



# MacBook Air 13" Mid 2012: loose or rattling trackpad repair

Replacement of two tiny "stop buffers", that are responsible for Mac trackpads (presumably many unibody models) getting loose or beginnig to rattle

Written By: Marc Malkwitz



## INTRODUCTION

In some MacBook Air and presumably many other MacBooks the trackpad tend to become loose or rattle after a couple of years. It is a often read mistake, that this can be adjusted or "repaired" by the central adjustment screw of the trackpad (marked in step 10). This will only make it worse as the reason for the loose trackpad however can be found in the failure of two tiny buffers, that work as upper stop of the trackpad. Tiny as they are, few seem to know them and unsurprisingly they fail after countless workcycles. I did not find them as spare part but please leave a comment, in case they are avialable. I will then update this guide.

In rest position, they press the trackpad against the contact point of the mentioned adjustment screw and the click button. When you click, they decompress and when you release, they are recompressed by the bounce of the click button, which explains why their elastic force must be rather small.

Steps 1-11 base on older guides, which contain some wrong information: **Do not follow step 10!** The mentioned screw is only for adjustment of the clickpoint and **must not be unscrewed**. The trackpad already comes out after Step 8

In this working position, we act directly above the display. So better place a thick cloth or any other protective material between screen an lower case before you begin.



### TOOLS:

- [P5 Pentalobe Screwdriver Retina MacBook Pro and Air](#) (1)
- [T5 Torx Screwdriver](#) (1)
- [Spudger](#) (1)
- [Phillips #000 Screwdriver](#) (1)



### PARTS:

- [Double Sided Adhesive Tape](#) (1)
- [\(EPDM\) Rubber foam material](#) (1)

## Step 1 — Lower Case



- **i** Before proceeding, power down your MacBook. Close the display and lay it on a soft surface, top-side down.
- Use a [P5 Pentalobe](#) driver to remove ten screws securing the lower case, of the following lengths:
  - Two 9 mm screws
  - Eight 2.6 mm screws

