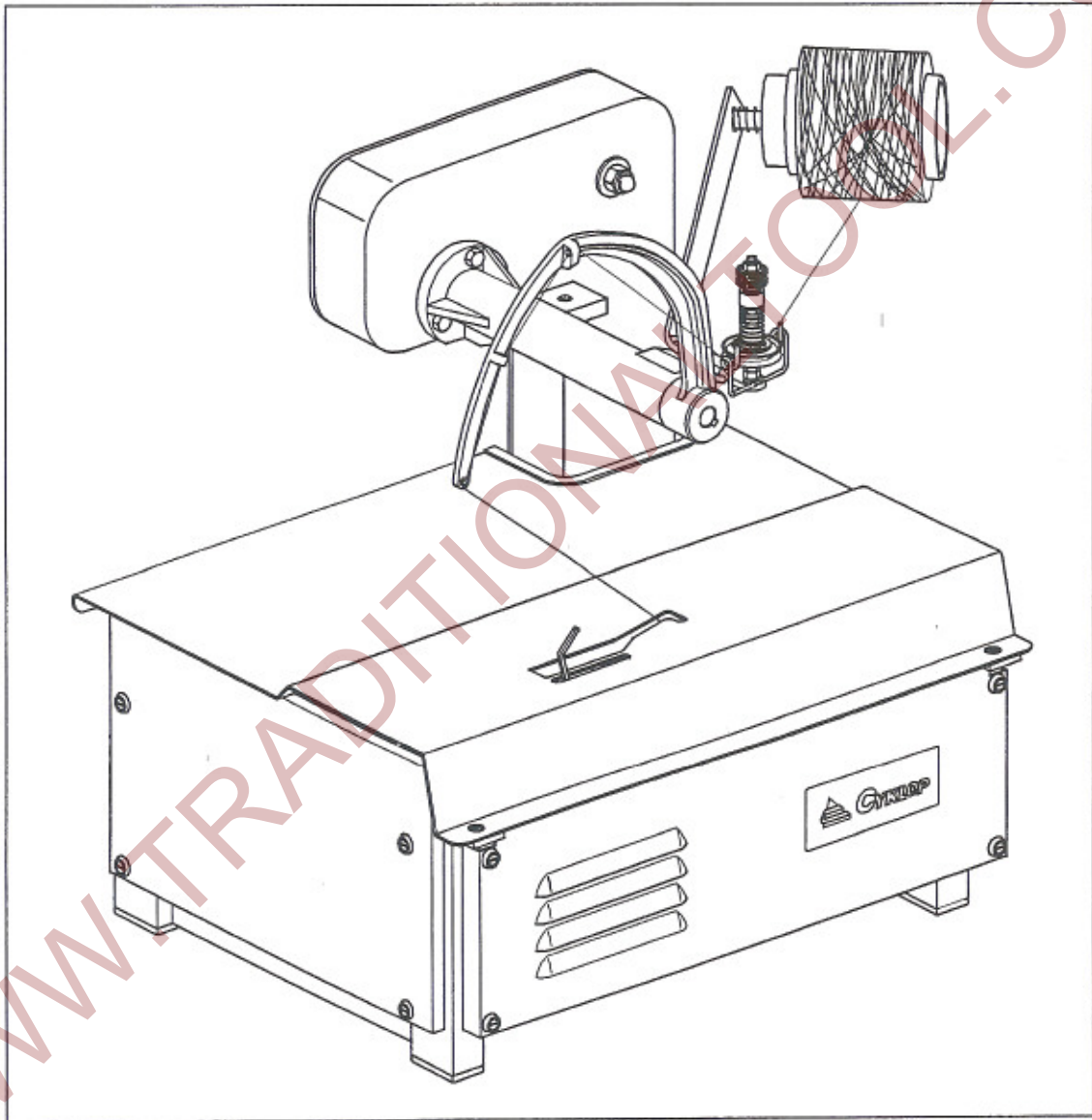


**CYKLOP
EMT-BINDER**



**CYKLOP
EMT-BINDER**

User's Manual

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1 INTRODUCTION

The EMT-binder is a machine for strapping small and/or fragile objects, like labels, writing materials and flowers.

The machine can be used in many work situations. Integration in production lines is also possible.

In this manual you find all information necessary to use the EMT-binder properly.

It is recommended to read this manual carefully. Pay special attention to adjustments and maintenance; indeed: correct adjustment and correct maintenance reduces possible failures and increases the life of the machine considerably!

