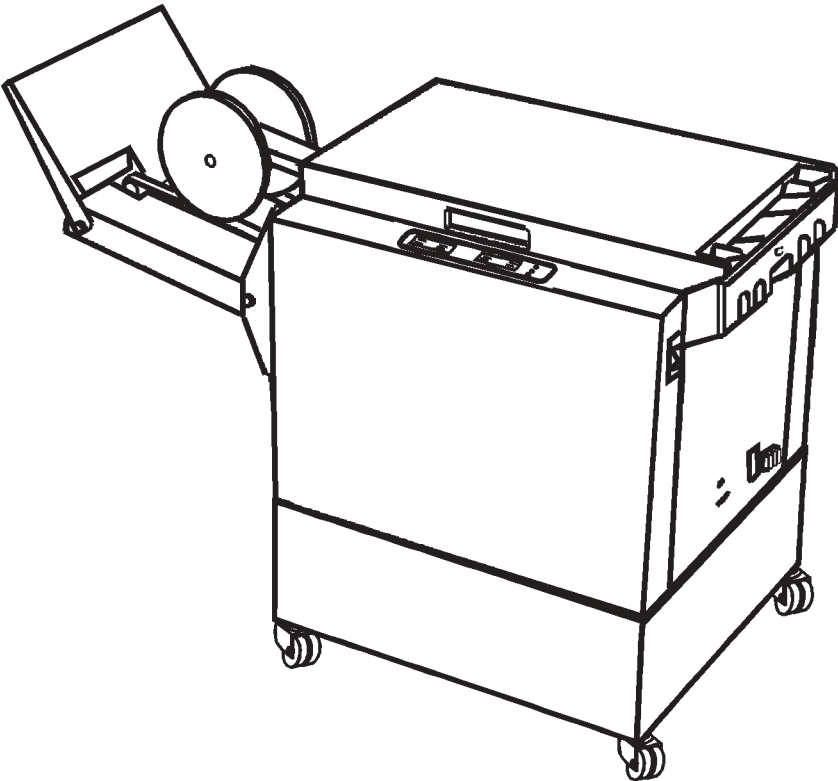


Stapler Folder Model 82 Service Manual



February 2003

Part No. 76166

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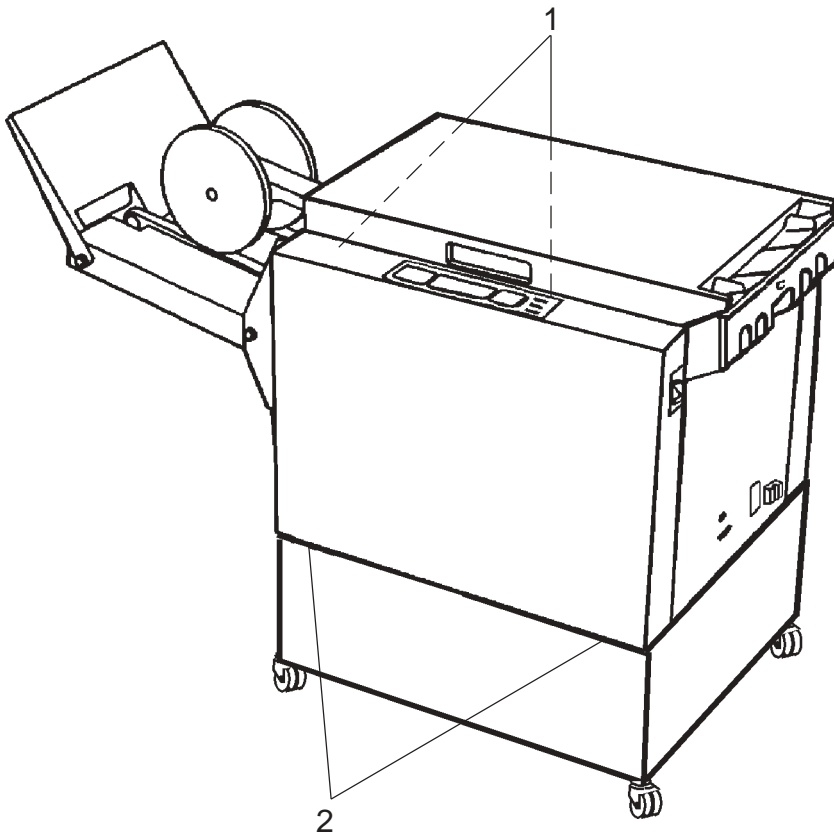
REMOVAL

Front cover

1. Switch off the main power switch and disconnect the power cord.
2. Open the Top cover and loosen the two screws (1) securing the top end of the Front cover.
3. Loosen the two nuts (2).
4. Pull out the lower end and lift up carefully to remove.

Rear cover

Removal of the rear cover is performed the same way as removal of the front cover.

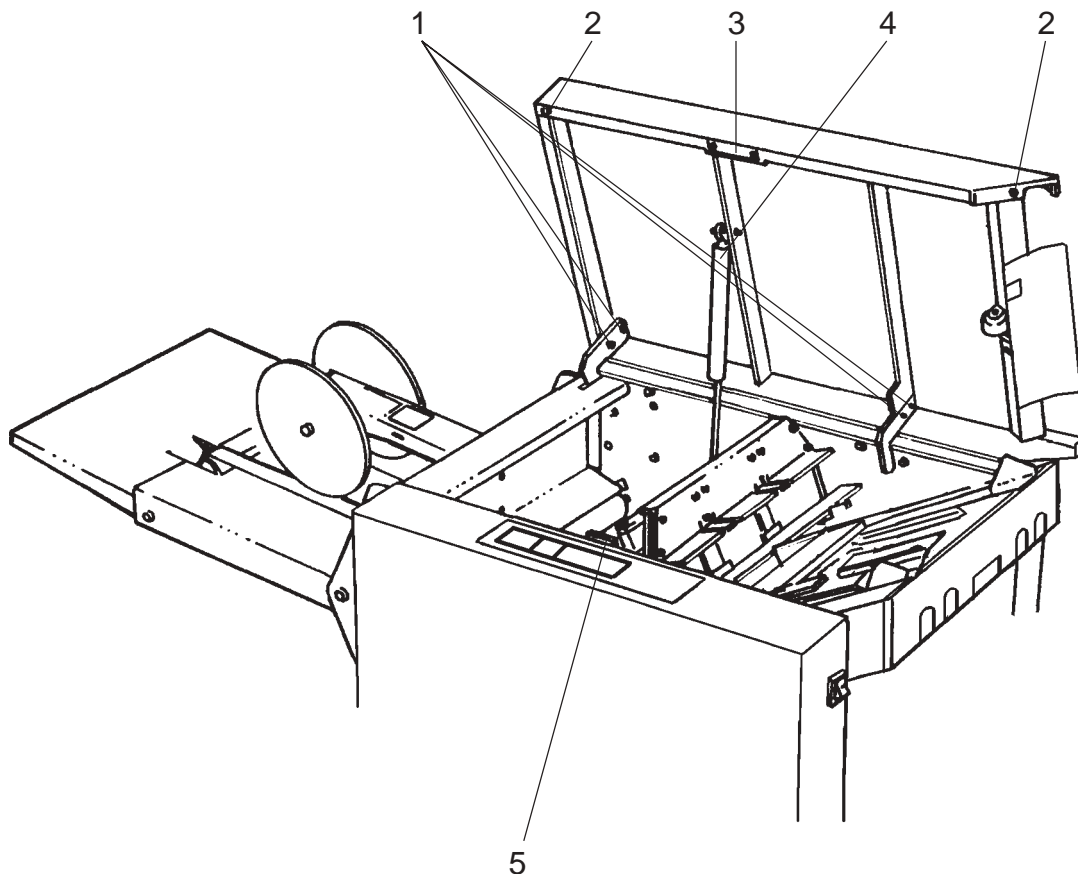


INSTALLATION

Installation is an exact reversed procedure of removal.

REMOVAL

1. Open the Top Cover
2. Disconnect the Gas spring (4).
3. Remove the four nuts and spacers and the two screws (1) from the brackets.
4. Lift off the Top cover.



INSTALLATION

1. Mount the four nuts and spacers and the two screws (1) onto the brackets and tighten.
2. Connect the Gas spring (4).
3. Close the Top cover and check:
 - That the magnet (5) locks on the sheet plate (3).
 - That both rubber bushings (2) contacts the surface.
 - That the Top cover front side is parallel to the front cover.
 - That the Interlock switch activates when the distance between the magnet (5) and the sheet plate (3) is 2 to 5 mm.

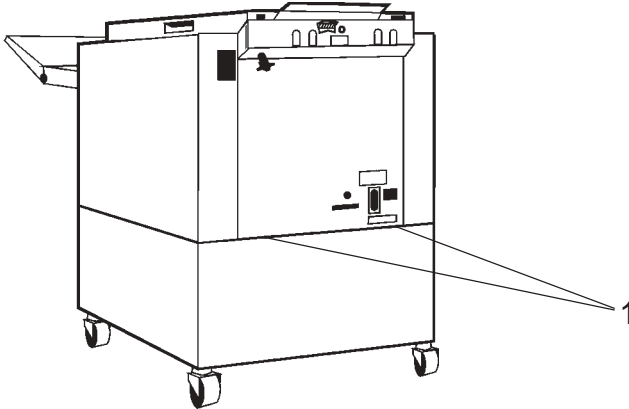
ADJUSTMENT

1. Loosen the screws and nuts (1).
2. Move the Top cover to adjust.
3. Tighten the screws and nuts (1).
4. Repeat the check.

REMOVAL

Infeed cover

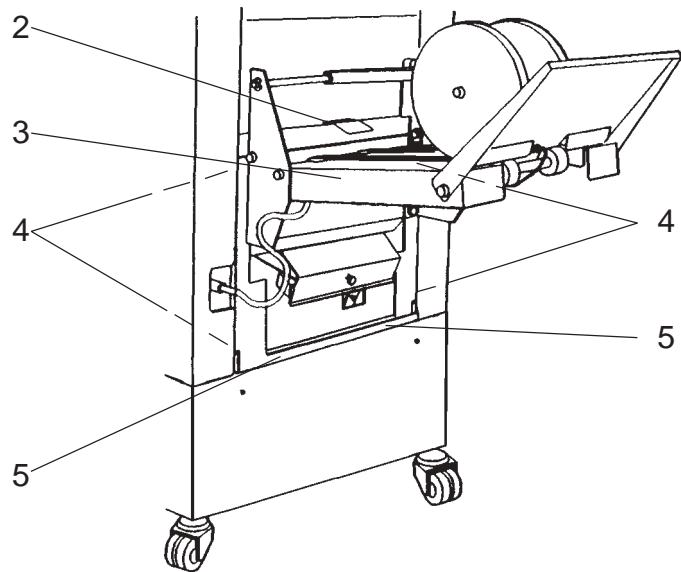
1. Switch off the main power switch and disconnect the power cord.
2. If the unit is online, disconnect the connection cable.
3. Loosen the two nuts (1).
4. Pull out the lower end of the infeed cover and remove the cover downwards.



Outfeed cover

1. Switch off the main power switch and disconnect the power cord.
2. Remove front and rear cover according to REP 1.1.
3. Loosen the two screws below the stacker frame securing the stacker.
4. Disconnect and remove the stacker (3).
5. Tip the model 82 by placing 50 mm or greater distances between the outfeed end of the Model 82 and the base.
6. Loosen the two screws (5) securing the outfeed bottom cover.
7. Slide the bottom cover towards the outfeed, until it releases from the infeed bottom cover. Slide the bottom cover towards the infeed until it releases from the screws (5).
8. Remove the four screws (4).
9. Pull the cover carefully out to avoid damage on the outfeed sensor harness on the front side.

NOTE: Cut the ty-wraps and disconnect the outfeed sensor to fully remove the outfeed cover.



INSTALLATION

Installation is an exact reversed procedure of removal.

NOTE1: Make sure the plastic guide (2) does not get jammed between the stackers left side and the outfeed cover when installing the stacker.

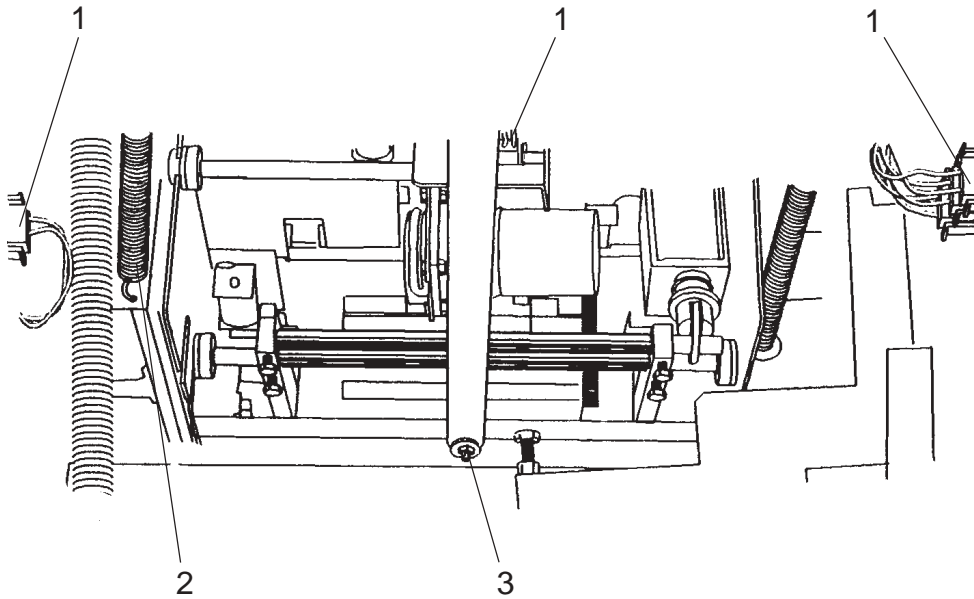
NOTE2: Replace ty-wraps for the outfeed sensor harness.

REMOVAL

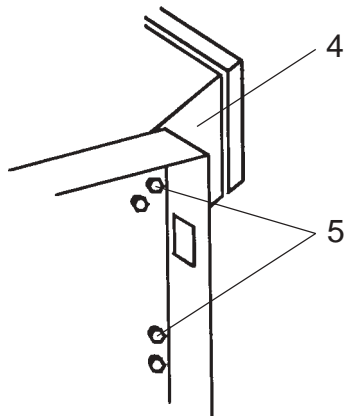
1. Remove the front and rear cover according to REP 1.1.
2. Remove the infeed cover according to REP 1.3
3. Disconnect the five connectors (1).
4. Remove the spring (2).
5. Disconnect the length adjust strap (3) .

NOTE: The length adjustment strap is mounted with a 5.5 mm nut.

VIEW INSIDE INFEED COVER



6. Remove the two screws (5) on the front side.
7. Remove the two screws (5) on the rear side.
8. Lift out the Infeed module (4).



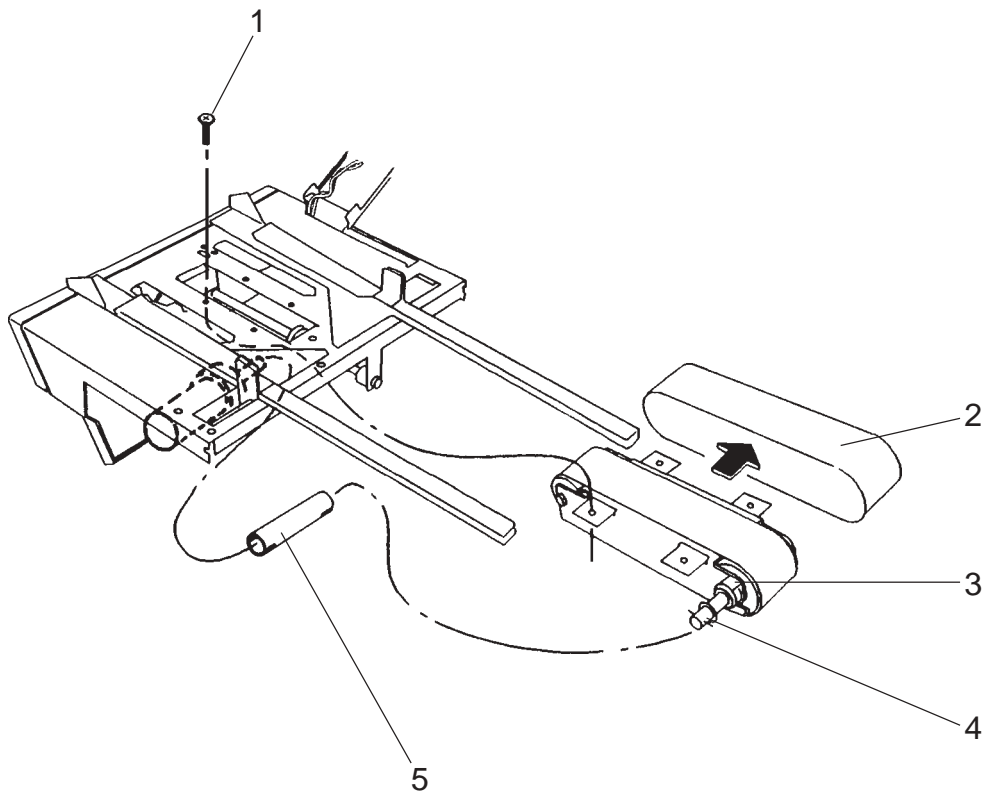
INSTALLATION

Installation is an exact reversed procedure of removal.

NOTE: Ensure the Side guides do not get damaged.

REMOVAL

1. Switch off the main power switch and disconnect the power cord.
2. Remove the Infeed module according to REP 2.1
3. Remove the four screws (1).
4. Slide the drive coupling (5) off of the drive shaft (4) and remove the transport belt assembly.
5. Remove the belt (2) from the assembly.



INSTALLATION

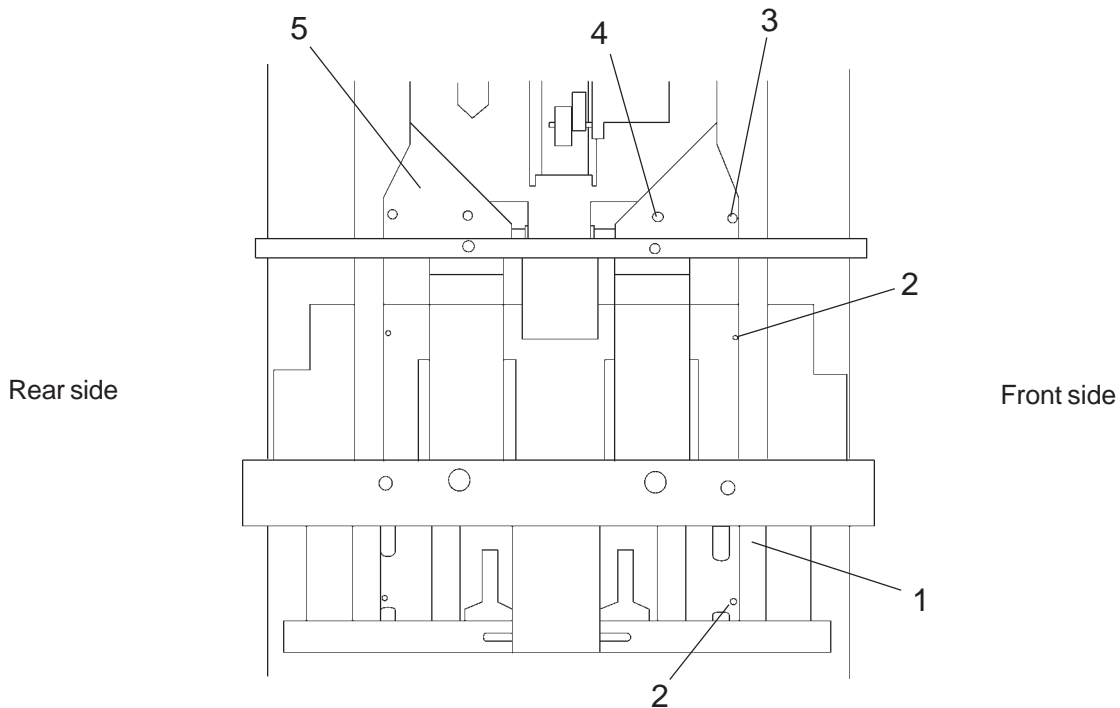
Installation is an exact reversed procedure of removal.

Note: Make sure the flat side on the bearing (3) is up when installing.

