

SY77/SY99 Floppy Drive Belt Replacement Guide

Introduction

This guide has been written to show you how to replace a drive belt on an SY77/SY99 floppy drive. The belts can lose their elasticity over time and become saggy, so that the torque from the motor is not transmitted to the flywheel.

This procedure has been written whilst repairing the drive on my SY99. But it will apply to the SY77 as well.

Symptoms of Drive Failure

If you try and use the SY disk functions and the red drive light comes on, but you cannot hear the sound of the floppy drive stepper motor moving the heads (you may faintly hear the drive motor itself) and the synth does nothing in response, then you probably have this problem.

Both my SY77 and SY99, won from ebay auctions, have had this problem, along with the other known SY foible of a dim LCD backlight.

Outline of Procedure

The procedure itself is quite simple, and anybody who can wield a screwdriver, follow a procedure and put things back together with no screws leftover(!) is capable of doing this job, which takes about 30 minutes.

All you need is a new drive belt and a posidrive screwdriver!

Sources of Belts

I have sourced my belts in the UK from the following supplier:

<http://www.smallpipeorgans.com/>

Ebay Link: [SY77/SY99 Drive Belts](#)

TBD – Add other sources here, if any.

Some people have also used the red elastic bands that the Royal Mail seem to litter everybody's driveways with, but I wouldn't recommend that myself.

Disclaimer

You perform this repair at your own risk. I am not responsible for any loss or damage to yourself or your prized keyboard by following this procedure.

Caution: Do not have the synth turned on and plugged into the mains with the cover removed, as there will be exposed mains voltages if the synth is powered on. If you are not comfortable with any aspect of this procedure, including electrical safety then it is best to give the job to a electronics/electrics repair technician.

Procedure

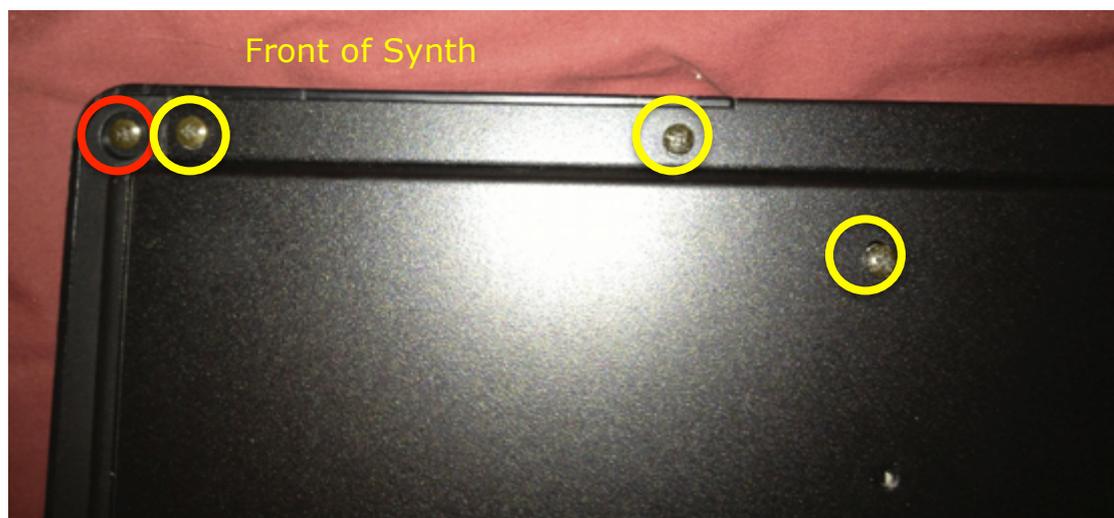
Place the keyboard upside down on a soft surface in a well lit area big enough for the keyboard. I tend to use a bed for this or a whole load of towels on a kitchen work surface.

