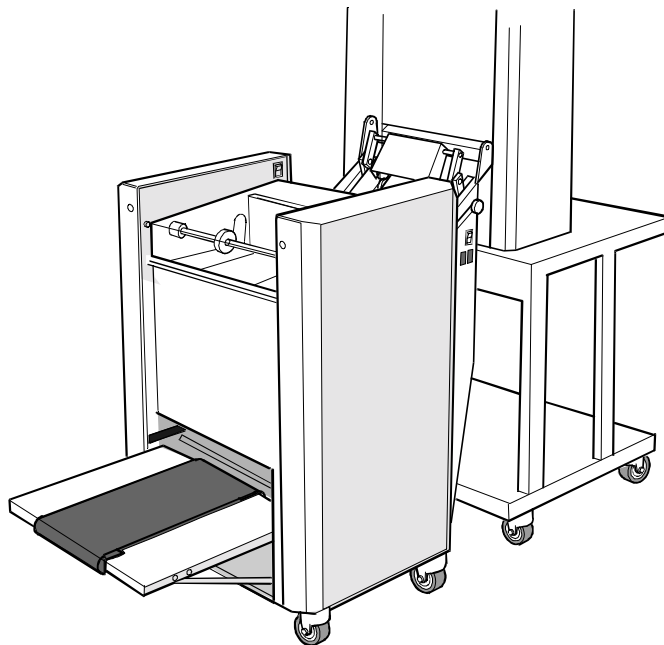

STAPLER FOLDER

DBM-70

INSTRUCTION MANUAL

**Please store this manual in a safe place for
future reference.**



Duplo

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Appendix A: Parts lists and drawings.

1 INTRODUCTION

- The DBM-70 Bookletmaker centre staples and folds to make booklets between A5 and A4 with up to 80 pages. On each cycle of the machine one set of sheets is stapled and the preceding set is folded and stacked on the conveyor belt.
- The machine can either be hand fed or placed on-line to one of the various desktop vertical collators, using a KAS conveyor/ jogger link. A stand is also supplied to carry the collator so that it is the correct height for feeding into the Bookletmaker.
- The DBM-70 is a floor standing machine fitted with sturdy castors and an integral conveyor which can be folded up in order to occupy minimal floor space when not in use.
- This model has two stapling heads, the positions of which are suitable for A4 and A5 books.
- A staple out detector is fitted to both stapling heads.

2 SPECIFICATION

INPUT CAPACITY:	20 sheets of 80 GSM bond
SHEET SIZES:	A4 to SRA3.
STAPLES	5000 cartridge
DIMENSIONS	Width 575 mm Height 911 mm Length 755 mm (Conveyor stored). Length 1090 mm (Conveyor in use).
WEIGHT	95 Kg.
POWER	220/240v 50Hz Consumption approx. 180 Watts Fuse: 6.3 amp 240v.

3. INITIAL SETTING UP

1. Remove the bolts holding the machine to the pallet.
2. Castors are already fitted to the machine, lift from the pallet on to an even surface.
3. Remove packing from stapling section and from under fold stop beneath the conveyor.
4. Lower output conveyor, allowing the slotted ends on the support bars (part no. 6.06) to locate on the protruding bolts provided. These bolts are located at the base of the machine.
5. Fit the conveyor wheels.

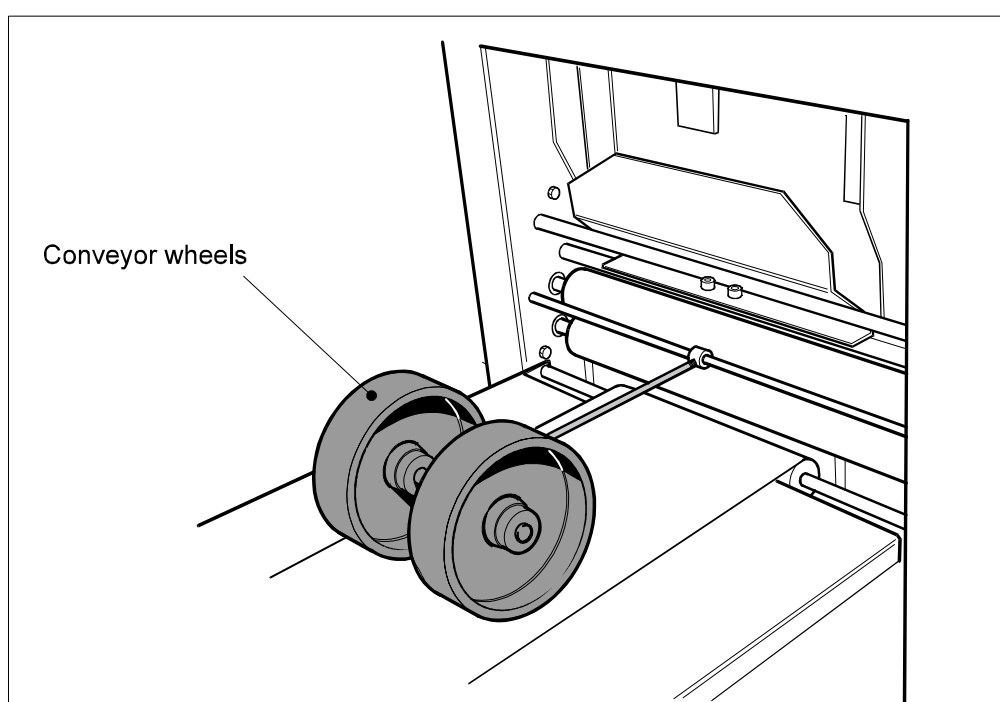


Figure 2 - Conveyor setup.