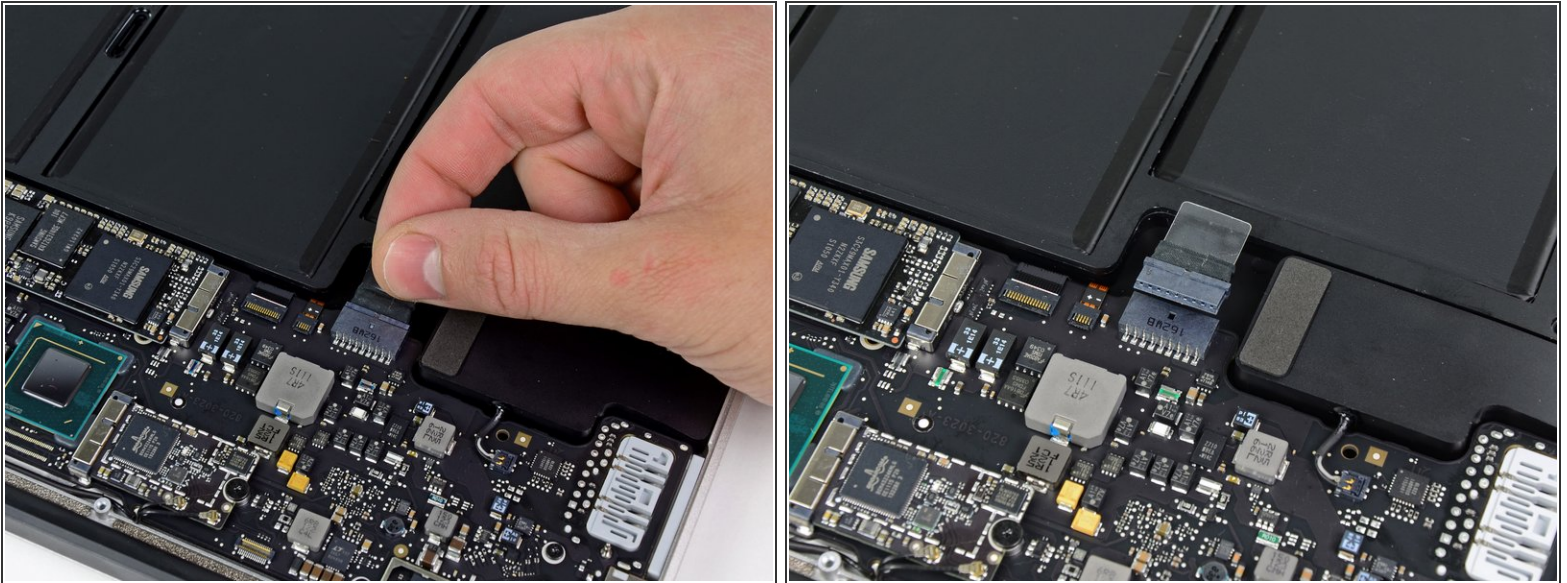
## Step 2



- Wedge your fingers between the display and the lower case and pull upward to pop the lower case off the Air.
- Remove the lower case and set it aside.



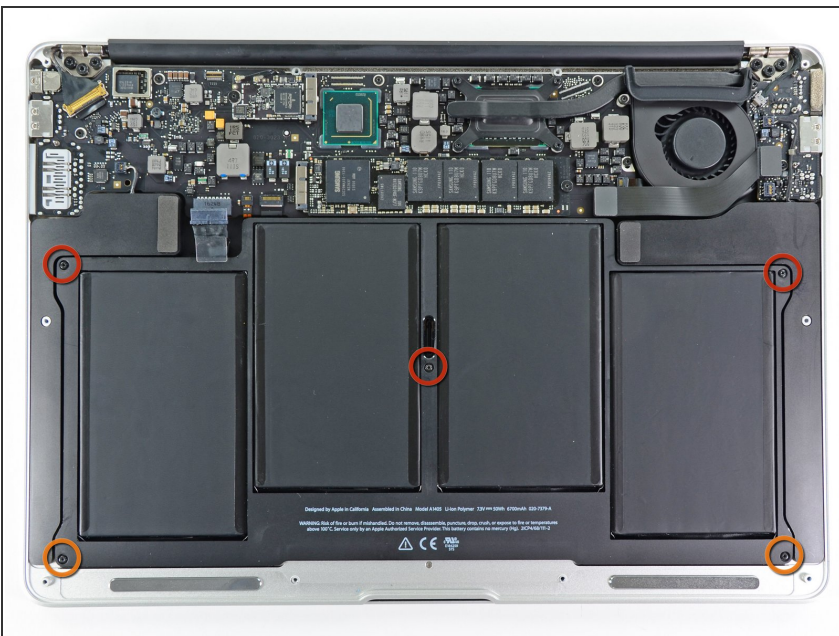
## Step 3 — Battery



- Grab the clear plastic pull tab attached to the battery connector and pull it toward the front edge of the Air to disconnect the battery from the logic board.

⚠ Do not lift upward on the connector as you disconnect it.