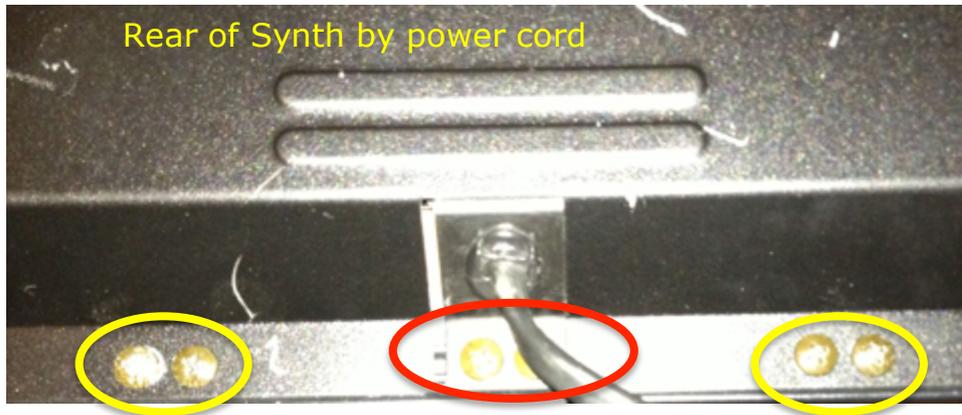
Whilst working on the synth, ensure that you have no static charge on you. I just regularly touch a radiator to discharge myself.

Step 1 – Remove Bottom Cover

All the screws on the bottom cover need to be removed, including the rubber feet.

You do not need to unscrew the end cheeks, or the two screws securing the power cord. The following pictures give you an idea of the screws to remove and which ones to leave. If the screw is circled in yellow, then remove it. If it is circled in red then leave it.

