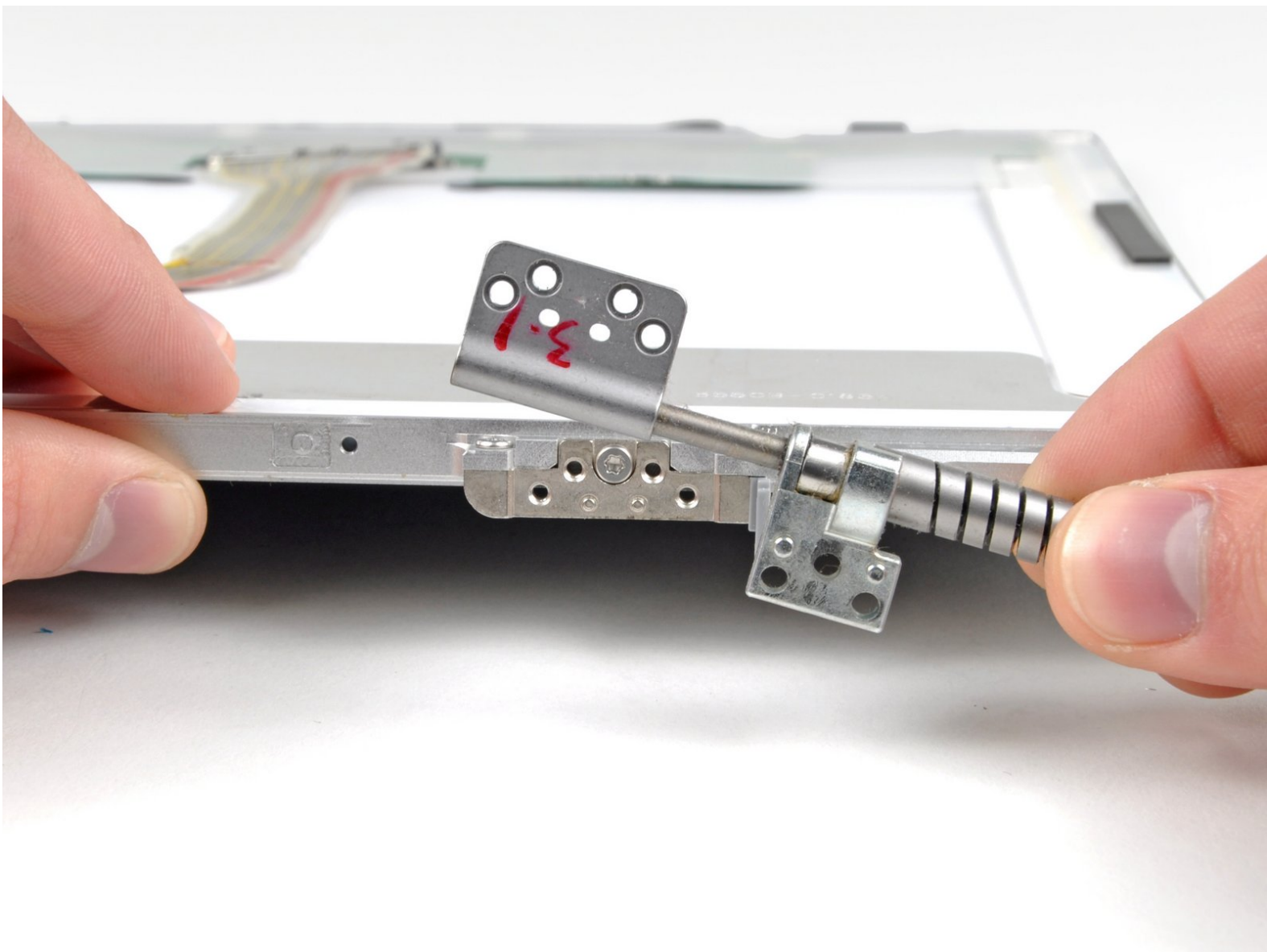




MacBook Pro 17" Models A1151 A1212 A1229 and A1261 Left Clutch Hinge Replacement

Written By: Andrew Bookholt



INTRODUCTION

Replace a damaged clutch hinge to keep your display opening smoothly.



TOOLS:

- [Phillips #00 Screwdriver](#) (1)
- [Spudger](#) (1)
- [T6 Torx Screwdriver](#) (1)



PARTS:

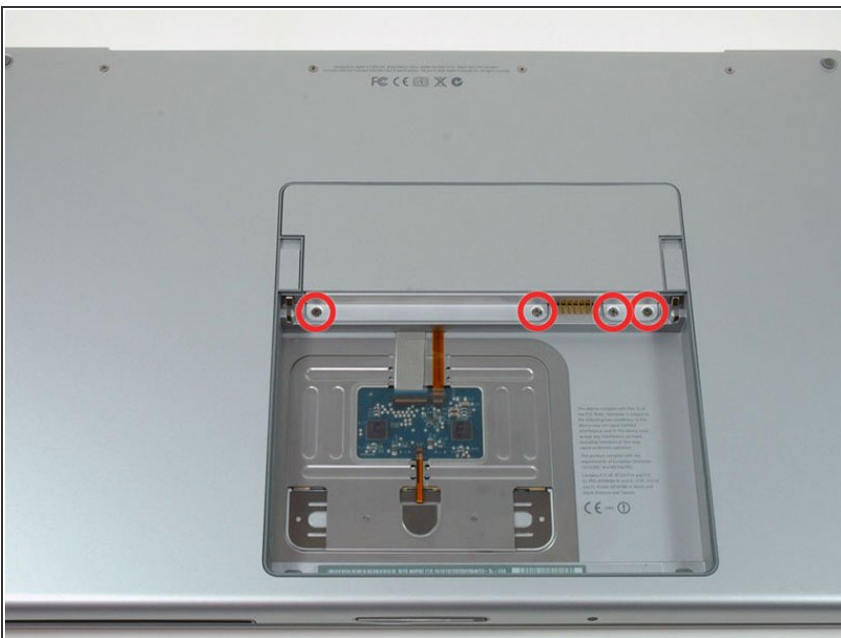
- [MacBook Pro 17" Left Clutch Hinge](#) (1)

Step 1 — Battery



- Use your fingers to push both battery release tabs away from the battery and lift the battery out of the computer.

