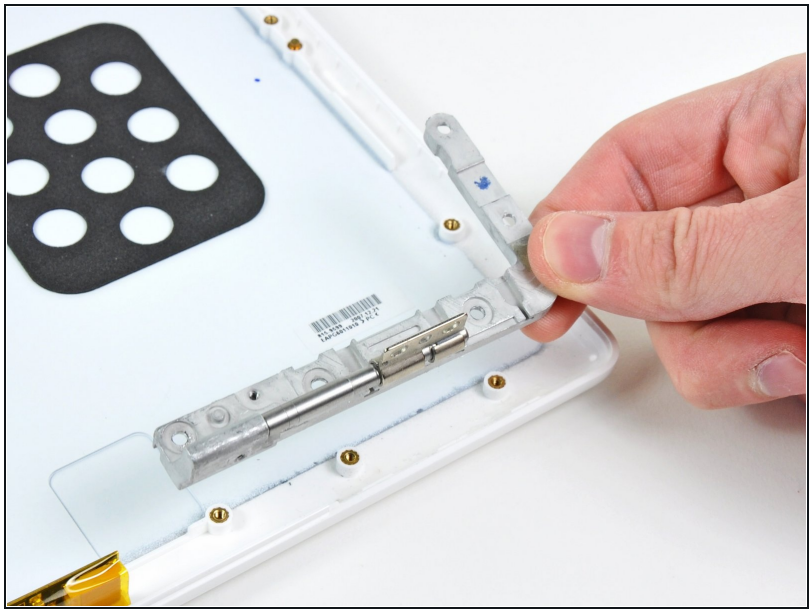
To reinstall this magnet, press it back into its cavity in the rear display bezel, with its short side facing up (see photo 2), then place the LCD panel back into the rear display bezel and screw it down so that the magnet doesn't drop out and disappear.

Step 54 — Right Clutch Hinge



- Remove the three 3.2 mm Phillips screws securing the right clutch hinge to the rear display bezel.

Step 55

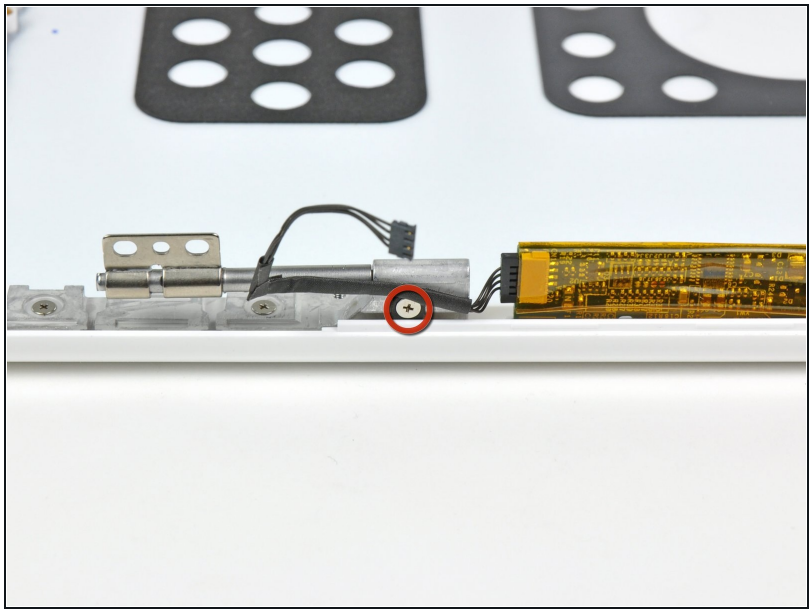


- Lift the right clutch hinge out of the rear display bezel.