## Step 4



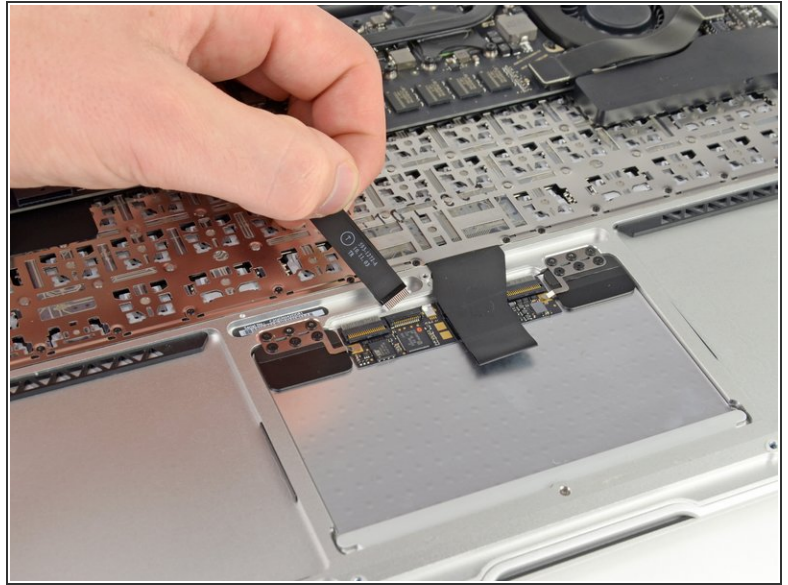
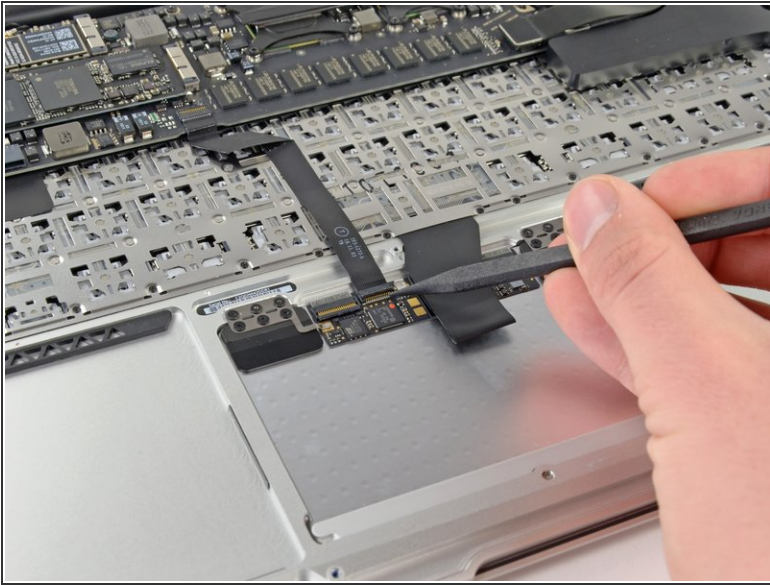
- Remove the following five screws securing the battery to the upper case:
  - Three 6.3 mm T5 Torx screws
  - Two 2.4 mm T5 Torx screws

## Step 5



- ⚠ When handling the battery, avoid squeezing or touching the four exposed lithium polymer cells.
- Lift the battery from its edge nearest the logic board and remove it from the upper case.
- ★ When installing the new battery, if there is a [thin plastic film](#) on your replacement battery, do not attempt to remove it. It is glued on and protects the battery pack while it is inside the MacBook.
- ★ If you're installing a new battery, you should [calibrate](#) it after installation:
  - Charge it to 100%, and then keep charging it for at least 2 more hours. Then, unplug and use it normally to drain the battery. When you see the low battery warning, save your work, and keep your laptop on until it goes to sleep due to low battery. Wait at least 5 hours, then charge your laptop uninterrupted to 100%.
  - If you notice any unusual behavior or problems after installing your new battery, you may need to [reset your MacBook's SMC](#).

## Step 6 — Trackpad



- Use the tip of a spudger or your fingernail to flip up the retaining flap on the trackpad ribbon cable ZIF socket.
- ⚠ Be sure you are prying up on the hinged retaining flap (on the side opposite the cable), **not** the socket itself.
- Pull the trackpad ribbon cable straight out of its socket toward the rear edge of the Air.



