

INSTRUCTION HANDBOOK

Alpha 1 M



Alfamacchine

Via dell'Artigiano, 12 - 47100 FORLI'

INDEX

<u>1. GENERAL INFORMATION</u>	3	<u>4.7.2b Vertical clamp height adjustment</u>	10
1.1 PRODUCER	3	4.8 CHECKING OPERATIONS TO BE EFFECTED BEFORE WORKING START	10
1.2 ASSISTANCE CENTERS	3	<u>5. FUNCTIONING</u>	11
1.3 CERTIFICATION	3	5.1 OPERATORS	11
1.4 WARRANTY	3	5.2 FUNCTIONING DESCRIPTION	11
1.5 PRE-ARRANGEMENTS CHARGED TO THE CUSTOMER	3	5.3 TIPS FOR PERFECT JUNCTIONS	11
1.6 HANDBOOK STRUCTURE	3	5.4 MACHINE STOP	11
1.6.1 <i>Object and contents</i>	3	5.5 MACHINE REINSTATEMENT	11
1.6.2 <i>Utilizers</i>	3	<u>6. MAINTENANCE</u>	12
1.6.3 <i>Preservation</i>	3	6.1 STATE OF MAINTENANCE	12
1.6.4 <i>Symbols utilized</i>	4	6.2 SPECIAL CAUTIONS	12
<u>2. MACHINE DESCRIPTION</u>	5	6.3 CLEANING	12
2.1 WORKING PRINCIPLE	5	6.4 ORDINARY MAINTENANCE	12
2.2 MAIN COMPONENTS	5	<u>7 DIAGNOSTICS</u>	13
2.3 MACHINE STRUCTURE	5	7.1 SAFETY WARNINGS	13
2.4 DIMENSIONS	5	7.2 BREAKDOWN SEARCH	13
2.5 SURROUNDING CONDITIONS	5	7.3 REQUEST OF ASSISTANCE	14
2.6 LIGHTING	5	<u>8. SPARE PARTS</u>	14
2.7 VIBRATIONS	5	8.1 SPARE PARTS LIST	14
2.8 NOISE EMISSIONS	5	8.2 SPARE PARTS ORDERING	14
2.9 TECHNICAL DATA	6	<u>9 DEMOLITION</u>	14
2.10 STANDARD EQUIPMENT	6	9.1 DEMOLITION	14
2.10.1 <i>Standard accessories</i>	6	<u>10. ATTACHMENTS</u>	14
2.10.2 <i>Upgrading and implementing of mechanical parts</i>	6	10.1 SCHEMES	14
2.10.3 <i>Optional accessories</i>	6	10.2 OPTIONAL ACCESSORIES	14
2.10.4 <i>Customized optional accessories</i>	6		
<u>3. SAFETY</u>	7		
3.1 GENERAL WARNINGS	7		
3.2 SCHEDULED USE	7		
3.3 INADVISABLE USE	7		
3.4 DANGEROUS AREAS	7		
3.5 SAFE WORKING PROCEDURES	7		
3.6 RESIDUAL RISKS	7		
<u>4. INSTALLATION</u>	8		
4.1 SHIPPING AND HANDLING	8		
4.2 STORAGE	8		
4.3 PRELIMINARY ARRANGEMENTS	8		
4.4 UNPACKING	8		
4.5 PRELIMINARY CONTROLS	8		
4.6 MACHINE ARRANGEMENT	8		
4.6.1 <i>V-nails magazine loading</i>	8		
4.6.2 <i>V-nail guide head replacement to change V-nails size</i>	9		
4.7 ADJUSTMENTS	10		
4.7.1 <i>V-nails inserting positions adjustment</i>	10		
4.7.2 <i>Vertical clamp adjustment</i>	10		
4.7.2a <i>Vertical clamp position adjustment</i>	10		

1. GENERAL INFORMATION

1.1 PRODUCER

The firm Alfamacchine can boast more than 10 years of experience in the construction of Woodworking Machines. It is the acquired technological know-how, developed during years of researches in strict touch with manufacturing department and international commercialization the best warranty that Alfamacchine can grant to its customers.

TEL 39 (0) 543 / 482711	FAX 39 (0) 543 / 480770
-------------------------	-------------------------

1.2 ASSISTANCE CENTERS

Alfamacchine is represented both in Italy and Europe by a numerous and prepared selling organization. Contact directly our firm to the over impressed numbers to have the indications concerning the local Assistance organization. For every need regarding Use, Maintenance or Request of Spare Parts, the Customer is pleased to address to the authorized service centers or directly to Alfamacchine, specifying the machine's identification data impressed on the plate.

1.3 CERTIFICATION

The machine is produced in conformity to the pertinent European Community Norms in force at the moment of its introduction on the market.

1.4 WARRANTY

Alfamacchine's products are built to have a long duration and are tested one by one.

