Operating Instructions

# Watkiss Automatic Stitch-Fold & Trim

Issue 4, November 2006

WATKISS DIGIvac+

WATKISS VARIO

# CONTENTS



Issue 4 - November 2006 - Part No. 960-191

Effective for serial numbers:
WA/ASF/1250 and WA/ATR/1250 onwards.

# 1 Specifications

| | |
|---|---|
| **Intended Use** | This product is intended to be used for the stitching, folding and trimming of materials as specified. |
| **Operating Conditions** | 10-35°C at 35-85% relative humidity |
| **Production** | up to 3,300 per hour |
| **Specifications** | |
| Maximum Input Size | 488 x 350mm, 18.9 x 13.78" |
| Minimum Input Size | 120 x 160mm, 4.72 x 6.25" |
| Maximum Book Thickness | 25 Sheets (80gsm) |
| Maximum Stitch Pitch | 278mm, 10.94" |
| Minimum Stitch Pitch | 86mm, 3.39" |
| Stitching Wire | 0.53mm (25 gauge) round electro-galvanised steel wire |
| Maximum Trim | 35mm, 1.38" |
| **Electrical** | 115V, 60 Hz or<br>230V, 50 Hz<br>Single Phase<br>(earthed supply required) |
| **Dimensions** | |
| Automatic Stitch-Fold (W,D,H) | 555, 888, 600mm, 150kg<br>21.9, 35.0, 23.6", 330lb |
| Automatic Trimmer (W,D,H) | 560, 585, 598mm, 110kg<br>22.0, 23.0, 23.5", 242lb |
| Outfeed Conveyor (W,D,H) | 404, 1050, 730*mm, 17kg<br>15.9, 41.3, 28.7", 37.5lb<br>*750mm; 29.6" angled |
| **Noise** | 72dB (A) |

Production may vary according to operating conditions. In line with a policy of continual product improvement, the manufacturer reserves the right to alter the materials or specification of this product at any time without notice.

**Radio Frequency Emissions**

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense.

# 2 Introduction

The Watkiss Automatic Stitch-Fold and Trimmer units have been purpose designed to use with your Watkiss collator. Together they give a fully integrated finishing system.

Several different configurations are available:

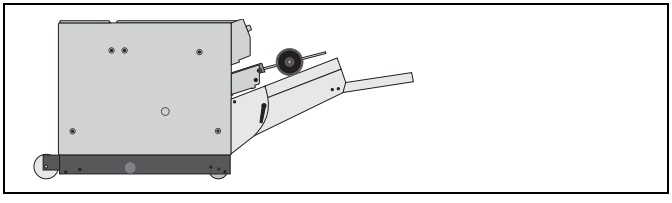

FIGURE 1
Automatic Stitch-Fold with Outfeed Conveyor (CNV)

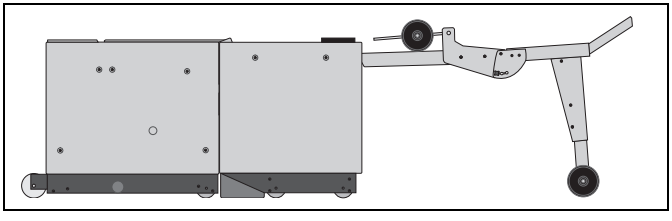

FIGURE 2
Automatic Stitch-Fold and Trim with Outfeed Conveyor (BAO)

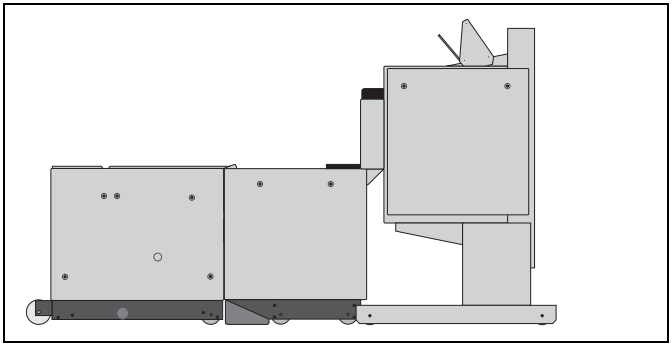

FIGURE 3
Automatic Stitch-Fold and Trim with Automatic SpineMaster (ASM)

The instructions that follow include the set-up and operating procedure for both the Automatic Stitch-Fold unit and the Automatic Trimmer unit. Please ignore those parts of the instructions that do not apply to your configuration. Operating instructions for the Automatic SpineMaster are supplied with that piece of equipment.

In these instructions the Automatic Stitch-Fold unit is referred to as the ASF, the Automatic Trimmer unit is referred to as the ATR and the Automatic SpineMaster is referred to as the ASM.

## INSTALLATION

The installation of your Watkiss collator requires specialist knowledge and should therefore only be carried out by a Watkiss approved engineer. It is recommended that your Automatic Stitch-Fold and Trimmer are sited on a level floor.

**Important**
This machine must only be plugged into an electrical supply line of the correct voltage and with a proven earth. Any damage caused by failure to do so will not be covered by the warranty. The required machine voltage is shown on the label on the rear of the unit (see Figure 5).

## SAFETY FIRST

Your Automatic Stitch-Fold and Trimmer units have been designed with safety as a key feature and incorporate safety covers which, when opened, will automatically cut the power to moving parts. However, as with all electrical equipment, when changing fuses or carrying out operations other than those detailed in this book:

**Always first disconnect the machine from the mains electricity supply.**

## CAUTION 1

It is essential that the supply to both the ASF and the collator is earthed.

## CAUTION 2

It is possible to damage the fold area of the ASF unit by dragging it over door thresholds etc. Care should therefore be taken.

**CAUTION 3** **Vario:** Before placing the ASF unit back underneath a floorstanding Watkiss Vario collator, IT IS ESSENTIAL to check that the front outfeed conveyor on the collator is in its upper (horizontal) position and that all the outfeed paper guides are clipped up. The divert catch tray must also be removed (see Figure 4). Failure to do this will result in damage to the collator. Refer to your collator operating manual for details of raising and lowering the front outfeed conveyor.

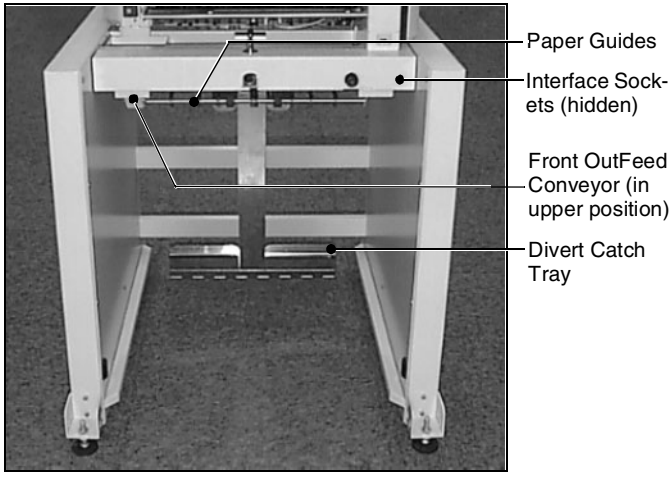


FIGURE 4 - Floorstanding Vario

**SWITCHING ON** Before use, plug in the collator and the ASF unit to single phase power supplies of the correct voltage as indicated by the mains input (see Figure 5). Check that the interface cable (see Figure 6) is connected between the ASF and the socket on the floor base (see Figure 4). If the ATR and outfeed conveyor or Automatic SpineMaster are installed, ensure that these too are connected

Note: if the blanking plug or the ASM cable is not plugged into the socket on the rear panel of the ATR, it will not function (see Figure 47 on p.67).

The collator and the ASF unit have independent mains ON/OFF switches.

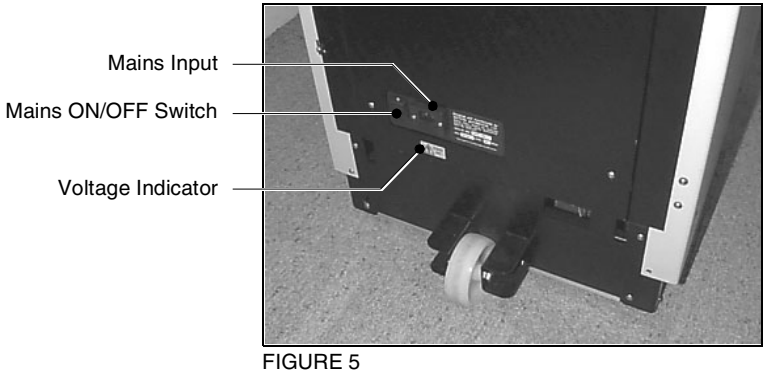

FIGURE 5

The ASF and ATR units will automatically start and stop when the collator does. Note: after stopping the collator, there is a delay of approximately 5 seconds before the ASF stops. For an immediate stop, either press the emergency stop button on the collator or open one of the safety guards.

The ASF can also be started by manually feeding a set into the unit. The unit will then automatically stop after approximately 10 seconds.

## MOVING THE ASF UNIT

The ASF and ATR units are castor mounted so that they can be wheeled underneath the collating tower. Press the motor transport switch (see Figure 6) to move the units in and out. An automatic cut-off switch acts when the units are fully docked under the collator.

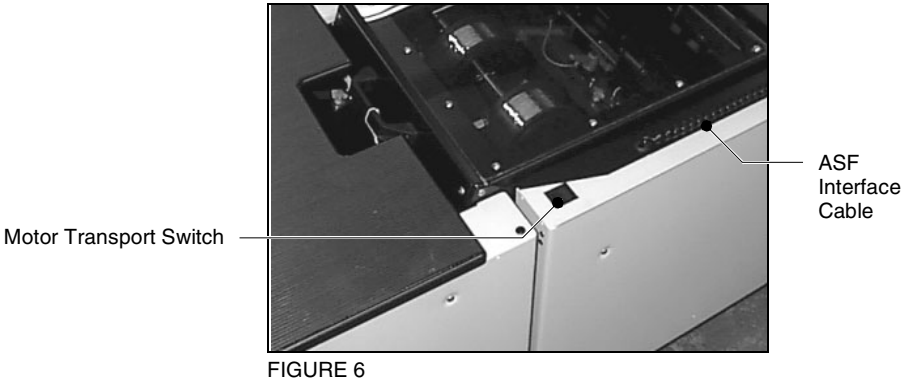

FIGURE 6

## Disengaging the Motorised Transport System

Under normal circumstances the wheels on the ASF are locked to prevent unwanted movement, and the unit can only be moved using the motorised system. To release this lock in order to move the unit manually, it is necessary to unscrew the wheel lock knob which is located inside the unit, underneath the motor transport switch (see Figure 7). Turn the wheel lock knob anti-clockwise until the lock disengages. The ASF unit will then move freely when pushed. Remember to re-engage the wheel lock by turning the knob fully clockwise when in position.

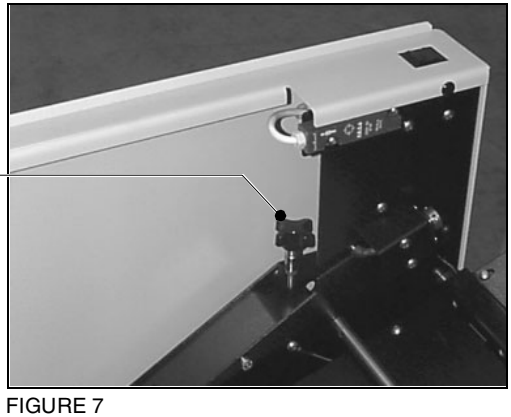


FIGURE 7

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# 3 Quick Start

This section is intended only as a brief operating guide. More complete instructions are included in later chapters.

Plug the collator and Automatic Stitch-Fold (ASF) into a mains supply of the correct voltage. Switch on the mains ON/OFF switch on the collator and ASF.

### Set Up the Collator

Load the bins with paper and make any necessary machine adjustments (see your collator operating manual).

### Select a Job

To retrieve a previous job touch **LOAD & SAVE**.

Highlight the job you require by touching it (you can also use the up and down arrows). Touch **LOAD** to load the highlighted job.

For a new job, touch **FINISHING** followed by **PAPER SIZE** and either select a preset size, or input a custom size.

Touch **FINISHING** followed by **BOOK THICKNESS** and select a value to suit the book (see p.13). If side stitching, adjust the ASF for the maximum thickness i.e. 25.