Step 2 — RAM Shield



- Remove the four identical Phillips 3.4 mm screws from the memory door. These screws have 4 mm

diameter heads rather than the 3 mm heads on the body screws.

Step 3



- Lift the memory door up enough to get a grip on it, and slide it toward you, pulling it away from the casing.

Step 4 — Upper Case



- Remove the three Phillips screws in the battery compartment near the latch. Apple was nice enough to tilt these screws at a slight angle to make them easier to remove. On the A1261 these screws have 4 mm diameter heads rather than the 3 mm heads on the body screws.

Step 5



- Remove the following six screws:
 - Two 14.5 mm T6 Torx screws on either side of the RAM slot.
 - Four 3.4 mm Phillips screws along the hinge.

Step 6



- Remove the four 3.4 mm Phillips screws on the port side of the computer.

Step 7



- Rotate the computer 90 degrees and remove the two Phillips screws from the rear of the computer.

Step 8



- Rotate the computer 90 degrees again and remove the four Phillips screws from the side of the computer.

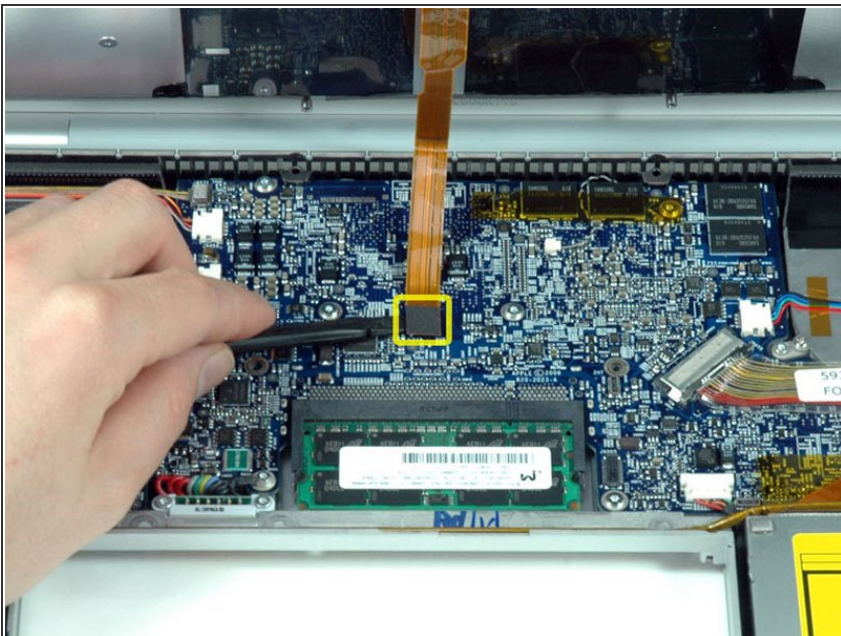
Step 9



⚠ Do not yank the upper case off quickly. The case is attached to the logic board via a ribbon cable.

- Lift up the back of the case and work your fingers along the sides, freeing the case as you go. Once you have freed the sides, you may need to rock the case up and down to free the front of the upper case.

Step 10



- Disconnect the trackpad and keyboard ribbon cable from the logic board.
- Remove the upper case.

Step 11 — Display



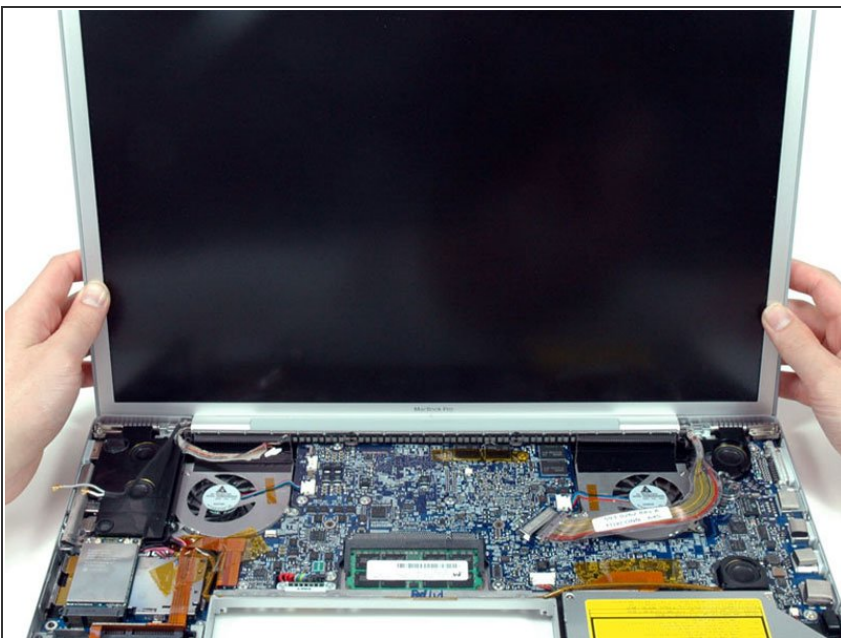
- Disconnect the two antenna cables from the AirPort Extreme card, the iSight and inverter cables from the left side of the logic board, and the display data cable from the right side of the logic board. Be careful to slide the connectors as they may become damaged otherwise.
- ⓘ For A1229 and A1212 models, disconnect the three antenna cables from the AirPort Extreme card and the three connectors highlighted on the logic board.
- ⓘ For the A1229, the order of the cables from left to right is: Black (left; towards the edge of the case) — Grey (middle) — Blue (right; towards the middle of the case).
- ⓘ For the A1261 model, disconnect the two antenna cables from the AirPort Extreme card and the three connectors highlighted on the logic board.
- Carefully peel the iSight and inverter cables off the top of the left fan and de-route the AirPort antenna cables from the channel in the left speaker.

