



Instruction Manual

Rollaway



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Instruction Information Sheet

Machine: Rollaway – Non-strike

Serial No:

Instructions Reference: 91P-1702

Issue Number: 03

Operator Competence

It is assumed throughout these instructions that the operator will be a competent one, having worked with similar machines for at least 2 years previously.

Training can be obtained from qualified Rollem staff upon request, it is recommended that operators attend a brief training session given by the Rollem installation and service engineer upon installation of the machine.

If in any doubt at all about the setting or operation of this machine – please contact Rollem for assistance.

Equipment Safety

General Safety

If you are unfamiliar with this equipment, read the manual thoroughly before proceeding.

If there is any doubt at any stage, do not proceed but seek clarification.

Before installing, maintaining, cleaning or removing any covers from a machine, switch off and isolate the machine either by disconnecting the plug from the socket, or ensuring that the isolator is switched off and has disconnected all the supply conductors (all lives and neutral).

There is no reason to work inside this equipment before it is correctly isolated.

Besides all procedures listed in this manual, reference must be made to local procedures for safe working practices, particularly the dangers of working with electricity.

Only competent persons trained on the equipment may service, maintain, repair or adjust the machine, or for any other reason remove any covers or part of the machines with a tool (a key is not a tool).

All Rollem manufactured machines are class 1 (to be earthed).

WARNING - THIS APPLIANCE MUST BE EARTHED

Although the machine has circuits at mains voltages and also at lower AC & DC voltages, the electrical safety and insulation of the machine are designed, constructed and are to be maintained at, the higher mains voltage.

- **If the machine is rated 13A:**

The wires in the mains lead are coloured according to the following code:

Green-and-yellow: Earth

Blue: Neutral

Brown: Live

As the colours of the wires in the mains lead may not correspond with the coloured markings identifying the terminals in your plug/isolator unit, proceed as follows:

The wire that is coloured green-and-yellow must be connected to the terminal in the plug that is marked with the letter E or by the earth symbol:



or coloured green, or coloured green-and-yellow

The wire that is coloured blue must be connected to the terminal that is marked with the letter N or coloured black.

The wire that is coloured brown must be connected to the terminal that is marked with the letter L or coloured red.

If the mains cord requires replacing, only cords supplied by Rollem must be used.

- **If the machine is single phase and rated above 13A:**

The wires in the mains lead are coloured according to the following code:

Green-and-yellow: Earth

Blue: Neutral

Brown: Live

The machine must not be connected to the electricity supply via a 13A (BS 1363) plug and socket; the machine must only be connected to a suitable supply point rated greater than the machine and must only be connected by a suitably qualified person. As the colours of the wires in the mains lead may not correspond with the coloured markings identifying the terminals in the isolator unit, proceed as follows:

The wire that is coloured green-and-yellow must be connected to the terminal, which is marked with the letter E, or by the earth symbol, or coloured green, or coloured green-and-yellow.

The wire that is coloured blue must be connected to the terminal that is marked with the letter N or coloured black.

The wire that is coloured brown must be connected to the terminal that is marked with the letter L or coloured red.

If the mains cord requires replacing, only cords supplied by Rollem must be used.

- **If the machine is rated for 3-phase electricity supply:**

The machine must be connected to a 3-phase electricity supply point, a 13A (BS 1363) plug and socket is not suitable. The machine must only be connected by a suitably qualified person. Note, wire colours for 3-phase supplies may vary; if there is any doubt, do not proceed but seek further clarification.

If the mains cord requires replacing, only cords supplied by Rollem must be used.

If the machine is rated differently from the above, reference must be made to Rollem before proceeding.

All machines must be connected to the mains electrical supply by either a suitable plug and socket (e.g. using a plug to BS4343 / EN60309-2), or by a suitable isolator unit, which can securely disconnect all supply conductors (all lives and neutral).

If left unattended for any time, the machines must be switched off and isolated.

Children must not operate Rollem machines.

Where machines are supplied for “bench use”, the machines must be sited on a work surface, capable of securely supporting them, avoiding positions where the legs or bases of the machines are near an edge and the machines could be inadvertently knocked and fall over; if there is any doubt, the machines must be bolted to a fixed, secure structure.

Attention must be paid to the recommended electrical safety maintenance procedure detailed within this manual.

The machines must not be used outdoors or in any situation where they are likely to be splashed or exposed to excessive damp.

When moving the machines, ensure that suitable facilities, or help, is available to lift or move the machines; particularly into or from awkward locations where overreaching may occur.

Do not block any of the ventilation holes on the equipment, either to the sides or on the top.

Safe Working Procedure (Electrical)

UNDER NO CIRCUMSTANCES MUST SERVICING WORK OF ANY NATURE BE CARRIED OUT WITHIN A LIVE MACHINE. THERE IS ABSOLUTELY NO REASON FOR ANY PERSON TO EITHER TOUCH INSIDE A LIVE MACHINE OR APPROACH THE VICINITY OF LIVE PARTS.

