

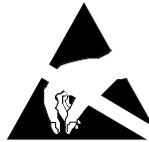


Cassette replacement instructions

Model 4181

INTRODUCTION

These instructions are intended as an aid to those required to replace the chart cassette of a model 4181 recorder. In order to ensure that the replacement cassette operates properly, it is recommended that certain checks are carried out after replacement, and these checks require a 'Correx' type gauge to measure 0 to 100cN (gramme) and feeler gauges to measure thicknesses between 1 mm and 1.4 mm inclusive.



Caution

This procedure involves the handling of circuit boards containing components which are susceptible to damage resulting from electrostatic discharges of less than 60 V. All relevant personnel must be aware of safe static-handling procedures.

CHASSIS REMOVAL

1. Open the recorder door and remove the chart.
2. With the paper cassette open, locate the two (captive) securing screws ('A' in figure 1), and undo them.
3. Pull the writing system forwards until it reaches its stops. Lift the writing system out of the case, releasing any relevant connectors as they become accessible.

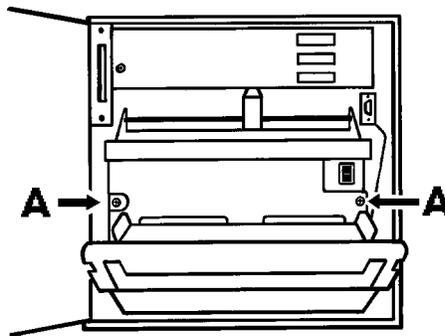


Figure 1 Writing system access

CASSETTE REMOVAL

4. Prise out the two plastic rivets which secure the circuit board and associated insulating sheet to the rear of the writing system. Disconnect the chart drive connector ('B' in figure 2), disconnecting the flexi 'C' if necessary for access.
5. Applying gentle leftwards force* on the lower paper tray, disengage it from its right-hand locating pin, as shown in figure 3, and lift it out.

*Note: The paper tray can equally well be removed by applying rightwards force, and disengaging it from the left hand locating pin.

6. With the lower tray removed, the cassette can be rotated forwards sufficiently to allow it to be lifted up and out of the chassis (figure 2).

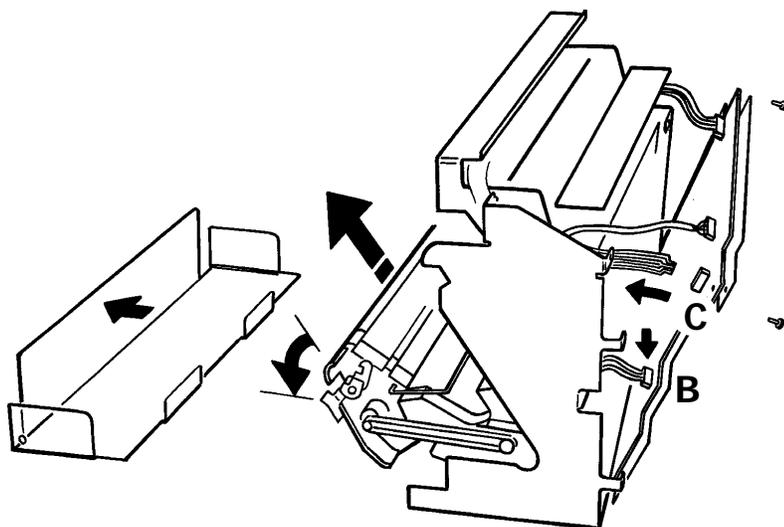


Figure 2 cassette removal

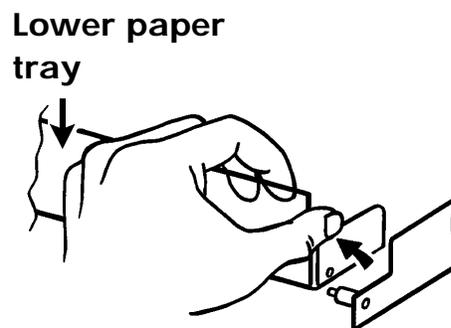


Figure 3 Lower paper tray removal

CASSETTE REPLACEMENT

7. Take the new cassette and fit it into the writing system. Latch it shut, and refit the lower paper tray.
8. Re-make the connector 'B' and, if necessary flexi cable 'C' (both figure 2), ensuring that the flexi is securely retained by the connector and that the flexi emerges from the connector perpendicular with the board (i.e. it is not skewed in the connector).
9. Re-secure the circuit board and insulating sheet.

CASSETTE CHECKS

10. Open the cassette, and place a piece of chart paper (as shown in figure 4) such that it is retained between the central tensioning spring and the platen, when the cassette is subsequently closed.
11. Close the cassette, and make a hole in the paper big enough for a Correx gauge probe.
12. Pull the paper forwards using the Correx gauge (figure 4), and ensure that the tension lies between 55 and 65 cN. Adjust if necessary by gently bending the spring out (to increase tension) or in (to reduce tension).
13. Carefully slide the print cartridge assembly to one end of travel, and check that the distance between the 'pen' tips and the platen (cassette closed) is between 1.0 and 1.4 mm.
14. Repeat for the opposite end of travel.
15. If necessary, correct the gap, by releasing the two cap-head screws (figure 5) (M2.5 Allen key - 2 mm across flats) and adjusting the position of the guide bar.

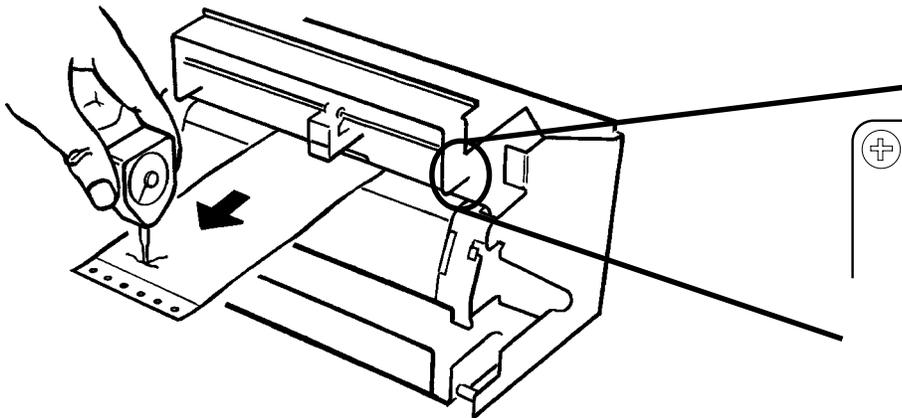


Figure 4 Checking the chart tension

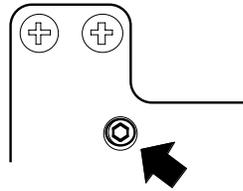


Figure 5 Pen tip/platen adjust screw (similar both sides)

RETURN TO SERVICE

16. Once the chart tension and print gap are correct, return the recorder to the case, remaking all the relevant connectors. Fit a chart, apply power and check recorder trending and printing performance. If satisfactory, return the recorder to service, if not, re-check the chart tension and print gap.

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