Touch **STITCH AND FOLD** followed by **STITCH POSITION**, and select either **ON FOLD** or **ON EDGE**. Touch **STITCH** to toggle the stitch function on and off. Make sure the lever on the ASF is in the correct position (see p.18).

### Adjust the Stitch Heads

If required, adjust the position of the stitch heads. This is not normally necessary because the unit is centre referenced.

### Adjust the Outfeed Conveyor

Slide the large payout wheels up or down their mounting rail so that they are just nipping the spine of the book when it is released from the rollers.

### Set the Collator Speed

**Vario Only:** Touch **ADVANCED** followed by **DRIVE SPEED** and set the collator drive speed to 80-90%.

### Start the Job

Touch **TEST SET** followed by ⏻ to run a single book. After inspection, touch ⏻ again to run the job.

# 4 Using the Control Panel

The settings for the ASF and ATR are controlled from the collator control panel using the **FINISHING** window (see Figure 8).

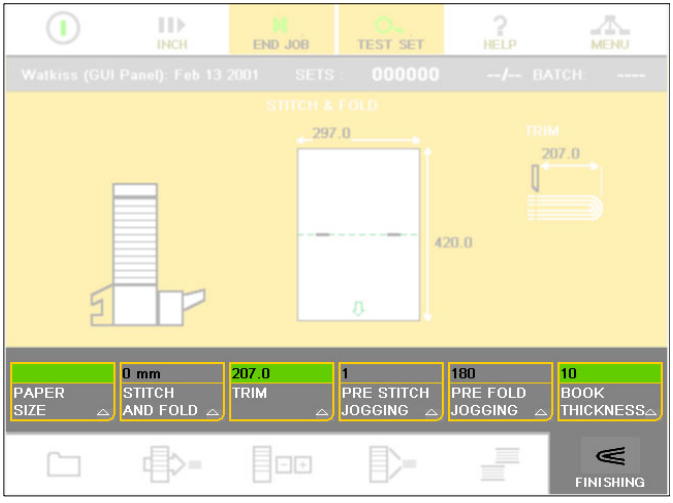


FIGURE 8

## THE 'FINISHING' WINDOW

Touch **FINISHING** to display the Finishing window. The main area of the screen will show the current settings for the booklet maker. The following functions are contained within the Finishing window:

### PAPER SIZE

Touch **PAPER SIZE** to alter the settings of the booklet maker and trimmer to suit the input paper size.

**RE-REF:** If you suspect the booklet maker or trimmer adjustment system is not calibrated correctly, touch **RE-REF** to re-reference the adjustment axes. The adjustment axes will return to the current settings once this is complete.

Periodically the booklet maker will automatically re-reference the axes during the setup procedure.

**PAGE DIRECTION:** Touching **PAGE DIRECTION** switches the orientation of the paper between landscape and portrait. This is only possible if the sheet does not exceed the maximum width accepted by the booklet maker.

**PRESETS:** Select from a choice of standard paper sizes by touching the **PRESET** window.

**STITCH AND FOLD**

The position of the stitch and fold can be offset relative to the centre of the paper. **STITCH AND FOLD** allows this position to be adjusted up to 20mm in either direction, in increments of 0.2mm.

**STITCH:** The **STITCH OFF** option will produce booklets that are folded, but not stitched.

**STITCH POSITION:** The **ON FOLD** option produces booklets which are stitched on the fold line.

The **ON EDGE** option produces sets which are edge-stitched and folded.

The Stitch Selection Lever on the booklet maker must be in the centre-stitch position.

**TRIM**

Touch **TRIM** to set the finished book size after trimming. When a preset paper size is selected, this distance is automatically adjusted, but can be fine-tuned. The trim function can also be switched off.

**PRE STITCH JOGGING**

The **PRE STITCH JOGGING** window has options to alter the way sets are jogged prior to stitching. This ensures the finished booklets are as neat as possible. The maximum speed of the booklet maker will be reduced when any of the Pre Stitch Jogging options are selected.

**PRE JOG: PRE JOG** provides additional jogging to the bottom of the set, when using heavy or large sheets. The booklet is stopped by the edge-stitch latch and jogged, before it drops to the stitch latch.

**DOUBLE JOG: DOUBLE JOG** provides additional jogging to the sides of the set, when using heavy or large sheets. The sidelays jog the set twice when it reaches the stitch latch.

**STITCH DELAY:** Increasing the **STITCH DELAY** value will cause a delay between the set arriving on the stitch latch and it being stitched. This allows more time for the sheets to settle. The default delay is 1mS.

**PRE FOLD JOGGING**

The **PRE FOLD JOGGING** window has options to alter the way sets are jogged prior to folding. This ensures the finished booklets are as neat as possible.

**SIDE JOG HOLD:** When **SIDE JOG HOLD** is selected, the sidelays hold the set during both stapling and folding without releasing. This is useful if the booklet is not being folded square, however it is essential that the sheet width is set accurately.

**FOLD DELAY: FOLD DELAY** can be adjusted to alter the delay between the set arriving on the fold latch and being folded. This is useful if the booklet is not being folded square, and allows more time for the sheets to settle. The default delay is 180mS. The maximum production speed of the booklet maker will be reduced if the delay is increased.

**BOOK THICKNESS**

The **BOOK THICKNESS** window alters the gap between the fold rollers of the Auto Stitch-Fold. The thickness of the set is entered on a scale of 1 to 25: this scale represents 1 to 25 sheets of 80gsm paper. The value will need to be adjusted to allow for heavier or lighter stock.

**Note:** The ASF and ATR contain several axes that are automatically adjusted to suit the job settings. The machine will 'beep' twice when the axes have finished adjusting.

Your collator can be set for either imperial or metric measurements. With the control panel set to Supervisor access level, touch **MENU**. Under the heading **MEASUREMENT**, select either the **MM** or **INCH** button.

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# 5 Booklet Making

## ORGANISING THE JOB

### Trim Margin

If you have the ATR installed and are using a friction fed Vario, we recommend that the job be printed with a 12mm trim margin on the feed edge and a smaller (perhaps 3-5mm) trim margin on the trailing edge. In this way any marking that could possibly occur due to wet ink or ink rub will always be in the trim margin.

### Loading the Bins

**Vario:** The sheets should be loaded face down and with the cover in the bottom bin(s). Depending upon the number of sheets in the set, remember that using the bin grouping can help to ensure continuous running. If the cover is thicker than the inner pages, use the bin grouping to allocate more bins for the cover stock.

**DigiVAC:** The sheets should be loaded face up and with the cover in the top bin.

### Set the Collator Paper Path

**Floor standing Varios:** Set the rear deflector lever to its upper position (see Figure 9).

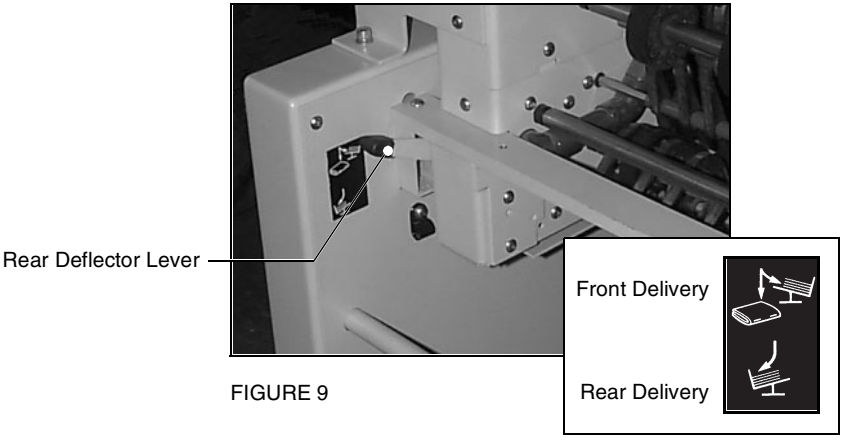



FIGURE 9

**DigiVAC+:** Set the delivery lever to its upper position, to deliver sets to the rear.

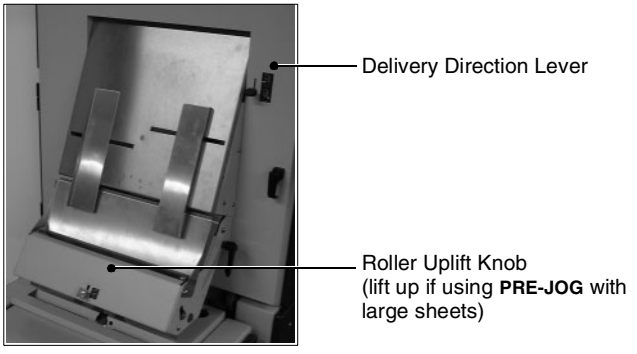



FIGURE 10

## SETTING UP THE AUTOMATIC STITCH FOLD AND TRIM

### Control Panel

Touch **FINISHING** to display and adjust the SFT settings.

Touch **PAPER SIZE** and adjust the sheet size to suit the job. Use **PRESETS** for standard sheet sizes (A3, A4 or A5 or 8x11", 5.5x8.5" or 5.5x4.2").

Select **LANDSCAPE** or **PORTRAIT** in the **PAPER SIZE, PAGE DIRECTION** window (see Figure 11).

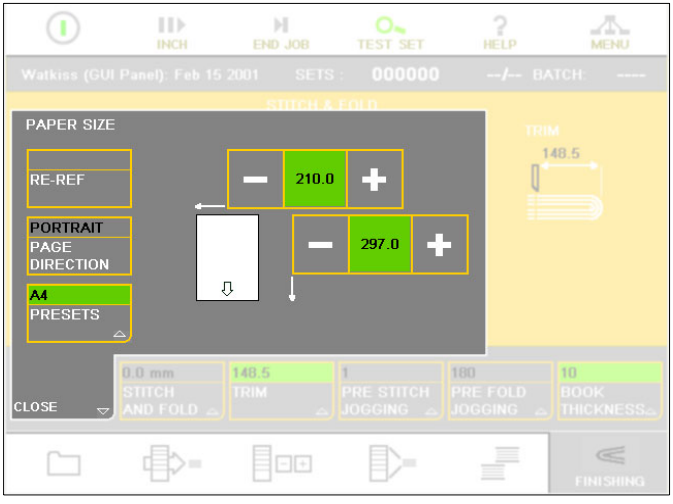



FIGURE 11

Touch **BOOK THICKNESS** and select a value to suit the book (see p.13).

**Tip**
Remember that you can recall the settings from previously stored jobs in the **LOAD & SAVE** window.

## Select Centre Stitching

Using the lever on the ASF (see Figure 12), select centre stitch operation (lift up, slide out and lower).

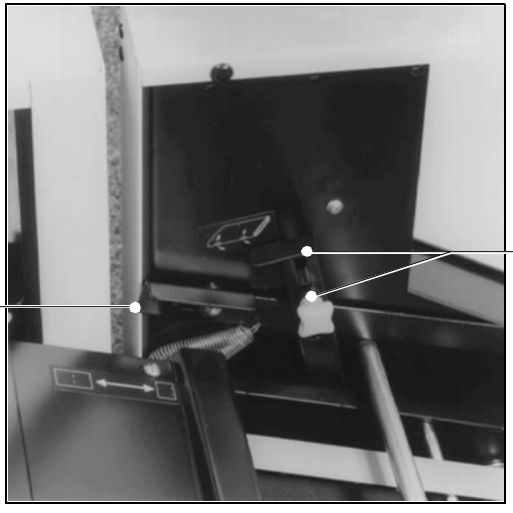



FIGURE 12

## Adjust the Stitch Heads

If required, adjust the position of the stitch heads (see p.27). This is not normally necessary because the ASF is centre referenced.

## Check the Adjustments

To check that all the adjustments are correct, either manually feed a set into the unit or run a test set by touching ⏻.

**Note:**
If you suspect the ASF adjustment system is not calibrated correctly, touch **RE-REF** in the **PAPER SIZE** window to manually recalibrate the ASF adjustment axes. After recalibration, The ASF adjustment axes will return to the current settings.

Periodically the ASF will automatically recalibrate the axes during the setup procedure.

## Adjust the Outfeed Conveyor

Slide the large payout wheels up or down their mounting rail so that they are just nipping the spine of the book when it is released from the rollers.