This procedure must be read together with, and does not take the place of, local procedures and Health and Safety Policies.

Before any work commences, people in the vicinity, or likely to approach the machine must be warned that the machine is about to be serviced.

Due regard must be made to site regulations such as permission/permit to work rules.

The electrical supply must be switched off and isolated, either by removing a plug or switching an isolator unit to off and ensuring that the live(s) and neutral are disconnected.

Precautions must be taken to prevent the isolator being turned accidentally back on, either:

- lock it off with a personal padlock.
- instruct a person to prevent the equipment being reconnected.
- if the isolator or plug and socket are in visual sight, attach a notice/sign to the isolation point warning that the connection is not to be remade and keep a visual check to prevent any person approaching the isolation point.

Covers may now be removed.

Before going further, a test must be made to ensure that the machine is isolated from the electrical supply. Particular care must be taken if a switch on an isolator unit disconnects the machine.

If it is necessary to run the machine with a cover removed, suitable precautions must be made to prevent any person approaching the machine and being exposed to danger.

Never leave a machine unattended with covers removed or in an unsafe condition.

Hand held devices for making electrical tests, which rely on the human body to complete a test circuit (such as neon-type screwdrivers) are not to be used; devices with insulated test probes are particularly recommended. Follow this procedure:

- isolate the machine
- check the points to be tested

- reconnect the machine
- take the required readings
- isolate the machine

Every time a machine is serviced, the following minimum checks must be made as a matter of routine:

- Correct wiring of the mains cord into a plug or isolator unit.
- Physical inspection of the mains cord for damage.
- Physical check of the cord grips at both ends of the mains cord.
- Physical inspection of the earth bonding.
- Physical check of cables inside and outside the machine for discolouration/other signs of overheating or damage.
- Any sharp edges in accessible areas.
- The earth bond and insulation tests for any machine connected by a plug and socket, and where practical to machines connected by other means)

Routine Electrical Maintenance Procedure

This procedure covers the minimum tests required to be performed on ROLLEM equipment, to comply with the UK Electricity at Work Regulations 1989. The meaning of words and phrases used in this procedure is to be interpreted according to the definitions within the regulations.

As a minimum, the maintenance procedure should be carried out at least annually, but consideration must be given locally to more frequent maintenance programs if there is a likelihood of the machines becoming dangerous within an annual maintenance period.

Always do the tests in the correct order, if a machine does not pass a test, do not pass onto the next test without rectifying the reason for the failure (a fault indicates danger and the next test may not be safe), if a machine cannot be rectified to pass one of the tests, the machine must not be reconnected and must not be left in a state where it could be used.

BEFORE TESTING

- Check the operating voltage, current and power of the machine and the supply; compare all sources of information (test sheet, serial plate etc.) and correct if necessary.
- Check the environment for hazards: flammable vapours, dusts etc.
- Warn people that tests are about to be carried out, and ensure that precautions are taken to keep a 3m (10') safety area around the machine during the periods when the machine is energised.
- Disconnect any additional equipment from the machine.
- Ensure that the supply for the test equipment is properly earthed.
- Physically isolate the machine from the supply; either by unplugging or by disconnecting and removing the mains cord from its supply point.
- Ensure that the machine on/off switch is in its normal ON operating position.

PHYSICAL EXAMINATION

- Check equipment casing for signs of damage/loose parts that may give rise to a source of danger, e.g. a breakdown of insulation or user access to live parts.
- Check the mains plug (if fitted) for cracks or damage, open it up and check the terminals, fuse and fuse rating; check that the cord grip is effective in preventing the cord being pulled out, pushed in or twisted.
- Check the mains cord for damage to the insulation or other dangerous conditions such as kinking.

Portable Appliance Test

Portable Appliance Test to be carried out in accordance with the equipments instructions.

Safe Working Procedures (Blades and Other Sharp Areas)

1. When handling any sharp items, for example slitting blades, suitable protection must be worn that will protect the hands and wrists from any risk of injury.
2. When removing or adjusting shaft assemblies, to avoid the risk of damage to the machine and the risk of personal injury, the shaft must be supported and must only be moved with the assistance of a suitably rated, approved and maintained mechanical hoist or equivalent.

Operating Temperature

Rollem machinery should be operated in an ambient temperature in the range of 5-40°C

Safety Guarding

Safety Guards are fitted with 2 tamperproof screws.

These screws must be in place before the machine is started.

The tool for the tamperproof screws is not to be issued to unskilled/incompetent persons, and must be used to remove the tamperproof screws/guard only for the setting/maintenance of the machine.

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Introduction

The Rollem Rollaway

The Rollaway is a fully mobile and automatic machine that can perforate, automatically strike perforate, score, slit, strike slit and semi-slit all at the touch of a button.

It can be used as an independent unit complete for manual feeding – the Rollaway perforates, creases and slits direct from the press or other machinery delivery in either of two directions.