Step 12



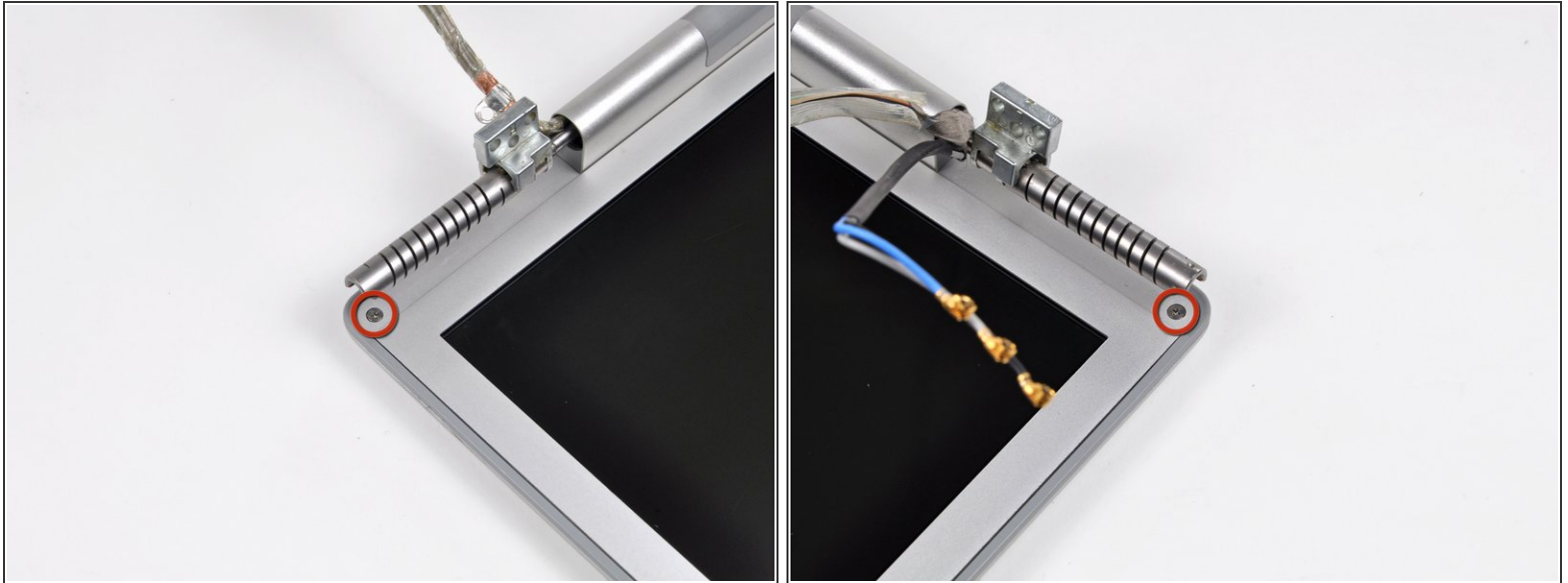
- Remove the ten silver T6 Torx screws securing the display (five on each side—take note that the inside screws on both sides are longer with a thinner head).
- ☑ Don't forget to replace the hinge end caps when reinstalling the display assembly. The end caps are side specific, so be sure that the posts are facing towards the lower case.


Step 13



- Grasp the display assembly on both sides and lift it up and out of the computer.

Step 14 — Rear Display Bezel



 The hinge end caps on this model can be easily removed at this point, as they are not fastened to the hinge and may fall off during service.

- Remove the Phillips screws from the lower left and right corners of the display (two screws total).

Step 15



- Insert the flat end of a spudger perpendicular to the face of the display between the plastic strip attached to the rear bezel and the front bezel.

 **Do not insert your spudger between the plastic strip and the rear bezel.**

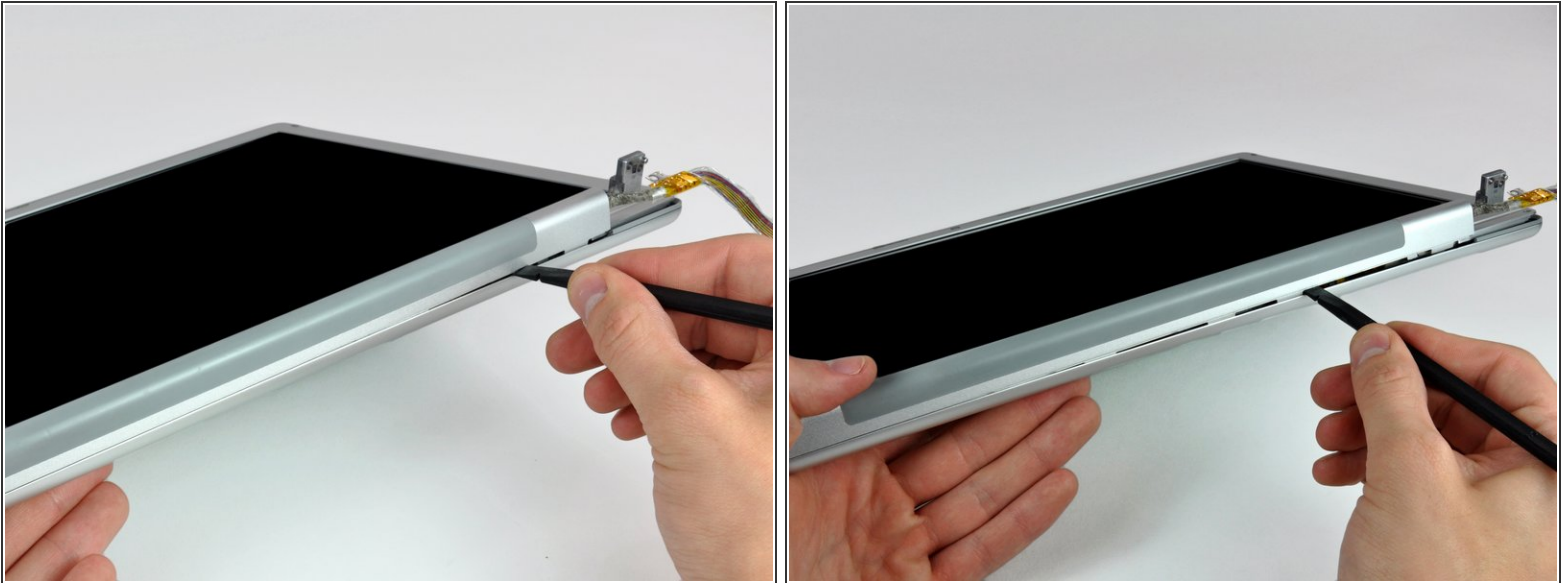
- With the spudger still inserted, rotate it away from the display to separate the front and rear bezels.
- Work along the right edge of the display until the rear bezel is evenly separated from the front bezel.