2 CONSTRUCTION AND FUNCTIONING

Construction (fig. 01)

The machine consists of the following main parts:

- **Electric motor (fig. 01I)**
This motor drives the machine.
- **Aggregate (fig. 01E)**
The aggregate converts the rotary movement of the electric motor into the knotting movement of the knotting unit.
- **Knotting unit (fig. 01F)**
The knotting unit knots the part of the cord which is pulled through the needle around the package to be strapped; subsequently a knife cuts the cord directly behind the knot.
- **Clamping mechanism (fig. 01C)**
The clamping mechanism holds the cord for the knotting unit.
- **Needle (fig. 01M)**
The needle pulls the cord around the package to be strapped and guides the cord to the knotting unit.
- **Transmission (fig. 01N)**
The transmission converts the rotary movement of the electric motor into the zig-zag movement of the needle.
- **Cord unreel holder (fig. 01A)**
Position the roll with strapping material (elastic cord) here.
- **Cord tension control (fig. 01B)**
By adjusting this control the cord can be tensioned correctly.
- **Mains switch (fig. 01J)**
By means of this switch the machine can be switched on or switched off.
- **Switch pin (fig. 01H)**
The strapping process is started by pushing the package to be strapped over the work top against the switch pin.

Functioning

If the EMT-binder has been switched on and fitted with cord, it starts strapping as soon as objects to be strapped are fed on the work top and at the same time the switch pin is activated. The objects themselves pull the necessary length of cord. The needle then automatically pulls a part of the cord down in the knotting unit during the infeed procedure. In this unit the end of the cord is already present. The knotting unit knots both cords and subsequently cuts the cord next to the knot. The cut ends are pulled through the knot. Now the part that still is connected to the roll is clamped by the clamping mechanism, after which the needle returns to its original position.

3 COMMISSIONING

General

Check that the supply voltage indicated on the type plate at the rear of the machine corresponds to the mains voltage of the wall outlet.

Putting into operation

Proceed as follows:

- 1 Pull the needle of the binder up until it locks.
- 2 Insert the plug in the wall outlet.
- 3 Switch on the main switch.
- 4 Let the binder make a few strokes; for this purpose activate the switch pin (fig. 01H) by means of an object.

4 CONTROL

4.1 Positioning and feeding the cord

Proceed as follows to position and feed the cord:

- 1 Position the roll on the holder (fig. 02A); note the correct unreeling direction (fig. 02) of the cord.
- 2 First lead the cord between the cups of the cord tension control (fig. 02C) and then lead it through the eye of the needle (fig. 02D).
- 3 Hold the end of the cord at the rear of the needle and, with your other hand, activate the pin of the start switch; make sure that the needle does not hit your hand.
The needle automatically feeds the cord into the machine.

The binder is now ready for use.

Set the desired cord tension by means of the cord tension control (fig. 02B).

4.2 Automatic strapping

The machine adjusts itself to the various dimensions and forms of the objects to be strapped. Bring the object via the switch pin (fig. 03A) in the direction of the cord until the rear of the object is above the knotting unit (fig. 03B). Do this in a smooth movement.

When the object to be strapped hits the start switch, the machine starts and the product is strapped.

The so-called "pre-switch" is generally used for strapping very thin products which have to be processed in a rapid sequence.

The machine must be set on "after-switch" for strapping larger products; in this mode the machine does not function when the switch pin is pressed, but when the switch pin is released.

This possibility is also shown in the wiring diagram; have your supplier or a qualified electrician make the alteration.

5 MAINTENANCE

In order to maintain the EMT-binder properly you must execute some tasks once a week and others twice a year.

5.1 Maintenance once a week

Proceed as follows:

- 1 Switch off the machine and unplug the machine.
- 2 Remove the work top (fig. 01L).
- 3 Clean the machine by means of a brush or air.
- 4 Oil the hinge points and the rolls of the throw-in mechanism and slide-off mechanism (fig. 04-lubricating points)
- 5 Oil the roll of the cord clamp (fig. 04-lubricating points).
- 6 Oil the knotting roll and the hinge point of the knotting jaw (fig. 04-lubricating points).
- 7 Grease the main curve (fig. 05A).
- 8 Reposition the work top on the EMT-binder and check that the binder function properly.