Technical Specification

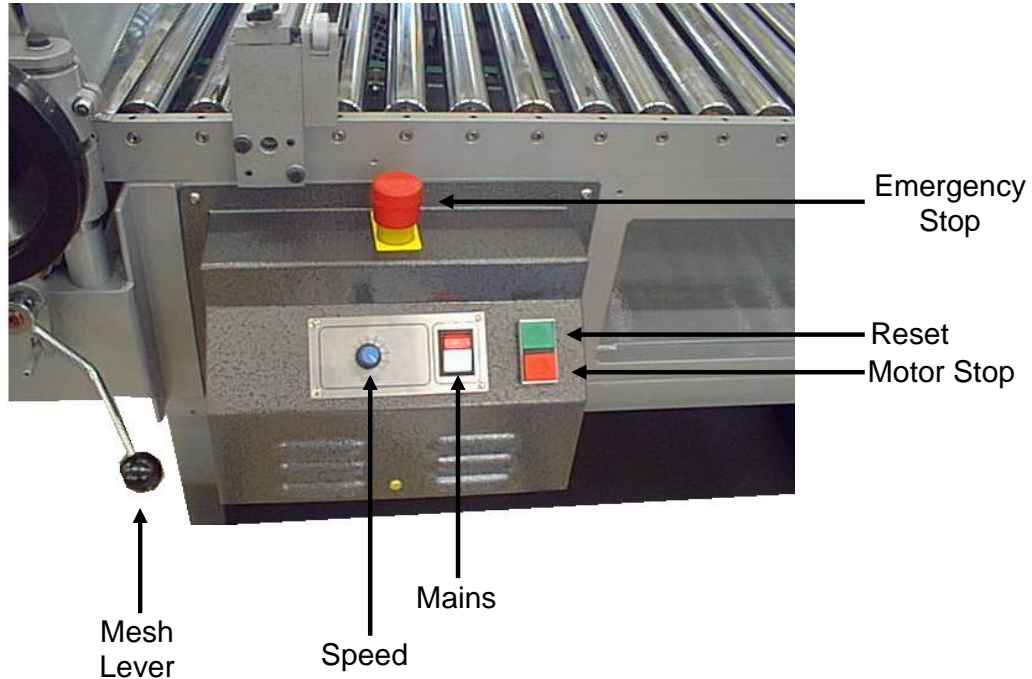
	Rollaway Single Head				Rollaway Double Head			
Machine Size	24" (600mm)	30" (750mm)	36" (900mm)	42" (1050mm)	24" (600mm)	30" (750mm)	36" (900mm)	42" (1050mm)
Length (mm)	1675	1675	1675	1675	1800	1800	1800	18000
Width (mm)	940	1095	1250	1410	940	1095	1250	1410
Height (mm)	1150	1150	1150	1150	1150	1150	1150	1150
Weight (kg)	310	400	460	530	410	500	560	630
Minimum Sheet Width (mm)	125	125	125	125	125	125	125	125
Maximum Sheet Width (mm)	580	735	890	1040	580	735	890	1040
Minimum Sheet Length (mm)	125	125	125	125	125	125	125	125
Maximum Sheet Length (mm)	1040	1040	1040	1040	1040	1040	1040	1040
Minimum Sheet Weight (g/sm)	40	40	40	40	40	40	40	40
Maximum Sheet Weight (g/sm)	700	700	700	700	700	700	700	700
Power Supply (volts)	110/230	110/230	110/230	110/230	110/230	110/230	110/230	110/230
Maximum Speed A5 (s/hr)	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000

Installation and Maintenance

When the machine is delivered carefully remove all dust and anti-grease with either blanket wash or a similar solution. Particular care should be taken to clean and lightly oil the shafts. This enables the units to be moved along the shafts easily when setting.

There are no oiling points on the shaft bearings as these are fitted with oil impregnated bushes. An occasional drop of thin oil should be applied between the stripper blades in the top perforating units and between the bottom perforating units. This allows for smooth running of the units and reduces the possibility of dry components rubbing together.

Control Panel



Starting Sequence:

1. Switch on the top switch marked 'MAINS'.
2. Switch on the middle switch marked 'RESET'.
3. Switch on the bottom switch marked 'MOTOR'
4. Adjust the speed of the roller table with the blue potentiometer.

Variable Speed Control

The machine is fitted with variable speed control. A potentiometer located on the control panel adjusts the machines speed from a complete stop to maximum speed. The speed control will allow you to inch the machine for ease of set-up.