6. Insert the conveyor end stop (part no. 6.11) at the far end of the conveyor, making sure it does not infringe the belt.
7. Position the machine near to a suitable socket outlet and ensure outlet is not covered and is easily accessible.
8. Adjust paper infeed wheels and back jogger to correct position for paper size selected.

See Section 10 for collator stand assembly and online connection. Check that the power supply is of the correct voltage for the machine. Once connected, the machine is ready for use.

4. OPERATION

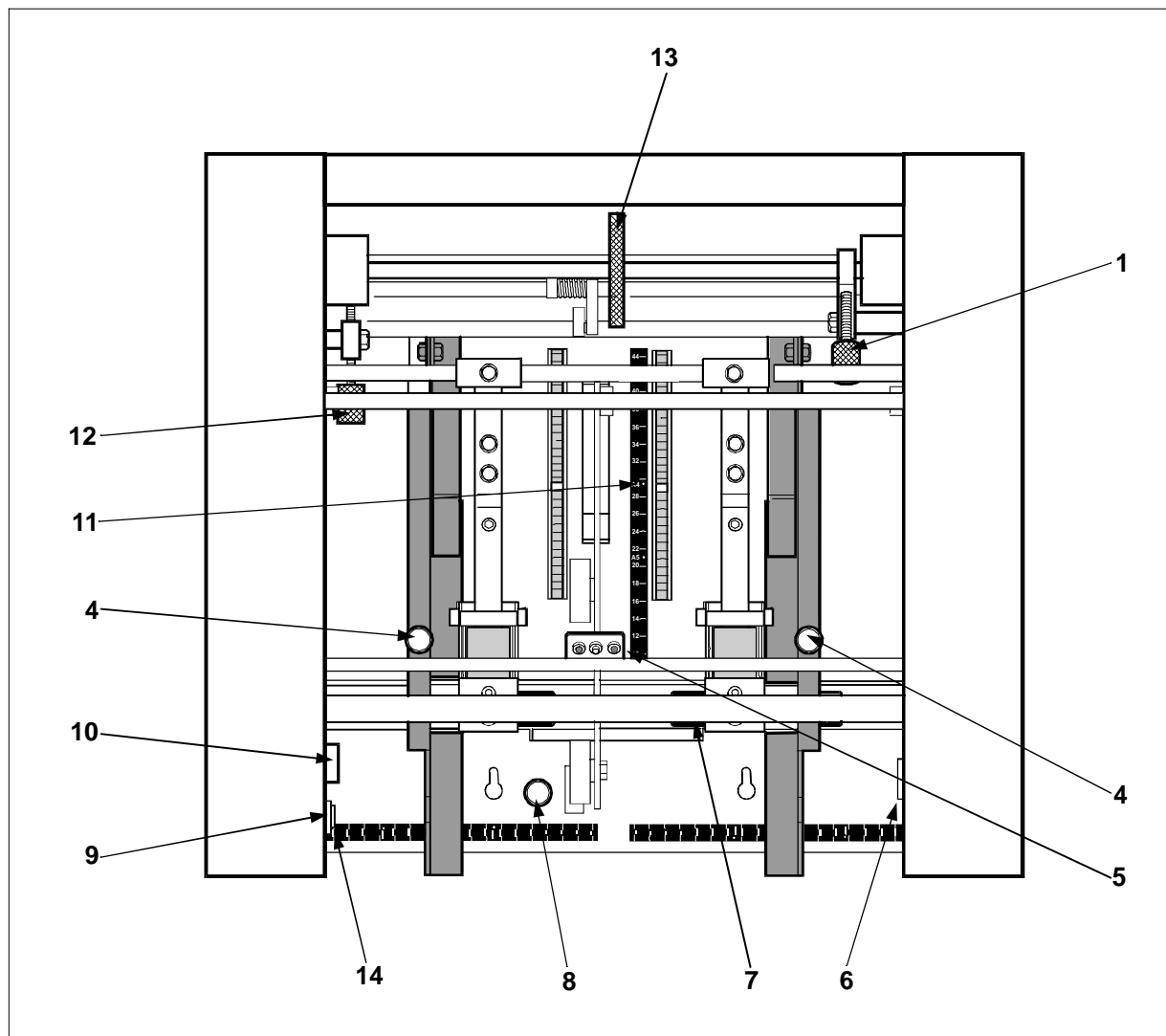


Figure 1 - Control layout (centre head removed for clarity)

- | | |
|--------------------------------------|---|
| 1 Staple / Fold stop lock thumbscrew | 8 Staple position fine adjustment screw |
| 2 | 9 On / off button |
| 3 | 10 Staple delay knob |
| 4 Side guide clamping thumbscrew | 11 Staple/fold stop indicator |
| 5 Staple out indicator / reset | 12 Fold stop tilt adjustment thumbscrew |
| 6 Counter | 13 Staple & fold stops adjustment wheel |
| 7 Anvil | 14 Reset button |