5.2 Maintenance twice a year

Proceed as follows:

- 1 Switch off the machine and unplug the machine.
- 2 Remove the work top (fig. 01L), the side plates and the lid of the transmission (fig. 01N) (only in model "16A").
- 3 Clean the machine by means of brush or air.
- 4 Clean the motor brake (fig. 05B) and adjust it. For this purpose proceed as follows:
 - 4.1 Remove the protective cover and the cooling fan.
 - 4.2 Dismount the brake anchor.
 - 4.3 Clean the brake anchor and the brake lining.
 - 4.4 Carefully reposition all parts.
 - 4.5 Adjust the air slot of the brake to 0.3 mm.
- 5 Tension the motor chain (fig. 06A); for this purpose move the motor sideways. The chain must be tensioned tightly.
- 6 Only in model "16A": check that the belt of the needle drive (fig. 06C) is not damaged and that the automatic tensioner functions properly.
- 7 Check the knotting unit (fig. 07A); for this purpose proceed as follows:
 - 7.1 Dismount the knotting unit (fig. 07A).
 - 7.2 Remove throw-in mechanism and slide-off mechanism (fig. 07D and 07E).
 - 7.3 Check the bearing bushes and shafts of the hinge points.

- 7.4 Check the knotting gear wheel (fig. 07F) for wear; especially note the flat part of the gear wheel.
- 7.5 Remove the knotting jaw (fig. 07B) from the knotting unit and check the roll; this roll must have no play.
- 7.6 Check the bolt of the knotting jaw (fig. 07C) for wear at the hinge point of the knotting jaw.
- 7.7 Check all dismantled parts for burrs and/or sharp edges.
- 7.8 Subsequently mount all parts on the knotting unit again.
- 7.9 Reposition the knotting unit on the aggregate; make sure that the knotting jaw (fig. 07B) is directed towards you during the mounting procedure!
- 8 Check that the clamping plates (fig. 07H) function properly: the cord must be pulled in the second notch by the clamping hook (fig. 07I) and be held firmly by the clamping plates (fig. 07H). It must be difficult to pull the cord from the plates or it must not be possible at all.
If this is not optimal, see chapter 6, "Troubleshooting".
- 9 Check the movement of the needle with regard to the aggregate rotation: the clamping hook must start moving when the end of the needle has travelled past the hook approx. 1 cm (if not, adjust the mechanism again; for this purpose see chapter 6, "Troubleshooting").
- 10 Check the stop position of the needle: the needle must stop at its highest point at the end of each cycle (if not, correct the adjustment of the switch cam (fig. 01D)).
- 11 Grease the EMT-binder; refer to section 5.1, "Maintenance once a week". Also grease the following parts:
- helical gears;
 - clamping hook lever;
 - chain (do not grease excessively!).
- 12 Check that the EMT-binder functions properly.

6 TROUBLESHOOTING

Failure

Remedy

BINDER DOES NOT
FUNCTION AT ALL.

Check the mains supply.
Check that the work top is positioned properly and that it presses the safety switch (fig. 01K).

THE NEEDLE STOPS
HALFWAY.

Activate the switch pin again; the needle arrives again its highest position. Check the position of the work top again.

If the failure repeats itself or the needle stops arbitrarily, check that the lock of the switch cam for a correct 0-position has not loosened (fig. 01D).

Check that the safety coupling of the needle has not been adjusted too lightly.

THE CORD JUMPS FROM
THE PRODUCT OR OUT OF
THE MACHINE.

Check that the cutting knife is sharp enough and that it is attached low enough.

Check that both cords are positioned in the counter knife during the cutting procedure (fig. 07J).

Check that the clamping hook brings both cords in the rear notch. If not, change the position of the clamping hook. For this purpose move the shaft of the clamping plate assembly (fig. 01G) to the front or to the rear, in accordance with the desired direction of the clamping hook.

Check the clamping pressure of the clamping plates. For this purpose pull the cord which is positioned between them. You must be able to pull the cord from the clamping plates with difficulty or it must not move at all.

If the clamping plates do not function optimally yet, check the position of the clamping plates with regard to the clamping hook again.

For this purpose proceed as follows:

Remove the clamping hook and check that the clearance between the plates is 2 mm. The right-hand plate must be parallel to the clamping hook, whereas the left-hand clamping plate at the rear must bend slightly outward.

Check that the clearance between the clamping hook (fig. 07I) and the clamping plate (fig. 07H) is 0.1 mm (fig. 07G) after mounting.

Check that all other corners are adjacent without clearance.

THE CORD IS STUCK IN
THE KNOTTING UNIT.