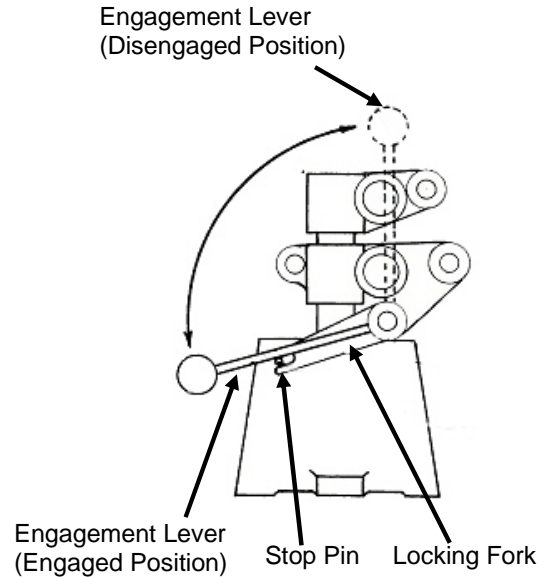
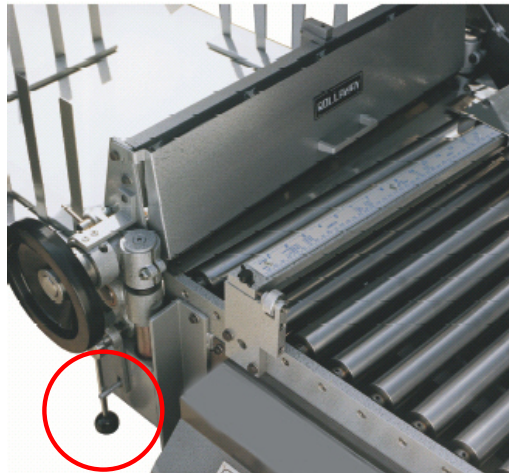
Alignment of the Machine

1. Wheel the Rollaway as near to the delivery position as possible.
2. Adjust the height by screwing the machine legs up or down so that the roller table is approximately 2" (50mm) higher than the ejection position of the paper from delivery rollers on the preceding machine.
1. Set at a slight angle to the preceding machine, this allows the trailing corner of the paper to strike the ball-loaded lay side first, preventing the leading corner plunging between the rollers.
4. Three alternative positions are provided for the laybar, to allow a shorter length of travel for the smaller sheets. The laybar is secured in position by two screws, *before altering the laybar position – remove steel balls from cage.*
5. Provision is made at one end of the laybar for angular adjustment. This is in the form of a single slot, allowing movement to the left or right to control the parallelism of perforation to lay edge of paper.
6. Provision is also made for easy changing of ball weights, allowing the smaller balls to be used for thin, light stock and the larger balls for heavy stock such as card and so on. The split adaptor rings for this purpose are a simple push fit into the laybar.

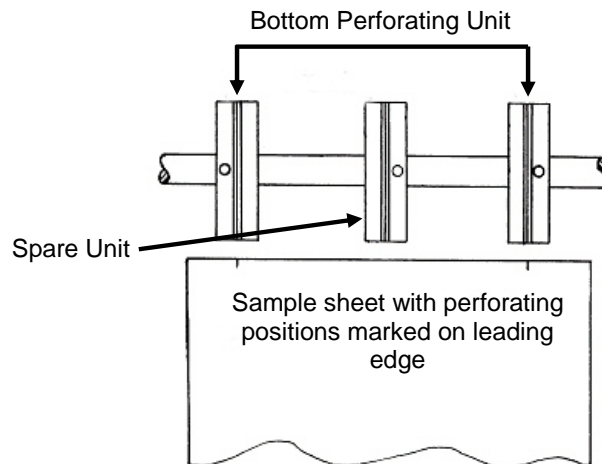
Setting up the Machine

Setting up the Perforating Units

1. Isolate the machine from the power supply.
2. Prepare a sample of work to be perforated – mark out the positions of the perforations on the front edge of the sample.
2. Put the engagement lever in the out of engagement position.

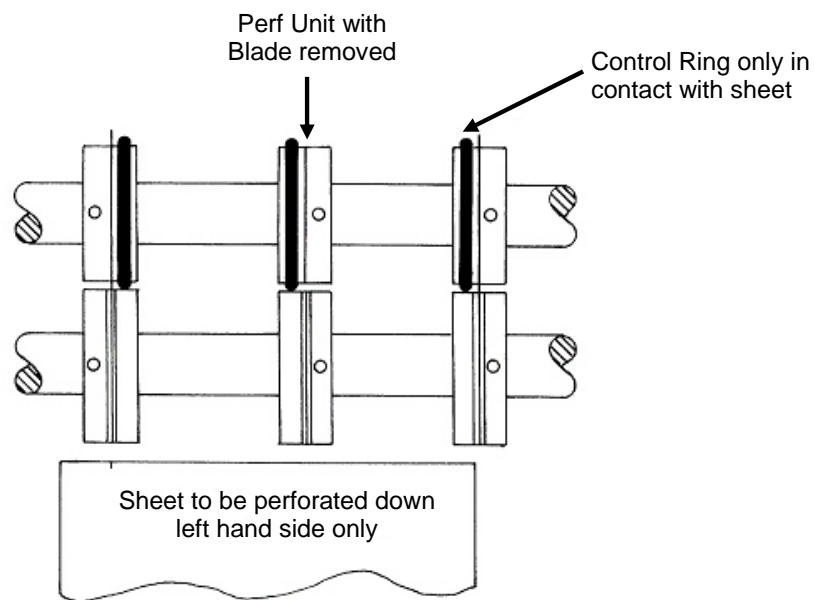


3. Slide the bottom perforating units into position. This is achieved by lining the gap between the two steel bottom cutter blades in each of the bottom units directly in line with the marked out position on the sample sheet.