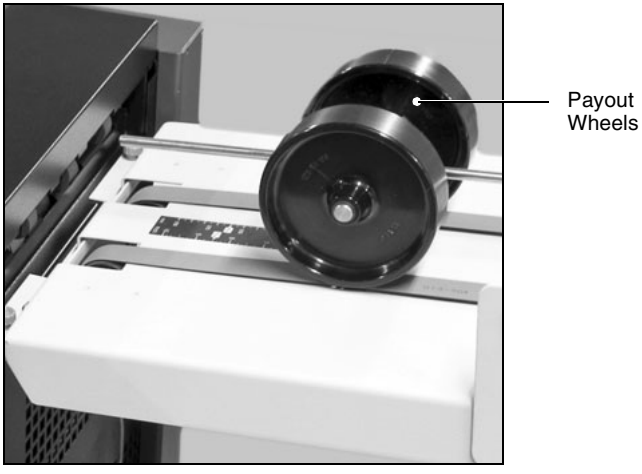



FIGURE 13

**Vario only:** Touch the **ADVANCED** window tab and check that **DRIVE SPEED** is set to 80-90%.

The production speed will be a factor of the booklet size and settings, but you can reduce it if required. Touch the **BASIC** window tab and reduce the number of **SETS PER HOUR**.

## Set the Trimmer Conveyor Gap

The trimmer conveyor gap has two positions, open or closed, and is set using the conveyor gap adjustment bar (see Figure 14). The normal setting is open. If a thin book is bouncing against the trimmer stop and is therefore trimmed out of square, close the gap. If a thick book is either being scuffed, or is jamming on entry into the trimmer, open the gap.

For very thick, narrow booklets (eg. folding A4 paper landscape), the conveyor gap can be opened further using an optional aid.

- Part No. 914-541, ATR Thick Book Setting Gauge

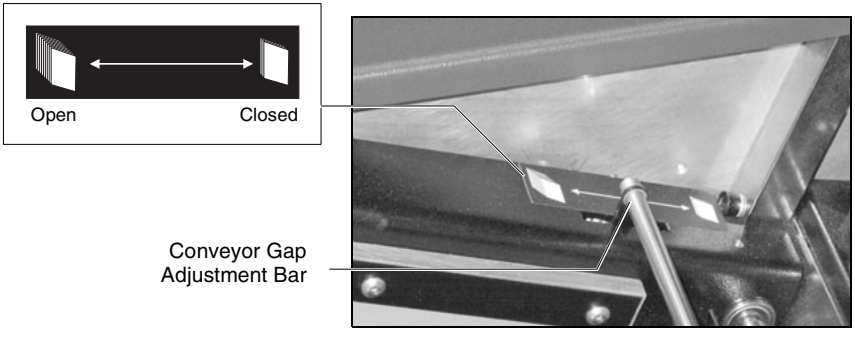



FIGURE 14

## Starting the Job

Touch ⏻ to run a test set. After inspection, touch ⏻ again to run the job.

Tip: If you need to start the ASF and ATR without starting the collator, touch **INCH**. It will automatically shut down 5 seconds after its last action. The ASF can also be started by manually feeding a set into the unit.

Tip: Remember to empty the trimmer offcut box periodically.

Tip: The ASF can be returned to its default settings by loading the default template: touch **LOAD & SAVE**, select **DEFAULT TEMPLATE** from the job list and touch **LOAD**.

## Fine Tuning the Fold Position

Occasionally paper characteristics may cause the stitch to be marginally off the fold. The ASF can be fine tuned to compensate for this using the fine tuning control (see Figure 12 on p.18).

Tip: To separate the books into batches on the outfeed conveyor, select **PAUSE / SEPARATE** from the **BATCH** window (see your collator operating manual).

# 6 Side & Corner Stitching

## ORGANISING THE JOB

### Loading the Bins

The stitches will be inserted into the feed edge of the sheet.

**Vario:** Load the sheets face down, with the first page in the lowermost bin.

**DigiVAC:** Load the sheets face up, with the firstpage in the uppermost bin.

Note: The maximum sheet width that can be side stitched is 340mm, 13.3". If the sheet width exceeds this, the top jog is automatically switched off and may not give satisfactory results.

### Set the Collator Paper Path

See page 15.

## ADJUSTING THE ASF FOR SIDE STITCHING

### Set Booklet Size

Touch **FINISHING** to display and adjust the ASF settings.

Touch **PAPER SIZE** and adjust the sheet size to suit the job. Use **PRESETS** for standard sheet sizes (A3, A4 or A5 or 8x11", 5.5x8.5" or 5.5x4.2").

Select **LANDSCAPE** or **PORTRAIT** in the **PAPER SIZE, PAGE DIRECTION** window.

Touch **BOOK THICKNESS** and adjust the ASF to the maximum width (i.e. 25).

> **Tip**
> Remember that you can recall the settings from previously stored jobs in the **LOAD & SAVE** window.

### Select Side Stitching

Using the lever on the ASF (see Figure 12), select side stitch operation (lift up, push in and lower). This will also automatically switch off the fold and trim actions.

## Adjust the Side Stitch Drive Wheel

The side stitch drive wheel is located between the stitch heads (see Figure 15). Unhook the jockey wheel catch and push the drive mechanism lever (identified by an orange dot) in so that the jockey wheel and drive wheel contact. This improves feeding for side/corner stitching by providing a more positive drive. Ensure the catch is hooked on the screw and the drive mechanism lever is out for normal operation.

When edge stitching heavier papers, the optional Edge Stitch Drive kit, Part No. 914-512, may be required.

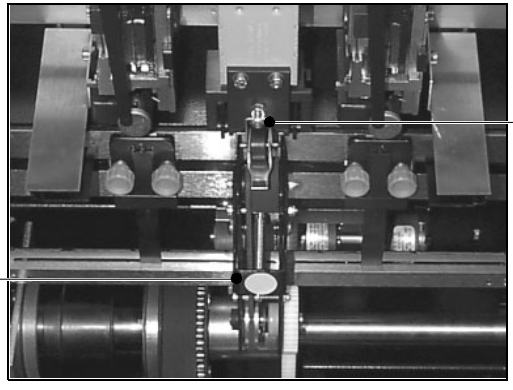



FIGURE 15

## Adjust the Position of the Stitch Heads

For side stitching no adjustment should be necessary. For corner stitching, adjust the position of one head and disconnect the second head by undoing the drive lug and sliding it across to one side (see p.27).

## Starting the Job

Touch ⏻ to run a test set. After inspection touch ⏻ again to run the job. If necessary another test set may be obtained by touching **TEST SET** followed by ⏻.

Note: When side stitching is selected the trimmer action is automatically switched off.

# 7 Side Stitching & Folding

If required, it is also possible to side stitch the set and then fold it. The only limitation to this is that the distance from the stitched edge to the fold must be at least half the width of the paper.

### Select Edge Stitching and Folding

Set **STITCH POSITION** to **ON EDGE** from the **STITCH AND FOLD** window (see Figure 16).

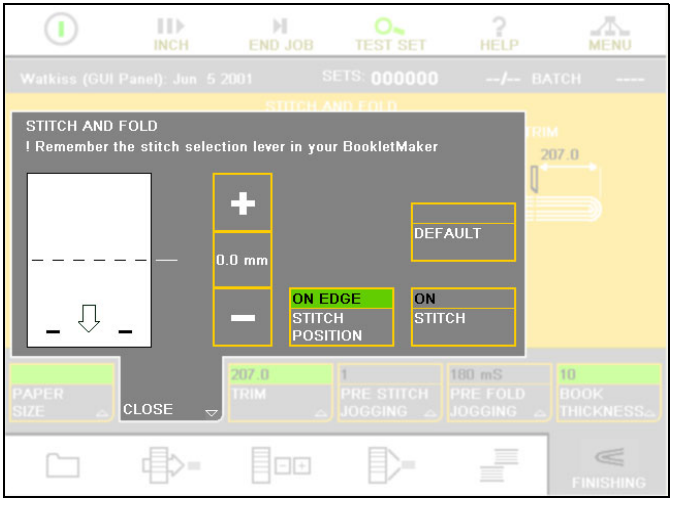



FIGURE 16

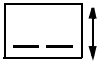
Using the lever on the ASF (see Figure 12), select centre stitching - not edge stitching (lift up, pull out and lower).

### Adjustments

Adjust the ASF/ATR for size (see p.21).

Note: When **STITCH POSITION** is set to **ON EDGE**, the trimmer action is automatically switched off.

Note: The maximum sheet width that can be stitched in this mode is 340mm, 13.3". If the sheet width exceeds this, the top jog is automatically switched off and may not give satisfactory results.)



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# 8 The Stitch Heads

**Note**
Before carrying out any work on the stitch heads you **MUST** move the ASF unit away from the collator and disconnect it from the mains electricity supply.

Your ASF will be fitted with one of three types of stitch head:

- Magnatek/M2000
- Deluxe G5
- Hohner 43/6

Please use the appropriate instructions.

| **Magnatek/M2000** | **Deluxe G5** | **Hohner 43/6** |
|---|---|---|
|  |  |  |
| • M2000 is engraved on the front | • Deluxe G5 is marked on the front | • Hohner 43/6 is marked on the front |

## USING THE HAND CRANK TO CYCLE THE STITCH HEADS

When making adjustments to the stitch heads it is sometimes necessary, for safety and convenience, to cycle the heads by hand. First release the solenoid (see Figure 17) by sliding your finger behind it and depressing the lever on the back (you will hear it click when it is released). Insert the hand crank (stored inside the ASF unit) into the hand crank access hole (see Figure 18) and turn it anti-clockwise to complete one cycle of the heads. It is necessary to release the solenoid at the beginning of each cycle.

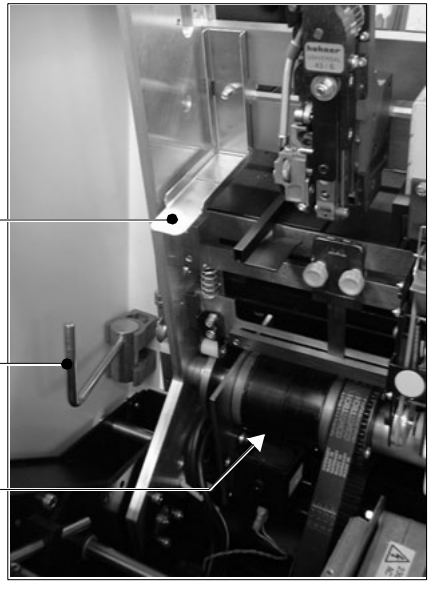



FIGURE 17

**CAUTION !**
**Avoid damaging your stitch heads by following these rules:**

1. Never drive one stitch on top of another.
2. Never operate the stitcher with wire feeding without paper between the clincher and formers.


FIGURE 18

## ADJUSTING THE POSITION OF THE STITCH HEADS

Because the system is centre referenced, the stitch head position will rarely need adjusting. In the majority of cases a stitch pitch of 130mm (5") will be suitable for both A4 and A5 (or US 8½ x 11" and 5½ x 8½") booklets.

Ideally the stitch pitch should be set between 65 and 190mm (2¾ to 7¾") so that the heads line up with the cutouts in the fold blade.

### Position the Stitch Heads

Open the perspex safety guard on top of the ASF unit and then open the ASF unit itself.

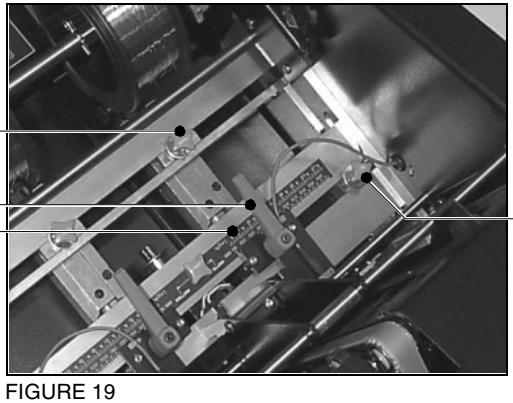



FIGURE 19

For each stitch head, release the stitch head clamp by turning it anti-clockwise (see Figure 19). Slide the stitch head along its mounting to the required position (note the scale for stitch pitch) and re-tighten the clamp. Ensure that the drive lug is also moved so that it is central on the stitch head.

**Note**
Do not place the stitch heads over the bottom of the infeed sidelay. Sensors prevent the ASF from stitching if this happens in order to prevent damage to both the head and the sidelay. An LED on each sensor is illuminated when this occurs and the message **Cannot start: sidelay under stitch head** appears on the touch-screen.

To place the stitch heads in their widest position, the two infeed guides (see Figure 17) will have to be moved. Undo the orange hand nut (see Figure 19) and refit the guides in between the stitch heads.