Step 56 — Left Clutch Hinge

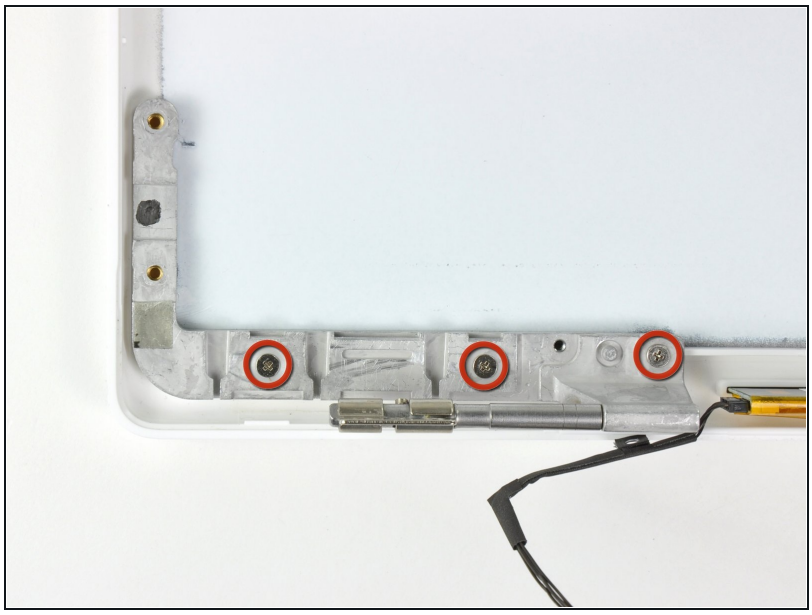
- Remove the piece of tape stuck to the left clutch hinge.

Step 57



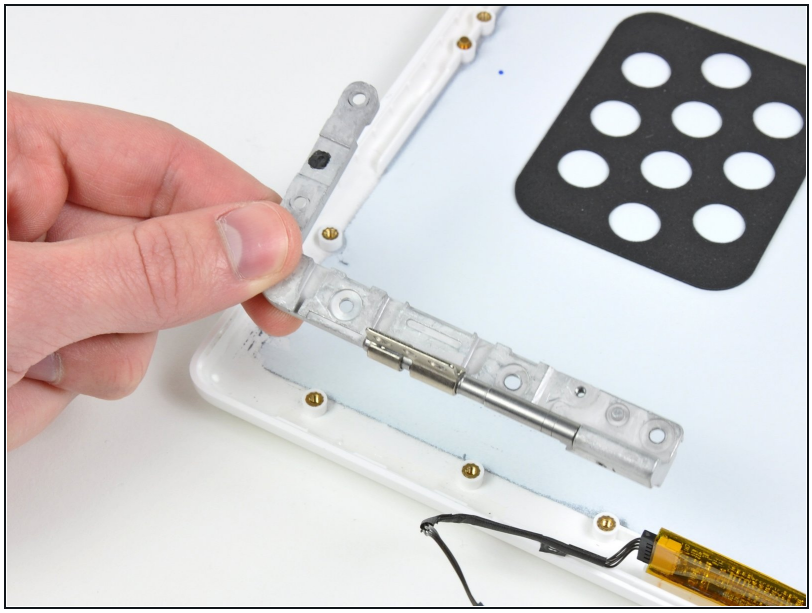
- Remove the single 3.2 mm Phillips screw securing the inverter cable to the left clutch hinge.

Step 58



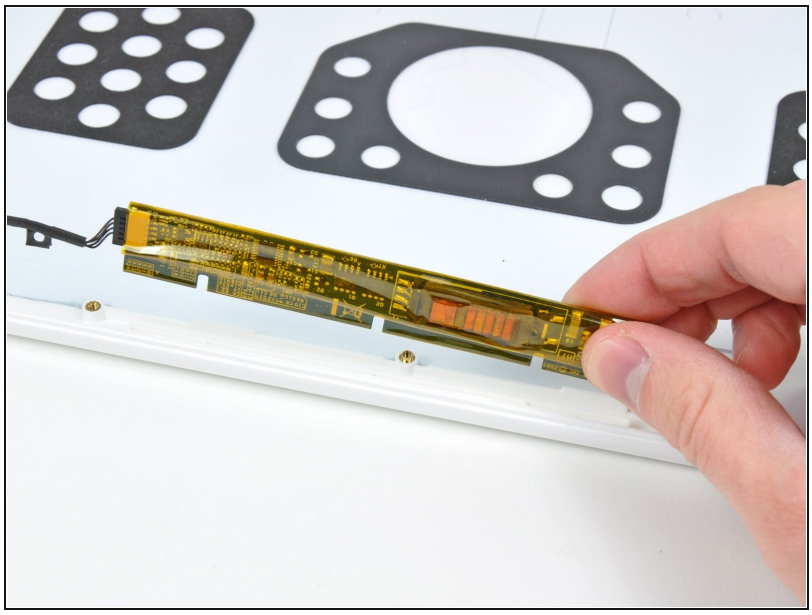
- Remove the three 3.2 mm Phillips screws securing the left clutch hinge to the rear display bezel.