REMOVAL

1. Switch off the main power switch and disconnect the power cord.
2. Remove the infeed cover according to REP 1.3
3. Loosen the screw (3) and the screw (4) on the front side jogger.
4. Remove the side jogger.
5. Same procedure on the rear side jogger.

STAPLER AREA VIEWED FROM ABOVE WITH STAPLER HEADS REMOVED



INSTALLATION

Installation is an exact reversed procedure of removal.

ADJUSTMENT

1. Move the front (1) side jogger to the two reference holes (2) in the paper path according to the figure.
2. Check the distance between the two holes and the side jogger. The distance should be equal ± 0.3 mm between the lower hole and the side jogger and the upper hole and the side jogger. If not go to step 3.
3. Loosen the screw (3) and the screw (4) on the side jogger. Adjust the side jogger according to step 2.
4. Perform the same check on the rear (5) side jogger, adjust if needed.

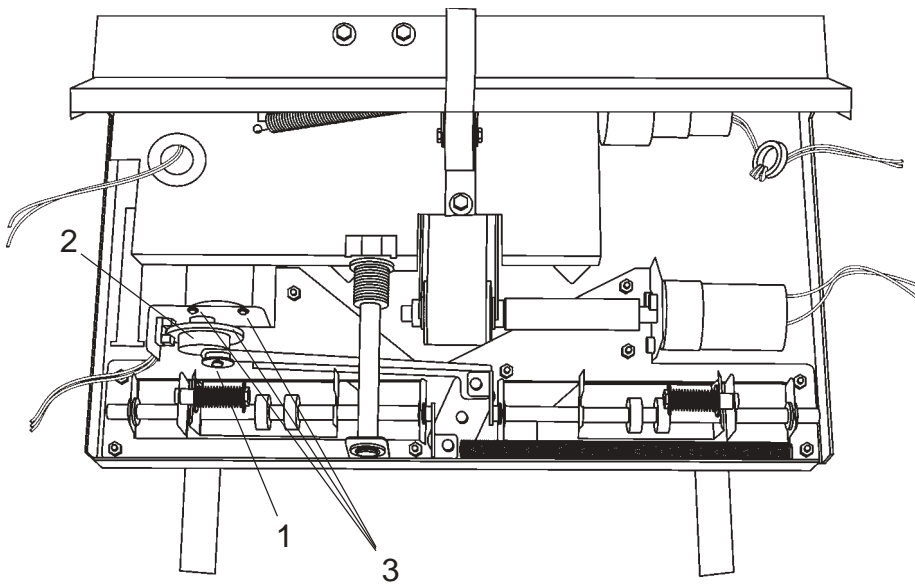
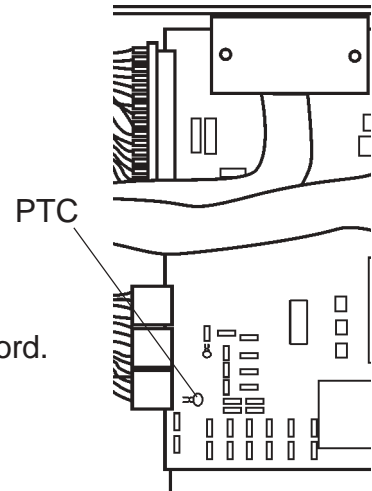
PURPOSE

To verify whether the motor or PCB is causing the motor M3 not starting or stopping too soon, perform this check:

1. Start the dead cycling according to FIP 8.1.
2. Feel the PTC resistor (PTC) with your fingers.
If warm replace motor, not PCB.

REMOVAL

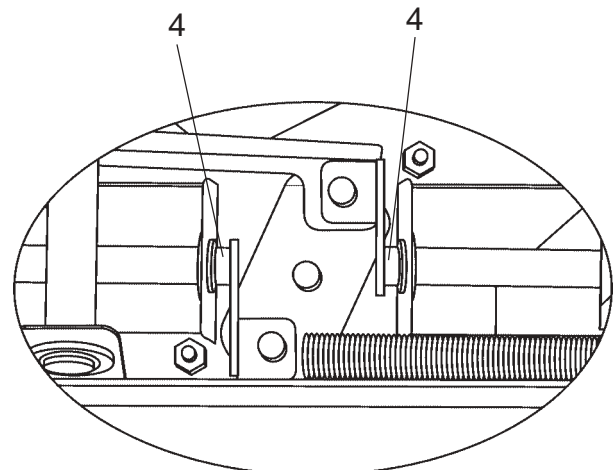
1. Switch off the main power switch and disconnect the power cord.
2. Remove the front and rear cover according to REP 1.1
3. Remove the infeed cover according to REP 1.3
4. Remove the infeed module according to REP 2.1
5. Turn the infeed module up side down.
6. Remove the 7 mm screw (1).
7. Remove wheel (2) by loosening one 4 mm allen screw.
8. Remove three 7 mm screws (3).
9. Cut two tie raps and remove the motor.



INSTALLATION

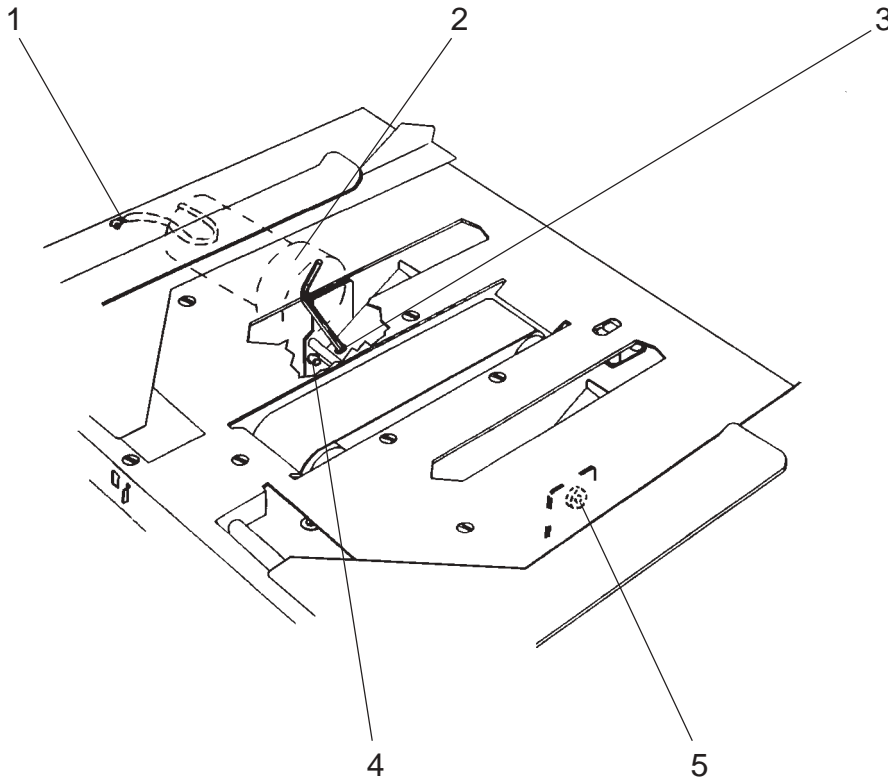
Installation is an exact reversed procedure of removal.

But before tightening the three screws (3), place the side joggers in the outer position. There should be 0.1-0.3 mm play between the plate and the flange bushing on both sides (4). Tighten the three screws (3).



REMOVAL

1. Switch off the main power and disconnect the power cord.
2. Remove the infeed module according to REP 2.1.
3. Disconnect the ground wire (1).
4. Loosen the setscrew in the collar (3).
5. Remove the motor (2).

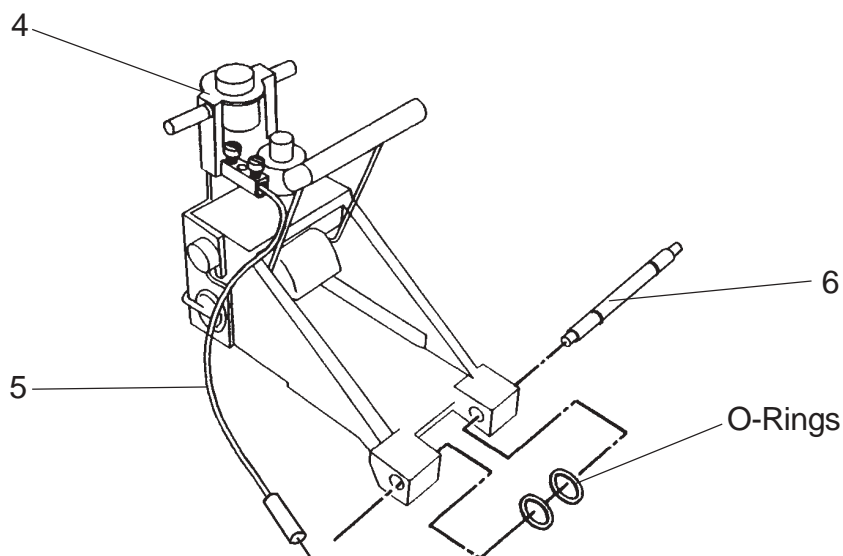
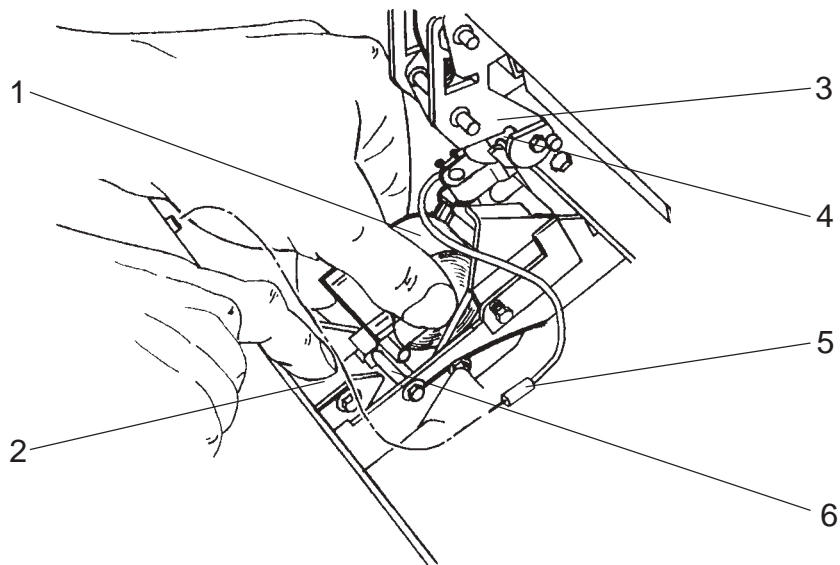


INSTALLATION

1. Install the motor.
2. Ensure that the pin on the motor is inserted in the grommet (4).
3. Push the collar (5) of the flange bushing firmly against the bracket.
4. Tighten the setscrew (3) on the flat of the shaft.
5. Connect the ground wire (1).
6. Install the infeed module according to REP 2.1.
7. Check/adjust the Staple/fold position according to REP 5.2.

REMOVAL

1. Switch off the main power switch and disconnect the power cord.
2. Disconnect the staple detection lead (5).
3. Push down latch (2) and lift the stapler head (1) out.

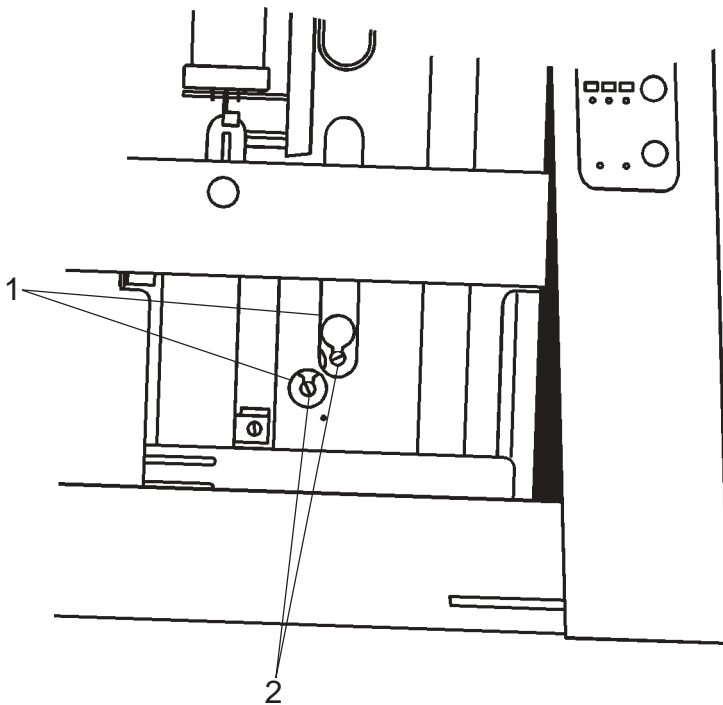


INSTALLATION

1. Install the plunger (4) in the plunger retraction swing arm (3).
2. Push the Stapler head down so that the pivot pin (6) locks under the latch (2).
3. Connect the staple detection lead (1).

REMOVAL

1. Move the front side guide to the outermost position.
2. Adjust the sheet size on the control panel to align the mounting screws (2) for the solenoid with the access holes (1) in the paper path.
3. Switch off the main power switch and disconnect the power cord.
4. Remove the infeed cover according to REP 1.3.
5. Cut the ty-wrap securing the cable.
6. Disconnect the solenoid connector.
7. Loosen the two screws (2).
8. Slide the solenoid towards the infeed to remove.



INSTALLATION

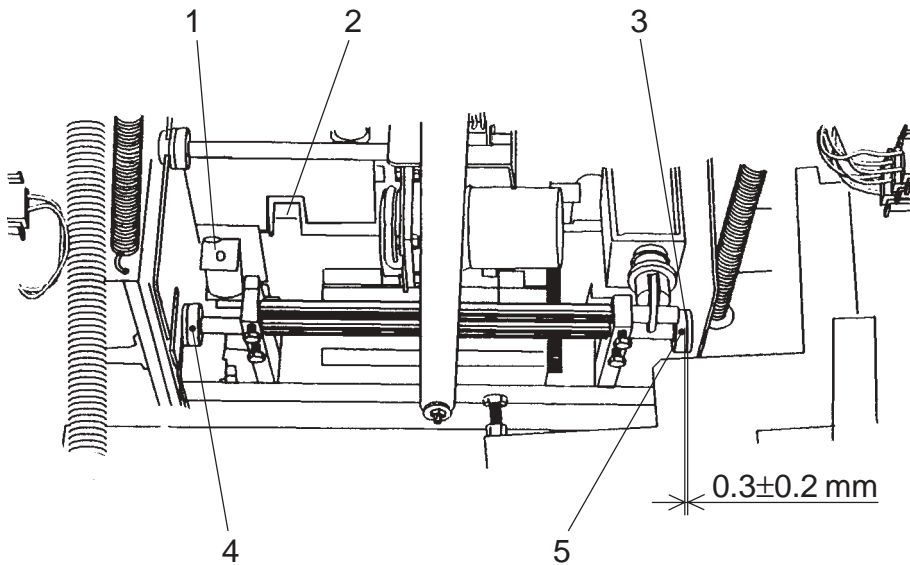
Installation is an exact procedure of removal.

PURPOSE

The purpose is to position the Stop gate fingers in the center of each opening in the paper path so that binding does not occur.

1. Adjust to the smallest sheet size on the control panel.
2. Switch off the main power switch and disconnect the power cord.
3. Remove the Infeed cover according to REP 1.3.
4. Insert a 0.3 mm feeler gauge (3) to ensure 0.3 ± 0.2 mm endplay.
5. Disengage the Stop gate release solenoid (1).

VIEW INSIDE INFEED COVER



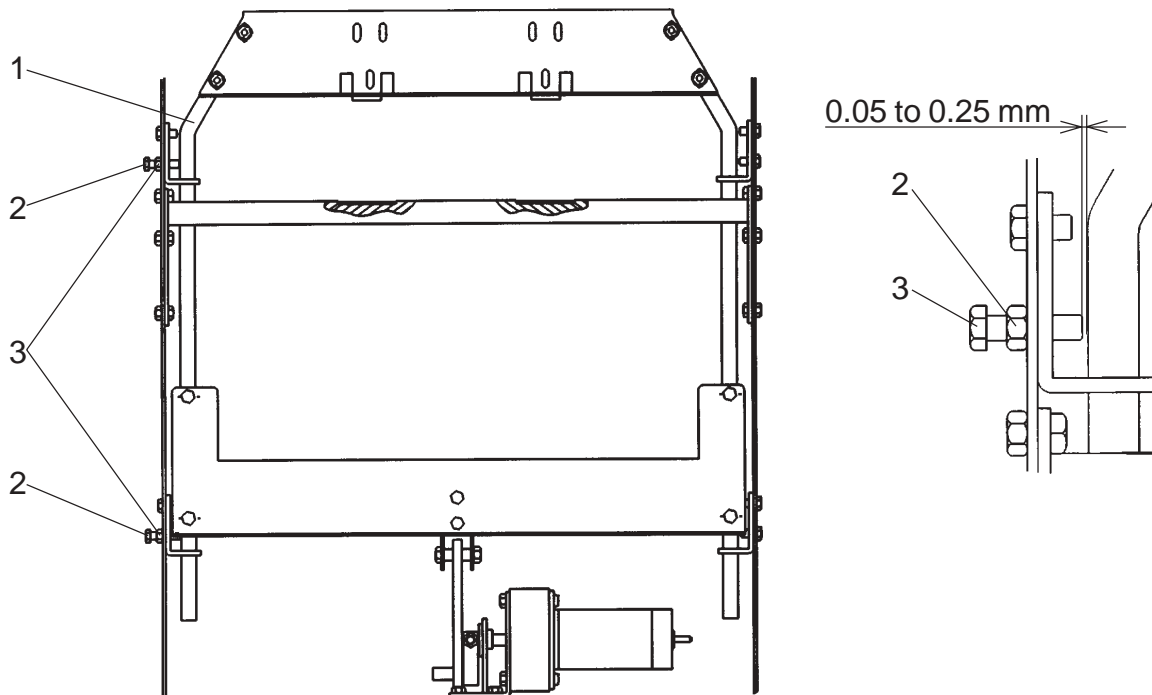
ADJUSTMENT

1. Check that the fingers (2) are centered in the openings in the paper path.
2. Loosen the two allen screws (4)(5) securing the collars.
3. Center the fingers (2).
4. Tighten the front allen screws (4).
5. Insert a 0.3 mm feeler gauge (3) to obtain 0.3 ± 0.2 mm endplay.
6. Tighten the rear allen screw (5).

PURPOSE

The purpose is to limit the front-to-rear movement of the Stapler assembly drive bars without causing them to bind.

1. Switch off the main power switch and disconnect the power cord.
2. Remove the Infeed cover according to REP 1.3.
3. Remove the Front cover according to REP 1.1.



ADJUSTMENT

Top bearing

1. Push the drive bar (1) toward the rear.
2. Insert a feeler gauge to check that the gap is 0.05 mm to 0.25 mm.
3. Loosen the locknut (3).
4. Rotate the screw (2) to adjust.
5. Tighten the locknut (3).

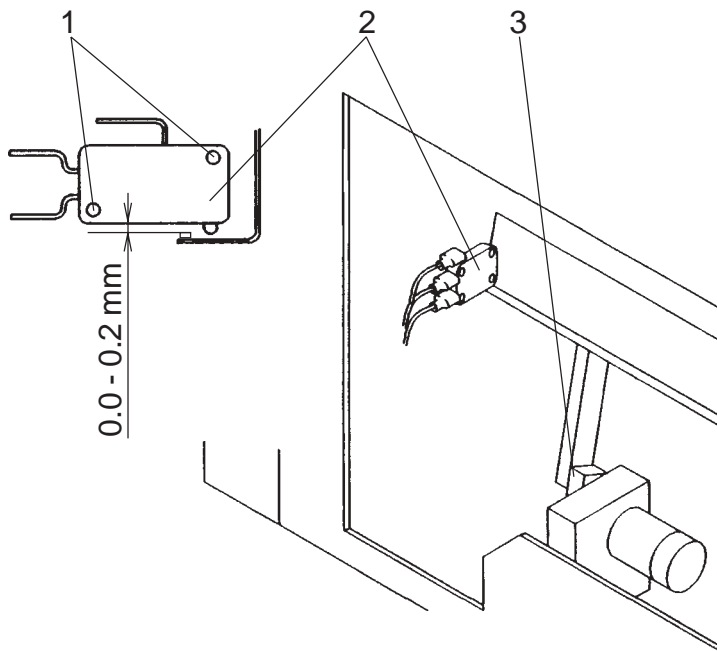
Bottom bearing

Adjustment of the Bottom bearing is performed the same way as adjustment of the Top bearing.