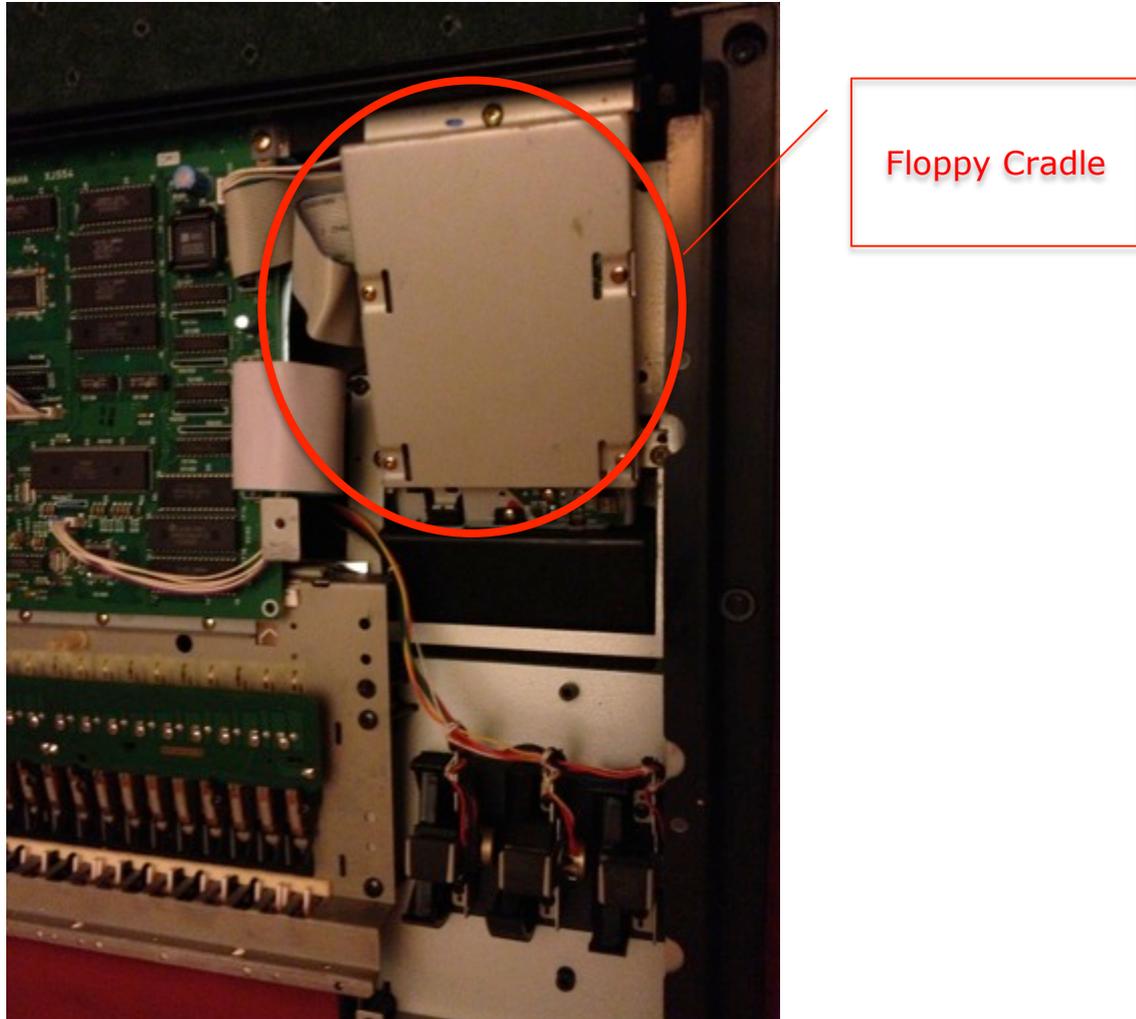




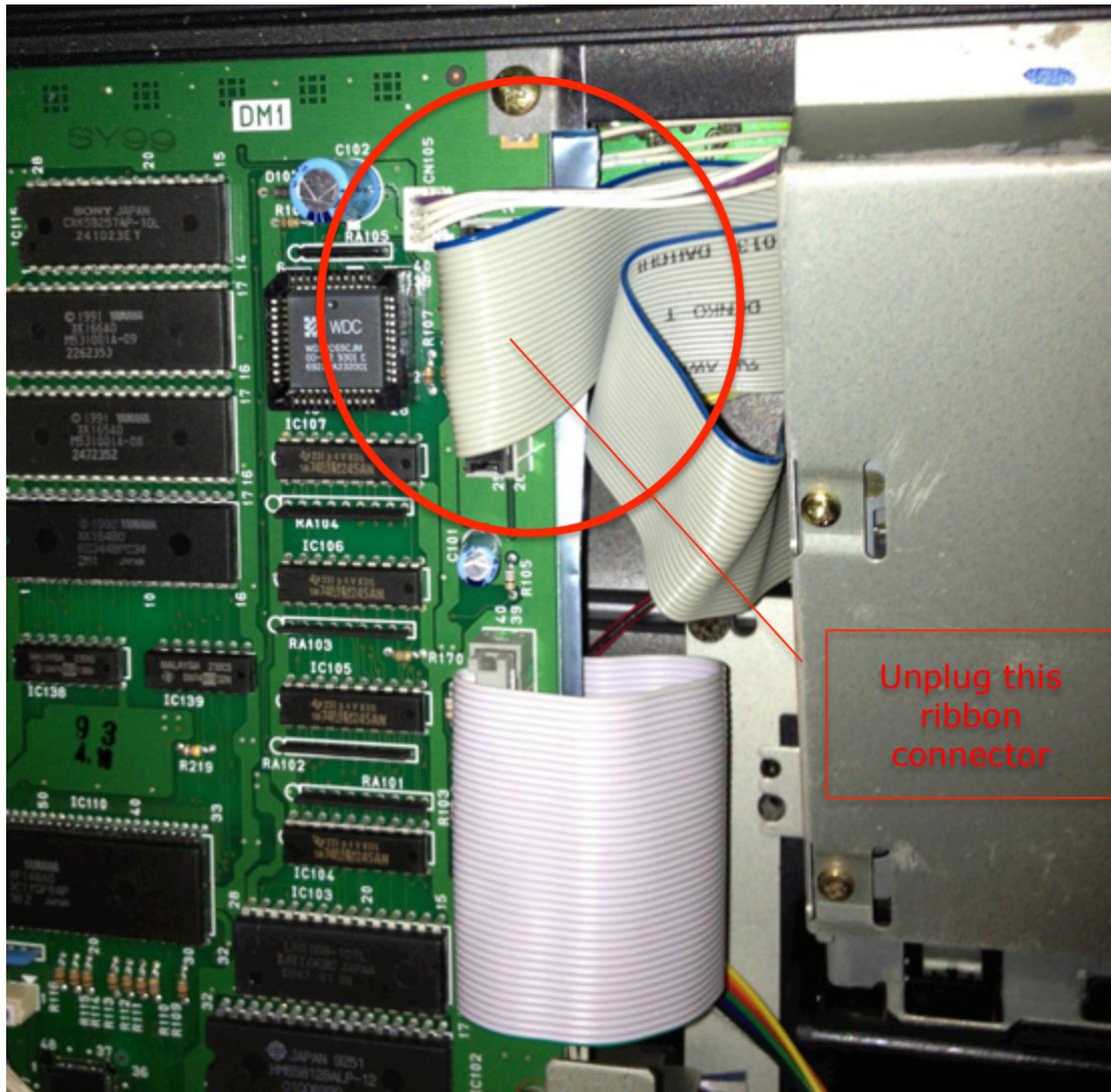
Once all of the screws are removed from the rear cover gently prise the cover away from the synth, lifting towards the front of the synth.