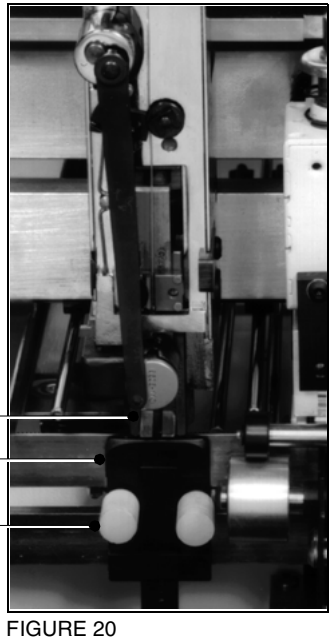


FIGURE 20

## Align the Clinchers

When aligning the clinchers, it sometimes helps to lower the staple driver to make alignment easier and more accurate. Remove the cut staple wire from the stitch head. Use the hand crank to lower the staple driver. For each head, release the clincher by loosening the two fixing screws (see left). Slide the clincher along until it aligns with the stitch head. Retighten the fixing screws and use the hand crank to complete the stitch head cycle before closing the ASF unit.

Visually check that there is no staple wire stuck in the clinchers or stitch heads.

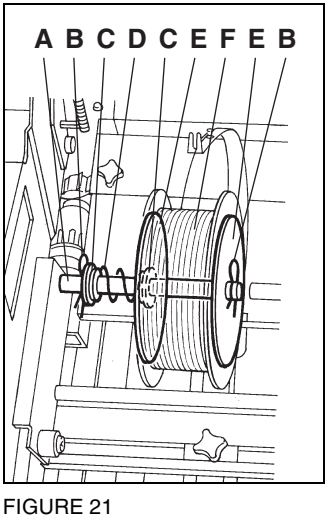
## WIRING THE STITCH HEADS

Your ASF will be fitted with one of three types of stitch head. Please follow the appropriate instructions.

All the stitch heads use 0.53mm (25 gauge) round electro-galvanised steel wire on 2.5kg (5lb) spools. These are available from Watkiss (P/N 812-001) or from your local supplier.

### Install the Wire Spool

Open the perspex safety guard on the top of the ASF unit. The wire spools are mounted on a split bar, half of which swings upwards to allow access. For each spool, remove the retaining clip and large disc, and then remove the empty spool. Ensure that the remaining spring, bushes and disc do not fall off. Slide the new wire spool onto the stud with the wire feeding over and up towards the wire guide spring. Replace the large disc and retaining clip.




| | |
|---|---|
| A | Spool Mounting Bar |
| B | Split Pin |
| C | Bush |
| D | Spring Coil Retainer |
| E | Spool Retainer |
| F | Spool |

FIGURE 21

**Note:**
Hold the wire taut at all times and do not release it until it has been threaded through the wire guides and wire straighteners. If necessary, remove any loose or tangled wire before you begin. This is essential to prevent de-spooling and tangling.

## THREADING MAGNATEK/M2000 STITCH HEADS

Remove the end of the wire from the hole in the outer edge of the spool and thread it through the slot at the end of the wire guide spring, through the two wire guides and through the upper wire straightener. Ensure that the wire is underneath the straightener discs (see Figure 22).

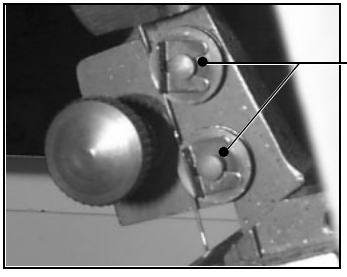



FIGURE 22

Now thread the wire through the lower wire straightener.

Unhook the swivel holder spring and swing it away to the left, then remove the swivel. Feed the wire into the wire cutter lead-in hole and pull through until it is straight. Push the grip spring to the left to open the grip, insert the wire and release. Pull the tension pawl down, insert the wire between the tension pawl and roller and then release. Cycle the heads to cut the wire to the correct length. Replace the swivel and swivel holder spring and cycle the heads again to load wire into the swivel.

Note: If the grip spring is too tight to open, simply lay the wire in front of it. The wire will self-load when the heads are cycled.

It is important to ensure the stitch wire is straight, particularly if using wire not supplied by Watkiss.

To check the straightness of the wire, hold the wire against the bottom face plate with your thumb and using pliers pull the wire straight down (it is important to pull straight down so as not to induce additional curve to the wire). Cut the wire just above the point where you were holding with your thumb. The wire should curve to the right of, and slightly away from, the face plate.

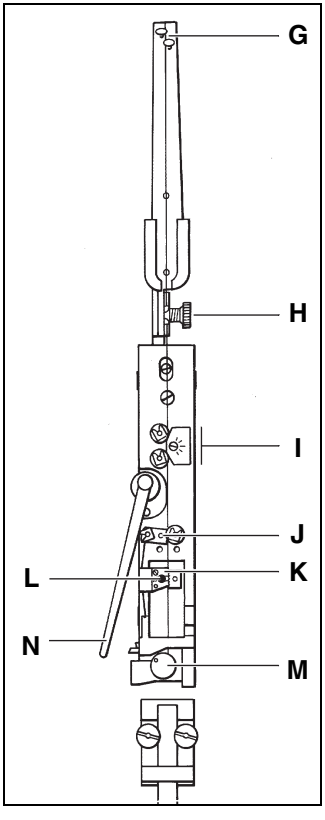



FIGURE 23 Magnetek/M2000

G Wire Guides
H Upper Wire Straightener
I Lower Wire Straightener
J Tension Pawl
K Grip Spring
L Grip Spring Lever
M Swivel
N Swivel Holder Spring

If necessary, the left/right straightness of the wire is adjusted by using a screwdriver to turn the pointer on the lower wire straightener, and the in/out straightness by turning the pointer on the upper wire straightener (see Figure 23).

## THREADING DELUXE G5 STITCH HEADS

**Note:**
When a spool of wire has run out, there will be a small amount of wire left in the middle wire tube. This **MUST** be removed before a new spool can be threaded. To do this, unclip the middle wire tube from the stitch head. Remove the wire then replace the middle wire tube, ensuring that it is correctly located.

Remove the end of the wire from the hole in the outer edge of the spool and thread it through the wire guide spring and through the two wire guides (see Figure 26).

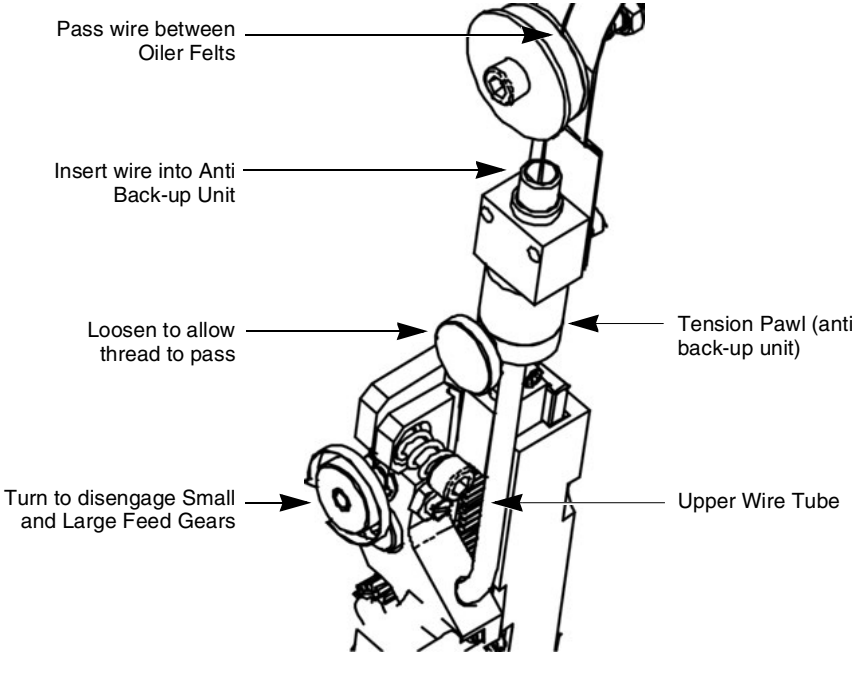



FIGURE 24 Threading the Head - Stage 1

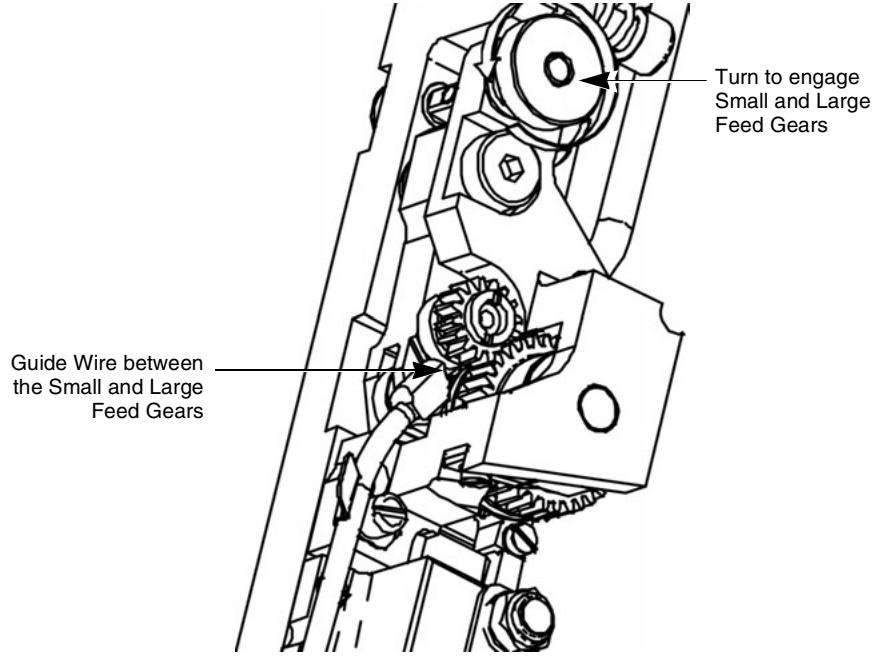



FIGURE 25 Threading the Head - Stage 2

Cycle the heads to cut the wire to the correct length.

It is important to ensure the stitch wire is straight, particularly if using wire not supplied by Watkiss.

Wire straightness is preset at the factory. To check the straightness of the wire, slide the wire holder retaining spring over to the side and remove the wire holder assembly from the stitcher head. Manually crank the stitch head and observe the wire exiting the cutter box assembly. The wire should have a slight upward curve.

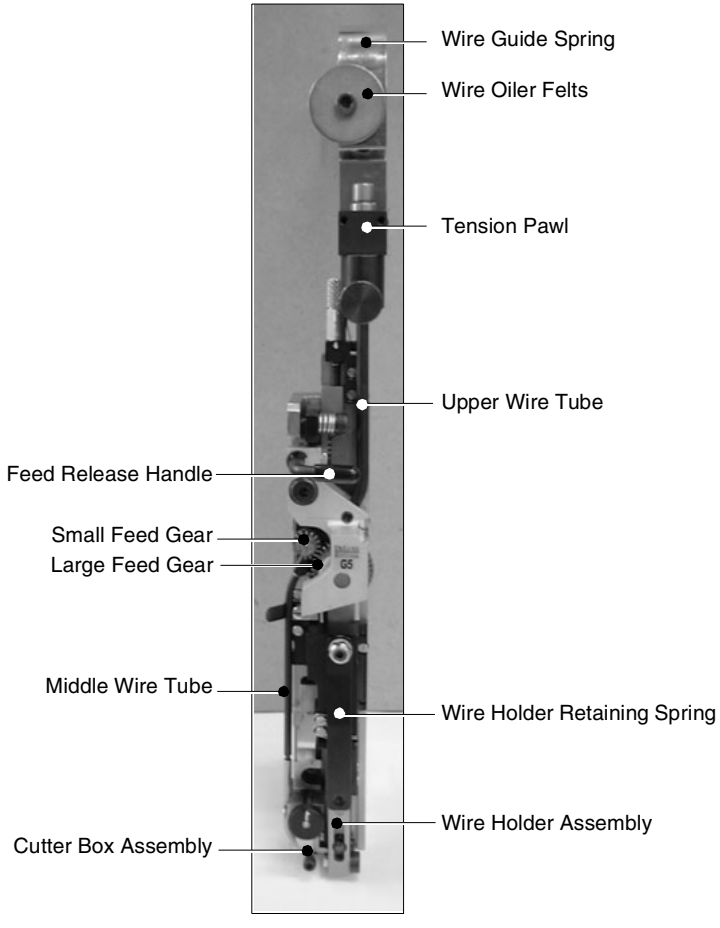



FIGURE 26 G5 Deluxe Stitcher

Replace the wire holder and re-engage the wire holder retaining spring. Manually crank the heads over to cut the excess wire off.