## Step 7

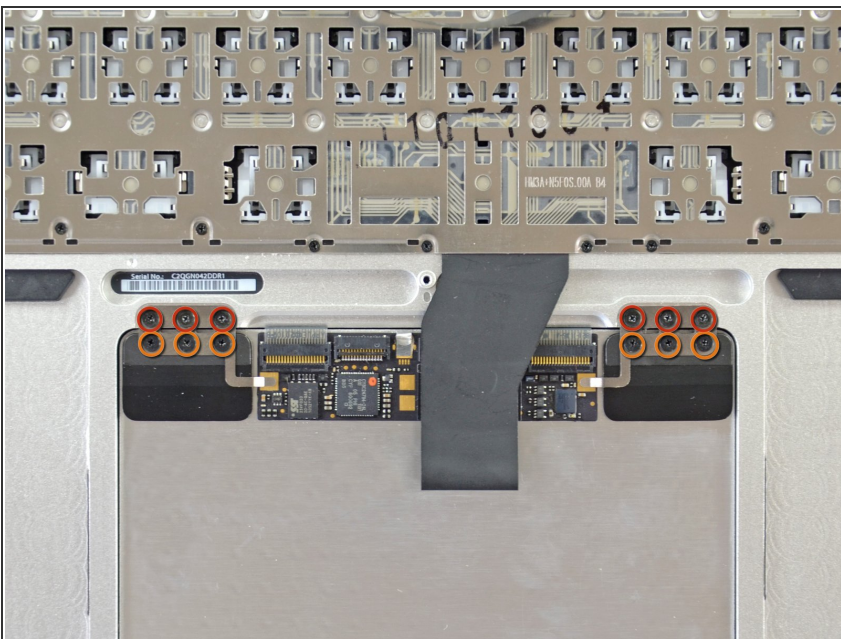


- While carefully lifting the keyboard ribbon cable with one hand, use the tip of a spudger or your fingernail to flip up the retaining flap on the keyboard ribbon cable ZIF socket.

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

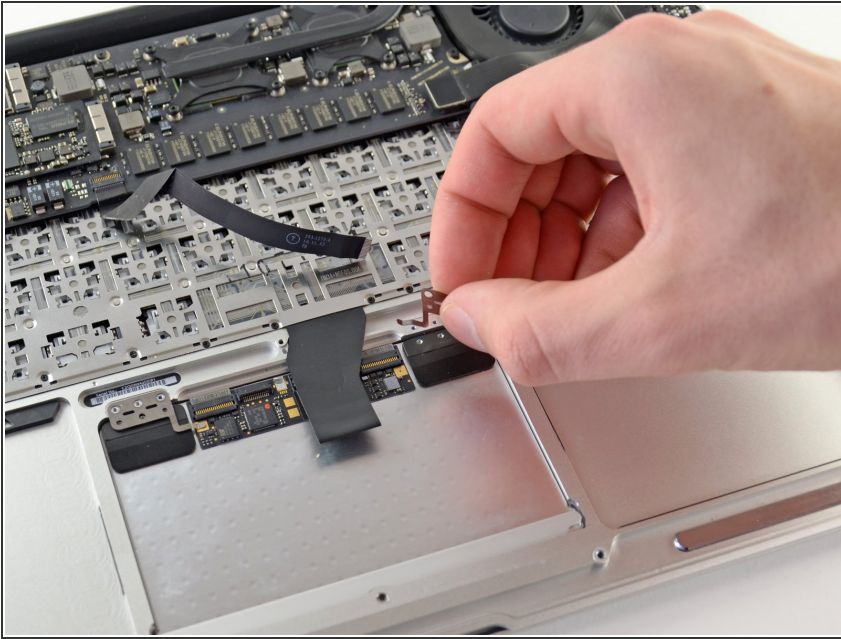
- Pull the keyboard ribbon cable straight out of its socket toward the front edge of the Air.