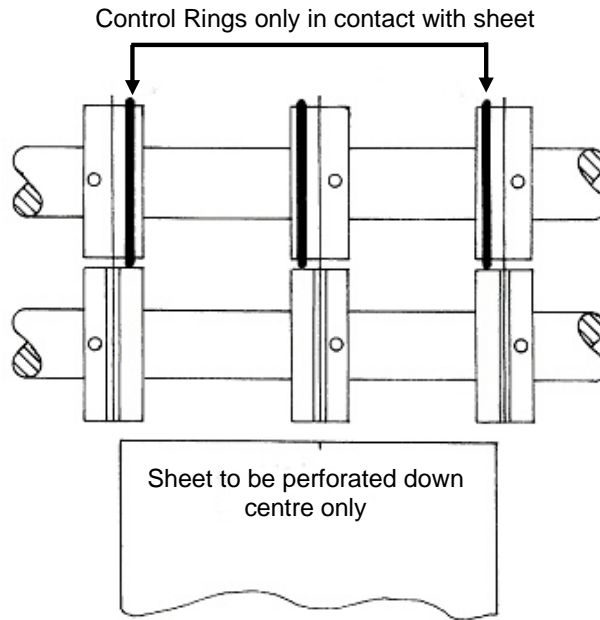


5. Once in position the units should be locked onto the bottom shaft by tightening the cutter retainer screw with the allen key provided.

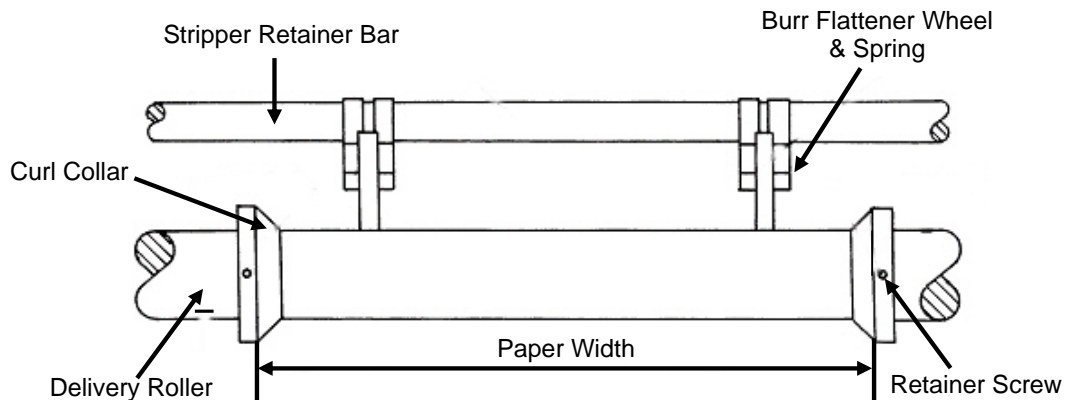
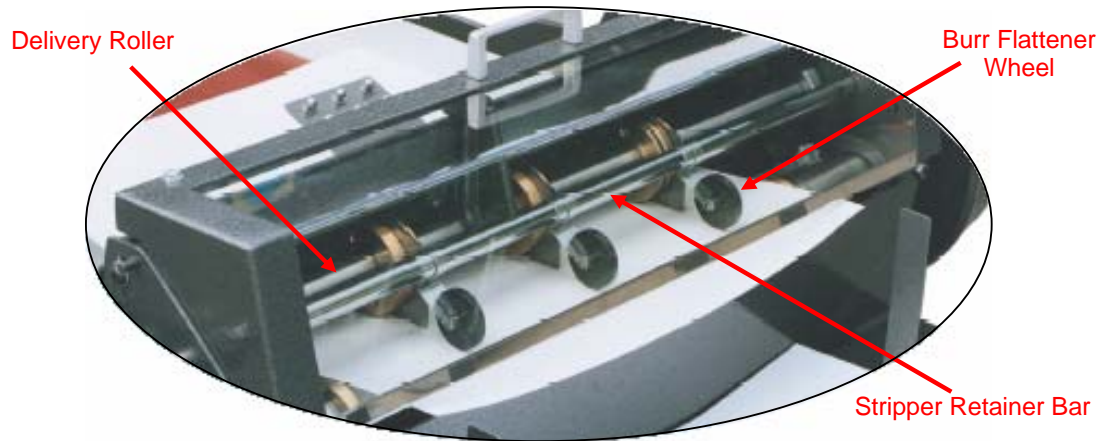
6. Any spare bottom units should be spaced out along the bottom cutter shaft to help support the paper as it passes through the machine.
7. At this stage it is important to ensure that all the top perforating units are completely offset from the bottom units, as damage can occur at the perforating blades whilst the top and bottom units are being brought into engagement.
8. The top perforating units should now be mated, one at a time, with their corresponding bottom units, by lowering the engagement lever down to the stop pin.
9. Extreme care should be taken to ensure that the perforating blade is located into the gap between the two steel bottom cutter blades.
10. Once in position the top units should be locked in position in the same manner as the bottom units.
11. Any spare top perforating units should be parked to the side of the machine, out of line with the work being perforated and fastened onto the shaft.
12. Where the work requires only one line of perforation near one edge of the sheet it is essential to ensure that a minimum of three rubber control rings are in contact with the sheet.
13. A perforating unit with the blade removed, or disengaged scoring head should be positioned at the opposite edge of the perforation so that the rubber ring is in contact with the sheet, giving additional control.