If, in spite of this, would occur any damage or malfunctioning, the replacement of defective parts is warranted (counting from the date written on the delivery bill) for a period of:

- 24 months for mechanical components
- 12 months for pneumatic parts

The driver blade is tested for about 1.000.000 working cycles. The Warranty does not cover the sending of technical staff. The repair interventions will be effected at Alfamacchine's plants and the freight of shipment will be entirely charged to the Customer.

The warranty does not cover the damages caused by a not appropriate use of the machine or not corresponding to the instructions described in this handbook.

The warranty decays in case of unauthorized modifications or because of accidental damages or tampering effected by unqualified personnel.

Warranty decays also in case of using of V-nails different from original Alfamacchine's ones.

To take advantage of warranty services is necessary, at the moment of goods reception, to fill up completely the form attached in 3 copies, and send it back as soon as possible to Alfamacchine.

The remaining copies will be attached to the machine documentation.

The warranty will be valid only after the Alfamacchine's recording.

1.5 PRE-ARRANGEMENTS CHARGED TO THE CUSTOMER

It is a customer duty, on times agreed with the producer, to execute what is indicated in our documentation.

Are normally charged to the customer:

- Premises predisposition, included building works and/or canalization eventually requested

1.6 HANDBOOK STRUCTURE

The customer must pay extreme attention to the indications reported on this handbook, because the proper Pre-Arrangement, Installation and Use of the Machine, constitute the basis of a correct customer-manufacturer relationship.

1.6.1 Object and contents

This handbook aim is to provide to the customer all necessities information so that, besides the proper use of the machine, he would be able to run it in complete autonomy and safety. The handbook contains information concerning the technical aspects, machine working and standstill, maintenance, spare parts and safety. Before making any operation on the machine, the qualified technicians and operators must read carefully this handbook instructions. In case of doubt about correct interpretation of a.m. instructions, ask to Alfamacchine the explanations requested.

1.6.2 Utilizers

This handbook is made both for operators and technicians authorized to the machine maintenance.

The operators can not execute operations reserved to the maintainers or to the qualified technicians.







The producer does not answer of damages deriving from not-observance of this prohibition

1.6.3 Preservation

The instruction handbook must be kept very closed to the machine, into a special container protected from liquids and whatever could compromise its legibility

Alpha 1M

1.6.4 Symbols utilized

 P...	DANGER	it indicates a danger with a mortal risk for the operator
 A...	WARNING	It indicates a warning or a note about key functions or useful information. Pay the maximum attention to the paragraph marked with this symbol.
 O...	OBSERVATION	It is requested to take a measurement data, to check a signal,....
 I...	INQUIRY	the utilizer is requested to check the proper positioning of any element of the machine, before operating a certain command
 C...	EXAMINATION	It's necessary to consult the handbook before effecting a certain operation
 R...	ADJUSTMENT	in case of strange working and/or anomalies, can be requested a certain mechanical adjustment and/or electrical setting

2. MACHINE DESCRIPTION

2.1 WORKING PRINCIPLE

The Frame Assembling Machine Alpha 1/M has been realized to assemble any kind of frame.

The Alpha 1/M, of simple construction and extremely easy to use, can joint with absolute precision any kind of moulding by means of special steel V-nails.

It can use normal straight V-nails, reinforced V-nails for very hardwood or special V-nails Alfagraf with "pulling power" effect of different sizes.

2.2 MAIN COMPONENTS

The main components constituting the machine are:

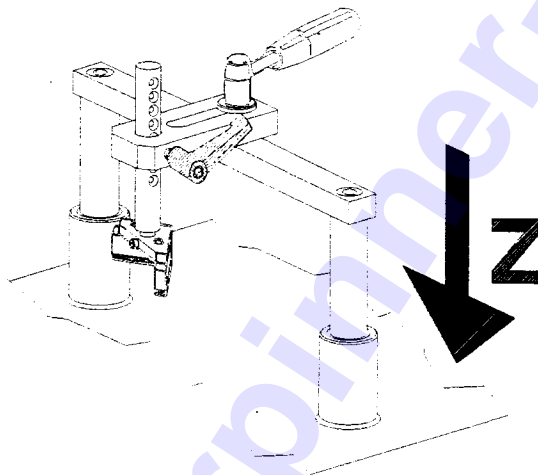
- Mechanic operating foot pedal
- Nail heads sizes 7, 10 and 15 mm.

2.3 MACHINE STRUCTURE

Z AXIS

Movement of vertical clamp

Fig. 2.1 A movement directions



2.4 DIMENSIONS

The overall dimensions are reported on table 2.9-A

2.5 SURROUNDING CONDITIONS

The machine does not need special surrounding conditions. It has to be installed inside an industrial building, lit, aired and with a compact and flat floor. The admitted temperatures go from 5° to 40° C, with an humidity not higher than 50% at 40° C or 90% at 20° C.

2.6 LIGHTING

Premises lighting must be conformed to the norms in force in that Country where the machine is installed and has to guarantee a clear visibility and do not create dangerous situations.

