

## Sonex canopy latch – fitting instructions



### **Outer handle group consists of:**

Outer trim – plastic

5/8" UNEF nut – 6061T6

Outer handle – 6061T6

Inner trim – plastic

Not shown – M4 x 10 cap screws (2) M4 x 20 cap screw (1) M4 nyloc nut

**Latch mechanism group consists of:**

Main shaft – 6061 T6

Press release shaft – 6061 T6

Spring – C08-02 0.8mm wire, 10mm od, 10 coils, 25mm free length

Housing – 6061 T6

Retaining plate – 6061 T6

Not shown – 3/16” ball, M4 x 10 dome head cap screws (3)

**Inner handle group consists of:**

Inner handle – 6061 T6

5/8” UNEF nut – 6061T6

Release knob – plastic

Not shown – M4 x 25 button head cap screw (1), AN3-5 bolt (1), AN310-3 nut (1),

AN960-10 washer (1), MS24665-208 cotter pin (1)

**Drill guide and links consists of:**

Drill guide – 15.8mm OD, 4.8mm ID, 20mm long

Links – choice of 2

**Also supplied**

CCP-44 rivet (2)

CCP-46 rivet (2)

Spare 3/16” ball

M4 x 25 flush head cap screws (2)

M4 nyloc nuts (2)

**Tools needed**

3/4” AF or 19mm wrench

Hex keys, 2.5mm and 3mm

1/8” drill bit

3/16” drill bit – best with one cutting edge blunted to drill the acrylic

4mm drill bit (if using M4 screws for fitting)

Step drill up to 5/8” - I think the best ones are the Irwin Unibits which have only a single cutting edge. I have found they do a very nice job drilling acrylic because they don't tend to bite in, however mine only steps up to 1/2 inch so I bought a larger and much cheaper 2-flute drill on eBay. It worked fine but if you are worried about the drill biting you could blunt one cutting edge using a small grinding disc.

Small sanding drum or just some abrasive paper wrapped around a dowel.

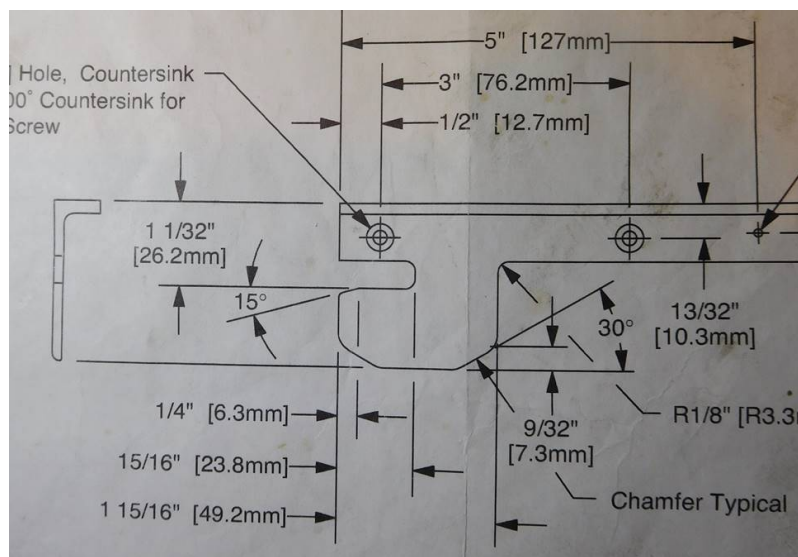
## Partly disassemble the latch

1. Use a 3mm hex key to remove the screw retaining the release knob. The outer release button can be prevented from turning by using a small Phillips screwdriver or 6 mm drill bit through the hole in the shaft.
2. Undo the 5/8" UNEF nut and remove the inner handle
3. Use a 2.5mm hex key to undo the three M4 x 10 button head cap screws and remove the retaining plate.
4. Press and hold the "press release" button and withdraw the outer handle and shaft from the housing.



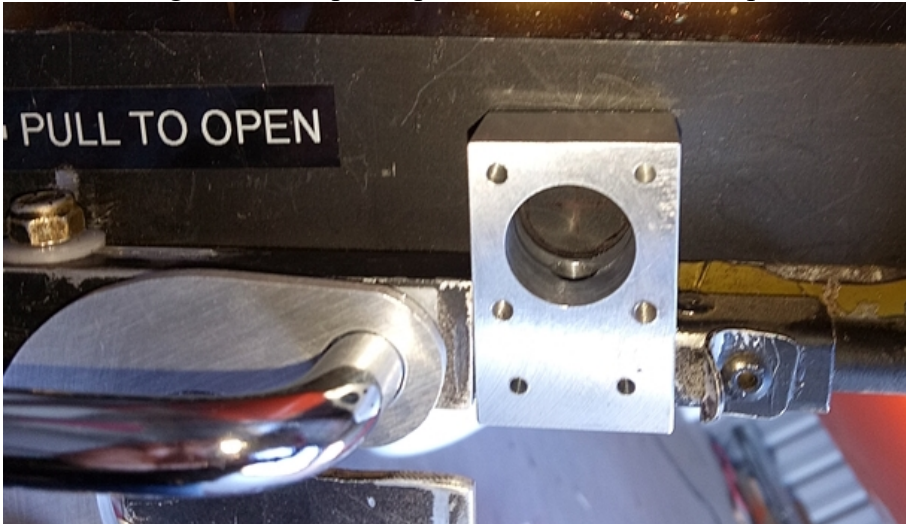
5. Set aside the 3/16" ball. They are really easy to lose. Guess how I know.