Step 59



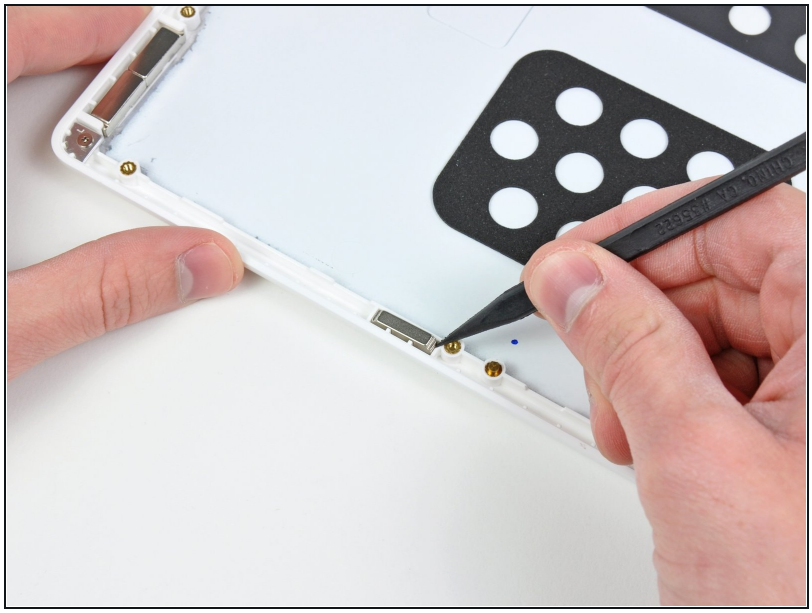
- Remove the left clutch hinge from the rear display bezel.

Step 60 — Rear Display Bezel



- Remove the display inverter and its attached cable from the rear display bezel.