PURPOSE

The purpose is to position the Stapler motor home position switch (SW1) so that the Stapler motor (M1) stops in the correct position after stapling a set.

1. Switch off the main power switch and disconnect the power cord.
2. Remove the infeed cover according to REP 1.3.
3. Rotate the motor linkage (3) to the top dead center.



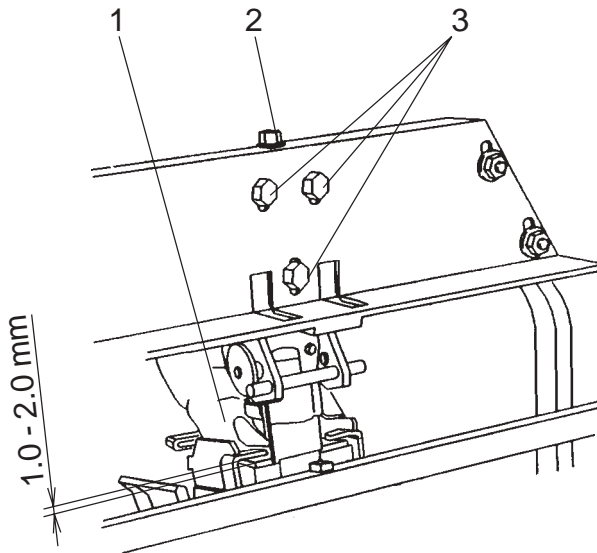
ADJUSTEMENT

1. Check that the gap is 0.0 mm to 0.2 mm.
2. Loosen the two screws (1).
3. Move the switch (2) to adjust.
4. Tighten the two screws (1).

PURPOSE

The purpose is to ensure the staple feed.

1. Check/adjust the Stapler home position according to REP 3.5.
2. Switch off the main power switch and disconnect the power cord.



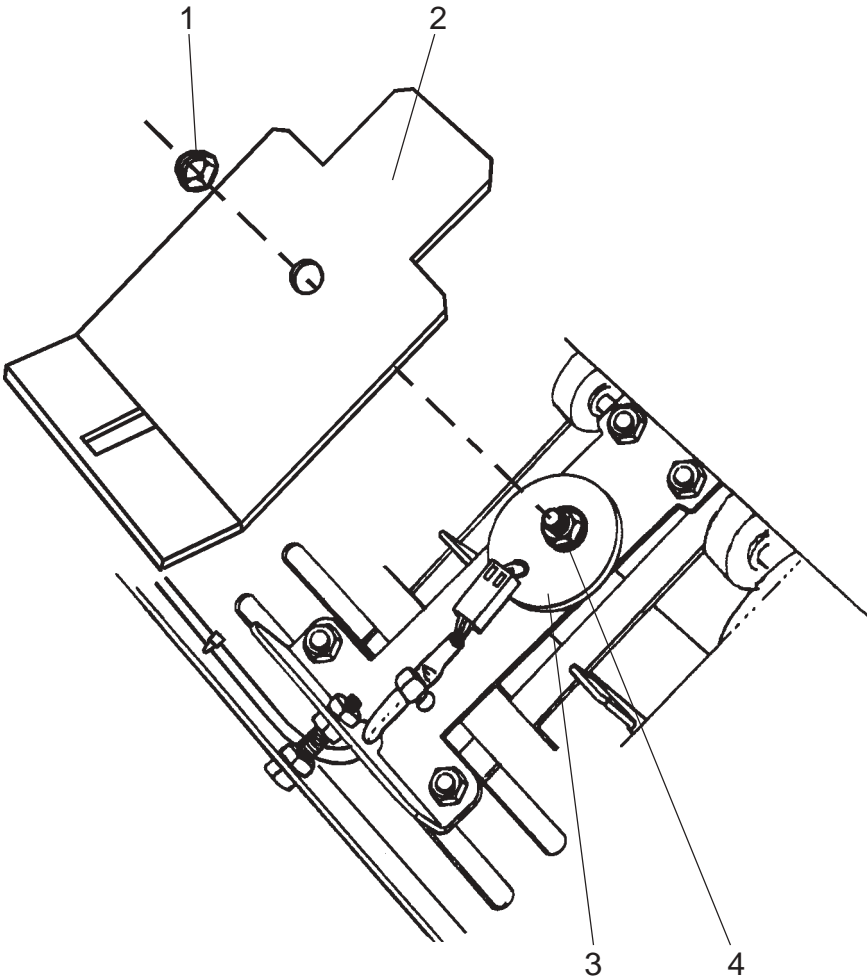
ADJUSTMENT

1. Push down the stapler head (1).
2. Check that the gap is 1.0 to 2.0 mm.
3. Loosen the three screws (3).
4. Rotate the screw (2) to adjust.
5. Tighten the three screws (3).

PURPOSE

The purpose is to position the saddle stapling sensor (Q1) so that it will switch on the stapler motor (M1) when a set reaches the Staple stop gate (see EDI 7.4).

1. Remove the rear cover according to REP 1.1 and pull out the interlock bypass switch actuator.
2. Remove the nut (1).
3. Remove the black shield (2).



ADJUSTMENT

1. The voltage between TP1 on the controller PCB and common ground should be greater than 2.2 VDC with the sensor blocked and less than 0.9 VDC unblocked.

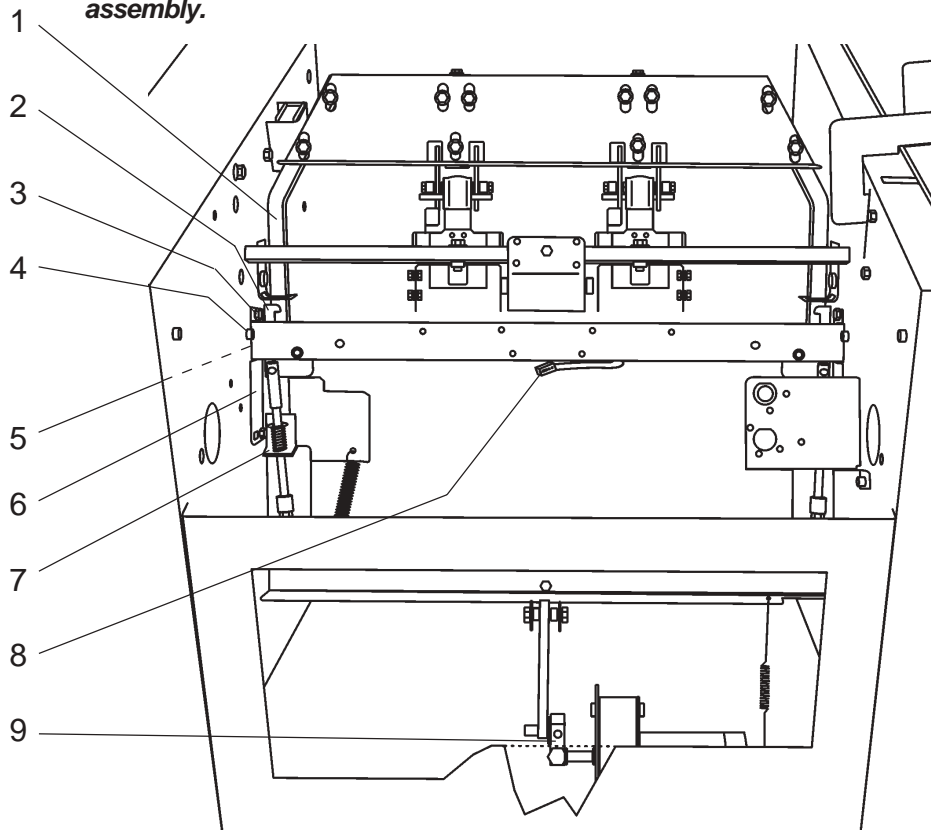
NOTE: Use white paper to block the sensor.

2. Loosen the nut (4).
3. Move the sensor (3) to obtain the voltages.
4. Tighten the nut (4).

Removal

1. Set the machine to A3 or 11" x 17" format.
2. Switch off the main power switch and disconnect the power cord.
3. Remove the infeed module according to REP 2.1.
4. Remove stapler heads.
5. Turning the motor linkage (9) down to the point where it stops by it's own weight.
WARNING: The stapler assembly falls down with it's full weight. Do not use your fingers directly on the crank joint as it could cause injury.
6. Loosen the nuts on both sides fastening the clincher arm bracket (7) to the stapler assembly drive bars (1).
7. Remove the screws (5) on both sides fastening the clincher bar.
8. Remove the allen screws (4) on both sides.
9. Remove the connector from the edge stapling sensor (8).
10. Lift out the clincher bar assembly.

NOTE: Turn the motor linkage (9) upwards slightly to facilitate removal of the clincher bar assembly.



INSTALLATION

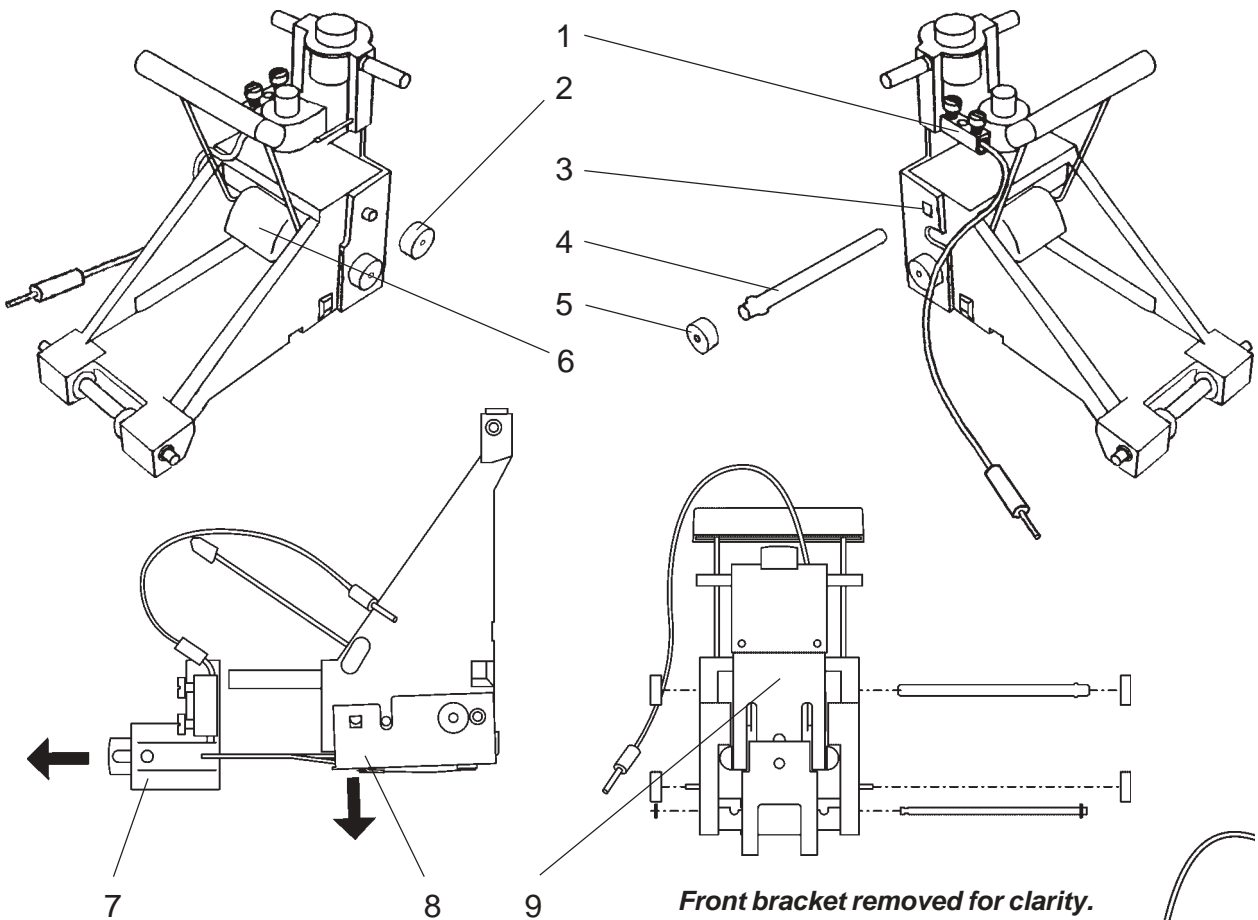
Installation is an exact procedure of removal.

NOTE1: Lift up the clincher arm (2) so that it not jams against the allen screw (3).

NOTE2: Make sure the clincher beam assembly fits tight towards the clincher bar support bracket (6) by pushing the clincher beam assembly towards the clincher bar support bracket (6) when tightening the screws (5).

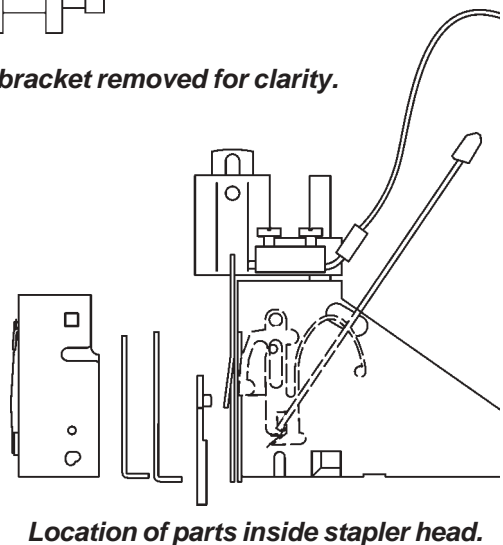
REMOVAL

1. Switch off the main power switch and disconnect the power cord.
2. Remove stapler head according to REP 3.1.
3. If the driver is to be replaced, remove the staple detection lead (1) and install it on the new driver.
4. Remove insulator (5).
5. Remove pivot pin (4) from the side where there is a square hole in the front bracket (3).
6. Remove the staple belt feeder (6).
7. Turn the stapler head as shown and lift out the upper part of the front bracket (8).
8. Remove the driver (7).



INSTALLATION

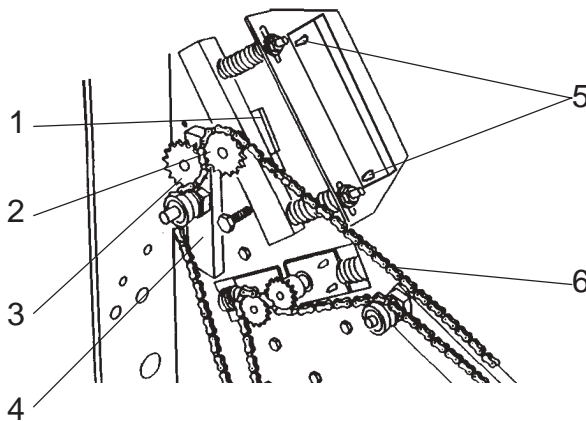
1. Clean and lubricate all moving parts with light grease or oil including both sides of the driver (9).
2. Installation is an exact reversed procedure of removal.
3. Move the driver up and down to make sure that it is correctly installed.
4. Install the stapler head according to REP 3.1.



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REMOVAL

1. Switch off the main power and disconnect the power cord.
2. Remove front and rear cover according to REP 1.1.
3. Remove the outfeed cover according to REP 1.3.
4. Remove the drive chain (6).
6. Note the position of the sprockets (2&3) on the shaft. Remove the sprockets and the plastic spacer from the front of the spring-loaded bearing block.
7. Remove the collar and the plastic spacer from the rear of the spring-loaded roll.
8. Remove the front bearing block (4) by removing the two screws from the inside of the machine.
9. Remove the front and rear spring-loaded bearing block assemblies by removing screws (5), front and rear, from the inside of the machine.
10. Note the position of the front plastic bearing (1). Remove the bearing.
11. Pull out the upper fixed roll to remove.
12. Pull out the upper spring-loaded roll to remove.



INSTALLATION / ADJUSTMENT

1. Installation is an exact reversed procedure of removal.

Note 1: *Push the upper side of the bearing block (4) towards the outfeed before tightening.*

Note 2: *Before tightening the spring-loaded bearing blocks, use a feeler gauge to check that the endplay is 0.1 to 0.5 mm between the sprocket (2) and the plastic spacer. Also check that the endplay on the rear side is 0.1 to 0.5 mm between the collar and the plastic spacer.*

2. Adjust the fold pressure according to REP 4.3.

REMOVAL

Lower right folder roll

1. Switch off the main power and disconnect the power cord.
2. Remove front and rear cover according to REP 1.1.
3. Remove the drive chain (3).
4. Note the sprockets (2) position on the shaft and remove the sprocket (2).
5. Remove the spring (4) on both front and rear side.

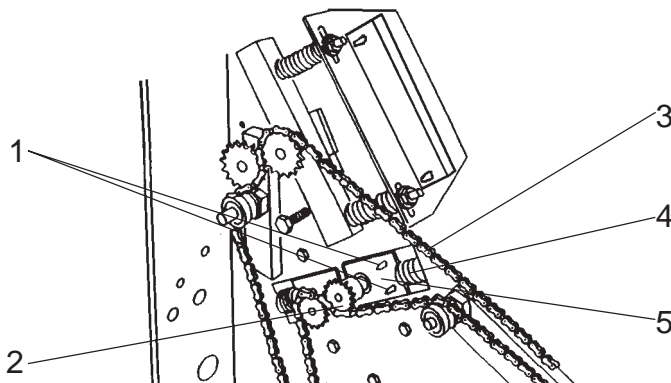
WARNING: *When compressing, pry the spring onto a screwdriver in order to avoid injury when removing it.*

7. Loosen the screws (1) from the inside of the the machine.
8. Wiggle the fold roller shaft up and down in order to release it from the brackets (5) securing the shaft.
9. Pull the folder roll through the cut out in the side frame until the shaft releases from the bearing on the opposite side. Then lift out the folder roll through the inside of the machine.

CAUTION: *In order to compensate for variations between machines, there could be shim washers placed on the inside of the bushing at the end of the Fold roller shaft. Note the position of the washers when removing.*

Lower left folder roll

Removal of the Lower left folder roll is performed the same way as removal of the Lower right folder roll, in addition the Outfeed cover has to be removed according to REP 1.3.



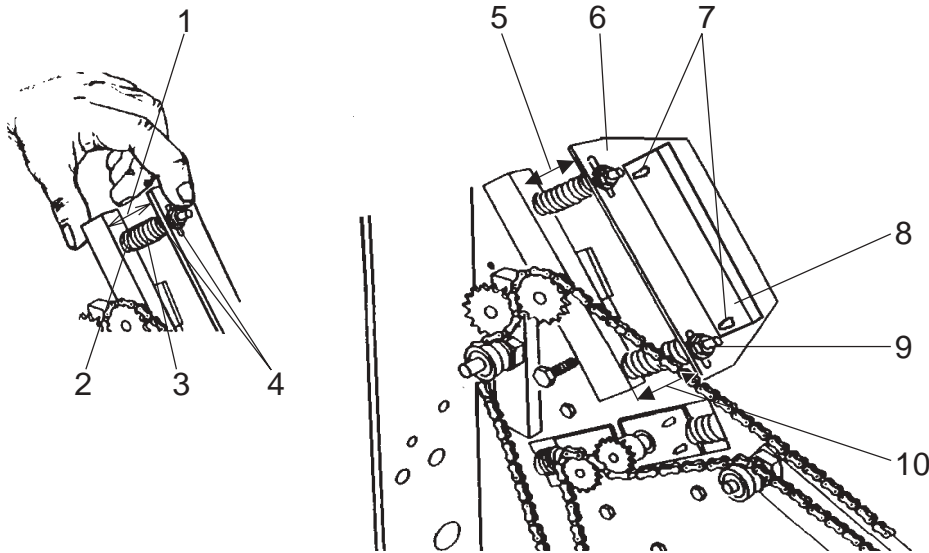
INSTALLATION

Installation is an exact reversed procedure of removal.

PURPOSE

The purpose is to ensure that when running 2-5 sheets, only the soft spring (upper spring) will be compressed and when running more than 5 sheets both springs will be compressed.

1. Switch of the main power switch and disconnect the power cord.
2. Remove the front and rear cover according to REP 1.1.



ADJUSTMENT

Front fold pressure assembly

1. Compress upper spring (3) until head of screw (2) contacts bar.
2. Check (1) for 34.0 ± 0.5 mm.
3. Adjust by loosening one nut (4) (Pull spring down to access locking nut) and reposition the other to obtain the dimension. When tightening the nuts make sure the screw is in the outermost position of the slot.
4. Check (10) for 36.5 ± 0.5 mm.
5. Adjust nut (9) to obtain the dimension.
6. Check (5) for 36.5 ± 0.5 mm.