## Fitting the housing to the canopy side rail



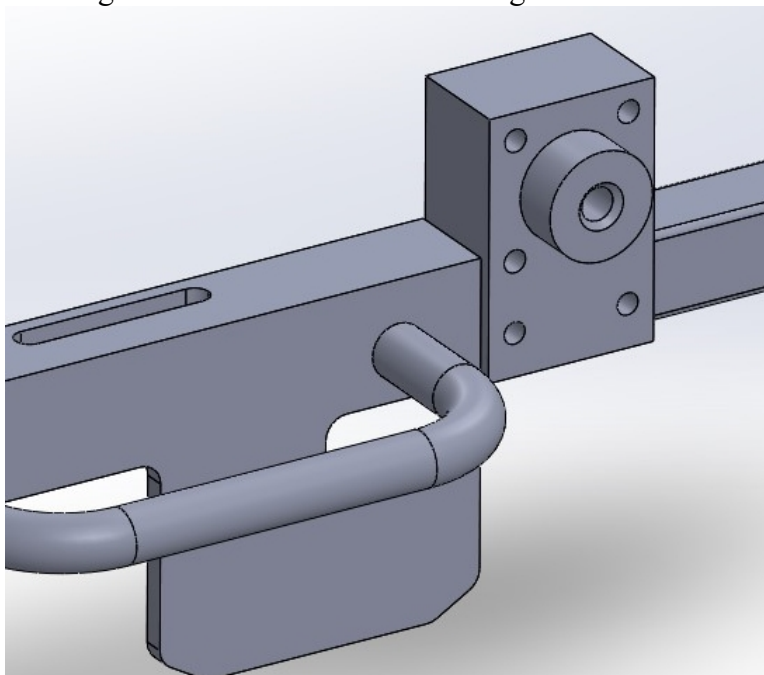
Prior to start, check that your "D" handle is correctly located on the hook angle. As shown on the Sonex drawing, the forward hole should be 1/2" from the forward edge of the "Hook Angle" (the moving part of the Sonex canopy latch).

1. Slide the Hook Angle to its forward stop.
2. Fit the housing to the canopy rail so that it is butted up against the end of the Hook Angle and clamp it in place with a small G clamp.



I recommend attaching the housing to the canopy rail with the M4 x 25 flush head cap screws and nyloc nuts but you also have the option of attaching it using CCP rivets.

3. Drill 1/8" through the housing lower holes into the canopy rail and temporarily attach the housing using 1/8" Clecos.
4. Insert the drill guide into the hole in the housing



5. Use a 3/16" or 4.7mm drill through the guide to make a pilot hole through the canopy bubble.
6. Remove the housing from the canopy rail and use the step drill to enlarge the hole to 16mm.
7. Use a small sanding drum or fine abrasive paper wrapped around a dowel in a drill to polish the hole.
8. Refit the housing permanently using suitable rivets and go to step 12 OR if you are using the 4mm screws go to step 9.
9. ALTERNATIVE FITTING INSTRUCTION – If you would prefer to use screws to attach the housing to the canopy rail, M4 screws are supplied with the kit. The acrylic bubble needs to be either not fitted or partially removed for this step. Use a 4mm drill to through the lower holes on the housing and right through the canopy rail.
10. Countersink the holes in the outside of canopy rail to match the M4 screws.
11. Fit the housing with the M4 screws and nyloc nuts. The screws supplied should be the correct length however you will need to check that they don't interfere with the latch mechanism on assembly.
12. Check the fit of the outer handle and axle. It should turn freely. If the axle binds on the canopy you have a bit of fettling to do.
13. Remove the hook angle from the canopy side rail and undo the forward screw of the "D" handle.
14. Fit the Link to the "D" handle and reattach it to the Hook Angle. The "D" handles come in different sizes so you very likely will have to drill out the larger hole in the link to suit.
15. Refit the Hook Angle to the canopy side rail.
16. Apply light grease to the shaft before assembly.
17. Holding the outer handle, press the release button, set the 3/16" ball in the hole in the shaft and slide the shaft in from the outside. When the shaft is in the correct distance and with the handle horizontal, release the button and the handle should lock in place.



18. On the inside, refit the locking plate and tighten the three cap screws. Press the release button on the outer handle and make sure that the handle turns freely. DON'T turn the handle 180° or the ball can drop into the tooling hole at the bottom of the housing.
19. Fit the inner handle and 5/8"UNEF nut. BE CAREFUL not to cross-thread the nut. Even though the threads are all aluminium they are pretty robust. I have tested one up to 28 ft pounds. It survived, just. 6 to 8 foot pounds should be fine.
- 20.** Fit the release knob and check the operation. If everything seems to be working OK remove the release knob and apply thread locker such as Loctite to the screw and refit the knob. **IMPORTANT If you don't lock the thread and the knob comes off you will not be able to open the canopy.**
21. Attach the link to the inner handle. Two different links are supplied. Use the one that is the best fit. Fit the AN3-5 bolt, one washer and castle nut. Nut should be loose enough to allow free rotation of the link on the handle. Fit the split pin.