## THREADING HOHNER STITCH HEADS

**Note:**
When a spool of wire has run out, there will a small amount of wire left over in the guiding funnel. This **MUST** be removed before a new spool of wire can be threaded. To do this, loosen the pan head screw to enable access to the guiding funnel. Remove the excess wire from the guiding funnel and re-assemble it in position. Re-tighten the pan head screw.

Remove the end of the wire from the hole in the outer edge of the spool and thread it through the wire guide spring and through the five wire guides (see Figure 28).

Thread the wire between the two felt discs and into the brake buffer, using pliers to push the wire, this will hold the wire secure. Turn the eccentric stop through 90° to open the transport gears. Thread the wire down until you feel a resistance, turn the eccentric stop through 90° to close the transport gears. Fit the adjuster handle to the bearing bolt and turn it clockwise until the wire is visible at the bottom of the head. Manually crank the heads over to cut the excess wire off.

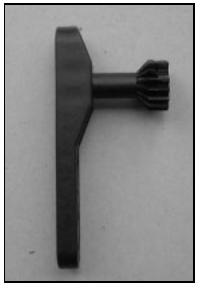


FIGURE 27 Adjusting Handle

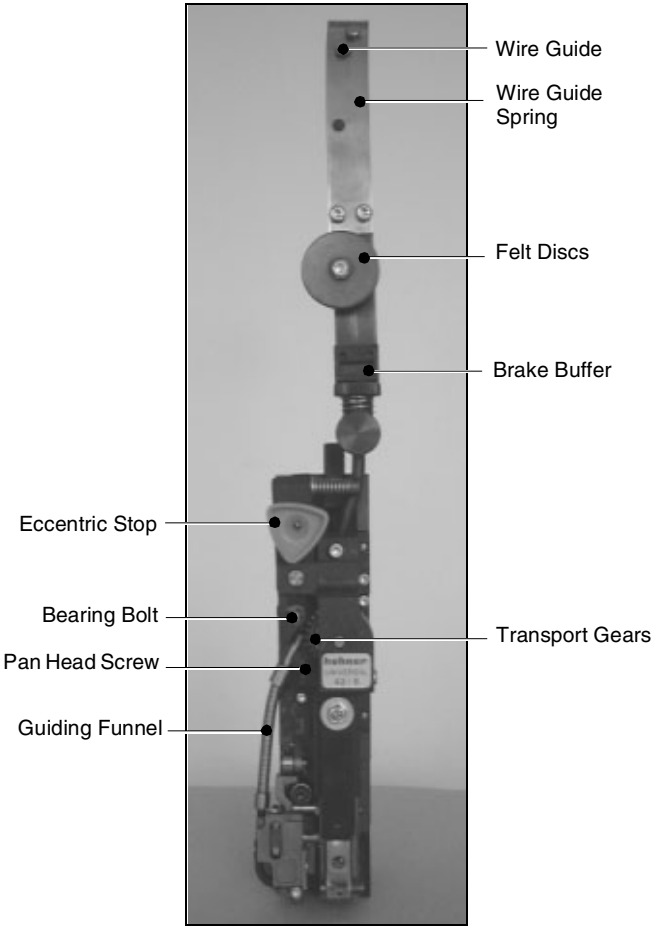



FIGURE 28 Hohner 43/6

## TESTING THE STITCH HEADS

After re-wiring the stitch heads, they should be tested. Slide a few sheets of paper between the heads and the clinchers and then use the hand crank to cycle the heads. Check for a correctly formed stitch and if necessary make adjustments as detailed in the trouble shooting chart.

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# 9 Troubleshooting Chart

As far as possible the system has been designed to be self-explanatory. In many cases problems or errors will be identified on the control panel. The following is a further guideline to help solve any problems, if they persist please call the Watkiss Service Department or your Watkiss Dealer.

| PROBLEM | CAUSE | SOLUTION |
|---|---|---|
| **Operational Problems** | | |
| AUTOMATIC STITCH-FOLD WILL NOT START | The ASF is not plugged in. | Plug into mains connection of the correct type and voltage. |
| | Interface between ASF and collator is not plugged in. | Plug in. (see p.6) |
| | Fuse has blown on the main input. | On 220-240V machines there are two 7 amp fuses in the mains input connector, check and replace as necessary. On 115V machines they are 10 amp fuses. |
| | One of the ASF or ATR safety covers is open. | Close all safety covers and ensure the trimmer offcut bin is in place. |
| | ATR interlock is in 'safe' position. | Slide interlock bar to 'live' position and secure (see p.66). |
| | Blanking plug or ASM data cable not plugged into socket on rear panel of ATR. | Refit blanking plug or ASM cable (see p.67) . |
| AUTOMATIC STITCH-FOLD DOES NOT STOP ON TOUCHING ⊙ (Note: There is a 5s delay after touching the stop button. For an immediate stop, use the emergency stop button or open a safety guard.) | A set is partially jammed and the ASF is trying to clear it. | Open covers, locate and remove the jam. |
| | ASF has lost communication with the collator. | Check that the interface is plugged in - it may have become disconnected when moving the ASF. |
| ONE OR BOTH STITCH HEADS ARE NOT ACTIVATED | Stitch not selected. | Make sure **STITCH** is set to **ON** in the **STITCH AND FOLD** window (see p.12). |
| | Drive lugs not in position. | Position lugs centred on each stitch head (see p.28). |

| PROBLEM | CAUSE | SOLUTION |
|---|---|---|
| | The stitch heads are adjusted over the bottom of the infeed sidelays. Sensors prevent the ASF from stitching if this happens in order to prevent damage to both the head and the sidelay. An LED on each sensor is illuminated when this occurs and the message **Cannot start: sidelay under stitch head** appears on the touch-screen | Adjust the stitch heads so that they do not activate the safety sensors |
| | A bad paper jam has caused the stitch heads to lock | Use the hand crank to cycle the stitch heads (see p.26) |
| FOLD IS NOT ACTIVATED | Unit is in edge stitch mode | Move lever into centre stitch position (see FIGURE 9 on p.15) |
| BOOK IS NOT TRIMMED | Trim not selected | Make sure **TRIM** is switched on (see p.12) |
| | Trim position is set off the edge of the sheet | Reset trim position |
| | Trimmer conveyor gap is too tight | Increase conveyor gap (see p.19) |
| | Edge stitching is selected or **STITCH POSITION** is set to **ON EDGE** | Not available in these modes |
| EDGE STITCH FUNCTION NOT WORKING | Edge stitch not selected | Select by moving lever to correct position (see p.18) |
| | Edge stitch latch solenoid missing | Check that the solenoid has not been removed to facilitate a below specification stitch pitch, in which case, refit |
| | Edge stitched sets do not pass through the stitch fold. | Fit the optional edge stitch drive kit (Part No. 914-512). |
| STITCH IS NOT ON THE FOLD | Heavy and/or coated stock is dragging against the rollers | Fine tune the fold position relative to the fold (see p.20) |
| | Set is bouncing before stitching | Allow the set more time to settle by increasing **STITCH DELAY** |
| | Set is bouncing before folding | Allow the set more time to settle by increasing **FOLD DELAY** |
| | Loose paper or stitches in the fold plate area | Locate and remove (see p.41) |

| PROBLEM | CAUSE | SOLUTION |
|---|---|---|
| | **SIDE JOG HOLD** is selected whilst the infeed sidelays are set too tight | Adjust **PAPER SIZE** so that both the infeed sidelays barely touch the paper (see p.11) |
| | **STITCH POSITION** is set to **ON EDGE** | Set **STITCH POSITION** to **ON FOLD** |
| | Head and clinch are not located in the cut-out of the fold blade | If possible locate the heads so that they line up with the cut-outs in the fold knife (see p.27) |
| | Side stitch drive wheel is engaged | Disengage (see p.22) |
| UNTIDY BOOKLET | Infeed sidelays are not adjusted correctly | Adjust **PAPER SIZE** (see p.11) |
| | Set needs more time to settle before stitching | Allow more time for the set to settle by increasing **STITCH DELAY** |
| | Collator delivering an untidy set | Improve collator delivery |
| | The ASF adjustment system is not calibrated correctly | Touch **RE-REF** in the **PAPER SIZE** window to manually recalibrate the ASF adjustment axes |
| FINISHED BOOK IS TOO LOOSE | Fold roller gap is too wide | Reduce the **BOOK THICKNESS** value (see p.13) |
| TOP JOG DAMAGE ON THE SET | Collator delivering an untidy set | Improve collator delivery |
| | **PAPER SIZE** incorrectly set | Check the sheet length value in **PAPER SIZE** (see p.11) |
| | Fold roller gap is too narrow | Increase the **BOOK THICKNESS** value (see p.13) |
| | When side stitching - side stitch drive wheel not engaged | Engage the side stitch drive wheel (see p.22) |
| | When side stitching - side stitch deflector is dirty | Clean deflector (see p.47) |
| | When side stitching, heavy sets do not pass through the fold roller. | Fit the optional edge stitch drive kit (Part No. 914-512). |
| ASF MOTOR TRANSPORT IS NOT WORKING | Drive is disengaged | Re-engage by turning the knob clockwise (see p.7) |

| PROBLEM | CAUSE | SOLUTION |
|---|---|---|
| AUTOMATIC STITCH-FOLD WILL NOT FIT BACK UNDERNEATH THE VARIO COLLATOR | Front outfeed conveyor is in down position | It is ESSENTIAL to raise the outfeed conveyor and clip up the outfeed paper guides before placing the ASF back underneath the collator (see p.5) |
| BOOKLETS WILL NOT STACK ON THE CONVEYOR | Large payout wheels incorrectly positioned | Reposition (see p.19) |
| | Electrical connection is unplugged | Plug in electrical connection between the trimmer and the outfeed conveyor |
| BOOKLET COVER IS MARKED | Dirty fold rollers | Clean them with a cloth dampened with soapy water or alcohol (isopropanol). Do NOT use blanket wash (see p.46) |
| | Fold roller or trimmer conveyor gap is set too tight | Reduce the **BOOK THICKNESS** value (see p.13) or trimmer gap (see p.19) |
| SMALL BOOKLETS FALL BETWEEN THE ASF AND ATR | The docking bracket is fitted in the standard position | Move the docking bracket to its rear position (see p.53) |

## Stitch Head Problems

| | | |
|---|---|---|
| ONE OR BOTH LEGS BUCKLED | Clincher worn or improperly aligned | Re-align if necessary (see p.28), replace if worn |
| LENGTH OF ONE LEG VARIES | Incorrect wire size | Replace with the correct size (see p.29) |
| | Gripper is worn or dirty (Magnatek head only) | Clean (see p.30) |
| | Excessive tension on the coil | Release the tension slightly (see p.29) |
| CORNER OR CROWN IS DISTORTED OR FRACTURED | Broken wire guide (see Figure 23) spring | Replace |
| | Clincher improperly aligned or worn | Re-align if necessary, replace if worn (see p.28) |
| | Incorrect wire size | Replace with the correct size (see p.29) |
| ONE OR BOTH LEGS TURN OUT | Incorrect clincher alignment | Re-align (see p.28) |

| PROBLEM | CAUSE | SOLUTION |
|---|---|---|
| FLAT PIECE OF WIRE INSTEAD OF A FORMED STITCH (MAGNATEK HEAD ONLY) | Swivel (see Figure 23) is dirty | Clean |
| | Swivel not lubricated | Lubricate swivel with light grease |
| STITCH COMES OUT IN PIECES | Incorrect wire size | Replace with the correct size (see p.29) |
| | Wire jammed in the stitch head | Inspect and remove any jammed wire |
| WIRE TANGLES ON THE SPOOL | Spool is incorrectly installed | Check and correct (see p.29) |

**Paper Jams**

Paper jams are most commonly caused by: incorrect settings of **PAPER SIZE**; by paper jammed in the ATR infeed or the conveyor. Other causes include an over-full trimmer offcut box, the use of curly paper and using **PRE-JOG** with large sheet sizes.

Open the safety covers of the ASF (this will disconnect the power for safety) and remove any jammed sets. Sets jammed in the trimmer can be removed from either the infeed or outfeed of the unit or by removing the offcut box. Check carefully and correct any faulty adjustments that caused the jam to occur (as detailed).

Paper jams can also be caused by offcuts obscuring the sensor in the trimmer conveyor.