Step 16



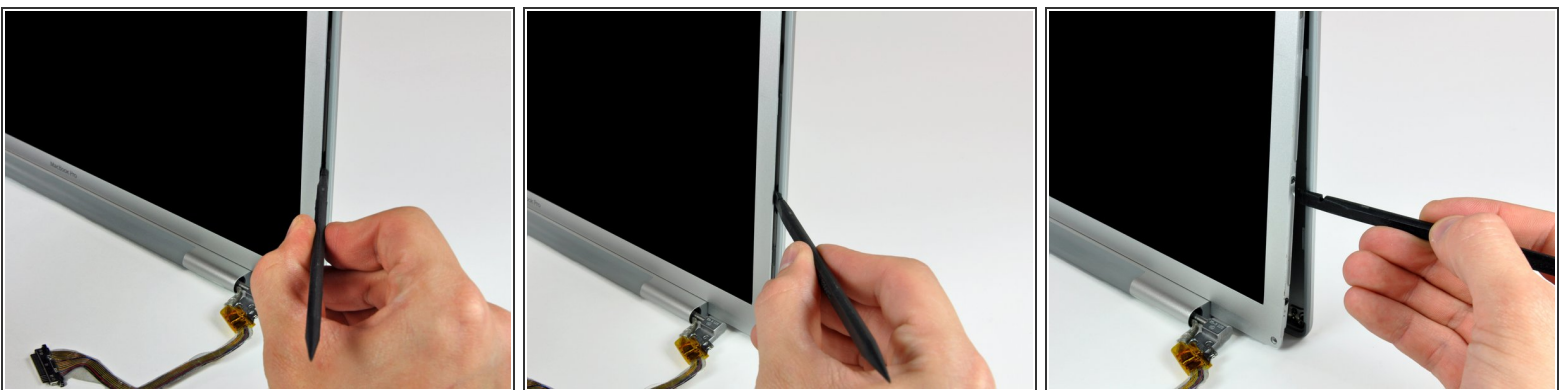
- Insert your spudger between the front and rear display bezels at the lower right corner of the display.
- Pry the rear bezel away from the front bezel to slightly separate the bottom edge of the rear display bezel.

Step 17



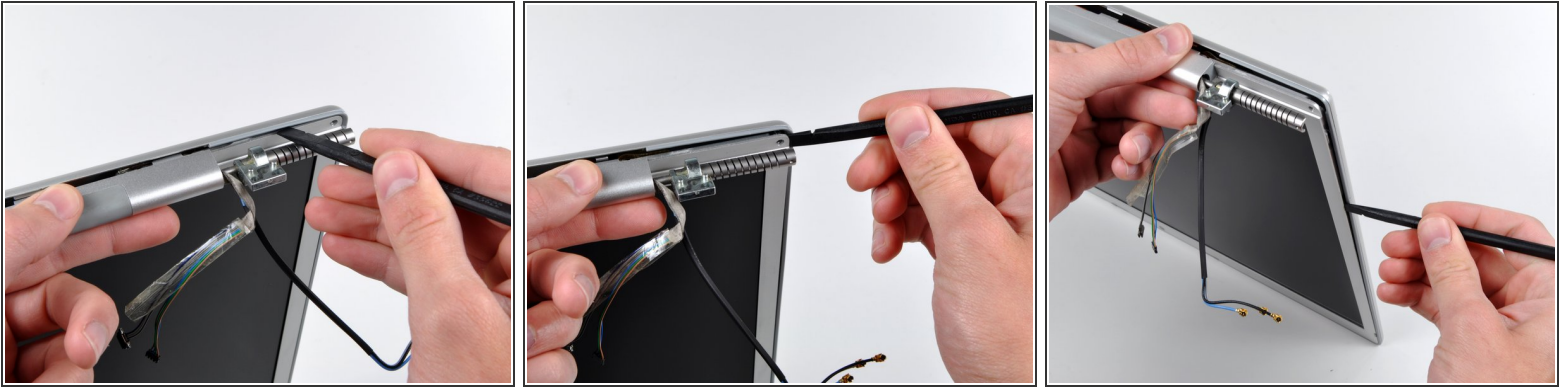
- Insert the flat end of a spudger into the gap between the rear display bezel and the clutch cover.
- Twist the spudger to separate the lower edge of the rear display bezel from the clutch cover.
- Work along the lower edge of the rear bezel until it is evenly separated from the clutch cover.

Step 18



- Now that the right and bottom edges of the rear bezel are slightly separated from the front bezel, use a spudger to pop the rear bezel off the tabs near the lower right corner of the display.