Note: Push downwards on the screw (9) when measuring the distance (5).

7. Adjust by loosening the two screws (7) (from the inside of the machine) and reposition the spring bracket (6) to obtain the dimension.
When tightening the screws make sure the spring bracket (6) is parallel to the nut plate (8) in order to align the folder roll movement with the spring load .

Rear fold pressure assembly

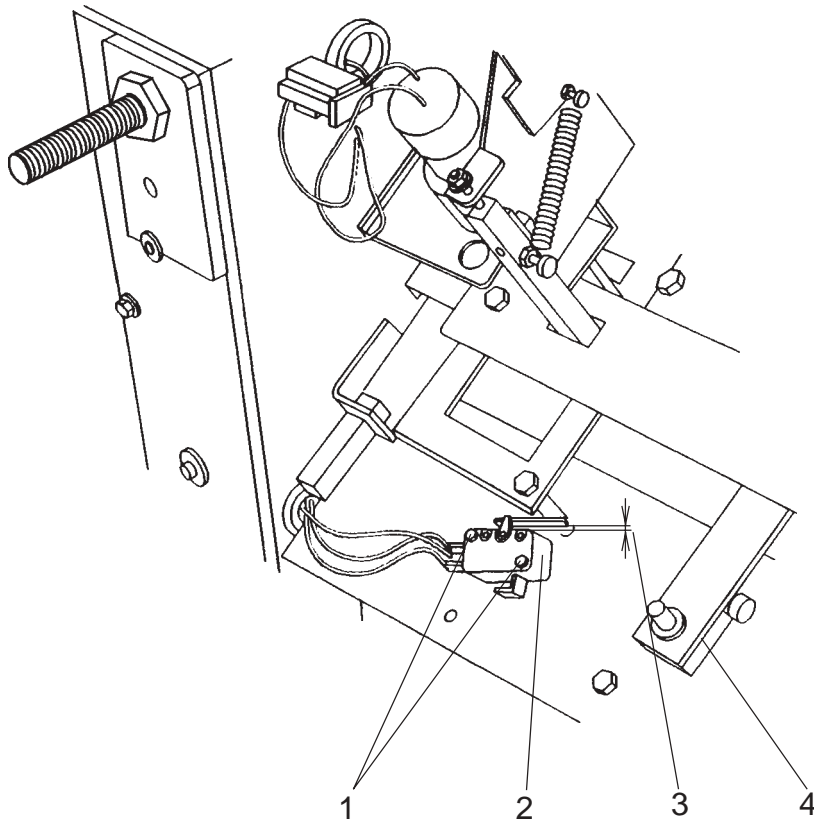
Adjustment of the Rear fold pressure assembly is performed the same way as adjustment of the Front fold pressure assembly.

PURPOSE

The purpose is to ensure that the Fold knife is clear from the paper path in home position.

1. Visually check that the Fold knife is not visible above the paper path.
2. Switch of the main power switch and disconnect the power cord.
3. Remove the outfeed cover according to REP 1.3.
4. Rotate linkage (4) to the down dead center.

SHOWN IN TIPPED POSITION FOR CLARITY



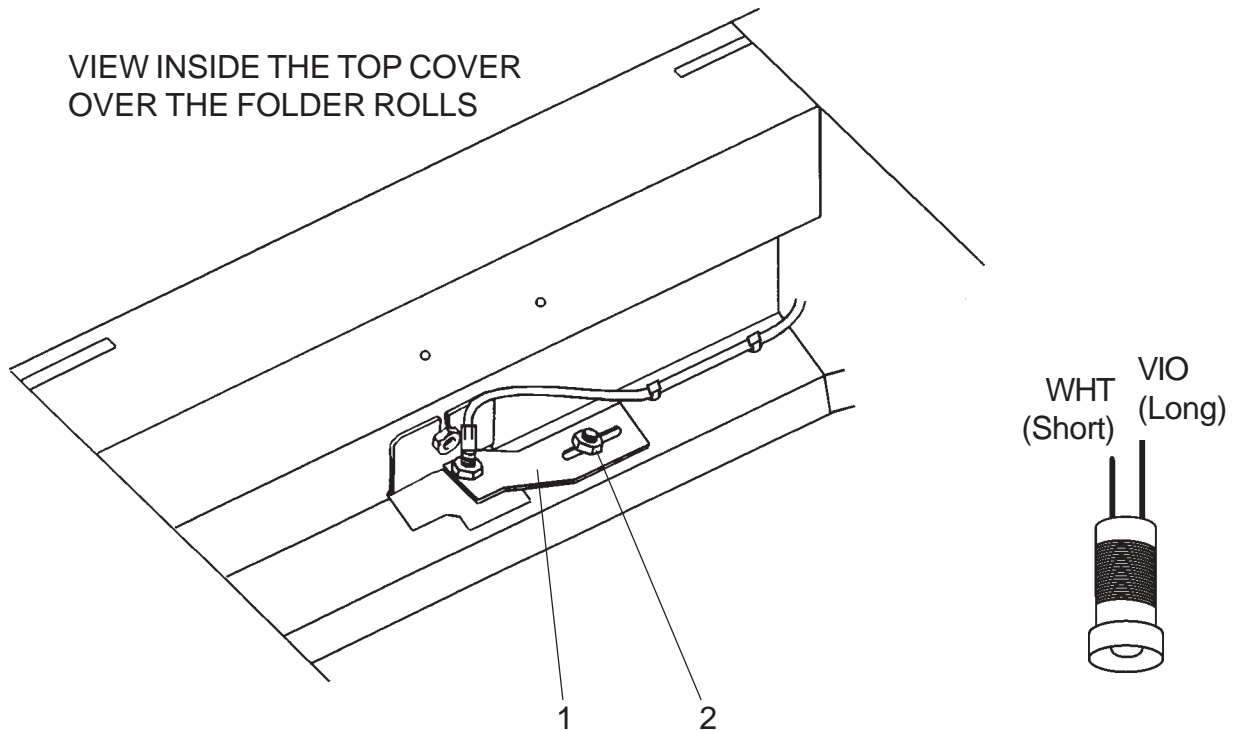
ADJUSTMENT

1. Check that the gap (3) between the switch housing and the actuator arm is 0.1 mm to 0.5 mm.
2. Loosen the two screws (1).
3. Move the switch (2) to adjust.
4. Tighten the two screws (1).

PURPOSE

The purpose is to position the Outfeed sensor (Q4) so that it will switch on the Stacker motor (M5) when a set enters the stacker tray.

1. Remove the rear cover according to REP 1.1 and pull out the interlock bypass switch actuator.



ADJUSTMENT

1. The voltage between TP8 on the controller PCB and common ground should be greater than 2.2 VDC with the sensor blocked and less than 0.9 VDC unblocked.

NOTE: Use white paper to block the sensor.

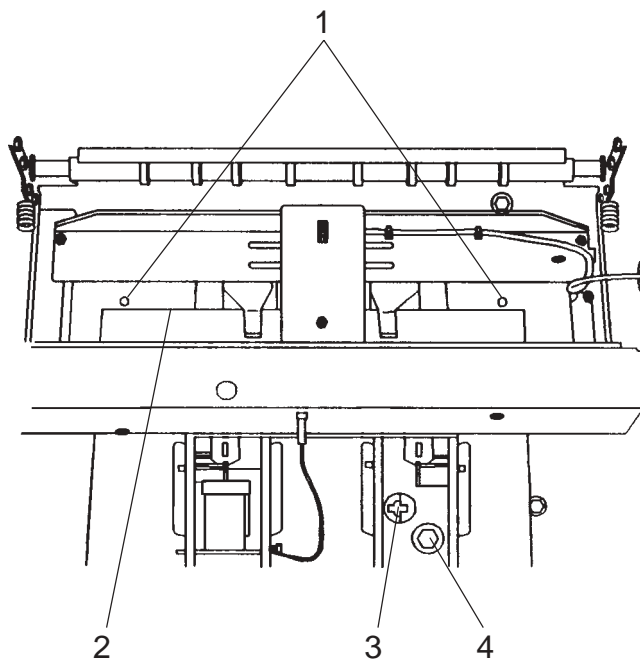
2. Loosen the nut (2).
3. Move the bracket (1) to obtain the voltages.
4. Tighten the nut (2).

REP 5.1 Stop gate parallelism, adjustment

PURPOSE

The purpose is to ensure that the staples are parallel to the edge of the sets.

1. Remove the rear Stapler head according to REP 3.1.
2. Move the side guides to the outermost position.
3. Select the Fold mode on the Control panel.
4. Select the Adjustment mode on the Control panel.
5. Fold an A4 (8.5" x 11") sheet of paper lengthwise by hand in order to form a straight edge.
6. Feed the folded paper sidewise into the machine so that the straight edge fold (2) is positioned against the Stop gate.
7. Adjust the sheet size on the control panel to align the straight edge fold (2) with the locating holes (1) in the paper path.
8. The straight edge fold (2) must align with both of the locating holes (1).



ADJUSTMENT

1. Loosen the screw (4).
2. Insert a screwdriver in the notches (3) and rotate to align the holes (1) with the straight edge fold (2).
3. Tighten the screw (4).
4. Check/adjust the Staple/Fold position according to REP 5.2.

PURPOSE

The purpose is to ensure that the sets are folded in the center of the set, that the fold is parallel to the edge of the sets and that the staples are aligned with the fold.

1. Select Fold mode and Adjustment mode on the Control panel
2. Handfeed a 2-sheet set using A4 (8.5"x 11") paper.
3. Adjust the sheet size on the control panel to align the Back jogger with the trail edge of the set without producing a buckle in the set.
4. Select Run mode and run a few sets.
5. Check that the fold is parallel to the edge of the set. If not perform Adjustment 1.

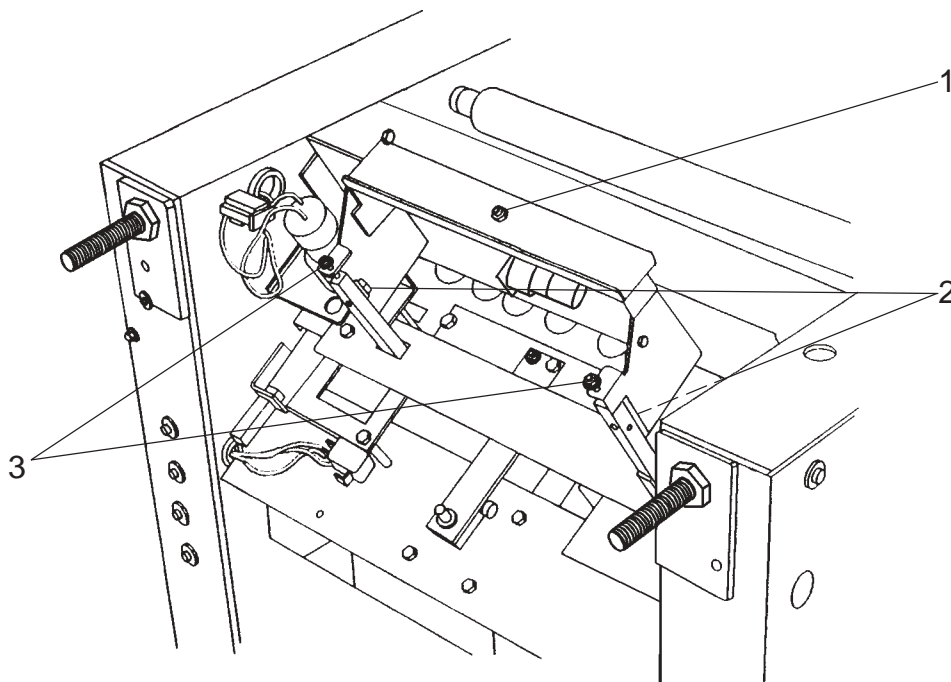
NOTE: After adjustment 1 is performed , return to this procedure and continue from step 1.

6. Check that the fold is in the center of the set (that the edges of the booklet are aligned).
If not perform Adjustment 3.

NOTE: After adjustment 3 is performed , return to this procedure and continue.

7. Repeat step 1 to 4 but run 4-sheet sets in Staple/Fold mode.
8. Check that the staples are aligned with the fold. If not perform Adjustment 2.

SHOWN IN TIPPED POSITION FOR CLARITY



ADJUSTMENT 1

1. Adjust to the largest sheet size on the control panel.
2. Place the stacker module in upright position.
3. Switch off the main power switch and disconnect the power cord.
4. Loosen the two mounting screws (2).
5. Rotate the two screws (3) to adjust.
6. Push in the fold stop assembly when tightening the two screws (2).
7. Repeat Adjustment 1 until the fold is parallel to the edge of the set.

ADJUSTMENT 2

1. Loosen the locknut and rotate the setscrew (1) clockwise if the staples are located on the top, counterclockwise if the staples are located on the bottom and tighten the locknut.

NOTE: Top of the booklet is the side that contacts the output wheel.

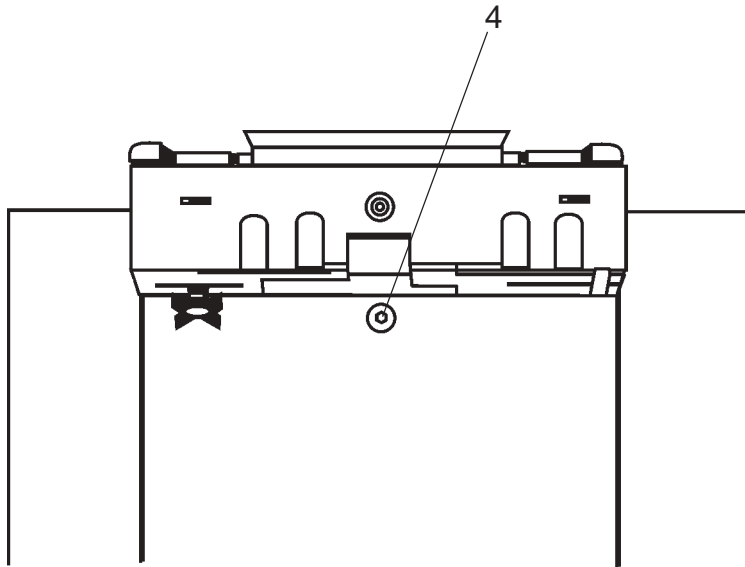
2. Repeat Adjustment 2 until the staples are aligned with the fold.

ADJUSTMENT 3

1. Rotate screw (4) clockwise to lengthen the top of the booklet, counter clockwise to shorten the top of the booklet.

NOTE: Top of the booklet is the side that contacts the output wheel.

2. Select Adjustment mode on the Control panel
3. Handfeed a 2-sheet set using A4 (8.5"x 11") paper.
4. Adjust the sheet size on the control panel to align the Back jogger with the trail edge of the set without producing a buckle in the set.
5. Select Run mode and run a few sets.
6. Repeat Adjustment 3 until the edges of the booklet are aligned.



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CAUTION: *Alignment of the stapler head to anvil is carried out at factory. Screws are after that sealed with red paint to ensure that alignment will persist and also to indicate if not.*

Alignment will not change over time and will therefore not need further adjustment. However, if the adjustment has been tampered with (i.e if red seal is broken) it is very important to strictly follow the described procedure below. The alignment of the stapler head to clincher is crucial and will determine the staple result as well as the lifetime of the stapler head.

The procedure requires 2 pcs brand new stapler heads.

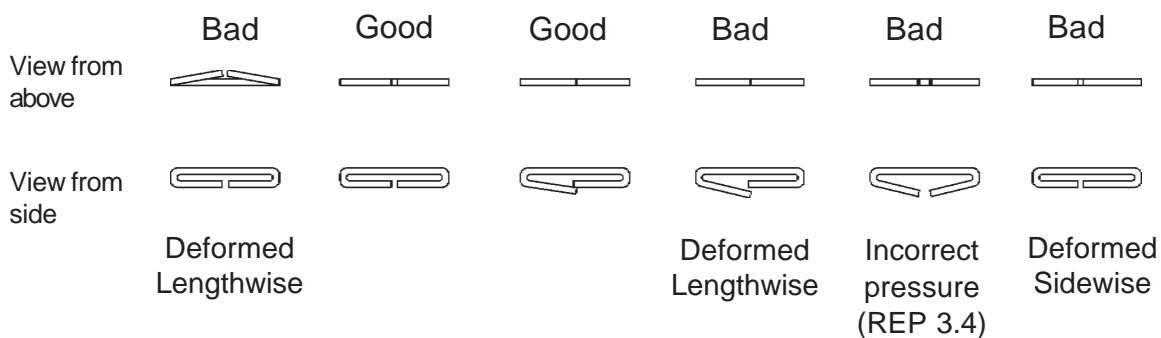
If the new stapler heads at any time during the procedure were cycled when adjustment were off (staple legs not hitting the slot in the clincher), stapler heads are ruined and must be replaced.

PURPOSE

The Stapler heads must be adjusted very precise in order to achieve proper staple result.

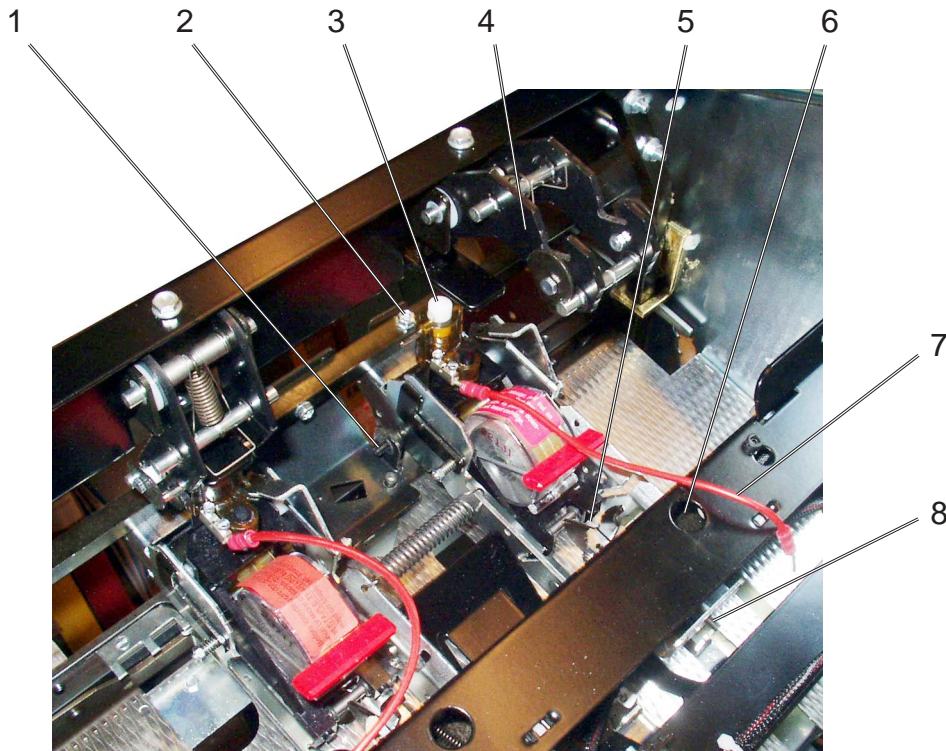
CHECKING ADJUSTMENT

1. Open the Top cover and disconnect a staple detection lead, close the Top cover.
2. Hand feed a two sheet set of paper.
 - The staple indication LED will come on
 - Open and close the Top cover.
 - The Booklet maker will automatically cycle and advance staples.
3. Check that the staples are formed properly, according to Figures below.
4. If a bad staple result is achieved, first perform step 1-20, then proceed from step 21.
5. If a good staple result is achieved on two sheets of paper, double check the adjustment by running a 20 sheet set.

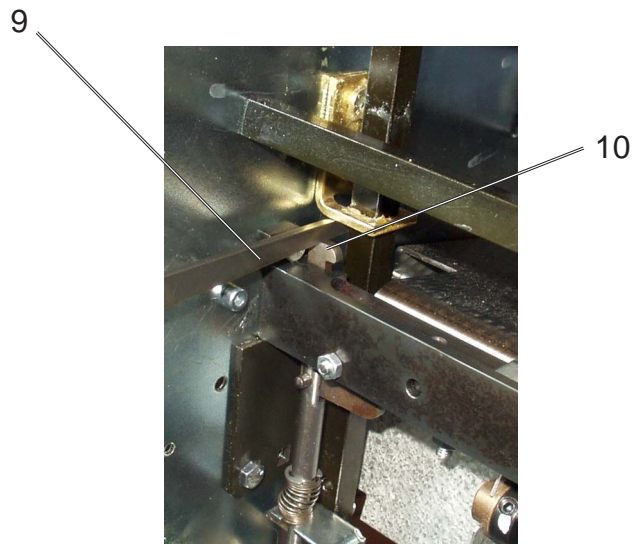


ADJUSTMENT

1. Check/adjust Stapler Assembly Drive Bar according to REP 3.4.
2. Check/adjust Stapler Pressure according to REP 5.4.
3. Check/adjust Stapler Head Retraction according to REP 3.6.
4. Check/adjust Clincher points height according to REP 5.6.
5. Check/adjust Clincher pressure according to REP 5.7.