Proceed as follows:

- 1 Increase the tension of the cord supplied.
- 2 Reduce the pressure on the knotting unit.
- 3 Check that the knotting jaw hinges easily.

THE CORD IS NOT
TAKEN UP BY THE
CLAMPING PLATES.

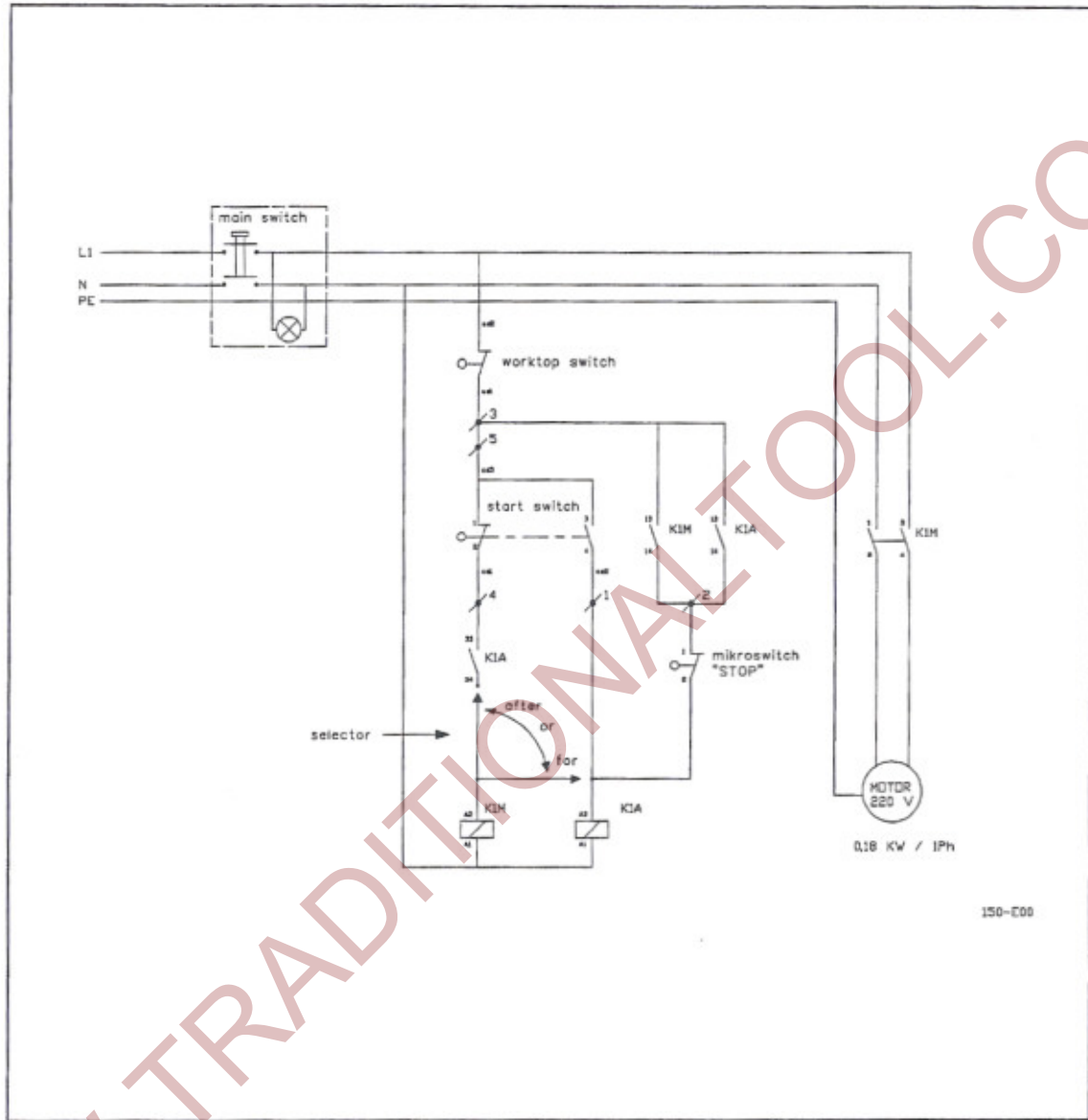
Check that the movement of the needle is correct with regard to the movement of the aggregate. If the adjustment is correct, the clamping hook starts moving as soon as the end of the needle has travelled past the hook approx. 1 cm.