Step 19



- Insert the flat end of a spudger between the front bezel and the plastic strip attached to the rear bezel near the screw holes at the bottom corners of the display.
- Rotate your spudger toward the rear bezel to separate it from the front bezel.
- ☑ If necessary, continue separating the left edge of the rear bezel off the tabs on the front display bezel.

Step 20



- Slightly lift the lower edge of the display and pull it away from the rear display bezel.
- The rear display bezel remains.

Step 21 — Display Inverter



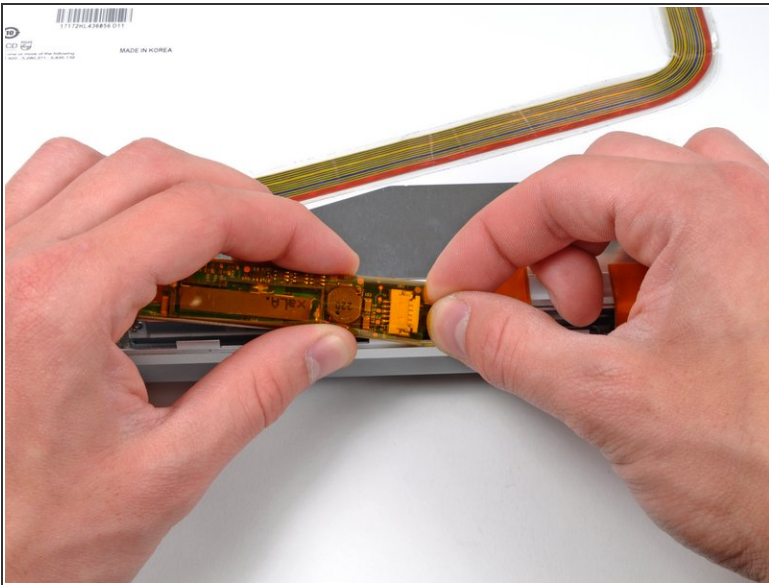
- Remove the piece of tape securing the backlight cables to the front display bezel.

Step 22



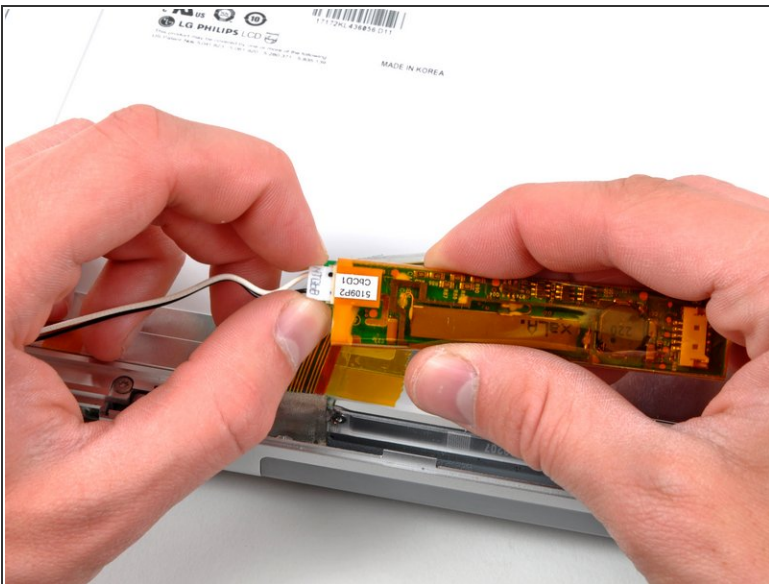
- Carefully lift the inverter out of the clutch cover.

Step 23



- Disconnect the inverter cable by pulling its connector away from the socket on the inverter board.

Step 24

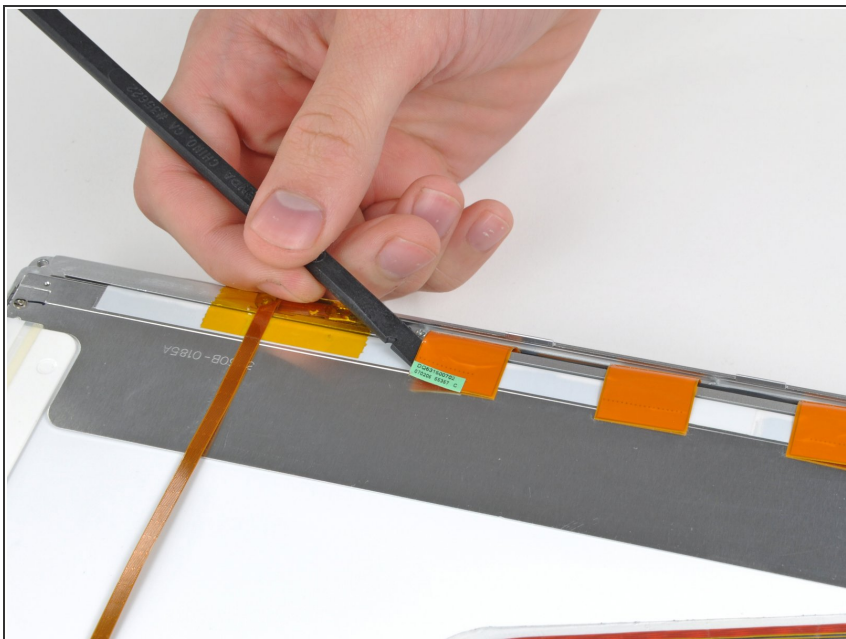


- Disconnect the backlight connector from the inverter board.

⚠ Be careful when removing this connector, as it may be firmly seated in its socket.