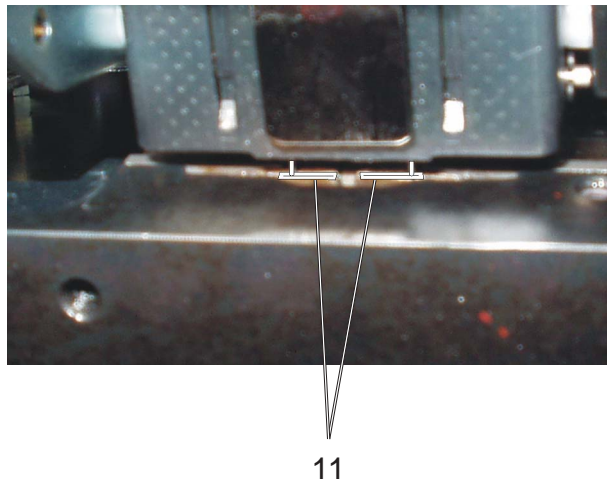


6. Remove Infeed module according to REP 2.1.
7. Disconnect the Staple detection lead (7).
8. Push down latch (5) and lift the Stapler head out.
9. Push the plunger (3) slowly so that the legs of the staple comes out about 1-2 mm.



10. Insert a pair of pliers (or screw driver) (9) so lever (10) becomes pressed down.
11. Reinstall Stapler head only on the pivot pin side. Not in the retraction swing arm (4).
NOTE: Install the Stapler head gently so the staple legs are not touched.

12. Push gently on plunger (3) and check if the staple legs are positioned in the center of the clincher points (11). Check both sidewise and lengthwise.
NOTE: Use a flash light to clearly see the alignment.
13. Loosens screws (2) and screws (6).
14. For lengthwise adjustment, turn adjustment screw (8).
For sidewise adjustment, turn adjustment screw (1).
NOTE: Push Stapler head bracket against adjustment screw (1) while adjusting sidewise. Push Stapler head bracket upwards while adjusting lengthwise.
15. When correct position is obtained, tighten screws (6) and (2).
NOTE: First tighten screw (6) while pushing Stapler head bracket upwards. Secondly tighten screw (2) while pushing Stapler head bracket against screw (1).
16. Repeat procedure for the other Stapler head.
17. Remove the pliers (9).
18. Reinstall Infeed module according to REP 2.1.
19. Install new stapler heads.
20. Repeat CHECKING ADJUSTMENT.



STAPLE DEFORMED LENGTHWISE

21. Loosens screws (2) and (6).
22. Turn Screw (8) maximum 1/8 of a revolution (45°).
NOTE: Turn clockwise if adjusting stapler assembly downwards and vice versa.
23. Tighten screws (6) and (2).
NOTE: First tighten screw (6) while pushing Stapler head bracket upwards. Secondly tighten screw (2) while pushing Stapler head bracket against screw (1).
24. Repeat CHECKING ADJUSTMENT.
NOTE: This procedure may need to be performed several times before a good staple result is achieved.

STAPLE DEFORMED SIDEWISE

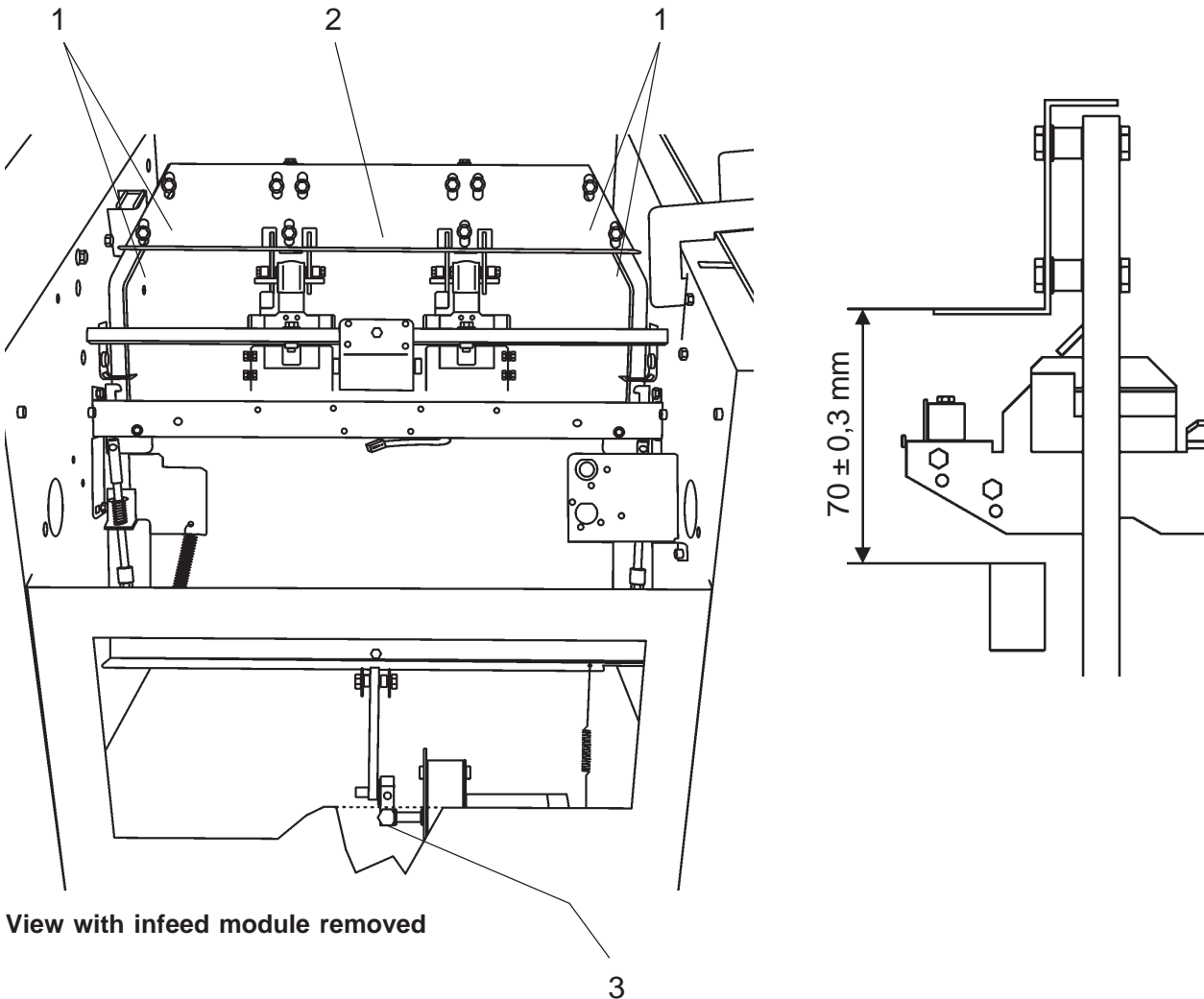
21. Repeat step 6-20 regarding the sidewise adjustment.
NOTE: Do not loosen screw (6) this time.

PURPOSE

The purpose is to ensure that adequate pressure is applied to the Stapler heads when the clinchers are forming the staples.

1. Switch off the main power switch and disconnect the power cord.
2. Remove the Infeed cover according to REP 1.3.
3. Remove stapler heads according to REP 3.1.
4. Rotate the motor linkage (3) to the down dead center.

WARNING: *The stapler assembly falls down with it's full weight. Do not use your fingers directly on the crank joint as it could cause injury.*



ADJUSTMENT

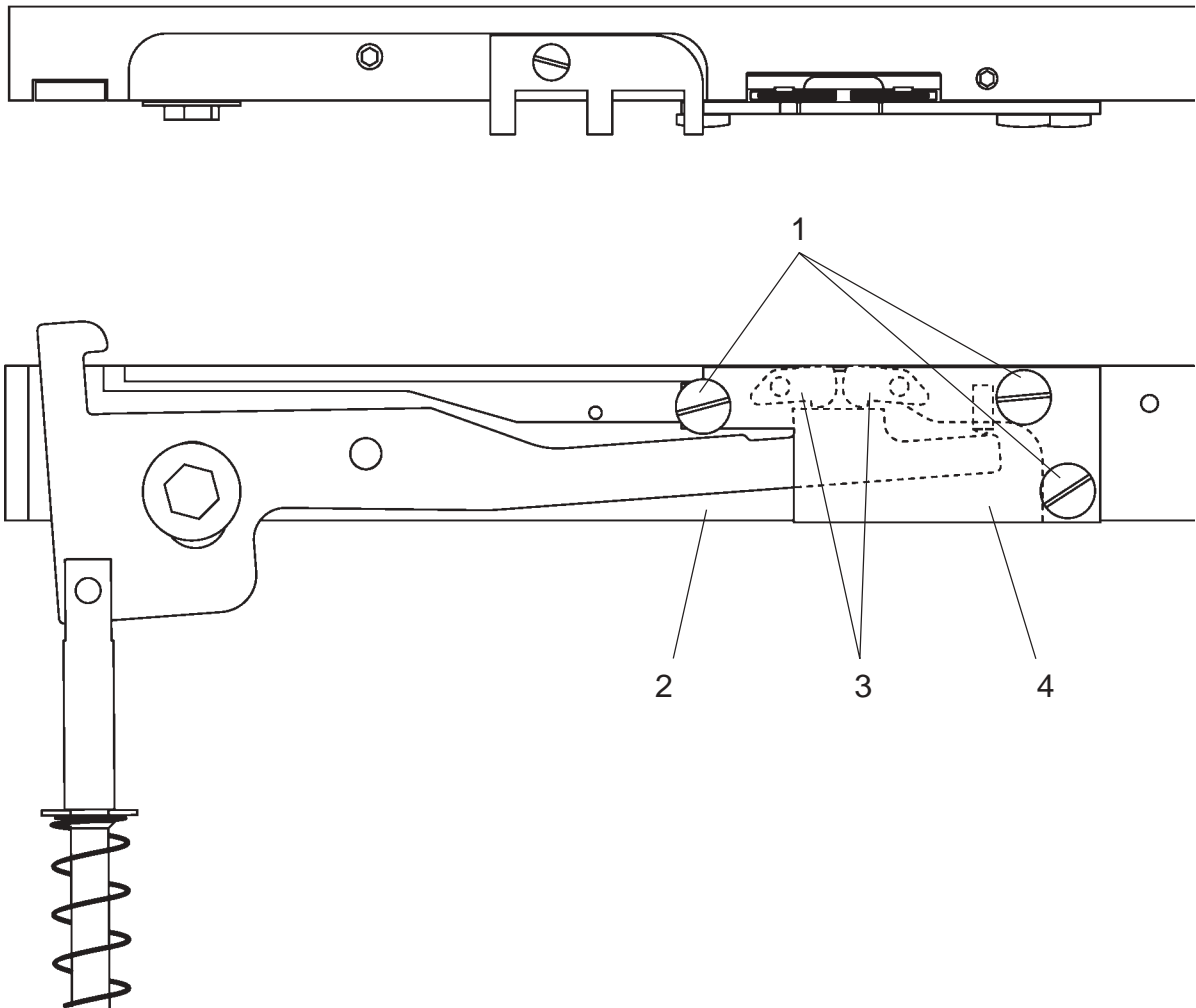
1. Use a sliding caliper and check that the distance between the upper side of the clincher bar and the upper side of the sheet plate is $70 \text{ mm} \pm 0,3 \text{ mm}$.
Check both front and rear side.
2. Loosen the four screws (1).
3. Move the sheet plate (2) to adjust.
4. Tighten the screws (1).
5. Check/Adjust the Stapler assembly drive bar position according to REP 3.4.

REMOVAL

1. Remove the clincher bar assembly (2) according to REP 3.8.
2. Remove the three screws (1) fastening each clincher plate (4).
3. Remove the clincher plate (4).

NOTE: *The clincher points are not interchangeable. They must be refitted on their original position.*

4. Clean clincher bar (2), clincher plate (4) and clincher points (3).
5. Apply light mineral oil on moving surfaces.



INSTALLATION

1. Installation is an exact procedure of removal.

NOTE: *Before refitting the clincher bar, check/adjust the clincher point height adjustment according to REP 5.6.*

2. Press and hold both length adjustment buttons on the control panel for 4 seconds.
- The Staple indicator will come on and go off as confirmation.

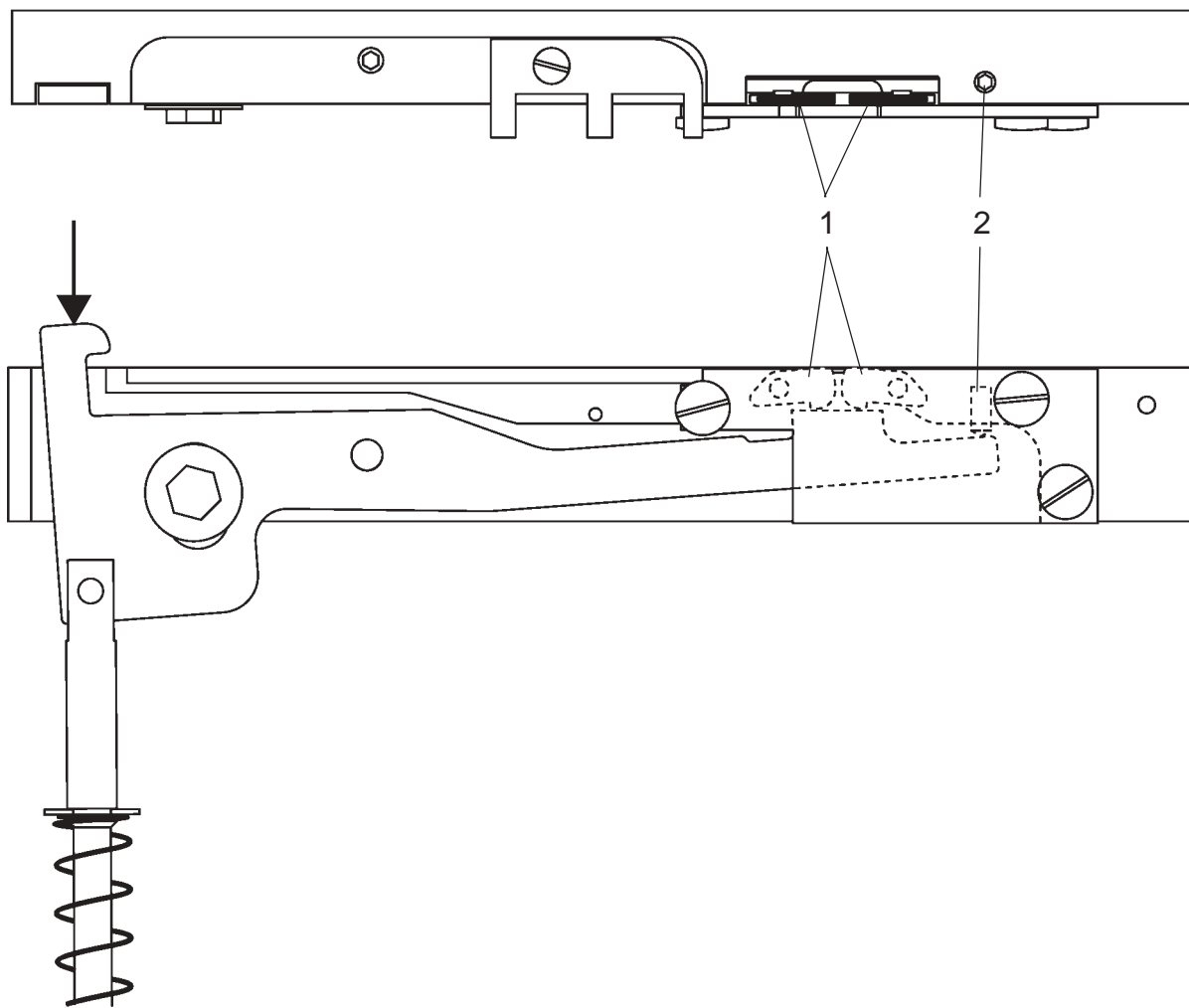
The counter for oiling the clincher is now reset. After 20 000 staple cycles, the staple indication LED will start flashing as a reminder that oiling clinchers is due (Oiling the clinchers is maintenance performed by the operator).

PURPOSE

The purpose is to achieve the correct, flat form of the staples and to maintain lifetime of the clincher points and stapler heads.

NOTE: *Adjustment of clincher points can be performed with clincher beam installed. However, if clincher beam is already removed, perform adjustment before reinstalling.*

1. Switch off the main power switch and disconnect the power cord.
2. Remove stapler heads according to REP 3.1.



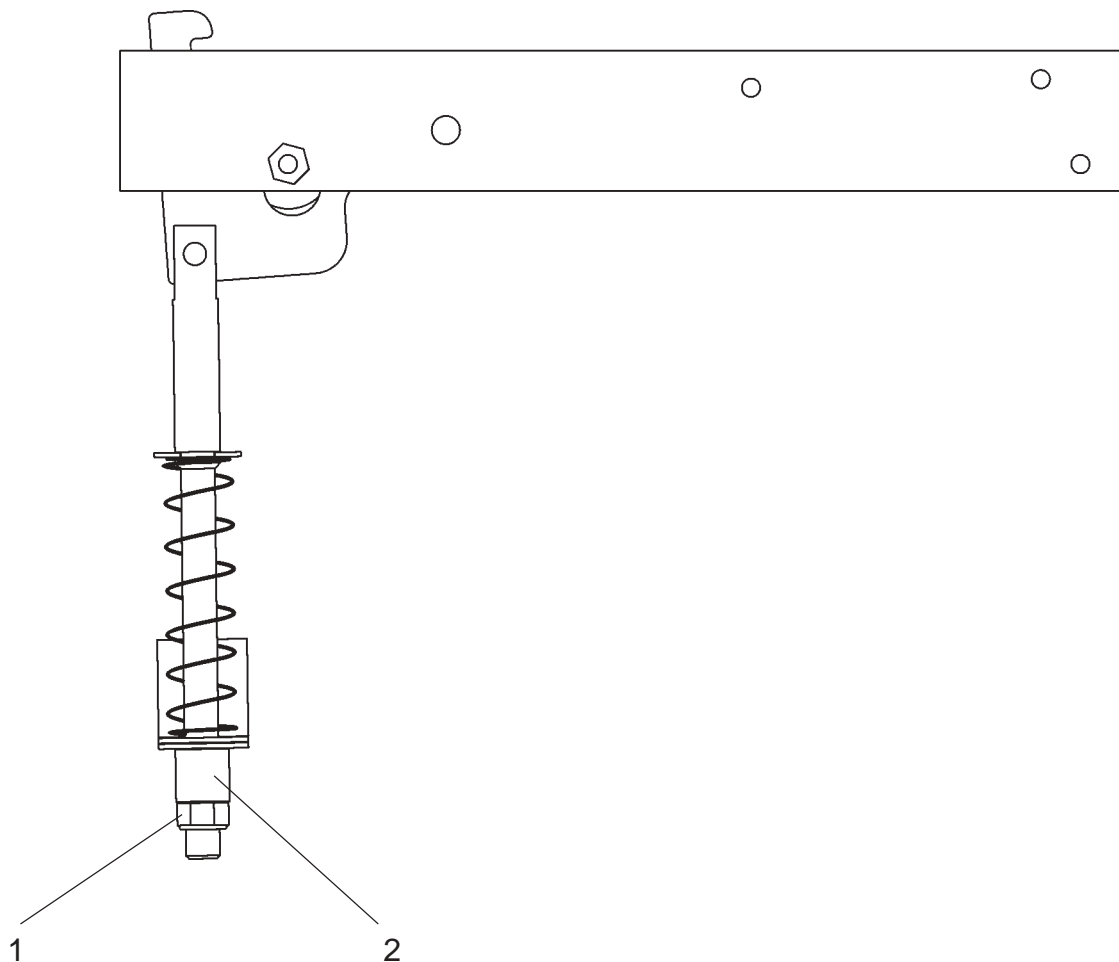
ADJUSTMENT

1. Press on the clincher arm where the arrow indicates.
2. Press down the clincher points (1) to make sure that they are resting on the clincher arm.
3. Check clincher point (1) height.
4. With an allen wrench, adjust the allen screw (2) so that the clincher points are flush with the upper side of the clincher beam when actuated.
5. Release and repeat step 1 to 3 to verify.