## Step 8



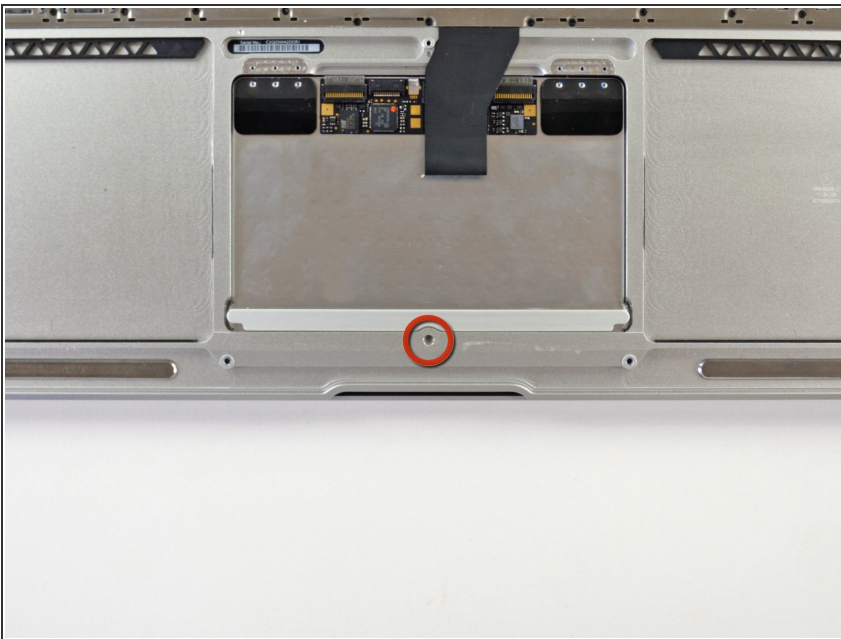
- Remove the following twelve screws:
  - Six 1.6 mm Phillips screws securing the trackpad to the upper case.
  - Six 1.6 mm Phillips screws securing the trackpad brackets to the trackpad.
- A Phillips #000 should be sufficient, but a JIS #000 may also work as well.

## Step 9



- Remove the right and left trackpad brackets from the upper case.

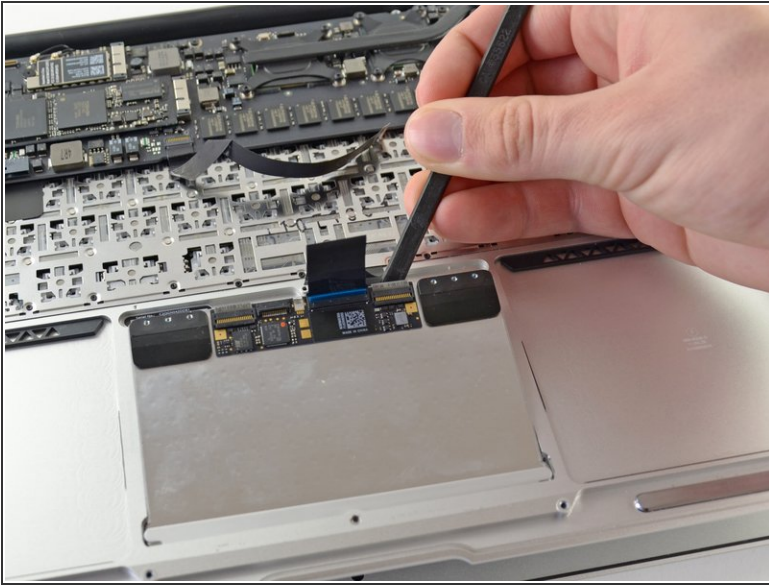
## Step 10



- Remove the 1.4 mm T5 Torx set screw from its tapped hole near the front edge of the upper case.
- ☑ During reassembly, do not over-tighten the set screw, as the button will cease to click at a certain point. Adjust the set screw until the movable side of the trackpad has minimal play.



## Step 11



- Use the flat edge of a spudger to carefully lift the edge of the trackpad closest to the keyboard from its recess in the upper case by lifting it away from the brackets attached to the upper case.
- Remove the trackpad from the upper case.

## Step 12 — Clean seat



- This is the seat of the buffer.
- You will find the rest of the rotten buffer here, which made your trackpad rattle
- Peel it off and clean with some alcohol or similar until you see the raw aluminium surface

## Step 13 — Cut and position double sided tape



- Cut two tiny (approx. 1,5 x 4 mm) pieces of double sided adhesive tape and place them on the seat
- the red colour comes from the protective film of Tesa 4965, which works perfectly for this job. But principally any double sided tape, which is not too thick should do
- On the second photo you see the empty seat on the left and the prepared one on the right