14. When a perforation is required down the centre of the sheet only, additional control should be applied to each edge of the sheet in the same manner as above.



15. The curl collars, situated on the delivery roller, should now be set in line with the outer edges of the sheet and the burr-flattener wheels placed directly at the back of each of the top perforating units. In addition to acting as a burr-flattener agent this positioning forms the paper into a shallow trough shape and eliminates the tendency for some sheets to roll over in the delivery tray instead of laying flat.



16. After removing the keepers from the magnets, the back stops should now be placed on the delivery table to form a box for the finished work to fall into. The magnetism can be easily broken by lifting the back stop directly from the table, thus allowing the positioning to be easily changed.

Note: The base section of the back stops should be placed to the inside where the sheet will be supported by the bases at the outer edges, this will give full table coverage.

Scoring and Slitting

The setting up procedure for scoring and slitting is the same as described above for perforating.

In the case of scoring however, it will be necessary to run the machine with the engagement lever slightly disengaged.

The position of the engagement lever will depend on the depth of score required. Once the appropriate position has been selected, the lever should be locked in place by tightening the securing screw in the locking fork.

Note: Do not run the machine with the engagement lever too far out of engagement, otherwise the rubber control rings will fail to grip the sheet resulting in an inaccurate score.

Care should also be taken to ensure that the male scoring blade is centred in the female groove to prevent cracking or splitting along one edge of the score.

An easy method of setting the male scoring head into the female scoring head is to:

1. Position the female scoring head into its proper position and tighten down the set screw.
2. Mate the male scoring head into the female groove and lower handle to engaged position (taking care not to damage the male scoring edge).
3. With the male scoring head loose and the female scoring head tight, run a doubled sheet of 20lb (9 Kg) of stock through the score by hand, 1 revolution of the male scoring head.
4. With the stock still in between the heads – tighten the male scoring head.

This should centre the score.

Double Scoring Head Configuration

(On Double Shafts only)

Different stock reacts differently to being scored. Only by testing can it be determined which configuration works best for an application.

A light score with a wide No 4, followed by a heavier but narrower No 5 will give a stair step score.

Using the same score in tandem (double scoring) with the first score light and the second score heavier, will deepen the score in 2 stages and is particularly useful on brittle stock.

A light score with a narrow No 5 followed by a heavier but wide No 4 deepens and widens the score in 2 stages.

Maintenance

Replacing Perforating Blades

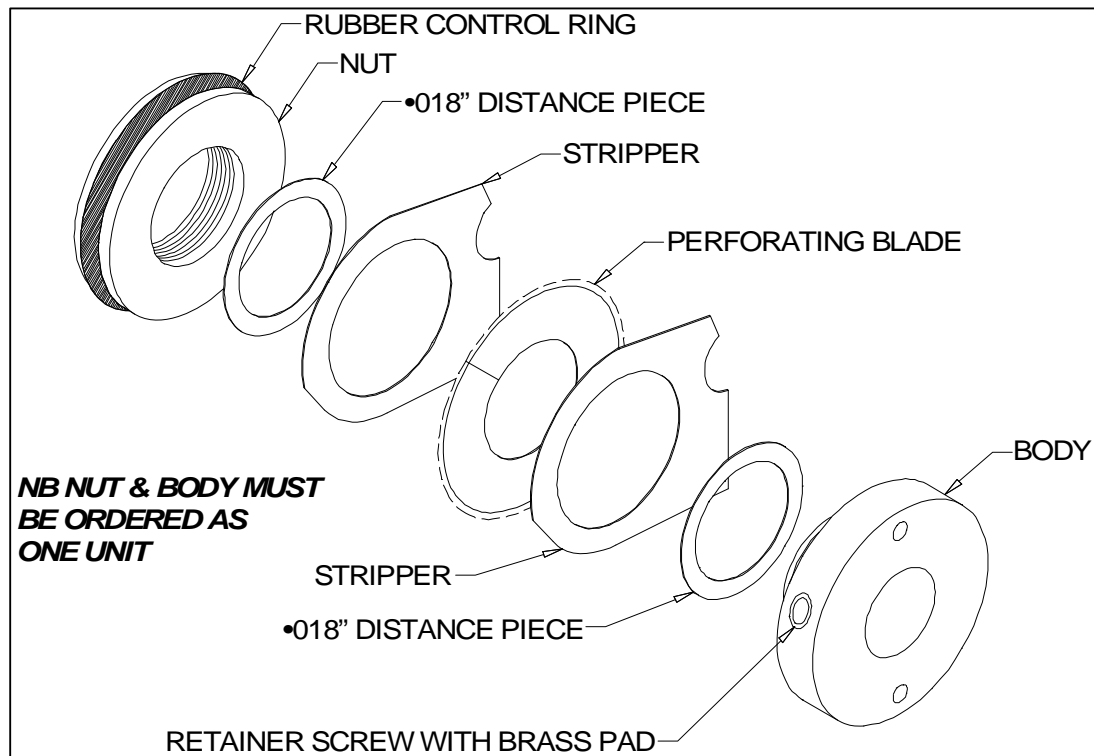
Replacement perforating blades can be fitted without taking the top and bottom shafts out of the machine.