PURPOSE

The purpose is to achieve the correct, flat form of the staples.

1. Switch off the main power switch and disconnect the power cord.
2. Remove infeed cover according to REP 1.3.
3. Remove stapler heads according to REP 3.1.
4. Rotate the motor linkage (see step 4, REP 5.4) to the down dead center.



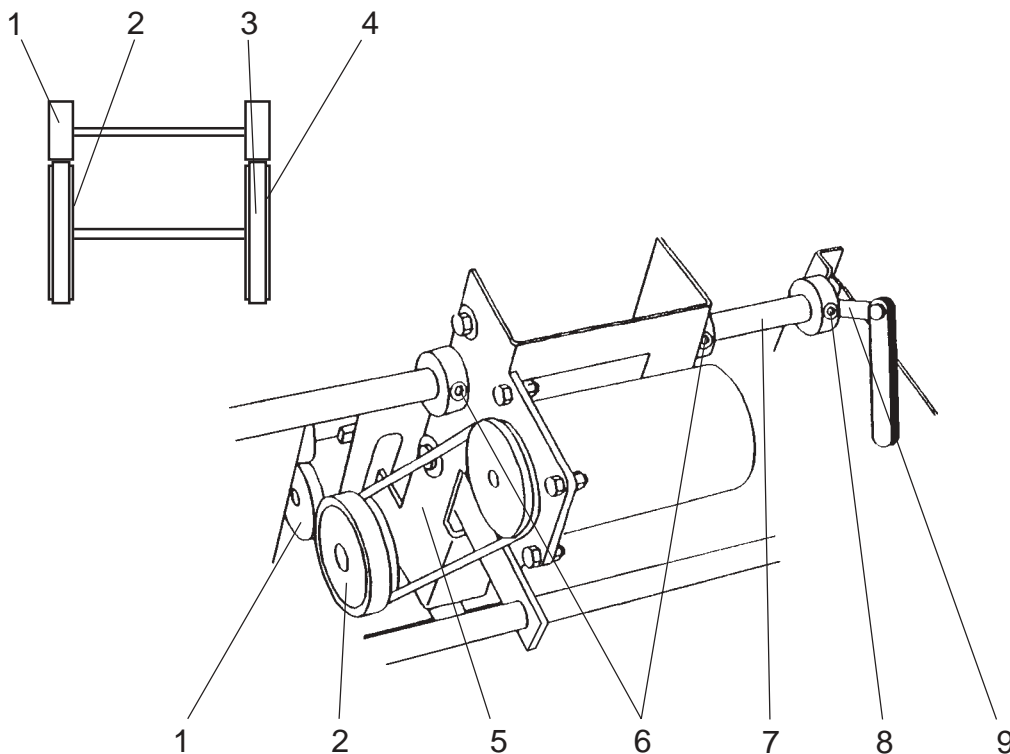
ADJUSTMENT

1. Tighten the nut (1) until the bushing (2) just barely can be rotated by hand.
2. Tighten the nut 2 revolutions more.
3. Repeat procedure on other side.
4. Reinstall the stapler heads and infeed cover.
5. Run a set of 22 sheets, 80 gsm. Check that staples are flat. If not, tighten nut on same side clincher arm $\frac{1}{4}$ of a revolution.
6. Check/adjust stapler pressure according to REP 5.4.

PURPOSE

The purpose is to horizontally align the Stapled set drive rollers with the Idler wheels to ensure the correct set transportation into the fold area.

1. Adjust to the smallest sheet size on the control panel.
2. Ensure that the tires (3) are centered on the hubs (4) of the drive rollers.
3. Manually move the Drive rollers (2) up against the Pressure rollers (1) by pushing the Stop gate down.
4. Push down the staple stop gate and visually check that the Drive rollers are centered on the Pressure rollers.



ADJUSTMENT

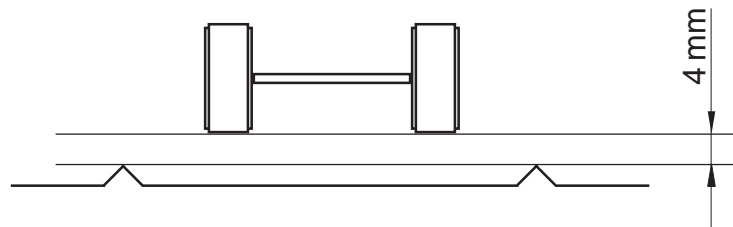
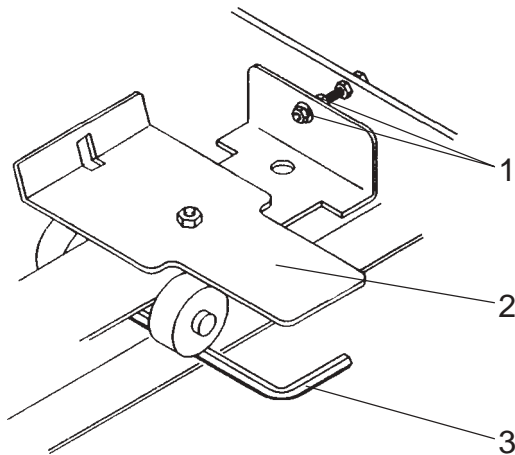
1. Switch off the main power switch and disconnect the power cord.
2. Remove the Infeed cover according to REP 1.3.
3. Loosen the allen screw (8).
4. Move the shaft (7).
5. Insert a 0.3 mm feeler gauge (9) to ensure 0.3 ± 0.2 mm endplay.
NOTE The endplay 0.3 mm is to prevent the Stop gate shaft from binding.
6. Tighten the allen screw (8).
7. Loosen the two allen screws (6).
8. Move the assembly (5) so that the tires (3) are centered on the Pressure rollers (1).
9. Tighten the two allen screws (6).

PURPOSE

The purpose is to position the Pressure rollers for the correct engagement with the Drive rollers.

1. Adjust to the largest sheet size on the Control panel.
2. Switch off the main power switch and disconnect the power cord.
3. Rotate the shield (2).

VIEW OF STAPLED SET TRANSPORT AREA



ADJUSTMENT

1. Check that the gap is 4 mm.

NOTE: Use a 4 mm allen wrench (3) - as shown on drawing - to check that it fits in the gap and a 5 mm allen wrench to check that it does not fit in the gap.

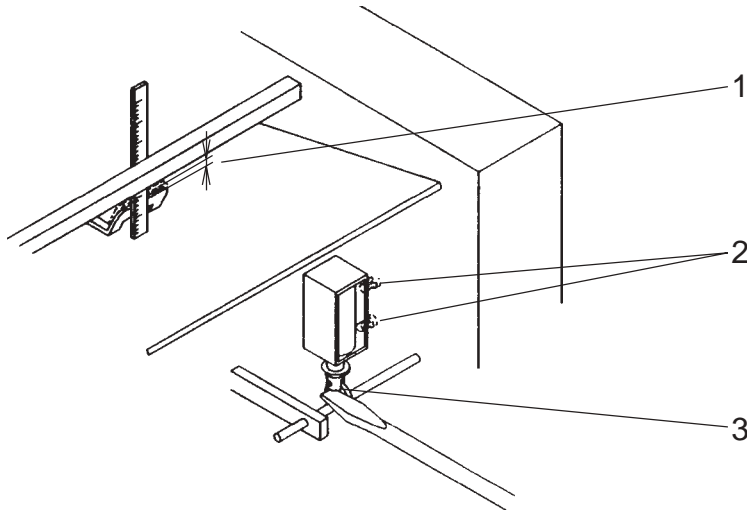
2. Loosen one nut (1) and reposition the other (1) as required to obtain the gap.
3. Check/adjust the Stop gate solenoid according to REP 5.10.

PURPOSE

The purpose is to ensure adequate engagement of the stapled set drive rollers.

1. Check/adjust the Pressure roller height according to REP 5.9.
2. Adjust to the smallest sheet size on the control panel.
3. Switch off the main power switch and disconnect the power cord.
4. Remove the infeed cover according to REP 1.3.

VIEW SHOWN WITH INFEED MODULE
REMOVED FOR CLARITY



ADJUSTMENT

1. Measure the height (1).
2. Push and hold the plunger (3) up.

NOTE: Push on the plunger of the solenoid only, do not push on the linkage. If pushing on linkage the measurement will not be correct.

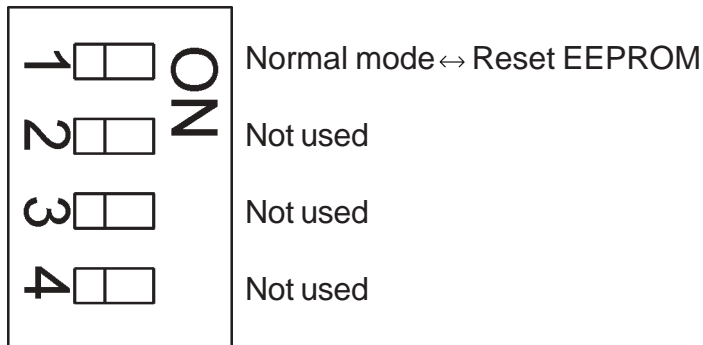
3. Measure the height (1) again. The difference should be 0.5 mm to 1.0 mm
4. Loosen the two screws (2) and move the solenoid to obtain the dimension.
5. Tighten the screws.

PURPOSE

The purpose is to transfer the original values from the Micro processor to the EEPROM. This procedure should be performed in response to minor logic problems such as failure in the operating sequence. Also perform this procedure if the controller PCB is replaced or if the power is lost during SDS.

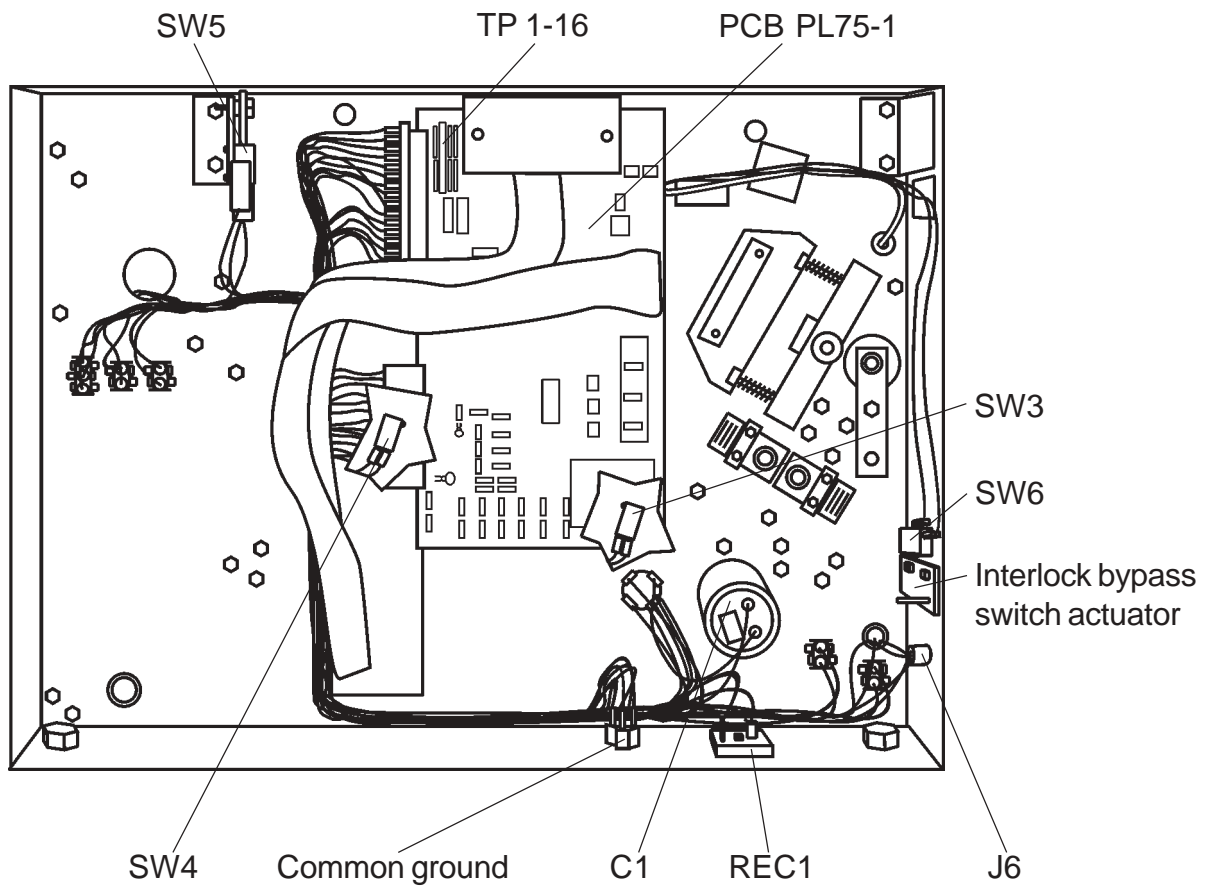
PROCEDURE

1. Switch off the main power switch.
2. Remove the rear cover according to REP 1.1.
3. Move DIP switch no. 1 on the controller PCB to the right (right when facing the PCB).
4. Switch on the main power switch.
 - The adjust LED on the control panel is flashing: The processor is transferring the default values to the EEPROM.
5. When the adjust LED stops flashing, switch off the main power switch.
6. Move DIP switch no. 1 on the controller PCB to the left (left when facing the PCB).
7. Reinstall the rear cover according to REP 1.1.

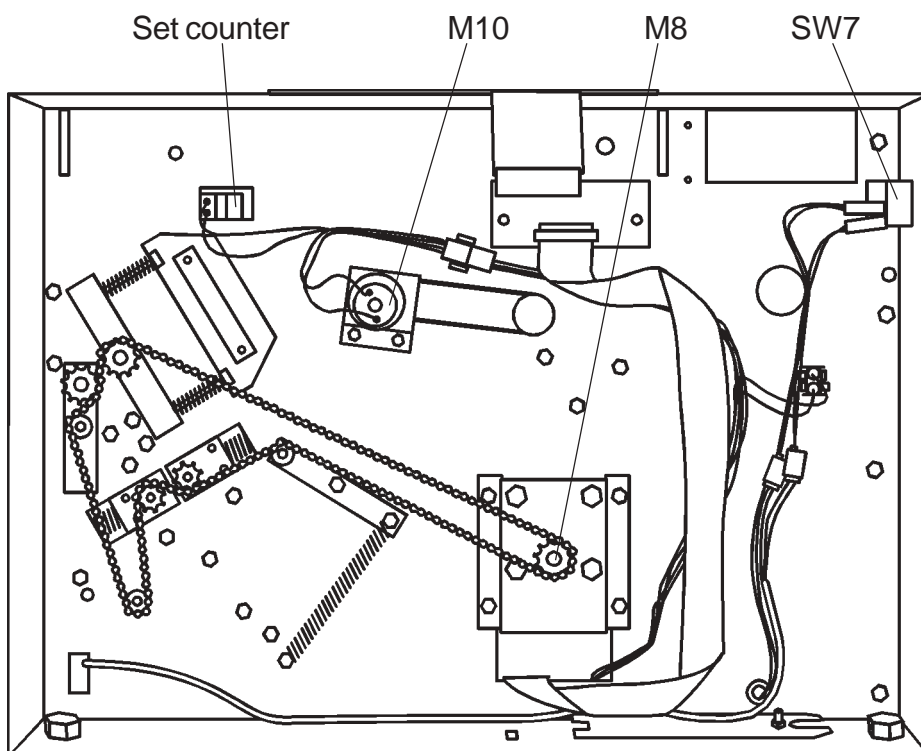


M1	Stapler motor	Page 45
M2	Fold knife motor	Page 45
M3	Side jogger motor	Page 47
M4	Stapled set transport motor	Page 45
M5	Stacker motor	Page 46
M6	Length adjustment motor	Page 44
M7	Back jogger motor	Page 47
M8	Fold roller motor	Page 43, 45
M9	Infeed transport belt motor	Page 47
M10	Edge staple stop motor	Page 43
M11	Edge stapling transport motor	Page 46
M12	Fold stop gate motor	Page 44
SOL1	Stop gate solenoid	Page 45
SOL2	Stop gate release solenoid	Page 45
SW1	Stapler home position switch	Page 45
SW2	Fold knife home position switch	Page 44
SW3	Length adjustment maximum limit switch	Page 43
SW4	Length adjustment minimum limit switch	Page 43
SW5	Interlock switch	Page 43
SW6	Interlock bypass switch	Page 43
SW7	Main power switch	Page 43, 45
Q1	Saddle stapling sensor	Page 46
Q2	Fold stop sensor	Page 44
Q3	Edge stapling sensor	Page 46
Q4	Outfeed sensor	Page 46
Q5	Infeed sensor	Page 46
Q6	Side jogger home position sensor	Page 47
Q7	Side jogger motor hall sensor	Page 47
F1	Main power fuse	Page 45
F2	10 VAC fuse, T500 mA	Page 45
F3	10 VAC fuse for staple detection, T500 mA	Page 45
F4	26 VAC fuse, T6.3A	Page 45
GFI	Ground fault interrupter	Page 45
T1	Transformer	Page 45
REC 1	Rectifier	Page 43
C1	Capacitor	Page 43
J3	Interface receptacle	Page 45
J6	Stacker receptacle	Page 43
PCB PL75-1	Controller Printed circuit board	Page 43