4.1 Loading Staples :

1. Only those staples sold or recommended by your supplier should be used in the DBM-70. Use of non recommended staples may damage the stapling heads and they are not covered by any warranty.
 2. Raise the top cover.
 3. Raise metal locking bar upwards and remove spent cartridge. Ensure the bar is in the uppermost position otherwise the cartridge may not load properly.
 4. Make sure that staples do not protrude past the staple tear line. If necessary the staples are easily torn off at the tear line by tearing downward.
 5. Cartridge should be placed flat on the slide in the body of the stapler and pushed firmly forward. Do not allow the cartridge to move backwards once inserted into the stapler. If this occurs remove cartridge from stapler and tear off staples at tear line again before re-inserting.
 6. To keep the cartridge in place push metal locking bar down until it snaps into the grove on the back of the cartridge.
 7. Press staple out reset button, lower top cover and press circuit re-set button located below the on/off button.
 8. The staples do not immediately feed through to the plunger and therefore the machine will not staple during the first three or four cycles after loading. Where this is a problem, refer to 10 below.
 9. To avoid books being processed without staples, cycle the machine by placing scrap paper beneath the heads. Repeat this until staples appear in the paper.
-

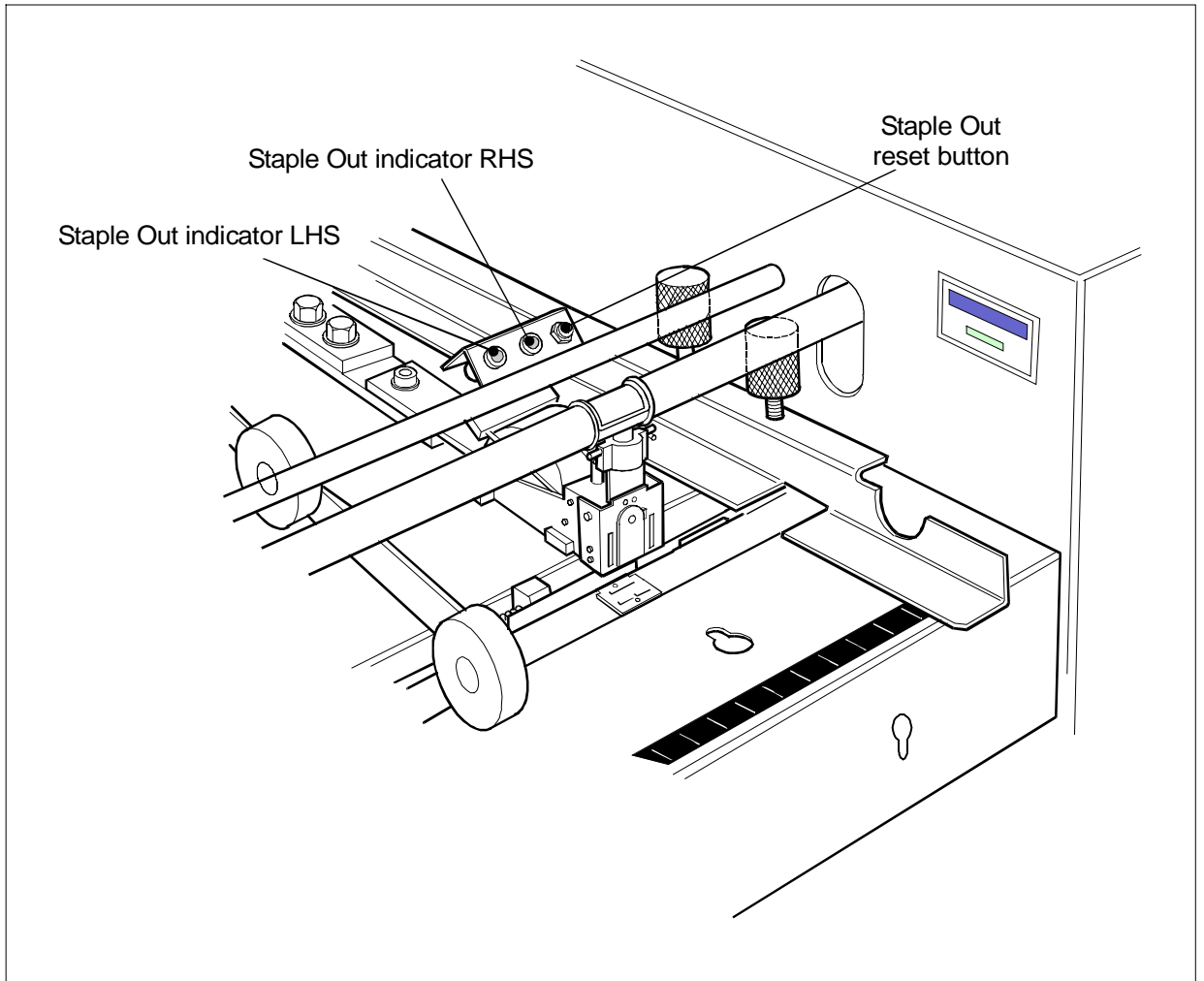


Figure 3 - Staple Out reset/indicators

4.2 Staple Out System :

When the stapling head runs out of staples the red light pertaining to that head will illuminate and the booklet maker will not cycle. The last set will not be stapled and should be removed from the fold section. It can be reprocessed once the staple head(s) has been refilled, and reset button pressed.