## Step 14 — Cut foam buffer



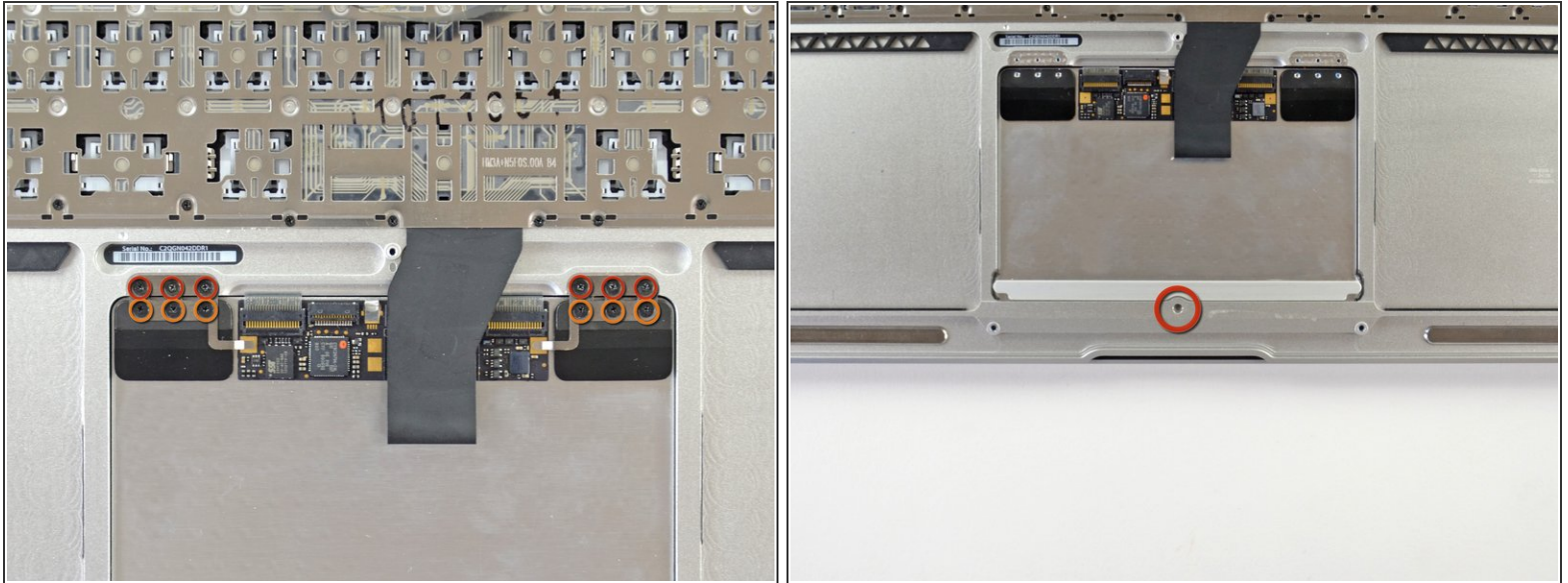
- Now cut a piece of foam material of the same size. My foam material is black, and therefore a bit hard to see
- In this case an EPDM foam was used, which can be compressed with little force but has a high longevity
- The material must be below one millimeter thick! depending on your source material you will have to cut all three dimensions
- This took me many tries...

## Step 15 — Position foam buffers



- Peel off the protective film of the double sided tape and position the foam parts on both sides.
- It should look more or less like on the photos

## Step 16 — Reinstall Trackpad



- Reinstall trackpad by following step 8 in reverse order but only tighten the 6 screws at the trackpad (orange) firmly and leave the 6 screws of the case (red) slightly loose
- Open the MacBook to nearly 90° so that it stands stable on its display case.
- Check the feel of the click. Does it go back gently into rest position? Has it enough stroke?
  - If not, you might have chosen to rigid or to thick material (or both)
- You may also try to readjust the central screw which is marked in step 10 and which you hopefully did not unscrew!



## Step 17 — Adjust position of trackpad



- Finally center the trackpad in the case. This can easily be done by positioning a lamp behind the vertically standing lower case.
- Move the trackpad in order to have an equal gap all around it. Then tighten the remaining 6 screws firmly to fix your adjustment.
- Reassemble the rest going back from Step 8 and you're done!

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