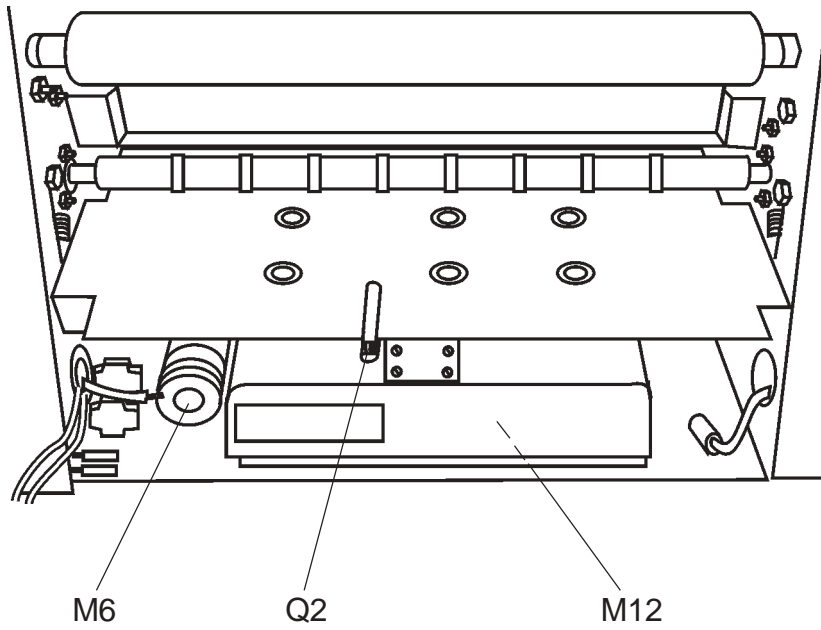
REAR VIEW



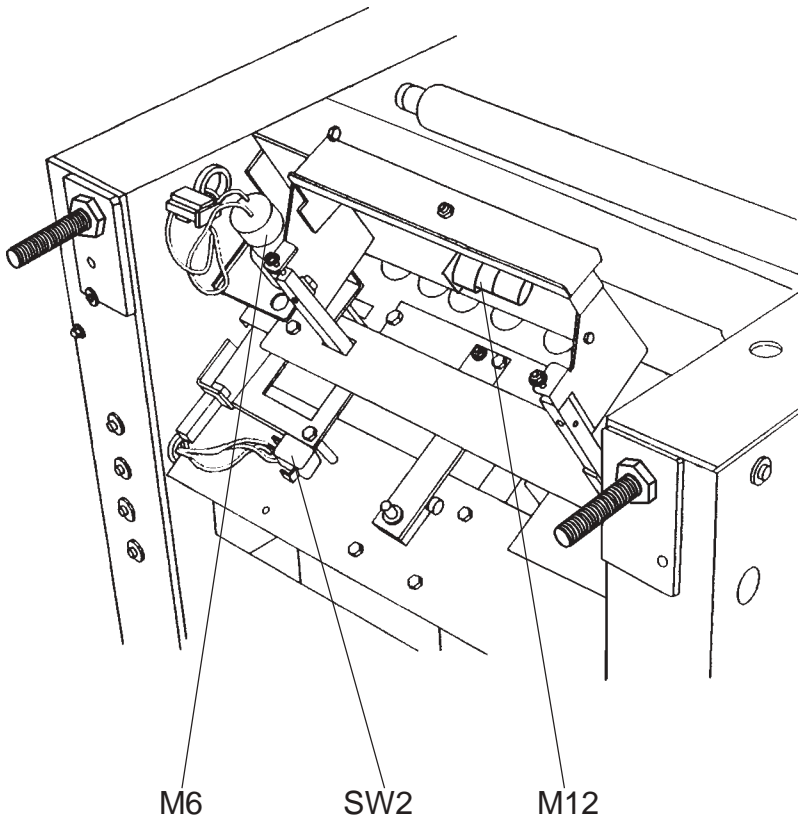
FRONT VIEW



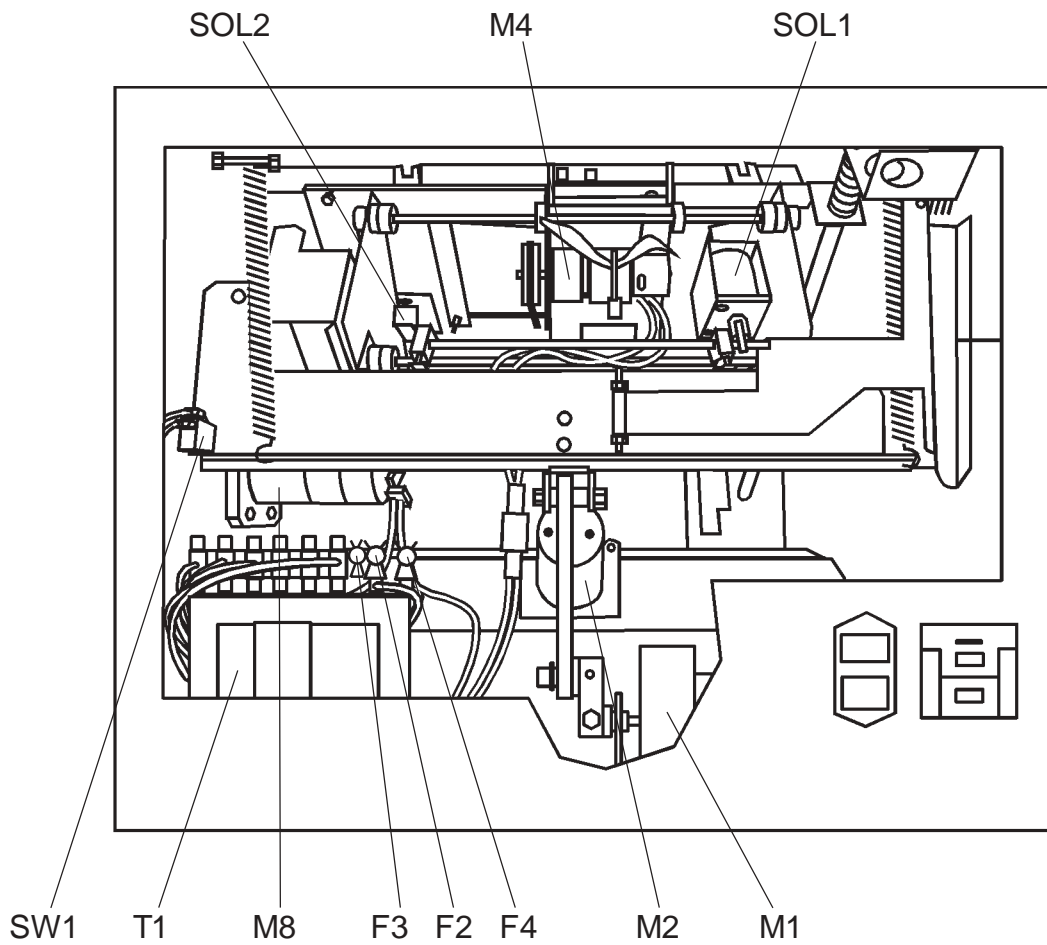
VIEW INSIDE OUTFEED COVER



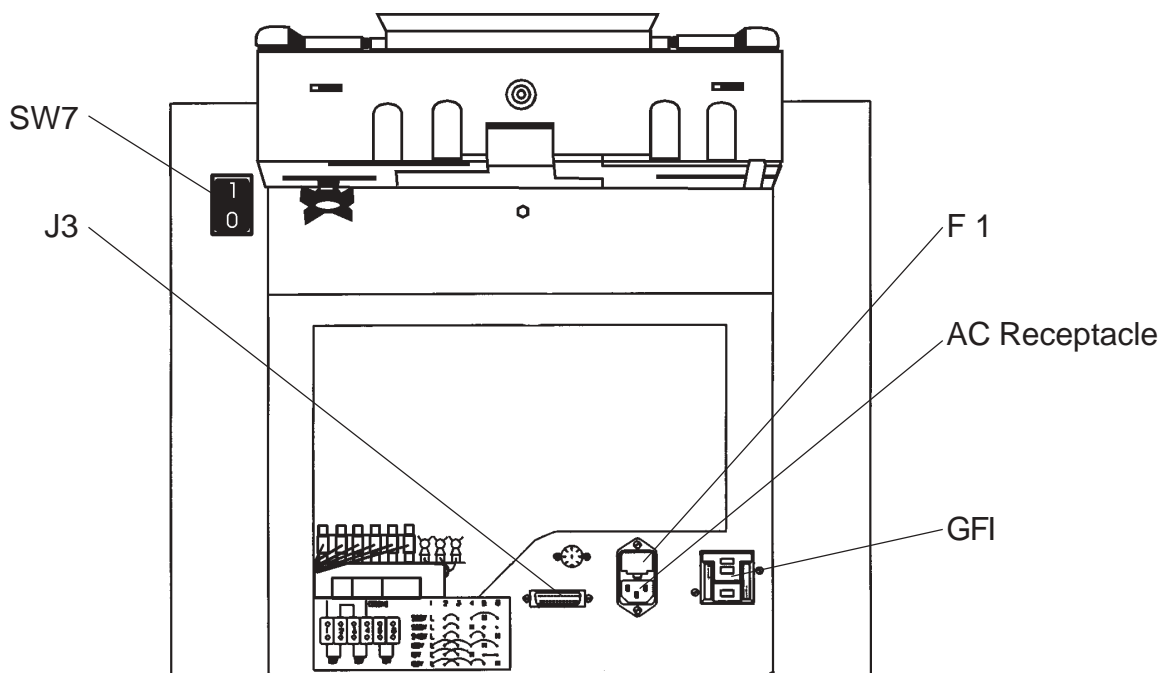
FOLD AREA SHOWN IN TIPPED POSITION



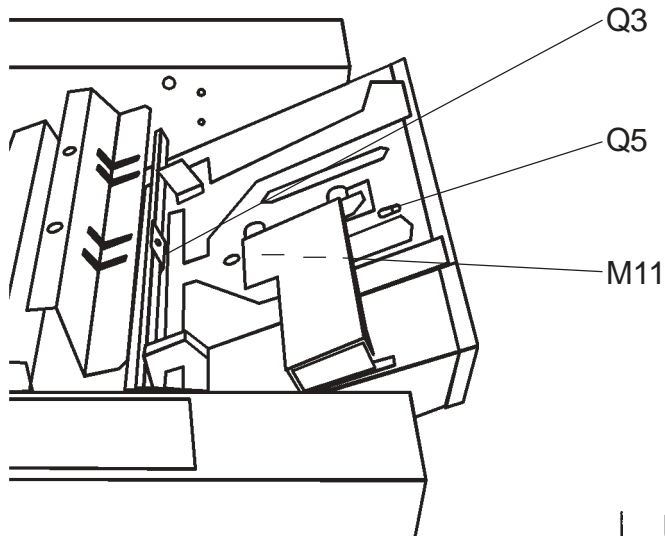
VIEW INSIDE INFEED COVER



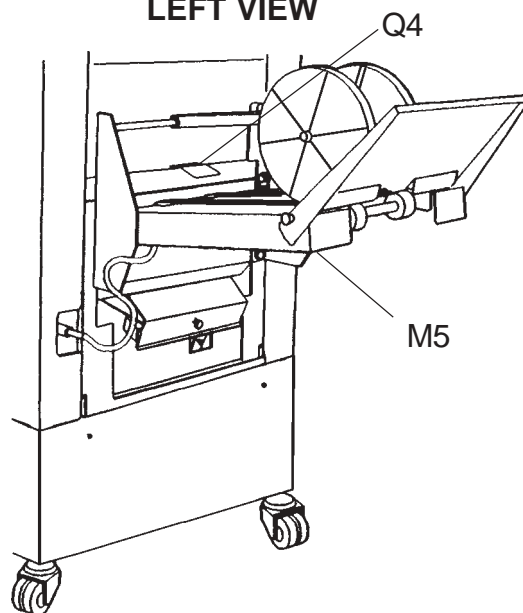
RIGHT VIEW INFEED COVER REMOVED



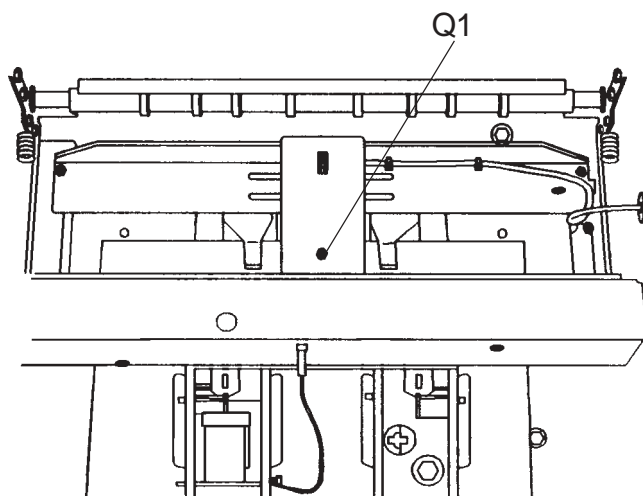
VIEW OF INFEED AREA



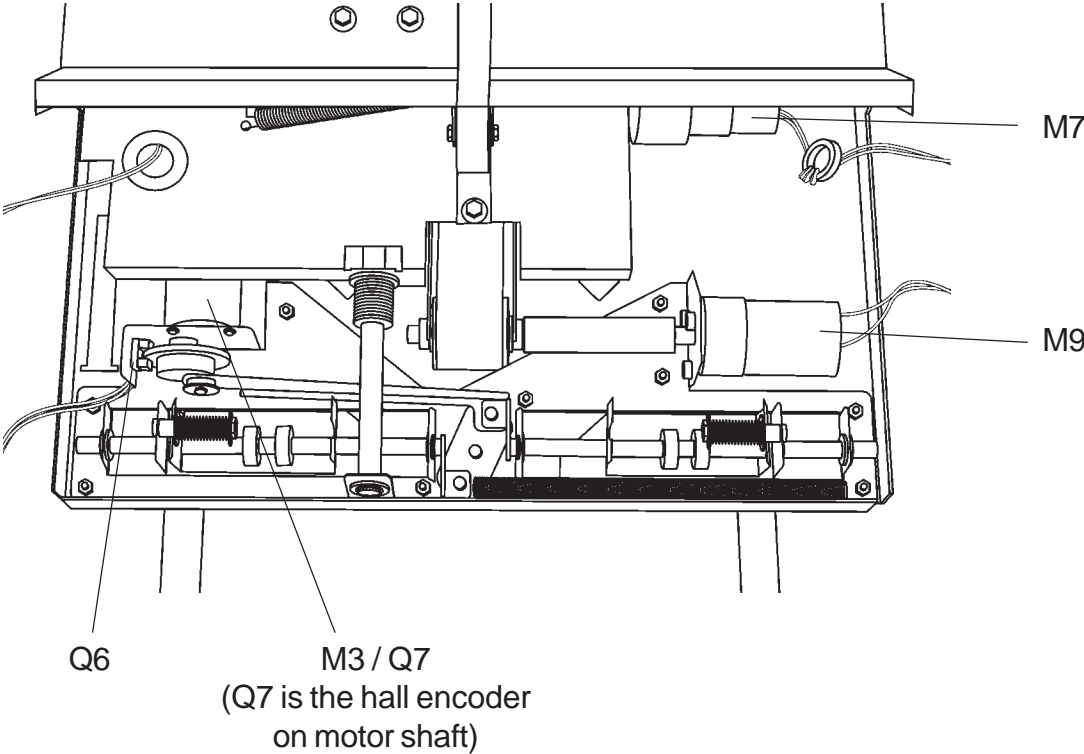
LEFT VIEW



STAPLER AREA



BOTTOM VIEW OF REMOVED INFEEDEr



PURPOSE

The purpose of the Test points (see location on page 7.4.1, TP 1-16) is to use them as the (+) connector when adjusting sensors or when checking the function of some components and their wires. Use any common ground as (-) connector.

Voltage when low: Less than 0.9 VDC

Voltage when high: Greater than 2.2 VDC

Test point	Description	Normal state
TP 1	Saddle stapling sensor Q1	Low inactivated
TP 2	Fold stop sensor Q2	High inactivated
TP 3	Side jogger home position sensor Q6	High inactivated
TP 4	Fold knife home position switch SW2	Low activated
TP 5	Stapler home position switch SW1	Low activated
TP 6	Jam signal from Trimmer	High inactivated
TP 7	Edge stapling sensor Q3	High inactivated
TP 8	Outfeed sensor Q4	Low inactivated
TP 9	Infeed sensor Q5	High inactivated
TP 10	Trimmer knife activated	High inactivated
TP 11	Length adjustment max. limit switch SW 3	High inactivated
TP 12	Not used	
TP 13	Length adjustment min. limit switch SW 4	High inactivated
TP 14	Trimmer connected	High inactivated
TP 15	Rear staple detection	High inactivated
TP 16	Front staple detection	High inactivated

Compiling

Collator sends a start signal. The infeed motor (M9) starts. The set enters the infeed module. Infeed sensor (Q5) activates. The infeed belt transports the set down to staple stop. The set stops at the staple stop. The saddle stapling sensor (Q1) at the staple stop activates. The infeed belt keeps on running for a certain time.

Jogging and stapling

When saddle stapling sensor (Q1) is activated and the infeed sensor (Q5) is deactivated, back jogger motor (M7) moves the back jogger up to knock the trail edge of the set. At the same time (delay 35ms) the side jogger motor (M3) moves to its home position by sensor (Q6), the side guides moves up against the paper. When the M3 home position sensor (Q6) is unblocked (activated), the infeed motor (M9) stops and the stapler motor (M1) cycles putting staplers through the center of the set. When the staples contact the clinchers, current running from the staplerhead through the staples contacting the clinchers establishes a closed circuit. That closed circuit created indicates that staples are present. If out of staples the paper will insulate stapler head from the clincher, which will result in an open circuit. The open circuit will indicate out of staples. The stapler motor (M1) will complete its cycle and stop in upper position by stapler home position switch (SW1).

Pre-fold transport

When staples are detected, back jogger motor (M7) moves down to release the trail edge of the set. The side jogger motor (M3) goes out. The stop gate solenoid (SOL1) moves the transport rollers upwards, gripping the set between the transport roller below and idler roller on top of the set. The staple stop gate is pulled down by the same solenoid (SOL1). The stapled set transport motor (M4) and infeed motor (M9) starts, and transports the set down to the fold stop. Fold stop sensor (Q2) activates. Fold roller motor (M8) and fold stop gate motor (M12) start. In case the sheet length is shorter than the distance between staple stop and fold stop (i.e. A4), the staple stop will unlatch as soon as the set clears the start sensor (Q1), also the stapled set transport motor (M4) will stop. The staple stop is unlatched by staple stop gate release solenoid (SOL2).

In case the sheet length is longer than the distance between staple stop and fold stop (i.e. A3), the staple stop will remain latched during folding until the set has cleared the start sensor (Q1). The stop gate solenoid (SOL1) releases and stapled set transport motor (M4) stops when fold stop sensor (Q2) is activated or start sensor (Q1) is clear, whatever comes first.

Folding

Fold roller motor (M8) that drives the first and second pair of fold rollers starts already about the time when fold stop sensor (Q2) is activated. Also fold stop gate motor (M12) moves the fold stop away a bit at that time.

Slightly after the fold stop sensor (Q2) is activated, the fold stop gate motor (M12) jogs the set upwards to position. Slightly after that the knife motor (M2) cycles. The fold knife is pushing the center of the set up through the first pair of fold rollers. The knife motor (M2) will continue its cycle and stop in home position by the knife motor home switch (SW2). A booklet is now formed.

When the set is exiting the second pair of fold rollers the outfeed sensor (Q4) activates.

Belt stacker

If a belt stacker is installed directly on the booklet maker (no trimmer installed) the stacker motor (M5) starts when the outfeed sensor (Q4) activates and runs for a short while to separate the booklets on the belt stacker.

PURPOSE SELF DIAGNOSTICS

The purpose of the Self diagnostics is to provide a functional check of the components of the Model 82.

PROCEDURE SELF DIAGNOSTICS

NOTE: *The Interlock switch or the Interlock bypass switch has to be actuated and the four DIP switches on the controller PCB has to be to the left (left when facing the PCB) and the Model 82 has to be cleared from paper sheets in order to perform the SDS.*

CAUTION1: *Always handle the PCB and micro processor in accordance with electrostatic discharge procedures (ESD). The PCB contains components that are sensitive to ESD damage.*

CAUTION2: *Do not switch off the power during SDS. If there is a loss of power during SDS, reset the EEPROM according to PRG 6.1.*

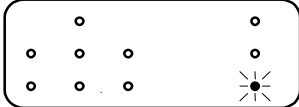
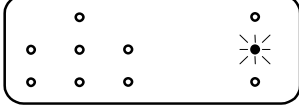
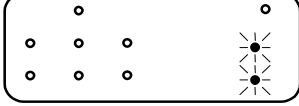
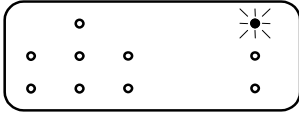
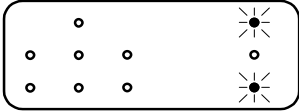
1. Switch off the power.
2. Press and hold the Auto/Manual button while switching on the power.
Release the Auto/Manual button.
 - First the Auto LED is flashing: The Model 82 is testing the EE-prom.
 - Then the Manual LED is flashing: The Model 82 is testing the 24 voltage, the 32 voltage, motors and solenoids.
 - At last all of the LEDs are lighting on the control panel: The test is complete.
3. Press the five buttons on the control panel one at the time.
 - All of the LEDs should be switched off except the Staples LED.
4. Move the four DIP switches to the right (right when facing the PCB), then to the left.
 - The last five LEDs will provide a fault code pattern.
Refer to SDS Fault code table and locate the lighting pattern of the LEDs.
5. Press the Auto/Manual button to display any other faults that were detected during the SDS.

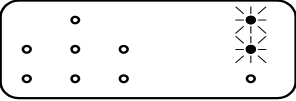

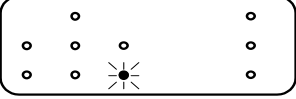
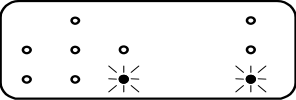
PURPOSE CEAD CYCLING

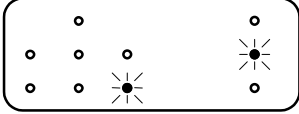
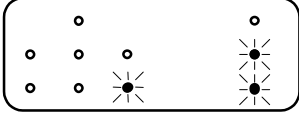
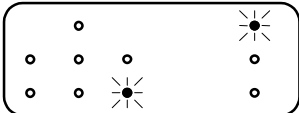
The purpose of the dead cycling is basically for factory testing, but can be of some use when trouble shooting. Dead cycling is a modified machine cycle. All functions in the machine are run such as motors and solenoids.