4.3 Staple Jam :

To clear jammed staples from heads, it is best to remove the cartridge, clear any damaged staples from stapling head and anvil, and replace the cartridge as described in 4.1.

WARNING - One may clear the jammed staples by operating the plunger manually. In this instance take care not to put fingers under front-most portion of stapling head, so avoiding injury to fingers from staples being ejected from the head.

4.4 Paper Width Settings:

1. Both sides guides should be adjusted for a given size of paper. Loosen the thumbscrews and move the side guides until their outside edges are level with the marking on the scale corresponding to the width of the paper, and then re-tighten the thumbscrews so that the guides are held in place.

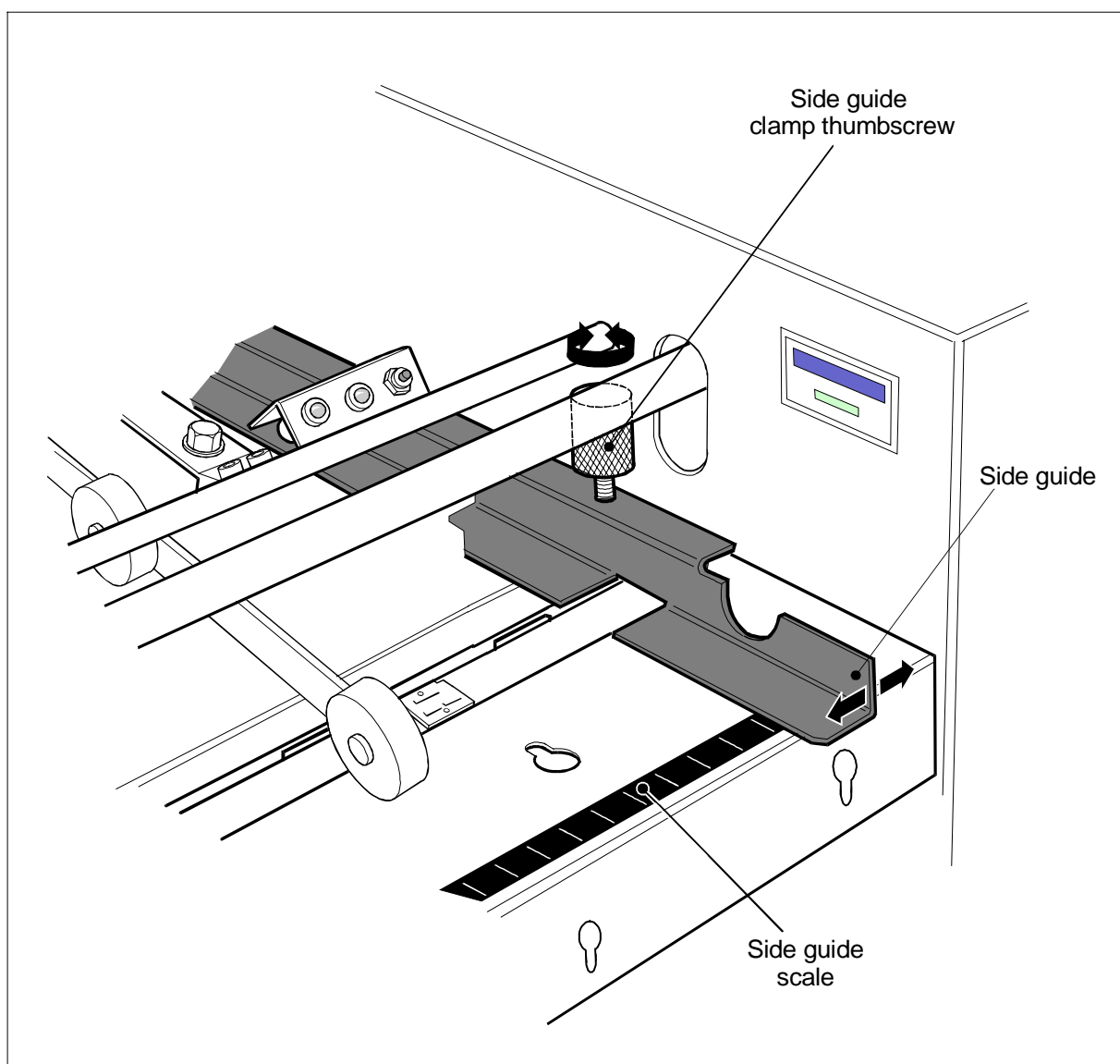


Figure 4 - Side guides.

2. Note that the marked settings are meant to be wider than the paper, to allow for side jog. Both guides move inwards on each cycle to the correct width to ensure that the sheets are aligned before stapling occurs.