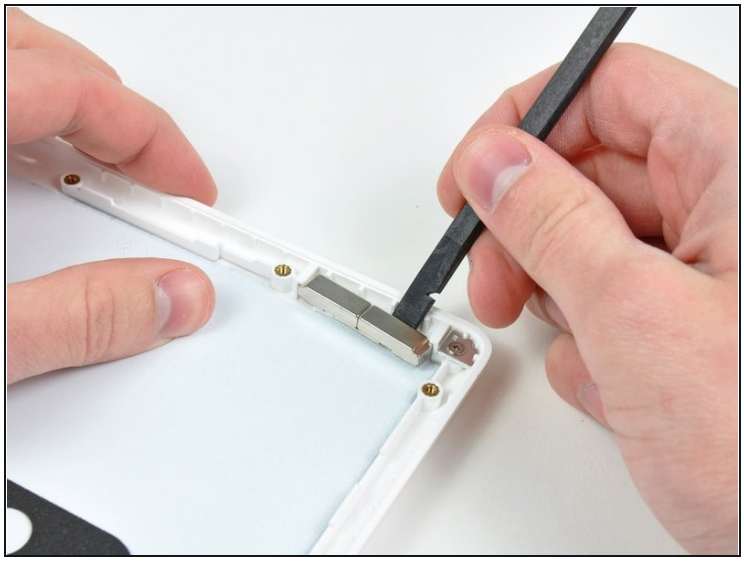
Step 61

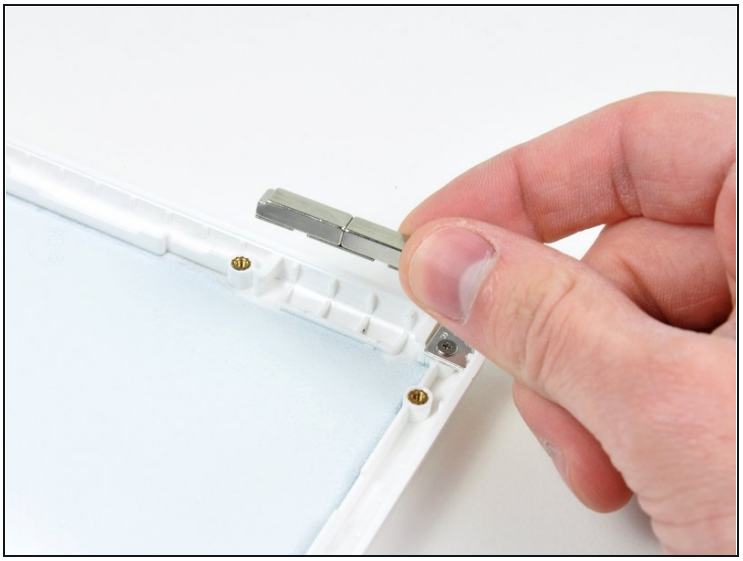


- If it is still stuck to the rear display bezel, pry the sleep magnet out of its housing on the left side of the rear display bezel.

Make sure to replace the sleep magnet with the shorter edge facing up.

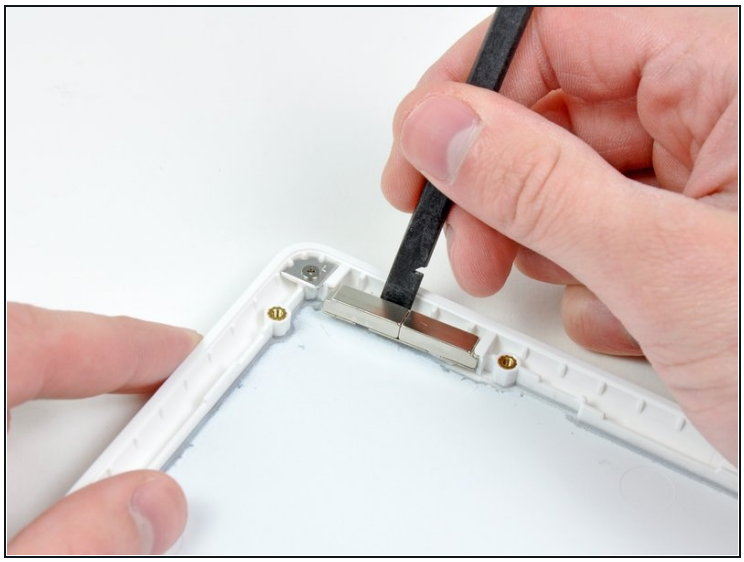
Step 62

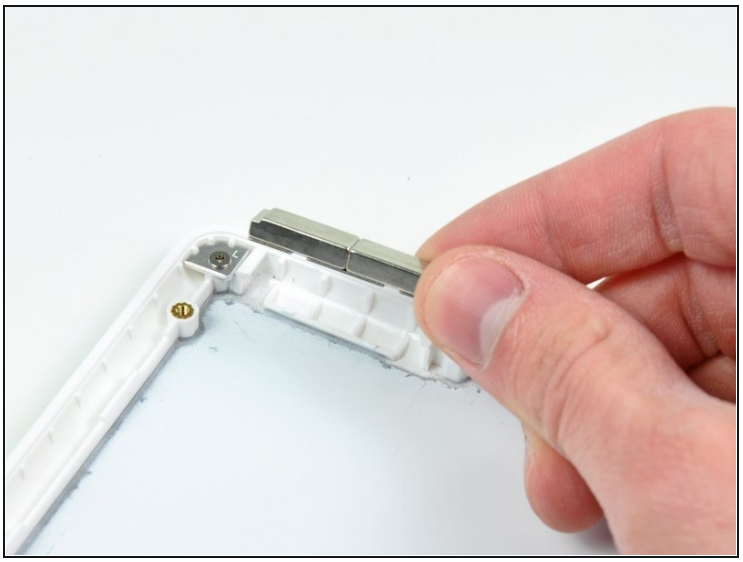




- Pry the right display latch magnet out of its housing. It may help to lift up on the magnet while prying it out.
- Remove the right display latch magnet.

Step 63





- Pry the left display latch magnet out of its housing.
- Rear display bezel remains.

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