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# 10 Maintenance

**SERVICE INTERVAL**

It is recommended that your ASF and ATR are serviced by an approved Watkiss engineer at six months intervals. The stitch heads should be serviced every one million cycles. Please contact your Watkiss supplier or the manufacturer for further details.

**OPERATOR MAINTENANCE**

The ASF and ATR units require only a small amount of routine maintenance.

**STITCH HEAD LUBRICATION**

**Important!**
Failure to lubricate the stitch heads according to these schedules may result in damage to the stitch heads and invalidate your warranty.

**MAGNATEK/M2000 STITCH HEADS**
Petroleum jelly is the recommended lubricant (e.g. Vaseline™). It is most easily applied from a syringe and can be obtained in this form from Watkiss by quoting part number 951-089.

**Daily**
Remove the swivel, wipe clean and lubricate with petroleum jelly.

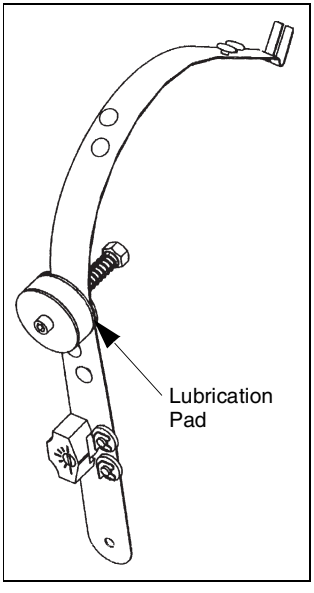


FIGURE 29 M2000 Stitch Head - Wire Guide

**At Each Spool Change**
The stitch heads should be removed and lubricated at every spool change (55,000 stitches with 0.53mm wire). Figure 30 on p.44 shows the areas where the stitch heads should be lubricated using petroleum jelly or similar.

**M2000 Stitch Head:** Rotate the lubrication pad on the wire guide so that the wire is in contact with a clean part of the pad, apply 30-40 drops of SAE20 oil to the pad. Replacement pads can be ordered by quoting part no.s 201-227 and 801-228 (one of each per head).

**Magnatek Stitch Head:** It may also be advantageous to lightly oil the new spool with SAE20 oil. Run a single 'bead' of oil across the width of the wire spool.

## Monthly

If the unit has low usage, once a month it should be lubricated as detailed in the section above 'at each spool change'.

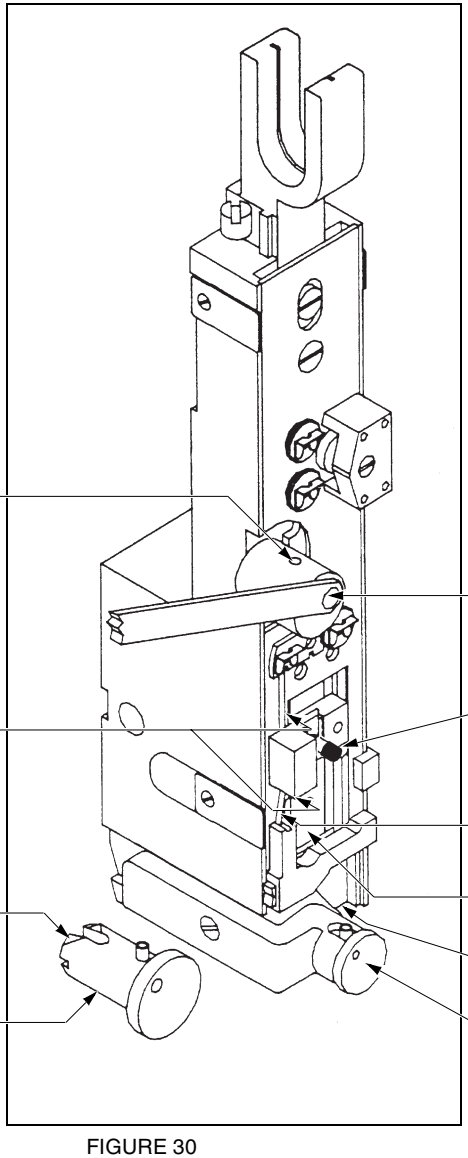


FIGURE 30
Magnetek/M2000 Stitch Head Lubrication

## DELUXE G5 STITCH HEADS

Using any standard SAE10 (3 in 1) oil, lubricate using one drop of oil in each point (see Figure 31).

### Weekly

Stitch heads that are in constant operation should be removed and lubricated weekly or once every 250,000 stitches.

### Every Third Spool Change

Stitch heads that are operated periodically should be removed and lubricated every 120,000 stitches or every third wire spool change, which ever comes first.

### Monthly

If the unit has low usage, it should be lubricated once a month.

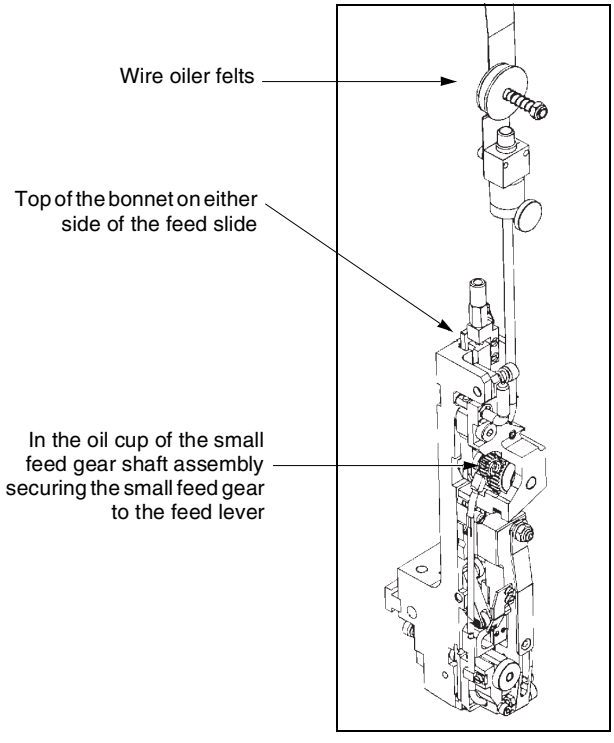


FIGURE 31 G5 Deluxe Stitch Head Lubrication

### HOHNER 43/6 STITCH HEADS

Lubrication of the Hohner stitch heads is only necessary when the stitch head is serviced at one million cycle intervals.

However, if they do require lubricating before they are serviced, use a light duty oil, such as 3 in 1. Using a drop of oil, lubricate all sliding parts.

## CLEANING

Build up of set-off powder, ink or general dust will gradually impair the performance of your ASF and ATR. Optimum performance will be obtained by keeping the machine clean.

### Fold Roller and Conveyors

Build up of set-off powder or ink on the fold rollers (see Figure 32) and conveyor belts will eventually cause slippage or ink transfer. Use the hand crank to turn them and clean with a cloth dampened with soap and water or alcohol (isopropanol). Do NOT use blanket wash.

(Note: Access to the trimmer hand crank and clutch requires the side cover and the black cover under the blade to be removed (see p.55). For safety reasons this should only be conducted by authorised personnel).

### Edge Stitch Deflector

The surface of the deflector should be cleaned periodically using anti-static polish.

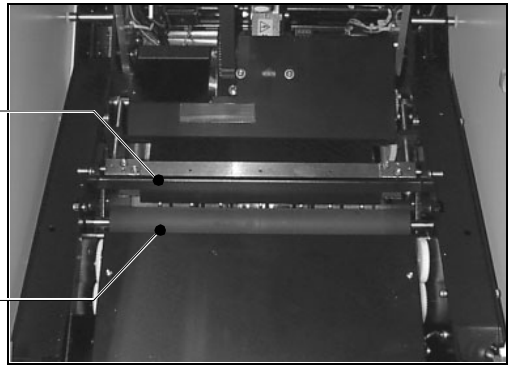


FIGURE 32

## TRIMMER BLADE SHARPENING

The trimmer blade (and anvil) should be sharpened when required (see Appendix 3).

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# A1 Using the Units Off-line

The ASF and ATR can be used off-line for hand-fed sets.

**Note:** An offline control panel is available, as an option, to enable setup and operation of all functions. The Offline Control Panel allows the ASF and ATR to be operated completely offline, without the need for a collator (see 'Using the Offline Control Panel' on p.59).

- Part No. 041-525, ASF Offline Control Panel

Set up the job whilst the ASF and ATR are still on-line with the collator (see 'Setting up the Automatic Stitch Fold and Trim' on p.16). This will set the ASF axes to suit the job.

The ASF will automatically start when a set is hand fed into the unit and will automatically stop approximately 20 seconds after the last feed. Note: Wait until the book exits the unit before feeding another set.

**VARIO ONLY:** A hand-feed guide which bolts on to the ASF infeed, is supplied with Vario versions of the ASF.

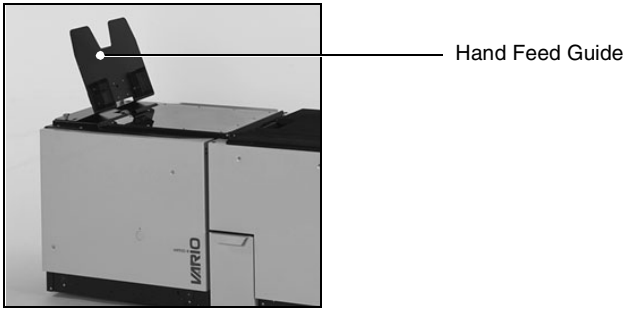


FIGURE 33

Vario versions of the ASF are also supplied with a remote control handset. To fit the remote control, remove the units from underneath the Vario, switch off the mains ON/OFF switch and open up the ASF unit (see Figure 34). Plug the remote control into the socket inside the ASF next to the interface socket and then unplug the interface socket (see Figure 35). Close the ASF taking care to thread the remote control lead through the hole used by the interface cable. Switch on the mains ON/OFF switch.

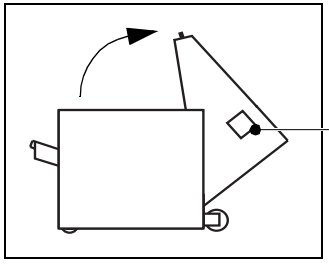


FIGURE 34

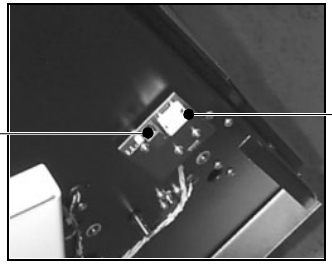


FIGURE 35

The units can now be controlled by the remote control handset:

: Starts the ASF and ATR.
: Stops the ASF and ATR.
and : Used to manually adjust the sheet length (this is normally set automatically on the collator before it is taken off-line).
: Press and hold to reset the ASF and ATR parameters to the factory defaults. A long beep will be heard.
: Press once to switch setup on/off. In the setup mode, the top jog and trim are disabled. This can be helpful when fine-tuning the adjustments etc.

The following signals are used in units with ASF software version V1.0a onwards.

'beep' = Setup switched on

'beep beep' = Setup switched off

'long beep' = ASF parameters reset to factory defaults

**PRE-JOG** is always switched on to obtain best results when hand feeding sets into the ASF.

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# A2 Producing Small Booklets

From S/Ns ASF/1131 and ATR 1127 onwards, the ATR can be docked with the ASF in two different positions. The standard position is designed to prevent trimmings from being transported through the conveyor system.

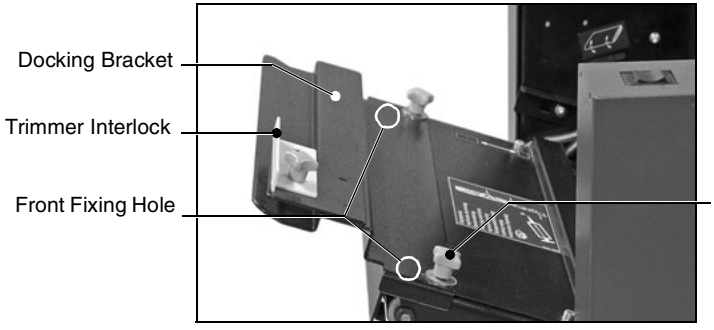



FIGURE 36 Docking Bracket (shown mounted in the standard position)

The docking bracket only needs to be adjusted when producing small booklets (typically A5->A6 or smaller).