4.5 Stapling / Folding Positions :

1. The Stapling and the Folding positions are adjusted as one. Loosen fold stop lock thumbscrew, figure 5.
2. Turn the fold stop adjustment wheel until the staple stop aligns with the appropriate calibration on the scale, for the size of paper being used.

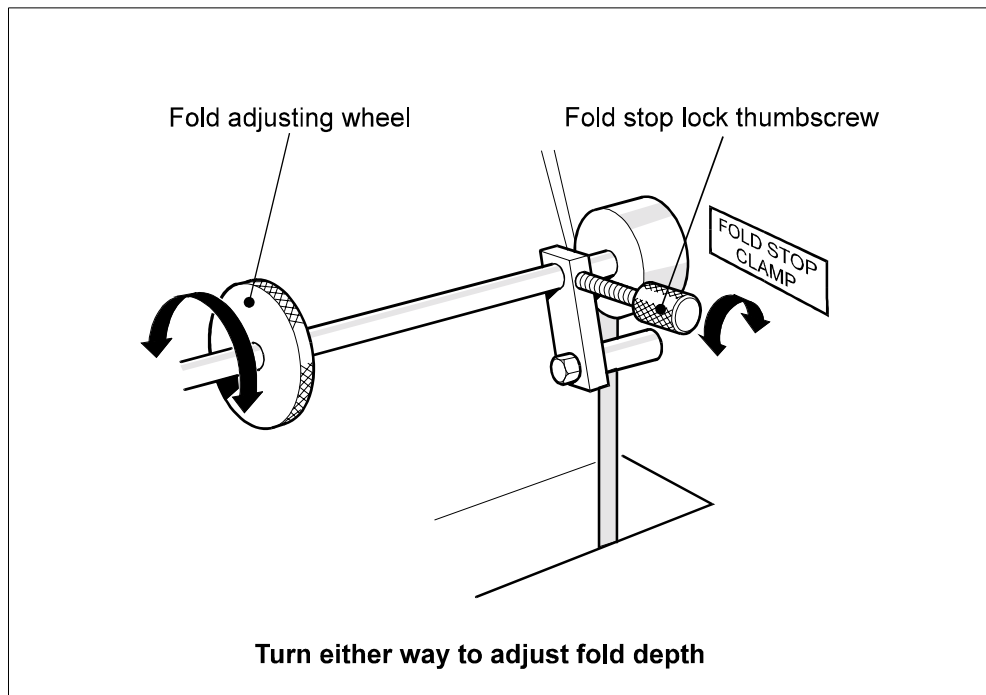


Figure 5 - Fold stop

3. Re-tighten fold stop lock thumbscrew when the stop has been correctly positioned.
4. Adjust back jog position on Infeed table to correct paper size. With the document lying in the machine pushed up to the staple stops, the back jogger should just touch the edge of the document on its forward stroke.

5. If fold line is not perpendicular to booklet edges, this can be corrected by adjusting the fold stop tilt thumbscrew, figure 6, on the left-hand side of the fold stop adjusting shaft. Loosen the locking nut and turn the thumbscrew clockwise to raise the left-hand end of the fold stop, or anti-clockwise to lower. Tighten locking nut.

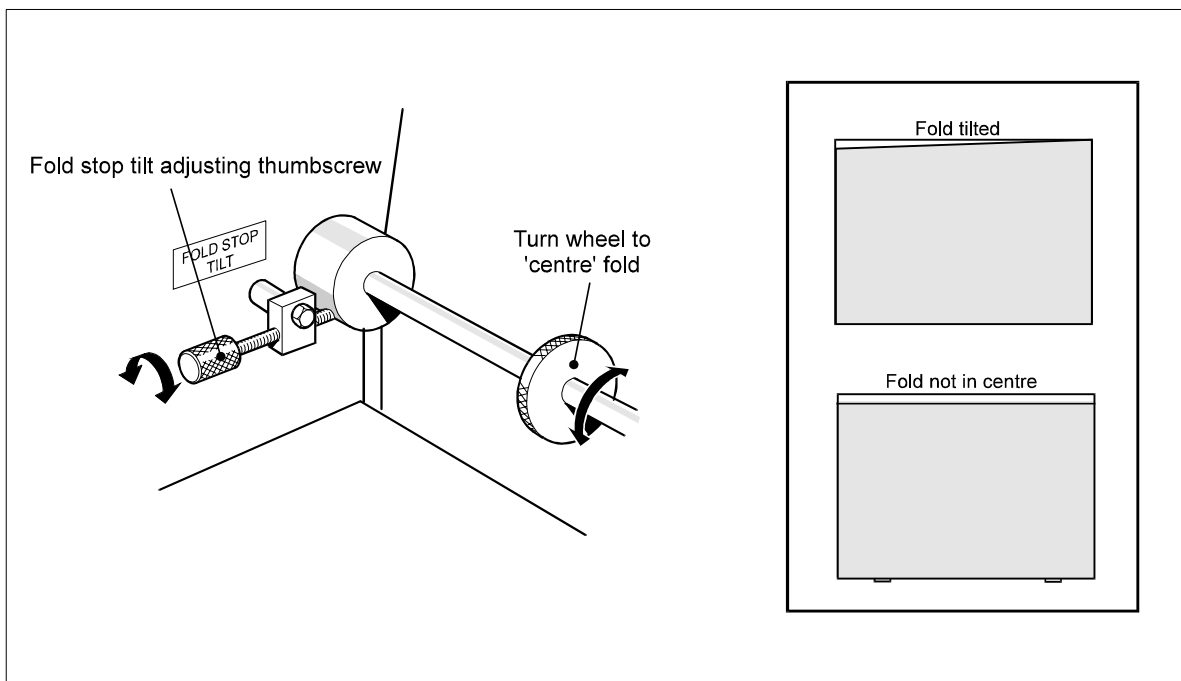


Figure 6 - Fold stop tilt.