1. With two spanner wrenches, loosen the top perforating unit.
2. Move aside the stripper and distance piece (one stripper and one distance piece on either side of the perforating blade).
3. Fit the new perforating blade, the perforating blade is split and so can be removed by threading it over the shaft.

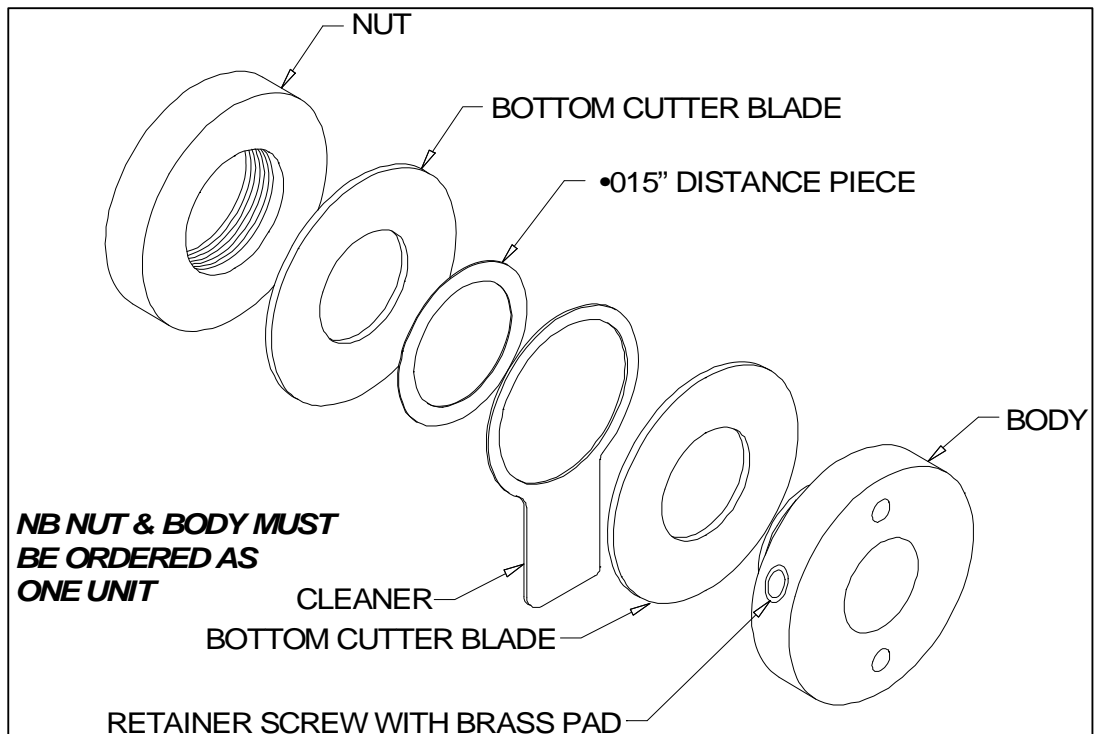
Replace the distance pieces and the strippers and tighten the nut, making sure that the strippers are riding on top of the distance pieces, if not then the perforating unit will not run freely, making rotary movement almost impossible.