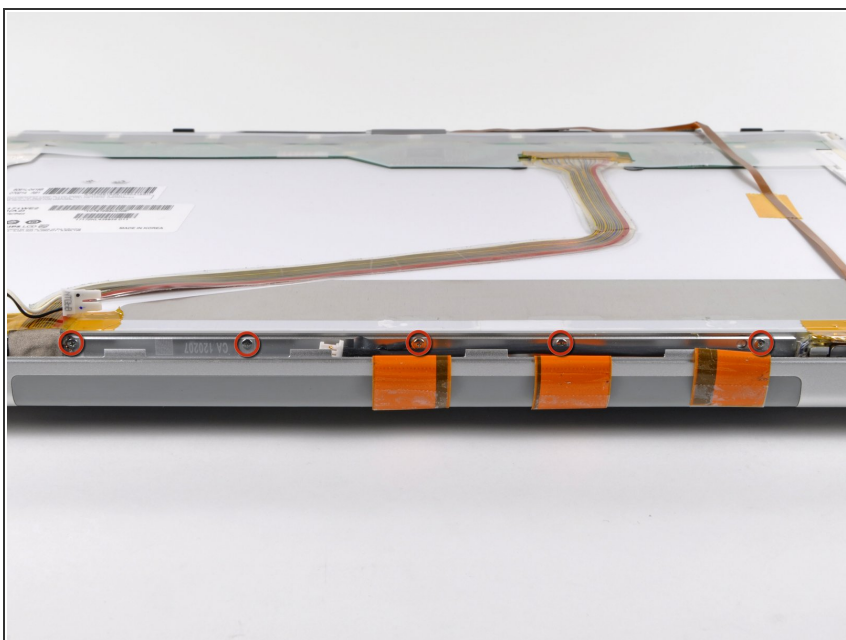
- Remove the inverter from the display.

Step 25 — Clutch Assembly



- Use the flat end of a spudger to carefully peel off the three antenna straps stuck to the lower edge of the LCD.

Step 26



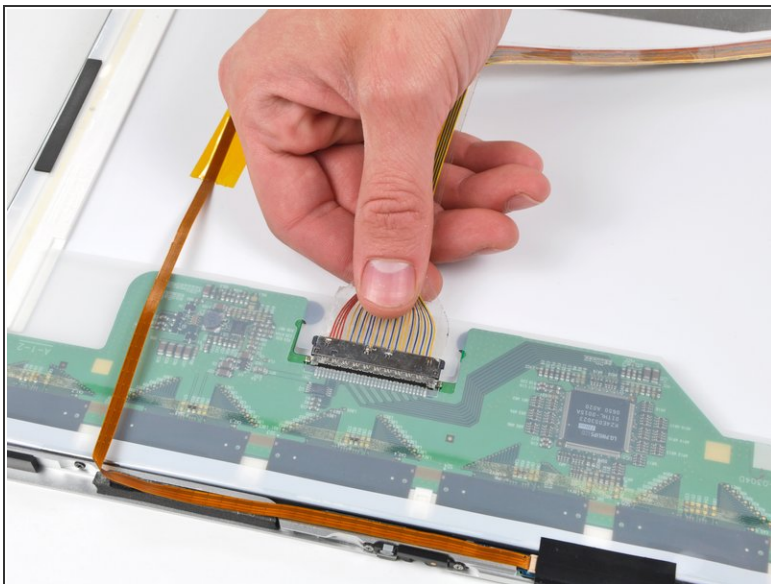
- Remove the five Phillips screws securing the clutch cover to the bottom edge of the front display bezel.

Step 27



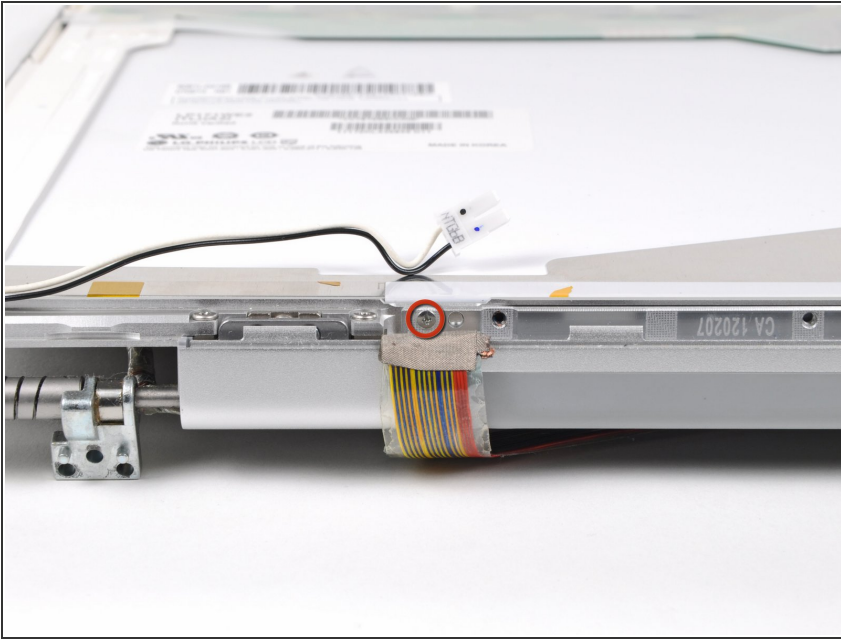
- Remove the two pieces of tape securing the display data cable to the LCD.

Step 28



- Disconnect the display data cable from the LCD by pulling it toward the bottom edge of the display.

Step 29



- Move the display data cable out of the way to remove the Phillips screw hidden underneath.