Step 2 – Remove the Floppy Drive Cradle

With the cover removed, you should now have a clear view of the floppy drive, which is held in a frame by three screws.



First, unplug the ribbon connector, just to the left of the floppy drive and at the back of the synth.



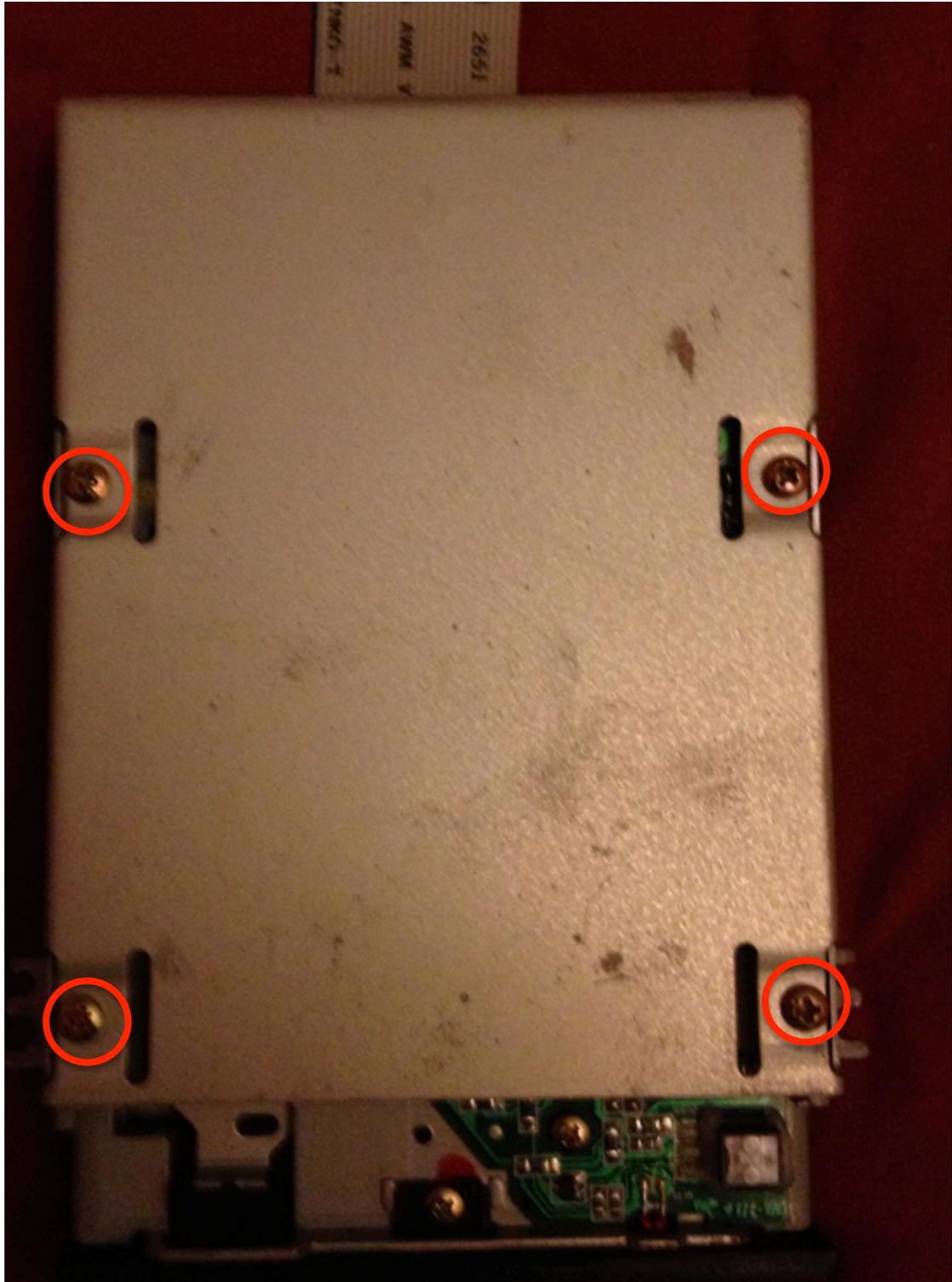
Now remove the three screws securing the floppy drive cradle. There is one either side of the cradle, and one at the top of the cradle at the back of the synth.