Perforating Units

Exploded Diagram of Top Perforating Unit

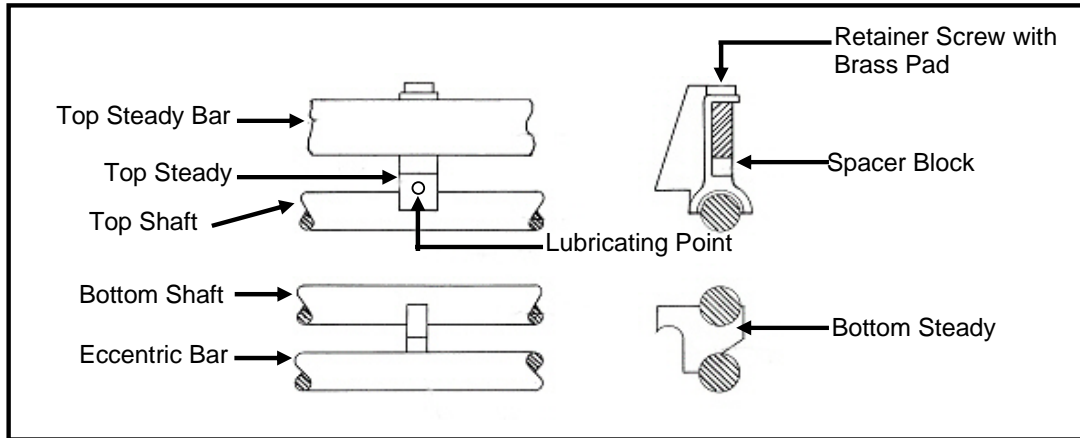


Exploded Diagram of Bottom Perforating Unit

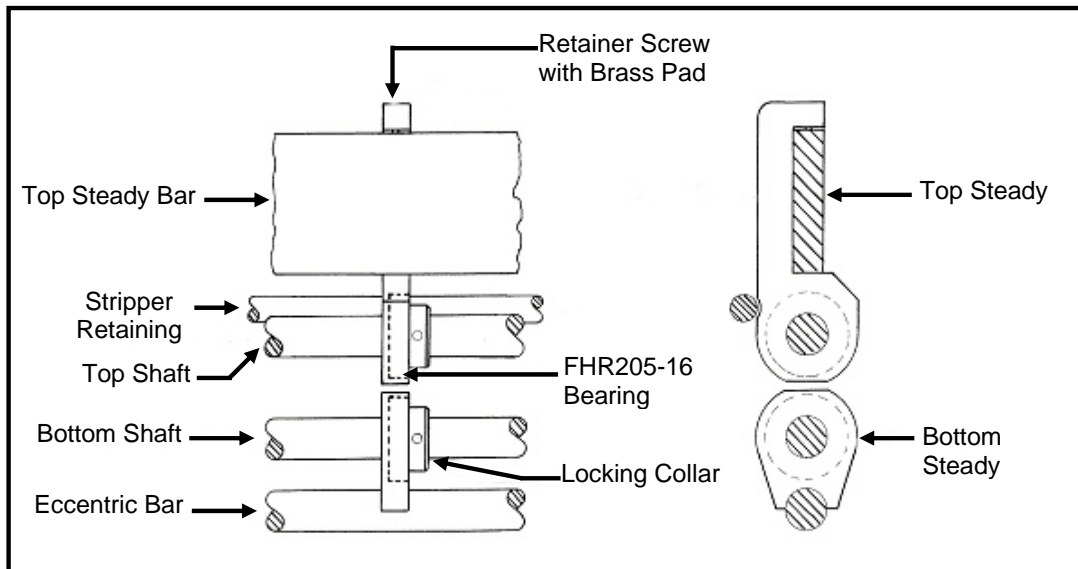


Steady Bearings

All machines size 24 inch (60cm) and above are fitted with steady bearings as standard.



In certain cases, where heavy duty work is involved, heavy duty steady bearings are fitted to the machine.



Always position top and bottom steadies as near to the centre of the machine as possible

Troubleshooting

Machine Will Not Start

1. No power input – incoming power off or circuit breaker tripped.
2. Bad on/off switch or potentiometer.
3. Fuse blown
4. Loose connection
5. Feeder not on.

Stock Does Not Register

1. Machine not level (tilted away from side guide).
2. Stock too far from side guide.
3. Stock catching on side.
4. Not enough control rings.
5. Machine running too fast (especially very mall or very wavy stock).

Stock Cracking

1. Incorrect width of score.
2. Incorrect depth of score.
3. Incorrect score configuration.
4. Score not centred.
5. Heads or shafts loose.
6. Double scoring may be necessary on some stock.
7. Steady bearings loose.
8. If stock cracks on folder but not by hand:
 - (a) Not folding on score,
 - (b) Pressure too great,
 - (c) Register off (see stock does not register).

Stock Marring or Scratching

1. Deflector panels down too low (scratching).
2. Deflector panels up too high (lead edge nicks).
3. Burr flattener has too much pressure (marring).

Score Slits Stock

1. Male coring head not centred in female.
2. Scoring head(s) loose.
3. Shaft(s) loose.
4. Handle too deep.

Uneven Depth of Score

1. Bad head (flattened score).
2. Change steady bearing position.
3. Score not centred.

Checklist

1. All lock collars tight
2. No movement in shafts
3. All scoring heads are tight.
4. All scoring heads are staggered or seated when handle is lowered (to avoid flattening scores).
5. Deflector panels are down.
6. When perforating engagement handle should be down and locked.
7. All shafts are turning.