**Procedure**

To alter the position of the docking bracket, first separate the ASF and ATR (see 'Connecting the Automatic Trimmer' on p.65). Undo both the orange hand screws that fix the docking bracket to the ASF's conveyor. Slide the docking bracket rearward, and refit the orange hand screws through the front fixing holes.

This will reduce the gap between the ASF and ATR when they are connected together. If the docking bracket is not moved in this way, there is a chance that small booklets could drop between the two machines.

# A3 Sharpening Trimmer Blades

Periodically all trimmer blades will require re-grinding. Poor grinding will result in poor life, cracks and nicks in the blade. We therefore offer the following guidelines which should accompany the blade when it is sent for re-grinding. Whenever the trimmer blade is re-ground, check the condition of the anvil also. This will only require re-grinding if it has become damaged.

**Warning!**
This procedure is potentially hazardous and should only be conducted by suitably skilled personnel. Disconnect the power before starting. Handle the blade with extreme caution and keep hands clear of cutting edges at all times.

### Tools Required

3mm Allen Key
6mm Allen Key
10mm Allen Key

### Before You Start

Separate the Trimmer from the Automatic Stitch-Fold (see 'Connecting the Automatic Trimmer' on p.65). In order to access the hand crank and clutch, take off the right side cover (viewed from blade) from the Trimmer unit by removing the two fixing screws. Remove the black cover beneath the blade by releasing the two screws at left and right, and lower to the floor. Note the position of the solenoid clutch behind the two electrical connectors.

**Important**
Note the angled position of the trimmer blade and with a marker pen or similar, mark along the bottom edge of the blade. This will act as a guide when refitting.

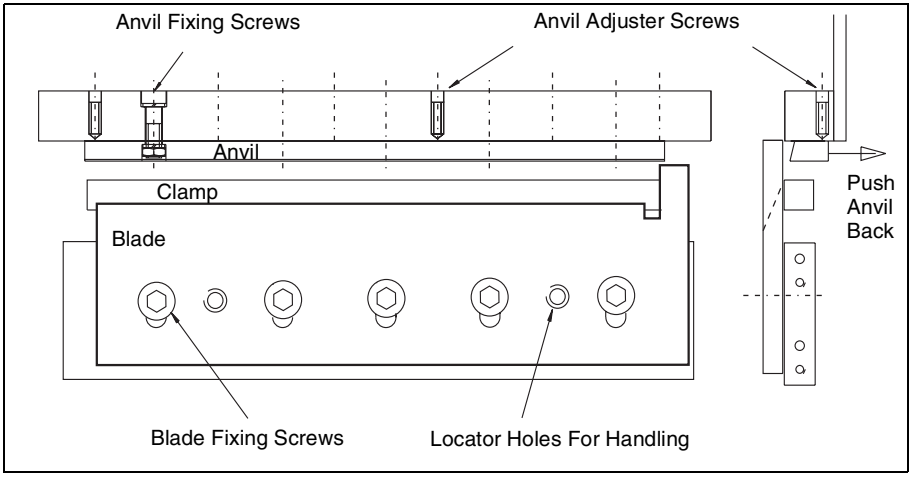



FIGURE 37 ATR Blade Removal

### Removing the Trimmer Blade

Slightly loosen all five blade fixing screws (see above). Remove the outer two screws and screw them into the locator holes. These will now act as handles. Remove the remaining screws and carefully lift the blade away. Immediately put the blade away safely.

### Check the Anvil

Remove the guard that covers the anvil and then carefully check the anvil for any damage. If it requires re-grinding, remove the five fixing screws and lift away.

### Refitting the Trimmer Blade and Anvil

Slacken the anvil adjuster screws (see Figure 37) back two revolutions. Position the anvil fully back towards the conveyor (see Figure 37) and lightly tighten the anvil fixing screws. Affix the blade using the five blade fixing screws but do not tighten. Using the mark made when the blade was removed, adjust the angle of the blade. Ensure that it does not protrude above the clamp at point 'A' or below it at point 'B' (see Figure 38). Lightly tighten the centre screw, sufficient to hold the blade in this position.

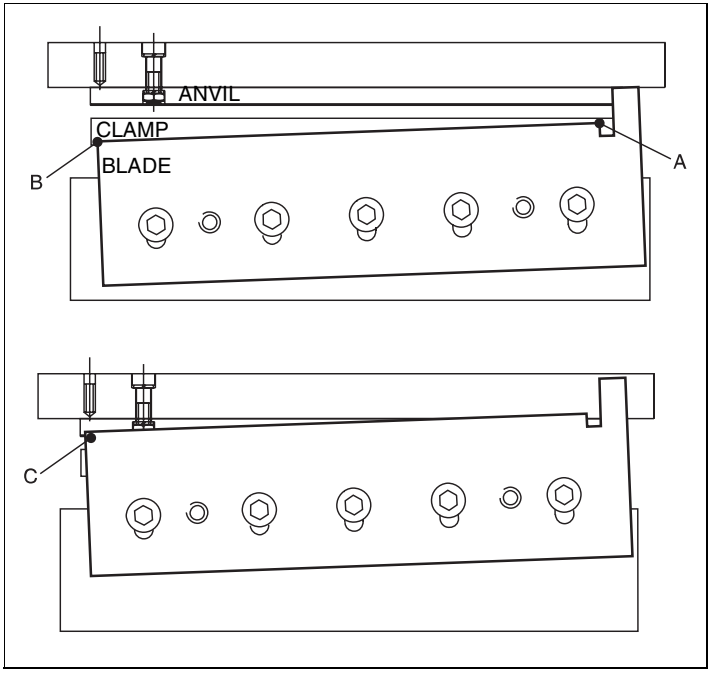



FIGURE 38

Manually release the clutch by pulling the lever towards you and use the hand crank until the blade is at top dead centre. At point 'C' (see Figure 38) the blade must pass the anvil by 1mm (1/25"). Make fine adjustments to the position if necessary. Tighten all the blade fixing screws starting from the centre and working out. Push the anvil firmly forwards against the blade (pushing from behind with your fingers at each end). Maintain a light pressure on the back of the anvil whilst tightening the anvil fixing bolts starting from the centre and working out. Lightly tension the anvil adjuster screws against the anvil.

## Final Adjustment

Manually release the clutch and hand crank slowly several rotations to check that the blade passes the anvil smoothly without obstruction.

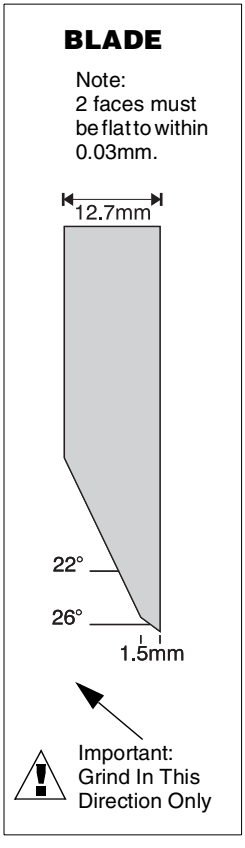
**Warning!**
Ensure that hands are kept clear at all times

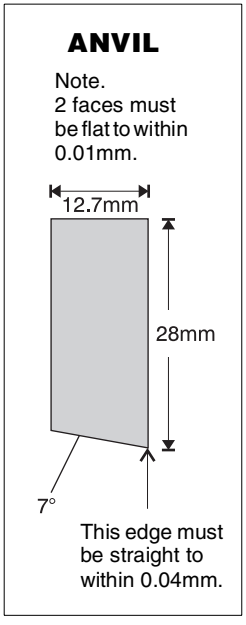
Place a single sheet of paper (large sheet size) between the blade and the anvil and hand crank to produce a test cut.

Check that a clean cut is obtained across the full width of the blade. If necessary loosen the anvil fixing screws at the point where adjustment is needed, apply additional pressure to the anvil adjusting screws (1/6th turn at a time) and re-tighten the anvil fixing screws.

Perform another test cut and make further adjustments if necessary.

Replace the anvil guard, black cover and side cover.

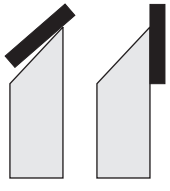


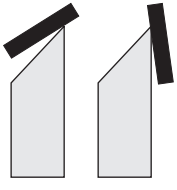

| | |
|---|---|
| Blade Material | High speed steel (18%W) |
| Grinding Angle | See drawing alongside |
| Grinding Wheel | Cup or Cylinder |
| Grinding Material | Grit : 46-60<br>Hardness : G-H<br>Bond : Bakerlite |
| Peripheral speed of the grinding wheel | 20-26 (V M/S)<br>65-85 (V Ft/S) |
| Table Speed | 20-26 (V M/Min)<br>65-85 (V Ft/Min) |
| Feed per pass | 0.01 - 0.02mm<br>0.0004 - 0.0008" |

## Honing

After re-grinding, the burr should be carefully removed by honing. The quality of honing affects the useful life of the cutting edge.



Correct



Incorrect

# A4 Using the Offline Control Panel

The Offline Control Panel allows the ASF and ATR to be operated completely offline, without the need for a collator.

- Part No. 041-525, ASF Offline Control Panel

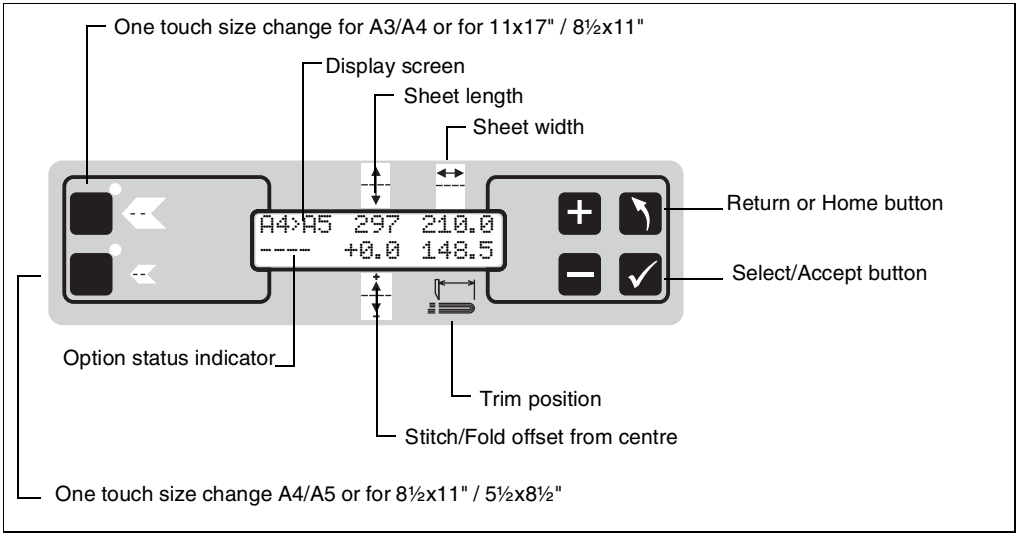



FIGURE 39 Offline Control Panel (metric measurements shown)

**NAVIGATION**

There are 5 different menu screens. Use ⊖ and ⊕ to move between different options on the screen. When an option is selected, it is highlighted by arrows on either side.

e.g. ▶297◀

Press ✓ to select the option - this either takes you to another menu screen, or allows alterations to be made.

After selecting an option, press ⊖ or ⊕ to make alterations, followed by ✓ to accept the changes.

At any time press ↰ to return to the main menu.

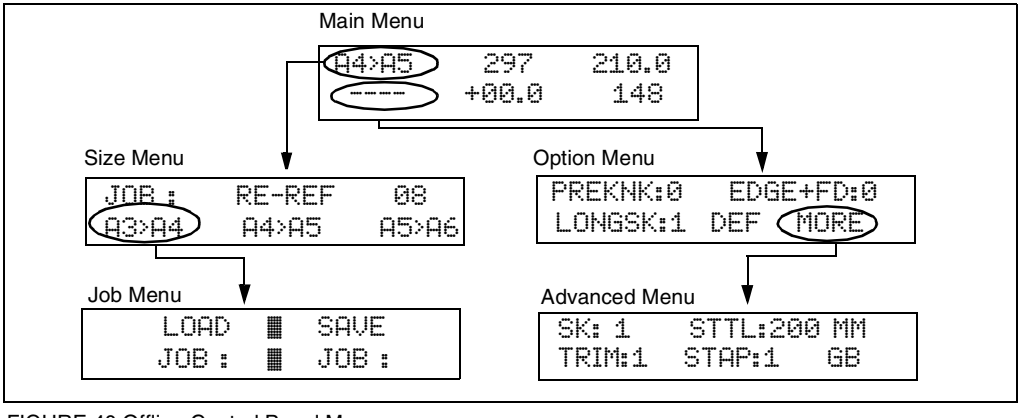



FIGURE 40 Offline Control Panel Menus

## PERSONALISING THE CONTROL PANEL

### Language

To change the language of the control panel display:

- press ⊖ / ⊕ to highlight ▶----◀*, press ☑
- press ⊖ / ⊕ to highlight ▶MORE◀, press ☑
- press ⊖ / ⊕ to highlight ▶GB◀, press ☑
- press ⊖ / ⊕ until your chosen language is displayed, press ☑

### Metric/Imperial

To change between metric and imperial measurements:

- press ⊖ / ⊕ to highlight ▶----◀*, press ☑
- press ⊖ / ⊕ to highlight ▶MORE◀, press ☑
- press ⊖ / ⊕ to highlight ▶MM◀, press ☑
- press ⊖ / ⊕ to toggle between ▶MM◀ and ▶IN◀, and then press ☑

When imperial measurement is selected, US standard paper sizes are available.