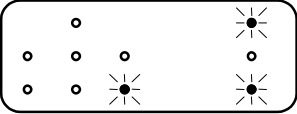
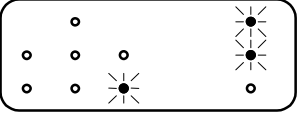
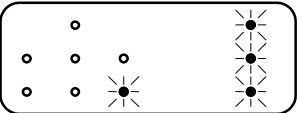
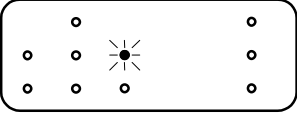
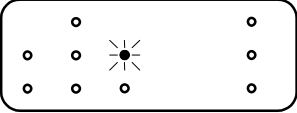
PROCEDURE DEAD CYCLING

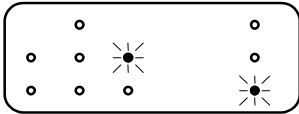
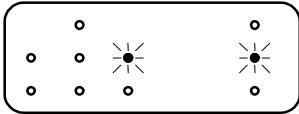
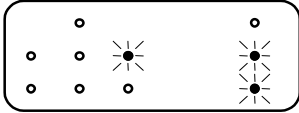
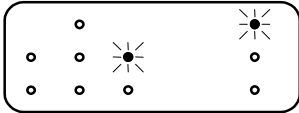
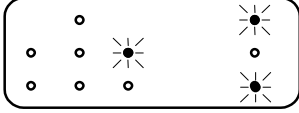
1. Switch off the power.
2. Remove the two stapler heads.
3. Press and hold the booklet making mode button while switching on the power.
Release the booklet making mode button.
 - The Staped booklet LED is flashing.

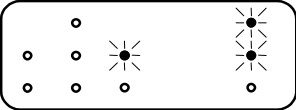
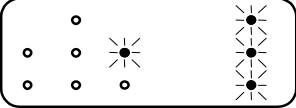
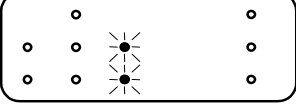
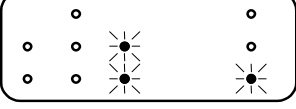
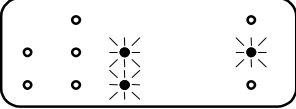
<u>Fault code</u>	<u>Possible cause</u>	<u>Fault isolating / repair</u>
<p>1. EEPROM error</p> 	<p>EEPROM values incorrect. EEPROM defective.</p>	<p>Reset the EE-prom according to PRG 6.1. Replace the controller PCB.</p>
<p>2. 36 VDC error</p> 	<p>Interlock switch SW5 activated. Rectifier REC 1 defective. Transformer T 1 defective. Capacitor C 1 defective. Wires defective.</p> <p>Controller PCB defective.</p>	<p>See fault code 5. Replace Rectifier. Replace Transformer. Replace Capacitor. Check the wires for an open circuit using a voltmeter. Measure from 3, 4 and 5 on connector J8 to the capacitor.</p> <p>Replace controller PCB.</p>
<p>3. 24 VDC error</p> 	<p>Controller PCB defective.</p>	<p>Replace controller PCB.</p>
<p>4. Interlock switch SW5, activated.</p> 	<p>Top cover open or Interlock switch not activated. Top cover misadjusted. Micro switch defective.</p> <p>Wires defective.</p> <p>Controller PCB defective.</p>	<p>Close the Top cover or pull out the Interlock bypass switch actuator. Check/Adjust the Top cover according to REP 1.2. Disconnect the wires from the switch. Check the function of the switch using a voltmeter. Check both Interlock micro switch and Interlock bypass micro switch. Disconnect the wires from the switch. Check the wires for an open circuit using a voltmeter. Measure from 10C and 17A on connector J1 to the Interlock switch and 10C and 12A to the bypass switch. If checks above is good, replace the controller PCB.</p>
<p>5. Stapler home position switch SW1, not activated.</p> 	<p>Stapler motor in faulty position. Stapler home position misadjusted. Micro switch defective.</p> <p>Wires defective.</p> <p>Controller PCB defective.</p>	<p>Switch off the power and switch on the power again. Check/Adjust the Stapler home position according to REP 3.5. Disconnect the wires from the switch. Check the function of the switch using a voltmeter. Check that the voltage between TP5 on the controller PCB and common ground is less than 0.9 VDC when the switch is activated and greater than 2.2 VDC when the switch is inactivated. If checks above is good, replace the controller PCB.</p>

<u>Fault code</u>	<u>Possible cause</u>	<u>Fault isolating / repair</u>
<p>6. Fold knife motor home position switch SW2, not activated.</p> 	<p>Fold knife motor in faulty position.</p> <p>Fold knife home position misadjusted.</p> <p>Micro switch defective.</p> <p>Wires defective.</p> <p>Controller PCB defective.</p>	<p>Switch off the power and switch on the power again.</p> <p>Check/Adjust the Fold knife home position according to REP 4.4.</p> <p>Disconnect the wires from the switch. Check the function of the switch using a voltmeter.</p> <p>Check that the voltage between TP4 on the controller PCB and common ground is less than 0.9 VDC when the switch is activated and greater than 2.2 VDC when the switch is inactivated.</p> <p>If checks above is good, replace the controller PCB.</p>
<p>7. Side jogger home position sensor Q6, faulty.</p> 	<p>Sensor defective.</p> <p>Wires defective.</p> <p>Controller PCB defective.</p>	<p>Check that the voltage between TP3 on the controller PCB and common ground is less than 0.9 VDC with the sensor blocked and greater than 2.2 VDC with the sensor unblocked.</p> <p>Disconnect the sensor connector. Check the wires for an open circuit using a voltmeter. Measure from 30A and 30C on connector J1 to the sensor connector. Measure from 30A and 4C on connector J1 to the sensor connector.</p> <p>Replace the controller PCB.</p>
<p>8. Edge stapling sensor Q3, activated.</p> 	<p>Paper is blocking the sensor.</p> <p>Sensor defective.</p> <p>Wires defective.</p> <p>Controller PCB defective.</p>	<p>Remove the paper.</p> <p>Check that the voltage between TP7 on the controller PCB and common ground is less than 0.9 VDC with the sensor blocked and greater than 2.2 VDC with the sensor unblocked.</p> <p>Disconnect the sensor connector. Check the wires for an open circuit using a voltmeter. Measure from 26C and 26A on connector J1. Measure from 2C and 8A on connector J1.</p> <p>If checks above is good, replace the controller PCB.</p>
<p>9. Saddle stapling sensor Q1, activated.</p> 	<p>Paper is blocking the sensor.</p> <p>Sensor misadjusted.</p> <p>Sensor defective.</p> <p>Wires defective.</p> <p>Controller PCB defective.</p>	<p>Remove the paper.</p> <p>Check/Adjust the Saddle stapling sensor according to REP 3.7.</p> <p>Check that the voltage between TP1 on the controller PCB and common ground is greater than 2.2 VDC with the sensor blocked and less than 0.9 VDC with the sensor unblocked.</p> <p>Disconnect the sensor connector. Check the wires for an open circuit using a voltmeter. Measure from 32C, 32A on connector J1. Measure from 1C and 23A on connector J1.</p> <p>If checks above is good, replace the controller PCB.</p>

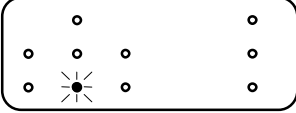
Fault code	Possible cause	Fault isolating / repair
<p>10. Outfeed sensor Q4, activated.</p> 	<p>Paper is blocking the sensor.</p> <p>Sensor misadjusted.</p> <p>Sensor defective.</p> <p>Wires defective.</p> <p>Controller PCB defective.</p>	<p>Remove the paper.</p> <p>Check/Adjust the Outfeed sensor according to REP 4.5.</p> <p>Check that the voltage between TP8 on the controller PCB and common ground is greater than 2.2 VDC with the sensor blocked and less than 0.9 VDC with the sensor unblocked.</p> <p>Disconnect the sensor connector. Check the wires for an open circuit using a voltmeter. Measure on connector J1 between 25A and 25C. And between 21A and 3C.</p> <p>If checks above is good, replace the controller PCB.</p>
<p>11. Fold stop sensor Q2, activated.</p> 	<p>Paper is blocking the sensor.</p> <p>Sensor misadjusted.</p> <p>Sensor defective.</p> <p>Wires defective.</p> <p>Controller PCB defective.</p>	<p>Remove the paper.</p> <p>Reposition the sensor to obtain the voltages below.</p> <p>Check that the voltage between TP2 on the controller PCB and common ground is greater than 2.2 VDC with the sensor blocked and less than 0.9 VDC with the sensor unblocked.</p> <p>Disconnect the sensor connector. Check the wires for an open circuit using a voltmeter. Measure on connector J1 between 31A and 31C. And between 31A and 4A.</p> <p>If checks above is good, replace the controller PCB.</p>
<p>12. Rear staple detection, activated.</p> 	<p>Stapler head short circuit to chassis ground</p> <p>Wires defective.</p> <p>Controller PCB defective.</p>	<p>Find what causes the short circuit and perform appropriate action.</p> <p>Check that the voltage between TP15 on the controller PCB and common ground is less than 0.9 VDC when the stapler head is in contact with the anvil and greater than 2.2 VDC when not in contact. Use a screw driver to connect the stapler head with the anvil.</p> <p>If check above is good, replace the controller PCB.</p>

<u>Fault code</u>	<u>Possible cause</u>	<u>Fault isolating / repair</u>
<p>13. Front staple detection, activated.</p> 	<p>Stapler head short circuit to chassis ground.</p> <p>Wires defective.</p>	<p>Find what causes the short circuit and perform appropriate action.</p> <p>Check that the voltage between TP16 on the controller PCB and common ground is less than 0.9 VDC when the stapler head is in contact with the anvil and greater than 2.2 VDC when not in contact. Use a screw driver to connect the stapler head with the anvil.</p>
<p>14. Trimmer not connected.</p> 	<p>Controller PCB defective.</p> <p>Model 75 intact.</p> <p>Cabels not connected.</p>	<p>If check above is good, replace the controller PCB.</p> <p>If a Trimmer is not connected.</p> <p>Connect the Interface cable and the Power cord from the Trimmer to the Model 82.</p>
<p>15. Infeed sensor Q5, activated.</p> 	<p>Wires defective.</p> <p>Trimmer faulty.</p> <p>Controller PCB defective.</p> <p>Paper is blocking the sensor.</p> <p>Sensor misadjusted.</p>	<p>Check the wires for an open circuit using a voltmeter. Measure from 6 on connector J9 to pin 8 on the DIN receptacle. Measure from 13 on connector J9 to pin 5 on the DIN receptacle.</p>
<p>16. Infeed transport belt motor M9, open circuit.</p> 	<p>Sensor defective.</p> <p>Wires defective.</p> <p>Controller PCB defective.</p>	<p>See technical documentation for Trimmer.</p> <p>Replace the controller PCB.</p> <p>Remove the paper.</p> <p>Reposition the sensor to obtain the voltages below.</p> <p>Check that the voltage between TP9 on the controller PCB and common ground is greater than 2.2 VDC with the sensor blocked and less than 0.9 VDC with the sensor unblocked.</p>
<p>16. Infeed transport belt motor M9, open circuit.</p> 	<p>Motor defective.</p> <p>Wires defective.</p> <p>Controller PCB defective.</p>	<p>Disconnect the sensor connector. Check the wires for an open circuit using a voltmeter. Measure on connector J1 between 24A and 24C. And between 24A and 2A.</p> <p>If checks above is good, replace the controller PCB.</p> <p>Disconnect the motor connector. Check the motor for an open circuit using a voltmeter.</p> <p>Disconnect the motor connector. Check the wires for an open circuit using a voltmeter. Measure from 14 and 7 on connector J8 to the motor connector.</p> <p>Replace the controller PCB.</p>

Fault code	Possible cause	Fault isolating / repair
17. Back jogger motor M7, jogger up, open circuit. 	Motor defective. Wires defective. Controller PCB defective.	If both fault code 17 and 18 was detected. Disconnect the motor connector. Check the motor for an open circuit using a voltmeter. If both fault code 17 and 18 was detected. Disconnect the motor connector. Check the wires for an open circuit using a voltmeter. Measure from 10 and 11 on connector J8 to the motor connector. If only one of fault code 17 and 18 was detected. Replace the controller PCB.
18. Fold stop gate motor M12, open circuit. 	Motor defective. Wires defective. Controller PCB defective.	Disconnect the motor connector. Check the motor for an open circuit using a voltmeter. Disconnect the motor connector. Check the wires for an open circuit using a voltmeter. Measure from 8 and 1 on connector J9 to the motor connector. Replace the controller PCB.
19. Stapler motor M1, open circuit. 	Motor defective. Wires defective. Controller PCB defective.	Disconnect the motor connector. Check the motor for an open circuit using a voltmeter. Disconnect the motor connector. Check the wires for an open circuit using a voltmeter. Measure from 9 and 2 on connector J2 to the motor connector. Replace the controller PCB.
20. Stapled set transport motor M4, Open circuit 	Motor defective. Wires defective. Controller PCB defective.	Disconnect the motor connector. Check the motor for an open circuit using a voltmeter. Disconnect the motor connector. Check the wires for an open circuit using a voltmeter. Measure from 7 and 14 on connector J9 to the motor connector. Replace the controller PCB.
21. Stapled set transport solenoid SOL 1, open circuit. 	Solenoid defective. Wires defective. Controller PCB defective.	Disconnect the solenoid connector. Check the solenoid for an open circuit using a voltmeter. Disconnect the solenoid connector. Check the wires for an open circuit using a voltmeter. Measure from 5 on connector J2 to 5 on connector J9. Replace the controller PCB.

<u>Fault code</u>	<u>Possible cause</u>	<u>Fault isolating / repair</u>
<p>22. Staple stop gate release solenoid SOL2, open circuit.</p> 	<p>Solenoid defective.</p>	<p>Disconnect the solenoid connector. Check the solenoid for an open circuit using a voltmeter.</p>
	<p>Wires defective.</p>	<p>Disconnect the solenoid connector. Check the wires for an open circuit using a voltmeter. Measure from 4 and 11 on connector J2 to the solenoid connector.</p>
	<p>Controller PCB defective.</p>	<p>Replace the controller PCB.</p>
<p>23. Side jogger motor M3, open circuit.</p> 	<p>Motor defective.</p>	<p>Disconnect the motor connector. Check the motor for an open circuit using a voltmeter.</p>
	<p>Wires defective.</p>	<p>Disconnect the motor connector. Check the wires for an open circuit using a voltmeter. Measure from 11 and 12 on connector J9 to the motor connector.</p>
	<p>Controller PCB defective.</p>	<p>Replace the controller PCB.</p>
<p>24. Fold knife motor M2, open circuit.</p> 	<p>Motor defective.</p>	<p>Disconnect the motor connector. Check the motor for an open circuit using a voltmeter.</p>
	<p>Wires defective.</p>	<p>Disconnect the motor connector. Check the wires for an open circuit using a voltmeter. Measure from 8 and 1 on connector J2 to the motor connector.</p>
	<p>Controller PCB defective.</p>	<p>Replace the controller PCB.</p>
<p>25. Folder roller motor M8, open circuit.</p> 	<p>Motor defective.</p>	<p>Disconnect the motor connector. Check the motor for an open circuit using a voltmeter.</p>
	<p>Wires defective.</p>	<p>Disconnect the motor connector. Check the wires for an open circuit using a voltmeter. Measure from 11 and 14 on connector J2 to the motor connector.</p>
	<p>Controller PCB defective.</p>	<p>Replace the controller PCB.</p>
<p>26. Stacker motor M5, open circuit.</p> 	<p>Motor defective.</p>	<p>Disconnect the motor connector. Check the motor for an open circuit using a voltmeter.</p>
	<p>Wires defective.</p>	<p>Disconnect the motor connector. Check the wires for an open circuit using a voltmeter. Measure from 13 and 6 on connector J9 to the motor connector.</p>
	<p>Controller PCB defective.</p>	<p>Replace the controller PCB.</p>
	<p>NOTE:</p>	<p>When you are running the Self diagnostics with a Trimmer. The Model 82 is only running diagnostics on it self. So the program will not detect the belt stacker as it is not connected directly to the Model 82.</p>

Fault code	Possible cause	Fault isolating / repair
27. Length adjustment maximum limit switch SW3, activated.	Adjusted to maximum paper size.	Adjust to a smaller paper size. It is allowed to run the Model 82 adjusted to the largest paper size
	Micro switch defective.	Disconnect the wires from the switch. Check the function of the switch using a voltmeter.
	Wires defective.	Check that the voltage between TP13 on the controller PCB and common ground is less than 0.9 VDC when the switch is activated and greater than 2.2 VDC when the switch is inactivated.
	Controller PCB defective.	If checks above is good, replace the controller PCB.
28. Length adjustment minimum limit switch SW4, activated.	Adjusted to minimum paper size.	Adjust to a larger paper size. It is allowed to run the Model 82 adjusted to the smallest paper size
	Micro switch defective.	Disconnect the wires from the switch. Check the function of the switch using a voltmeter.
	Wires defective.	Check that the voltage between TP11 on the controller PCB and common ground is less than 0.9 VDC when the switch is activated and greater than 2.2 VDC when the switch is inactivated.
	Controller PCB defective.	If checks above is good, replace the controller PCB.
29. Edge staple stop motor M10, open circuit.	Motor defective.	Disconnect the motor connector. Check the motor for an open circuit using a voltmeter.
	Wires defective.	Disconnect the motor connector. Check the wires for an open circuit using a voltmeter. Measure from 8 and 9 on connector J8 to the motor connector.
	Controller PCB defective.	Replace the controller PCB.
30. Edge stapling transport motor M11, open circuit	Motor defective.	Disconnect the motor connector. Check the motor for an open circuit using a voltmeter.
	Wires defective.	Disconnect the motor connector. Check the wires for an open circuit using a voltmeter. Measure from 12 and 13 on connector J8 to the motor connector.
	Controller PCB defective.	Replace the controller PCB.
31. Length adjustment motor M6, open circuit.	Motor defective.	Disconnect the motor connector. Check the motor for an open circuit using a voltmeter.
	Wires defective.	Disconnect the motor connector. Check the wires for an open circuit using a voltmeter. Measure from 1 and 2 on connector J8 to the motor connector.
	Controller PCB defective.	Replace the controller PCB.

<u>Fault code</u>	<u>Possible cause</u>	<u>Fault isolating / repair</u>
<p>32.Side jogger motor hall sensor Q7, faulty.</p> 	<p>Sensor defective.</p>	<p>Check that the voltage between 15C and 19A on connector J1. Is greater than 2.2 VDC with the sensor blocked and less than 0.9 VDC with the sensor unblocked.</p>
	<p>Wires defective.</p>	<p>Disconnect the sensor connector. Check the wires for an open circuit using a voltmeter. Measure on connector J1 between 15C and 19A. And between 19A and 1A.</p>
	<p>Controller PCB defective.</p>	<p>If check above is good, replace the controller PCB.</p>

	Problem	Cause	Action
1	Staple indicator LED is flashing.	Clinchers need to be oiled. (Every 20 000 staple cycles, the LED will start flashing as a reminder to oil the clinchers).	Put a couple of drops of oil on each clincher by the clincher points. Wipe off excessive oil. Press and hold both size adjustment buttons simultaneously for 4 seconds. <i>The LED will come on and go off.</i> -The counter for oiling clinchers is now reset.
2	Bad staple forming	A staple is jammed in the stapler head. Any of the four white insulators on the stapler head is missing.	Remove stapler head and staple cartridge. Make sure no staple is jammed in the stapler head. It can be necessary to disassemble the stapler head according to REP 3.9 to reach the jammed staple. Mount the four insulators on each stapler head.
3	Bad staple forming (after item 2 has been carried out)	Stapler driver defective. Stapler head defective.	Replace stapler driver according to REP 3.9. Replace stapler head according to REP 3.1.
4	The spine of the staple is damaged/waveshaped.	Stapler driver defective. Stapler head defective.	Replace stapler driver according to REP 3.9. Replace stapler head according to REP 3.1.
5	Staple legs not flat formed, general.	Staples remaining in clincher point area. Stapler pressure not adjusted correctly. Clincher points not adjusted correctly. Stapler head not correctly positioned lengthwise (or sideways) against clinchers. Reinforcement bar below machine not fixed, square or damaged.	Clear staples by pressing on clincher arms as when adjusting clincher points. See REP 5.7. Use a plier if necessary to remove the staple. Adjust stapler pressure according to REP 5.5. Adjust clincher points according to REP 5.7. Adjust stapler head to clincher according to REP 5.3. Make sure it is square and tightened.
6	Staple legs not flat formed, 20 sheet sets.	Clincher pressure not adjusted correctly.	Adjust clincher pressure according to REP 5.8. Tighten nut (1) on the actual side a quarter of a turn (1/4).

Note: Item 5 and 6 is based on the assumption that the stapler heads are faultless and that adjustments has not been tampered with.