5. BOOKLET MAKING.

- The machine will not operate with the top safety cover in the raised position. After closing the top safety cover it is necessary to press the circuit reset button, located in the left hand inside side wall. This is an added safety feature and the machine will not cycle until the button is pressed.

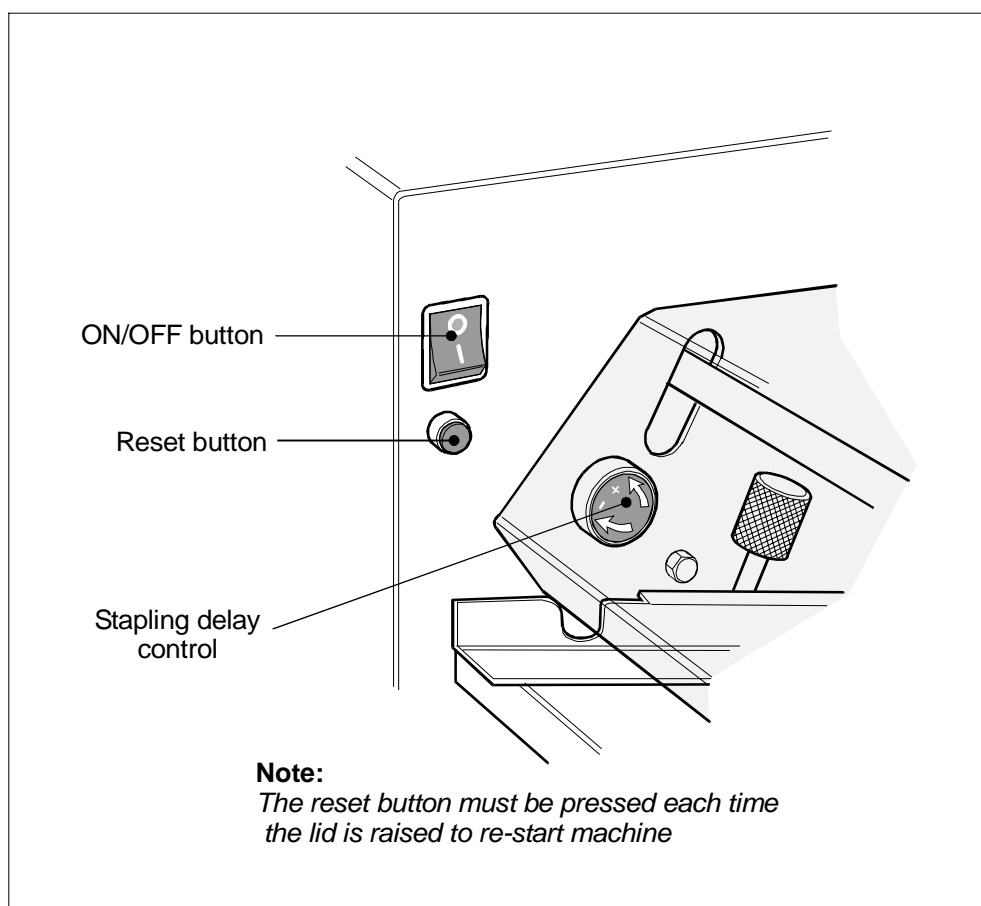


Figure 8 - Operating controls

- When the machine is switched on the motor will start when the reset button is pressed. If it is left running and not used for a period of more than three minutes the motor will automatically switch off. The online collator will not start until the bookletmaker motor is running.
- The stapling / folding operation is started when sensors detect the paper in the machine. The time between the paper entering the machine and the stapling action can be varied. This is achieved by turning the Stapling Delay Control shown in figure 8 clockwise for more time and anti-clockwise for less. When first using the machine, give the Stapling Delay Control a quarter turn clockwise. This will give time for the operator to settle the paper between the guides before the machine cycles.

5. When paper is placed in the machine it breaks the light beam between the photocell emitter (part no. 2.83) and the photocell receiver (part no. 2.71). On the interruption of the beam the time set by the timer expires and the machine will operate for one cycle.
6. If the stapled set fails to drop into the folding position the guides may be set too closely and must be set slightly wider. The first set placed in the machine will not fold and exit to the conveyor until the second set is being stapled. To release the last set from the machine, hold a scrap of paper under the stapling heads for one cycle and then remove it.
7. The conveyor wheels shown in figure 11 should be adjusted so that the wheels are just over a book's distance from the fold rollers. Too close and they will interfere with subsequent booklets coming out of the fold rollers. If the wheels are too far away the booklets will have the tendency to insert themselves inside previously ejected booklets.
8. Staple Position Fine Adjustment. If, after correctly setting the fold stop adjustment wheel, it is found that the staples are not exactly on the fold line, this can be corrected by turning the staple position fine adjustment screw, figure 9.