*The option status indicator, ▶----◀, will contain the letters P, L or E when 'pre-knock', 'long side knock' or 'edge and fold' are selected respectively (see p.63).

## CHANGING PAPER SIZES

### One-touch size change

One-touch size change is available for the two most common sizes, simply press the appropriate button. The ASF will give a double beep when it is ready to run.

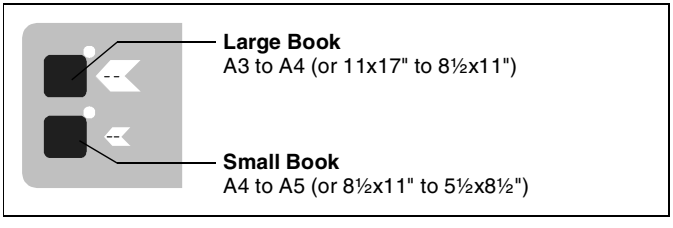



FIGURE 41 One-touch size changes

### Standard sizes

Three standard sizes are available through the control panel. Press ➖ / ➕ to highlight the top left position on the screen and press ☑. Press ➖ / ➕ to highlight the standard size needed and press ☑.

| Standard Sizes | Input Sheet Size | Booklet size | Trim setting |
|---|---|---|---|
| **Metric** | | | |
| A3>A4 | 420x297mm | 210x297mm | 207mm |
| A5>A6 | 297x210mm | 105x148.5mm | 145mm |
| A4>A5 | 210x148.5mm | 148.5x210mm | 102mm |
| **Imperial** | | | |
| 8.5"x11" | 11"x17" | 8.5"x11" | 8.4" |
| 5.5"x8.5" | 8.5"x11" | 5.5"x8.5" | 5.4" |
| 5.5"x4.2" | 5.5"x8.5" | 4.2"x5.5" | 4.1" |

### Custom sizes

Custom sizes can be entered from the main menu. Press ➖ / ➕ to highlight the required setting and press ☑. Use ➖ / ➕ to increase or decrease the measurement, then press ☑.

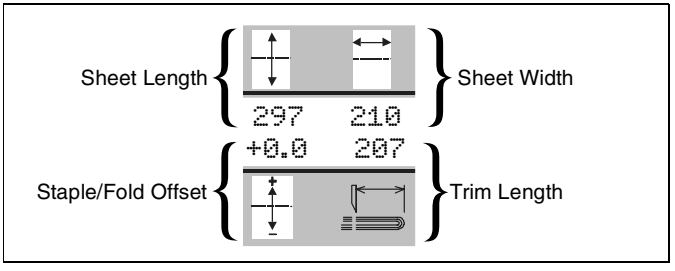



FIGURE 42 Size Adjustment

By default, the stitch/fold position will be exactly in the centre of the sheet. This can be altered using the stitch/fold offset setting (default is +0.0).

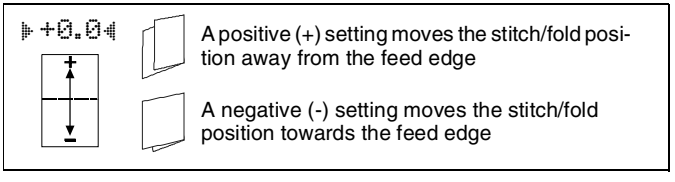



FIGURE 43 Staple/Fold Offset

### Book Thickness

Book thickness (the fold roller gap) is adjusted from the size menu. Press ⊖ / ⊕ to highlight the required setting and press ☑. Use ⊖ / ⊕ to increase or decrease the value, then press ☑.

## USING JOB MEMORIES

If required, up to five custom job settings can be loaded into memory, to be retrieved at a later date.

### Loading a job

- press ⊖ / ⊕ to highlight the top left position of the screen, press ☑
- press ⊖ / ⊕ to highlight JOB, press ☑
- press ⊖ / ⊕ to highlight LOAD, press ☑
- press ⊖ / ⊕ to select the memory required, press ☑

**Note:** When highlighting an option on the screen, the top left position is always highlighted first, therefore, to access the Job Menu, you can just press ✓,✓.

### Saving a job to memory

- press ⊖ / ⊕ to highlight the top left position of the screen, press ✓
- press ⊖ / ⊕ to highlight ▸JOB◂, press ✓
- press ⊖ / ⊕ to highlight ▸SAVE◂, press ✓
- press ⊖ / ⊕ to select the memory required, press ✓

## CONTROL PANEL OPTIONS

In addition to the functions explained earlier, the following options are also available. When selected, some of these are shown on the 'option status indicator' position on the main menu screen:

PREKNK Selects pre-knock which provides additional jogging prior to stitching. This is useful for heavy or large sheets. When selected, this shows as P on the main menu screen.

EDGE+FD When selected, the set will be edge-stitched and then folded. When selected, this shows as E on the main menu screen.

LONGSK Selects long side-knock which causes the in-feed sidelays to hold the set during both stitching and folding without releasing. This is useful if the booklet is not being folded square, however it is essential that the sheet width is set accurately. When selected, this shows as L on the main menu screen.

DEF Returns the ASF/ATR to default factory settings. This does not alter job memories or current size settings.

MORE Enters the 'advanced menu' where additional parameters can be adjusted.

RE-REF If you suspect the adjustment system is not calibrated correctly, you can select this option. After recalibration, the adjustment axes will return to the current settings. If the software detects a possible axis positional fault, the unit will automatically recalibrate the axes.

It is important that you do not re-reference whilst there is paper in the machine, if for example there is a paper jam.

SK Press to adjust the delay between the side-knock and stitching; this is sometimes useful in ensuring a tidy set. The default value is 1. Increase in increments of about 100, up to a maximum of 1000. Note that increasing the side-knock will reduce the production speed.

STTL Press to adjust the time delay before folding (the default is 200mS). Reducing the value will increase speed.

TRIM Switches the trim operation on and off.

STAP Switches the stitch operation on and off.

# A5 Connecting to other Watkiss equipment

The ASF can be connected as follows:

- Automatic Stitch-Fold to Automatic Trimmer
- Automatic Stitch-Fold and Trim to Outfeed Conveyor

The following guidelines regarding connection or disconnection should be observed.

### Connecting the Automatic Trimmer

If the ASF is connected to a collator, use the motorised transport switch and drive the ASF clear of the collator base unit.

Switch off and disconnect the power to the ASF.

Push the ATR towards the ASF and ensure the docking bracket on the ASF conveyor outfeed engages squarely and fully with the locating bar in the ATR infeed and the cables are not trapped (see Figure 44).

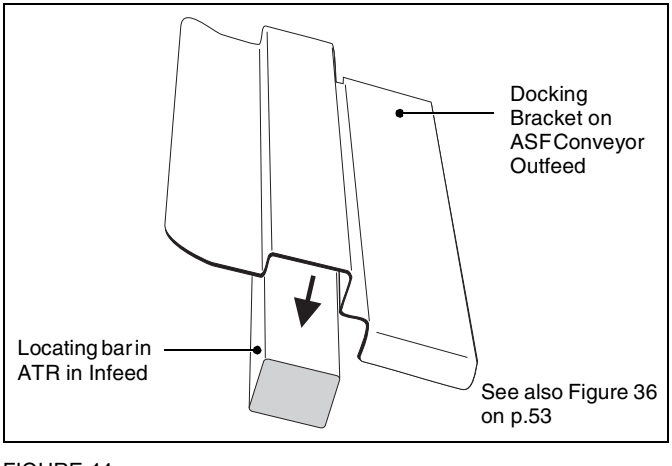



FIGURE 44

Raise the lid on the ASF and connect the power and data cables from the ATR.

Raise the lid on the Automatic Trimmer, unscrew the orange hand screw on the safety interlock and slide the interlock bar towards the side of the machine so it engages with the switch unit. If it is difficult to engage the interlock bar it is probably because the two machines are incorrectly docked.

Tighten the orange hand screw to secure the interlock in the 'live' position (see Figure 45).

Close the lids on the ASF and ATR.

.

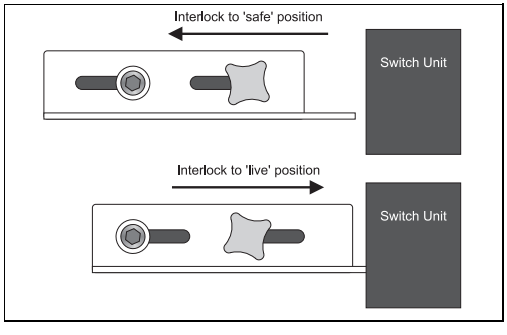



FIGURE 45

Reconnect the power, switch on and drive the combined ASF/ATR unit back under the collator floor base where necessary.

## Connecting the Outfeed Conveyor to the ATR

Offer up the outfeed conveyor to the ATR. Align the two orange hand screws on the conveyor to the threaded mounting holes on the ATR and tighten.

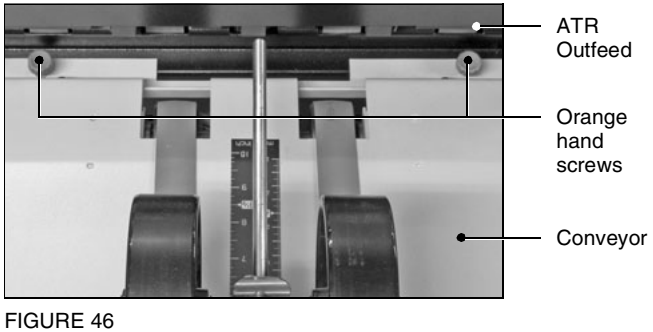



FIGURE 46

Plug in the conveyor cable to the socket on the rear panel of the ATR.

Note: to release this cable it is necessary to press in the metal tab marked ‘PUSH’ while pulling on the plug (see Figure 47).

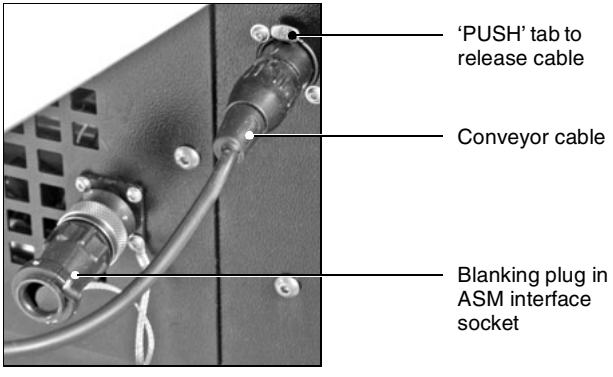



FIGURE 47

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# A6 Declaration of Conformity

**Manufacturer's Name:** Watkiss Automation Limited

**Manufacturer's Address:**
Watkiss House
Blaydon Road
Sandy, Bedfordshire, UK.
SG19 1RZ
United Kingdom

**Declares that the product**

**Product Name:** Watkiss Automatic Stitch-Fold and Trim

**Conforms to the following Product Specifications:**

**Safety:** 73/23/EEC & 98/37/EC Council Directive 'on the approximation
of laws of Member States relating to machinery'.
BS EN 60950 : 2002

**EMC:** 89/336/EEC Council Directive 'on the approximation of laws of Member States relating to electromagnetic compatibility'.
EN55022:1998 Class A
EN55024:1998
EN61000-3-2:2000
EN61000-3-3:1995 + A1:2001

M C Watkiss
Technical Director
Watkiss Automation Ltd

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# Index

# Index

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Watkiss Automatic Stitch Fold & Trim Operating Manual.
Issue 4, November 2006. Part No. 960-191