Step 30



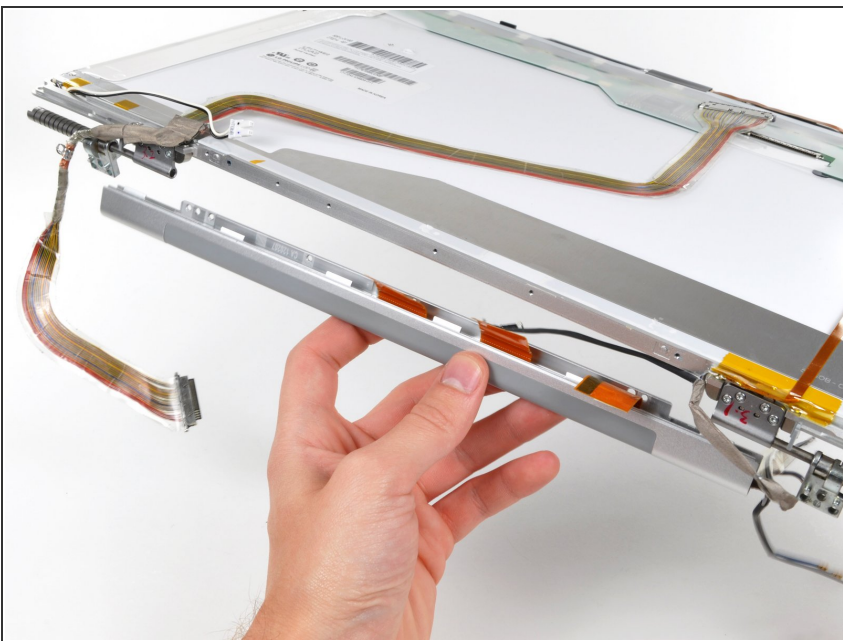
- While pulling the clutch assembly away from the clutch hinge with one hand, insert an iPod opening tool between the clutch cover and the front display bezel to lift the clutch cover over the retaining pin on the front display bezel.
- Pull the clutch assembly away from the front display bezel.

Step 31



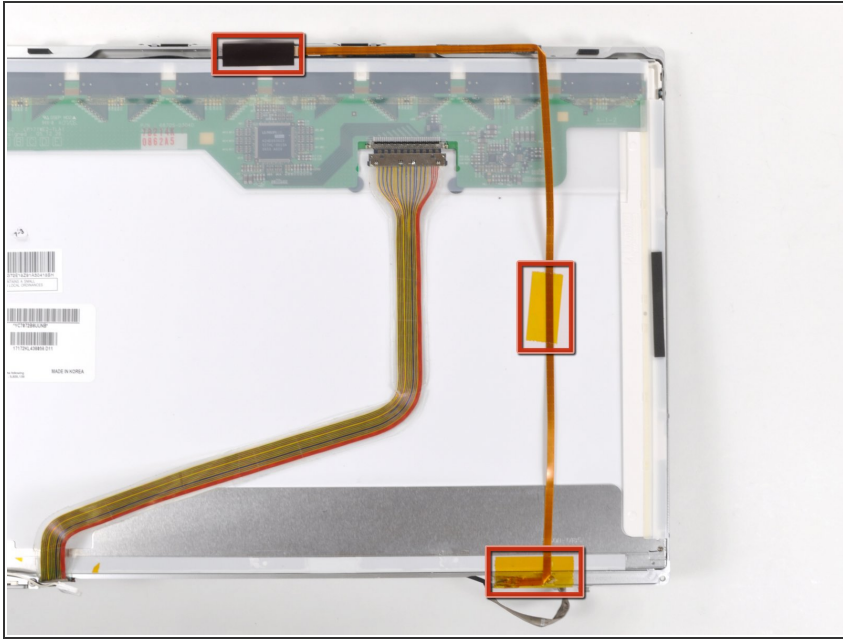
- Repeat the process covered in the previous step to free the other side of the clutch assembly from the front display bezel.

Step 32



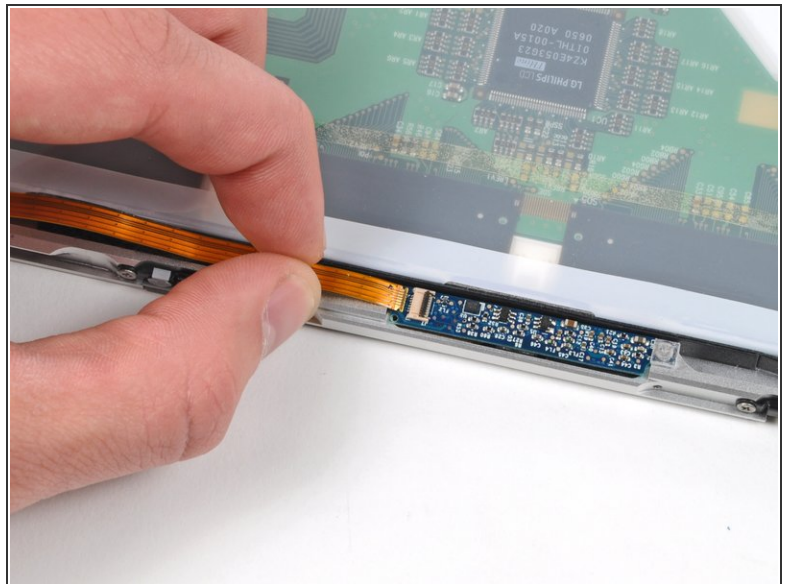
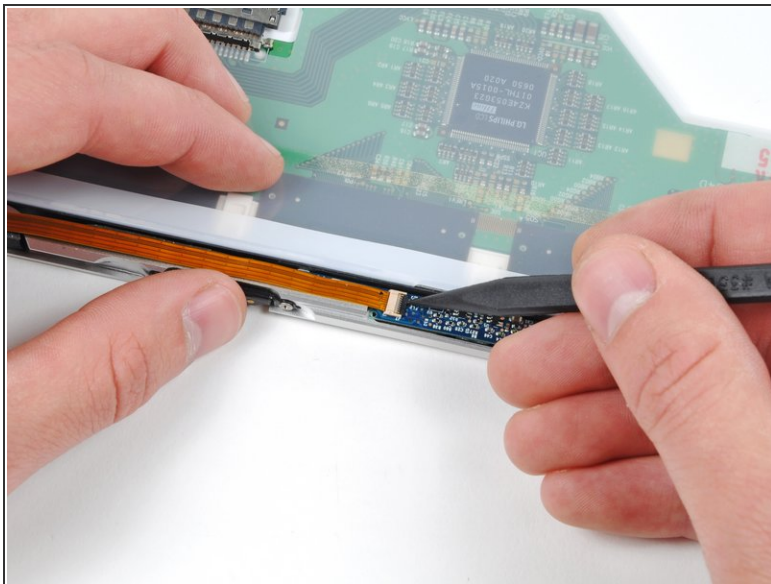
- Remove the clutch assembly from the front display bezel, minding any cables that may get caught.