Now you can remove the floppy drive cradle, titling it up slightly and taking care that the front bezel does not foul anything whilst being removed.

Step 4 – Remove Floppy Drive From Cradle

Now undo the four screws shown to remove the floppy drive from the cradle.



Step 5 – Remove Belt Guard and Replace Belt

Now, remove the black plastic belt guard between the drive motor (top left) and flywheel (bottom). You undo the screw circled in red.



Once this screw is removed, the belt guard lifts off, and you can now remove the old belt and fit the new one.

When fitting the new belt, take care not to stretch it too much, and ensure it is not twisted.

Step 6 – Put it all Back Together Again

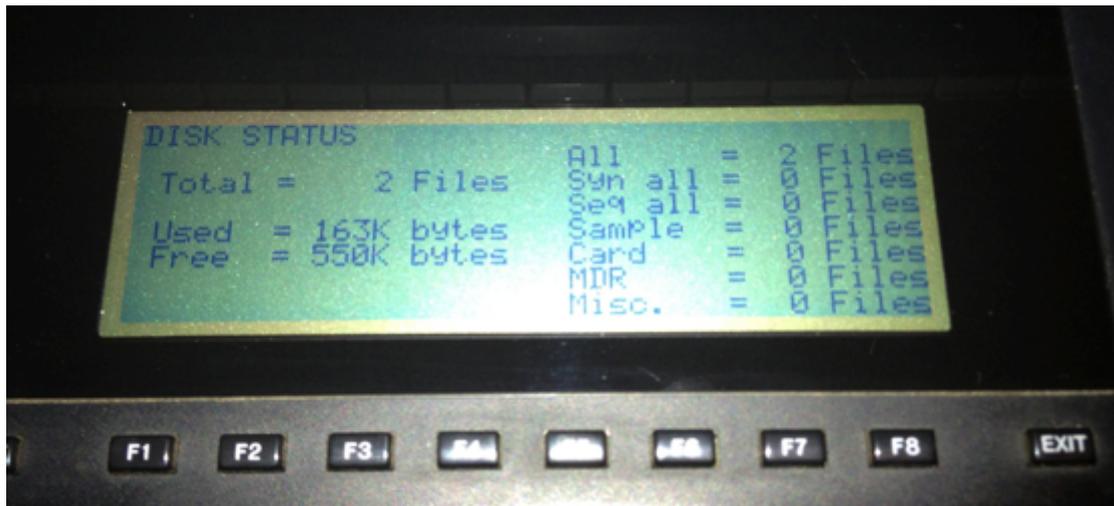
Reassembly is simply the reverse of all of the above, there is nothing special to watch out for other to ensure that things are seated correctly (using the guide lugs).

And ensure that you have no screws left over!

Step 7 – Try The Drive

Well, both times I have done this repair, first to my SY77 and then to my SY99, the drive has worked again first time without a hitch.

Here are some screen shots of my (dim) SY99 display showing the results of the drive working. Prior to the repair, if I tried any disk function, you would get nothing.





And as a good workout, I loaded the "Yes 90125 Demo", which is pretty impressive!.