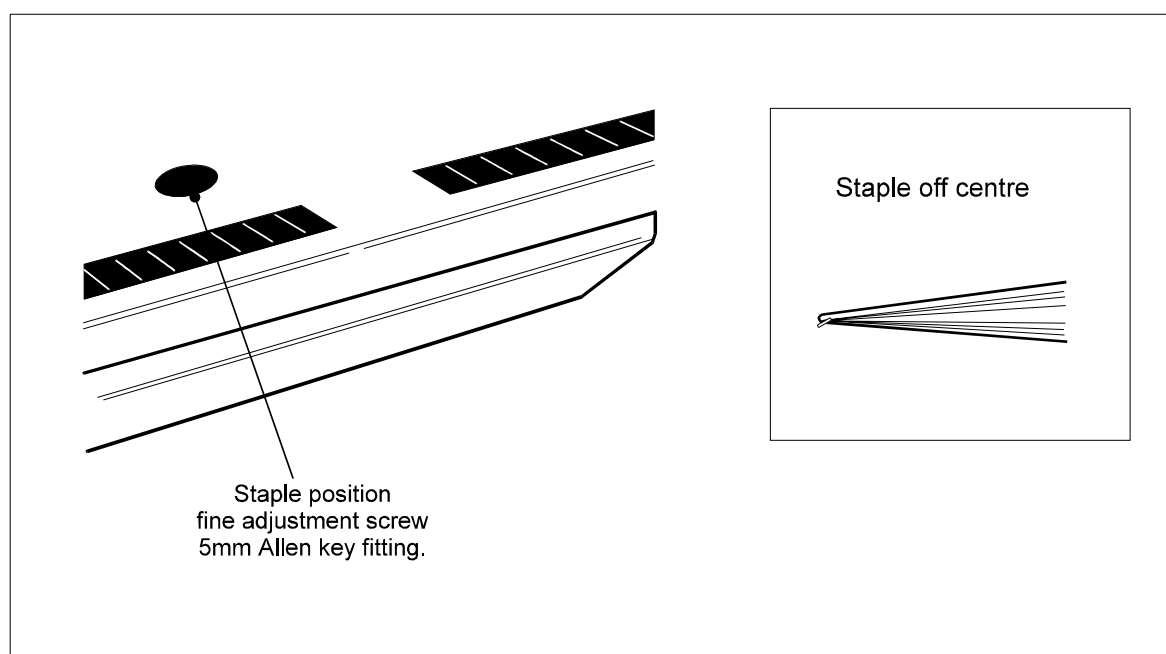


Figure 9 - Staple position fine adjustment

9. Looking at the finished booklets laying on the stacker table after ejection from the fold rollers, if the staples are visible above the fold, turn adjusting screw anti-clockwise. If the staples are below the fold, turn adjusting screw clockwise.

6. COUNTER

The counter can be reset to '0000' by pressing the rectangular black button below the number window.

7. REPLACING STAPLING HEADS

Should it become necessary to remove either or both of the stapling heads follow the procedure below.

10. Pull the left-hand side of the spring clip so that the eye clears the pin and swivel the spring clip anti-clockwise around the actuating bar. This should remove the hook on the right-hand side of the clip from the other end of the pin.
11. Unplug the electrical lead from the bracket containing the reset button and lights.
12. Loosen the small (M6) bolt in the stapling head retaining plate sufficiently so that the retaining plate can be lifted and pushed aside revealing the trough in which the bar at the back of the stapling head is located.
13. Take the bar from the trough and having removed the head completely replace the retaining plate in it's original position and tighten the bolt.
14. To re-fit a new head place the bar at the back of the stapling head into the trough, position the retaining plate over the top and tighten the bolt and replace the spring clip. Replace electrical lead.

8. ADJUSTMENT GUIDE FOR SWINGLINE STAPLER

If you find the stapling head is giving a bad staple, re-align the head. The instructions that follow are a guide to help re-align the heads.

Unplug the machine then:

1. Remove cassette of staples from stapler.
 2. Loosen the hex screws holding part no. 2.105
 3. Place the adjustment guide between the stapler and anvil. Align and insert the raised lugs of the guide into the underside of the stapler where the staple exits, making sure the metal locating pip is to the front. When inserted replace the cassette of staples.
 4. Locate pip on adjustment guide into small hole at front of anvil and then retighten hex screws. The stapling head should now be in a position to carry in stapling after removing adjustment guide.
-