If not, proceed as follows:

- 1 Put the aggregate in the position in which the clamping hook starts moving.
- 2 Loosen the tensioning bush at the needle drive (fig. 06B).
- 3 Make the end of the needle pass the clamping hook 1 cm in a downward movement.
- 4 Tighten the tensioning bush again and check the adjustment.

If necessary, repeat the procedure mentioned above.

A2 WIRING DIAGRAM



A3 LUBRICANTS

Oil: SAF 10WH0

Grease: Molykote 3694 (for helical gearing)
 Molykote Longterm W2 (for other lubricating points)



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A1 ILLUSTRATIONS

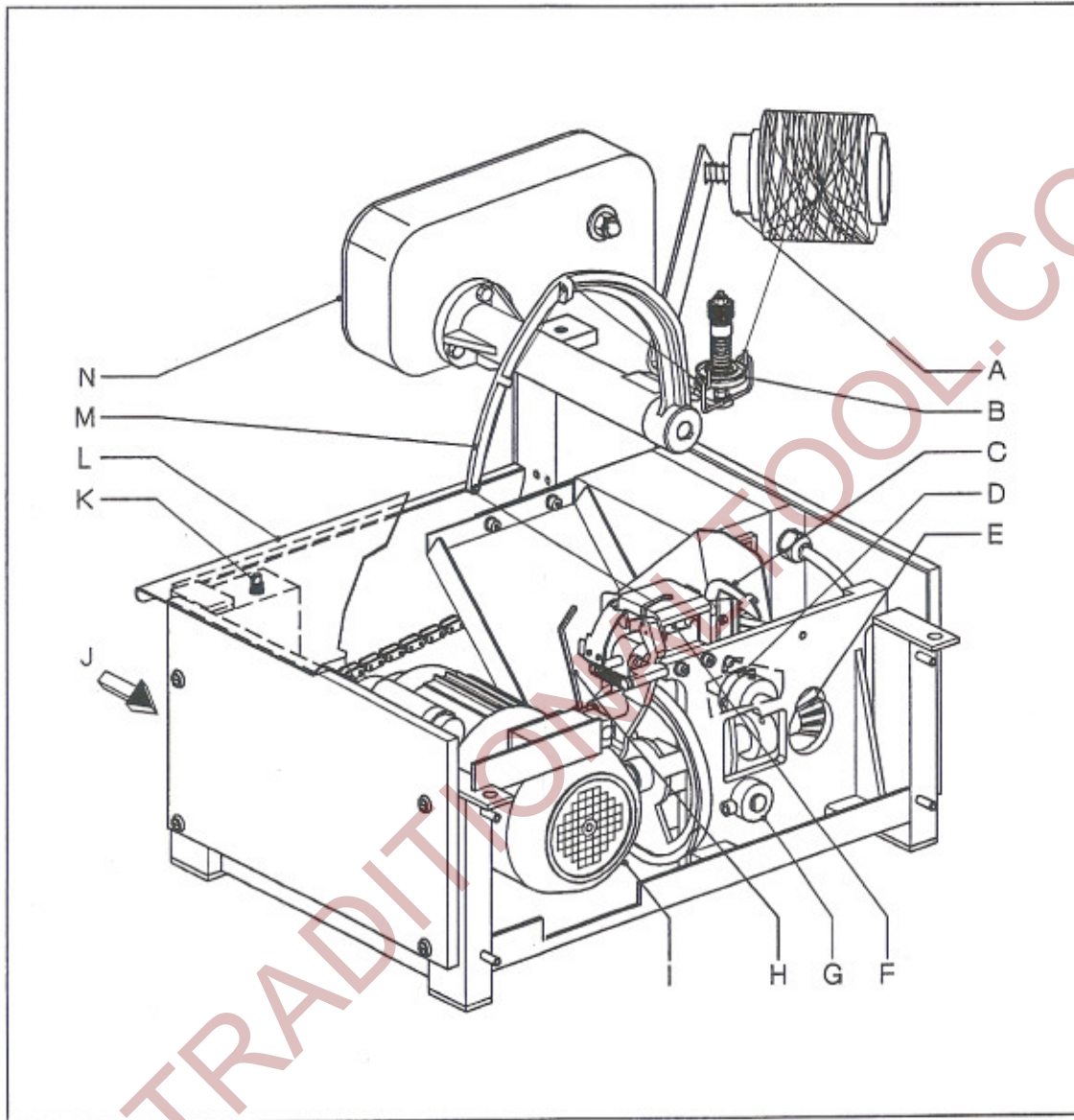


Fig. 01

A1 ILLUSTRATIES - Vervolg

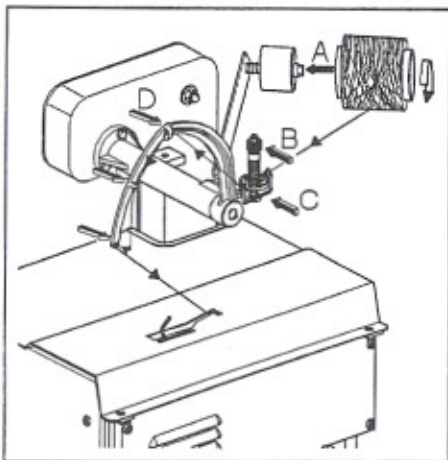


Fig. 02

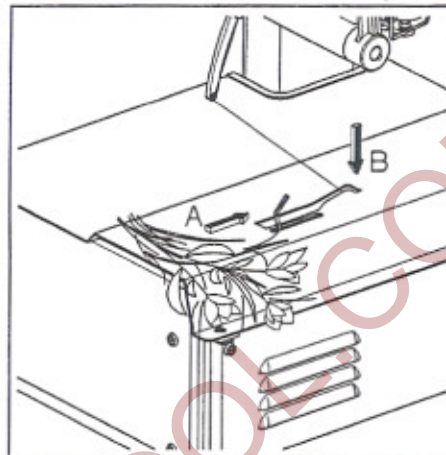


Fig. 03

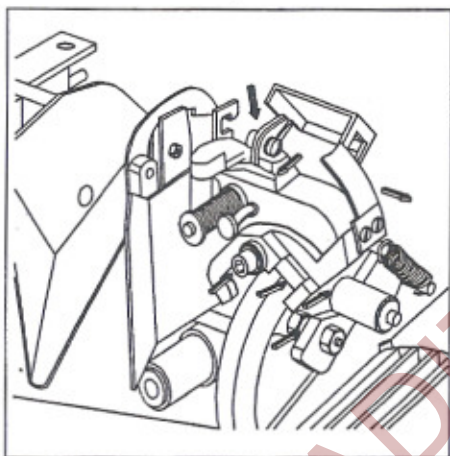


Fig. 04

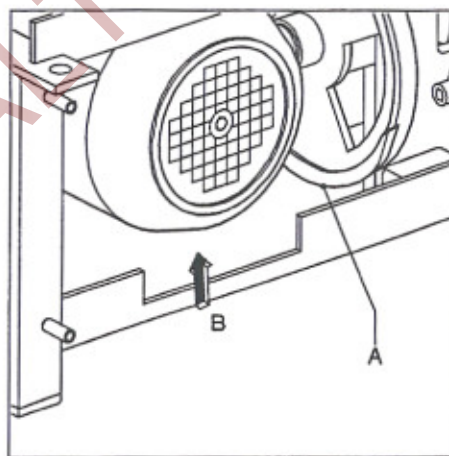


Fig. 05

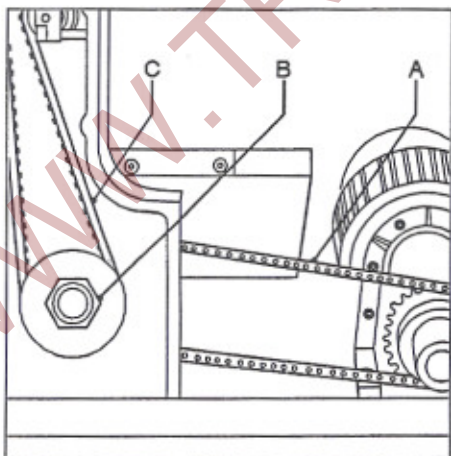


Fig. 06

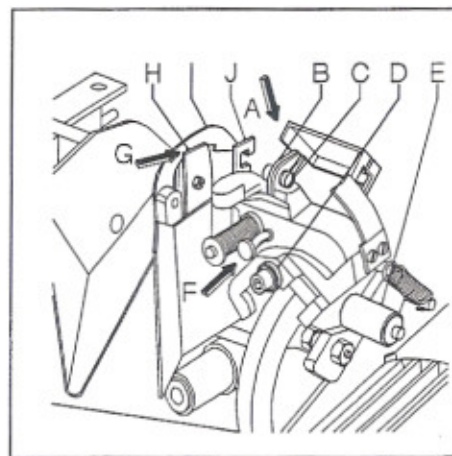


Fig. 07