Step 33 — Inverter/Antenna Cables



- Remove the three pieces of tape securing the camera cable to the display assembly.

Step 34



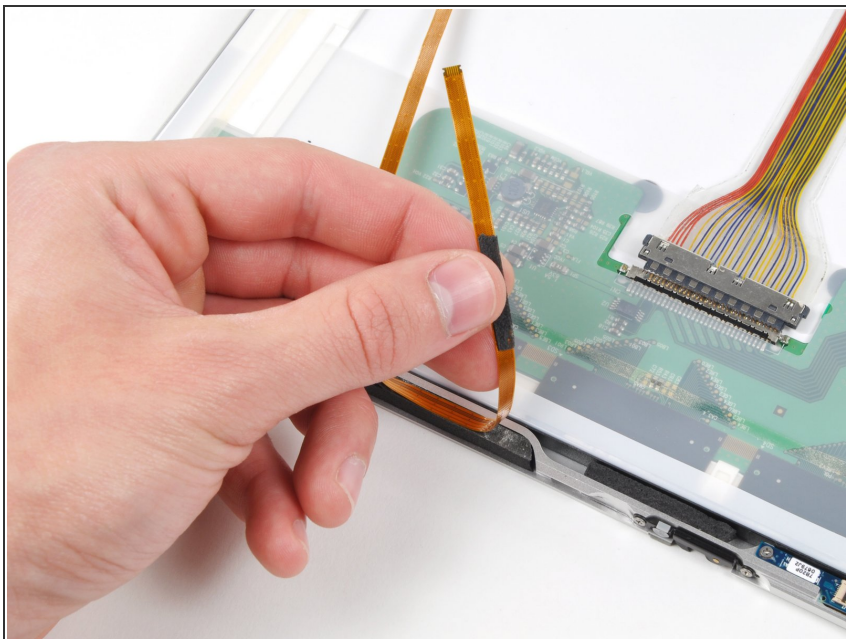
- Use the tip of a spudger or your fingernail to flip up the ZIF retaining flap on the camera cable socket at the edge of the camera board near the top center of the front display bezel.

⚠ Be sure you are prying up on the retaining flap, **not** the socket itself.

- Pull the camera cable out of its socket.

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Step 35



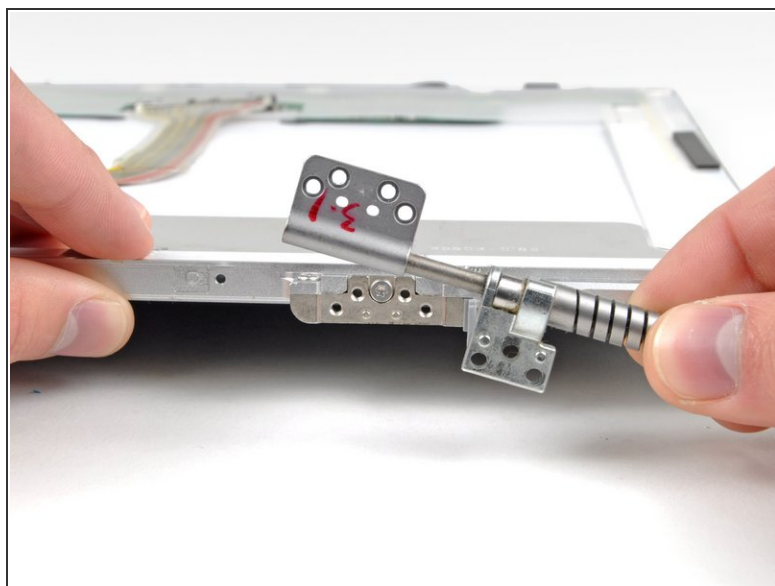
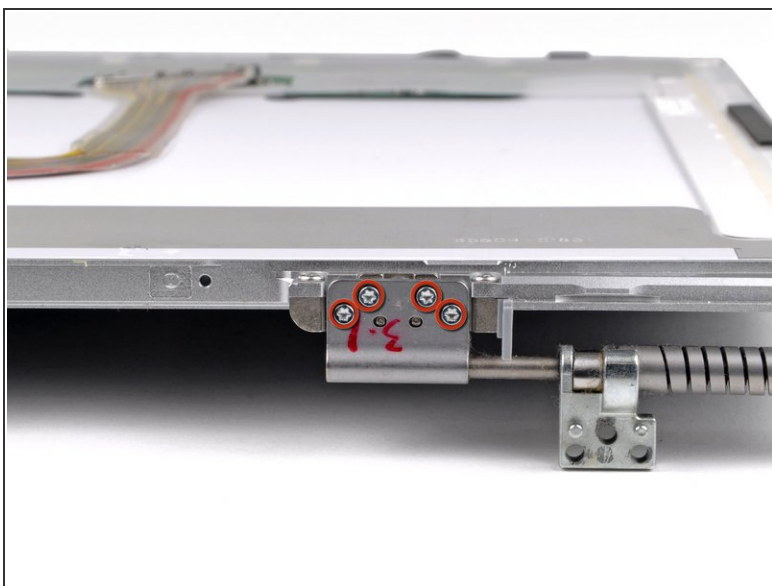
- Peel the camera cable off the foam tape along the top edge of the display.

Step 36



- Remove the inverter/antenna cables from the display.

Step 37 — Left Clutch Hinge



- Remove the four 3.5 mm T6 Torx screws securing the left clutch hinge to the front display bezel.
- Remove the left clutch hinge from the front display bezel.

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