9. PROBLEM SOLVING.

PROBLEM	POSSIBLE CAUSES	REMEDY
Motor will not start	Blown Fuse	Switch off and unplug machine. Check and replace fuses as necessary
Machine will not start when paper is inserted	Powerful light source from above	Shield safety cover from light or move machine
Machine will not cycle	Machine in jam mode	Remove paper from machine in stapling section to allow photo-cell to reset
Stapling head jammed	Incorrectly fitted staple cartridge	Switch off machine, lift safety cover, remove cartridge, clear jammed staples and replace.
Repeated jamming of stapling head.	Miss aligned head with anvil	Check alignment of stapling head and anvil.
Staple legs breaking.	Miss aligned head with anvil	Check alignment of stapling head and anvil.
One staple not on fold line	Fold stop out of line	Adjust tilt screw
Book does not travel through machine after stapling	Side guides too tight	Open right hand side guide
Pinching around staples	Residue being left on rollers	Clean rollers

10. COLLATOR STAND ASSEMBLY AND ONLINE CONNECTION

1. Connect castors to underside of frames, using Allen screws, and nut plates provided.
 2. Fit rectangular tie section to the base of the frame. Using 6mm bolts, do not tighten. Fit the 2 rectangular tie sections between frames at the top, using 6mm bolts provided, ensuring the section with the 13mm diameter hole is at the front of the stand.
 3. Place bottom shelf into position and secure using 4 self tapping screws and attach connecting bar to top cover using screws, nuts and washers provided. Place the top shelf into position and secure using 6 self tapping screws. Tighten all screws.
 4. Place collator on top of the stand so that the main weight of the collator is over the vertical supports of the stand.
 5. The booklet-maker and interface must be locked to the collator stand using the bridge plate fitted to the back of the interface. There are three slots on this bridge plate, one for 'A4' and one for 'A3' paper sizes with further one for wider paper. This bridge plate hooks over the bar, which is fitted to the collator stand. To fit, lift interface at the rear, approximately 1.5mm and drop over the bar for the appropriate paper size. This bridge plate is pivoted and needs only to be lifted for further adjustments.
 6. Having connected the bridge plate to the stand for either 'A4' or 'A3' paper, the collator has to be correctly aligned to the interface for correct entry of paper
 7. An electrical interface is supplied to connect the collator to the bookletmaker. It is fitted with a 6 pin DIN plug for connection to the bookletmaker and the appropriate plug fitting to the collator. This connection will stop the collator from feeding if the bookletmaker should jam or when the staple low warning is sent.
 8. Set DC-10 collator to slow speed.
 9. If this the first time the collator has been connected to the bookletmaker follow the modification instructions in Duplo Technicat Buletin, BK001D .
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Model: DBM-70 **Subject: DC-10 I/F Cable Connection**

The DBM-70 interface cable to the DC-10 Mini Collator, connects to the 9 way 'D' type socket at the back of the collator, next to the Paper Receiving Tray.

The following modification to the DC-10 Mini is recommended to allow DBM-70 connection.

Remove the Upper and Lower External Covers Left. Remove the Paper Receiving Tray. Remove the Motor Cover Panel. Remove the Sensor PWB Unit.

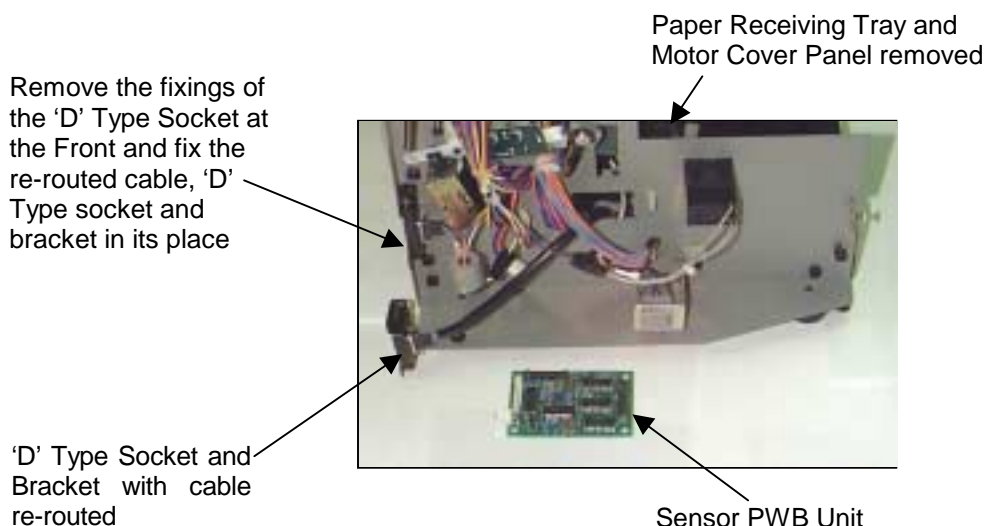
The 'D' Type socket at the back is fixed to a bracket. Remove the bracket fixings. This allows the cable, 'D' Type socket and bracket to be re-routed through the chassis via a hole that was behind the Sensor PWB unit. Remove the fixings of the 'D' Type Socket at the Front and fix the re-routed cable, 'D' Type socket and bracket in its place.

Re-fit the Sensor PWB Unit, Motor Cover Panel, Paper Receiving Tray and Upper and Lower External Covers Left.

With this connection it is not possible to connect a second DC-10 Mini Collator.

DIP Switches: With all other DIP switches turned 'OFF', DIP switch bank 'C' numbers 4 & 6 must be switched 'ON'.

Before running the system, the DC-10 Mini Collator must have the Slow Collating Speed function selected.



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