2.7 VIBRATIONS

In standard conditions conformed to the indication of machine proper utilization the vibrations do not create dangerous conditions. The average quadratic weighed level, according to the acceleration frequency to which arms are exposed does not exceed 2,5 m/s².

2.8 NOISE EMISSIONS

The machine is designed and projected for reducing the noise emission level to its source. In standard working conditions the Machine noise power level is:

- Acoustic Continuous Equivalent weighed pression A <70dB
- Acoustic Istantaneous weighed pression <130dB

The noise levels indicated are emission levels and are not representing sure operating levels. In spite of existing a relationship among emission levels and exposure ones, this can not be used in a reliable way to define if further cautions are necessary. The factors determining the exposure level to which the working force is subjected, include exposure lasting, working premises characteristics and other noise sources (number of machines, closed proceeds, etc...). Furthermore, also the allowed exposure levels could change according to the several Countries. At any rate, the information provided, will allow the Machine Operator to achieve a better evaluation of danger and risks he is submitted to.



The indicated noise levels are emission ones measured in standard conditions of use. In case of any machine modification, the above mentioned levels could be changed and should be settled directly on the same machine.

Alpha 1M

2.9 TECHNICAL DATA

Here below are listed Machine data and technical characteristics to which make reference for any eventual contact with Producer Technical Assistance.

- Frames thickness	min-max	6-80 mm.
- Frames width	min-max	6-80 mm.
- V-nails magazine capacity		n. 220
- V-nails size		7, 10, 15 mm.
- V-nails size on request		3, 4, 5, 12 mm.
- Weight		about 50 kg
- Height of working bench		1000 mm.
- Overall dimensions		400x500x1150 mm.



Figure 1

2.10 STANDARD EQUIPMENT

The equipment listed here below is the standard one. Possible special supplying could consequently need different components from the listed ones.

2.10.1 Standard accessories

Once removed the packing, please check the presence of following accessories:).

- N.1 nail head mm. 7
- N.1 nail head mm.10
- N.1 nail head mm.15
- N.1 L shaped pressure pad
- N.1 Rounding pressure pad
- N.1 Allen Wrench 5 mm. for V-nails head replacement
- N.1 Brass rod magnet to remove V-nails



Figure 2

2.10.2 Upgrading and implementing of mechanical parts

The machine has been realized following a modular criterion, therefore the existing equipment can be further upgraded with additional accessories that will not alter its basic structure. Technical upgrades on the machine model, if any, will be such that they can be installed at any time without requiring any substantial modifications to the machine structure.

2.10.3 Optional accessories

- Adjustable tilting fences (see fig. 1)
- Wooden working bench extension
- Metallic working bench extension
- V-nails claw heads size 3-4-5-12 mm.
- Special fences for octagons (see fig. 3)
- Special fences for hexagons (see fig. 2)

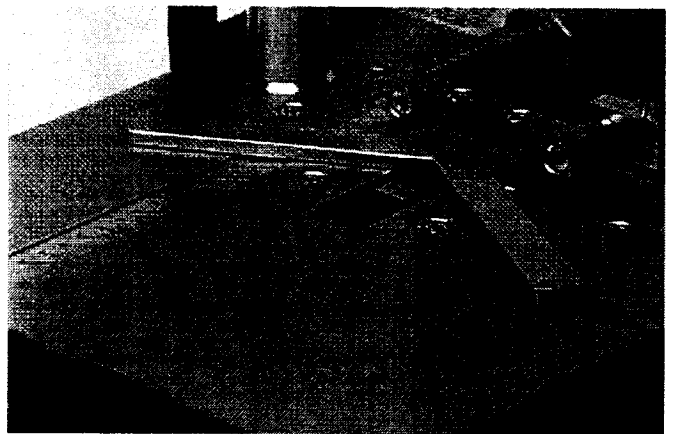


Figure 3

2.10.4 Customized optional accessories

Thanks to its versatility this machine can be 'custom-made' to meet our users' requirements, with additional accessories that can make frame assembling easier: e.g. special fences for peculiar moulding shapes, special clamps to ensure the mouldings are locked properly during V-nail firing, and so on.

You can send to Alfamacchine some samples of the mouldings you wish to join: we shall thus be able to analyse them and design and develop customized accessories which can solve in the best way your specific problem.

3. SAFETY

3.1 GENERAL WARNINGS

The operator must read paying the maximum attention to the information written on this Handbook, expressly about proper precautions for Safety listed in this chapter.

It is indispensable for the operator to follow the warnings list here below:

- Keep clean and ordered the machine and the working premises
- Provide appropriate containers to stock both just worked pieces and ready to work ones.
- Use the Machine only in normal psycho physical condition
- Wear an adequate clothing to avoid obstacles and/or dangerous entangles to/from the machine
- Wear the individual protection gears prescribed by instructions handbook, regarding the effected operations
- Do not remove or alter the warning plates and adhesive signs
- Keep the fingers away from the working area
- Keep the foot separated from the pedal during Machine regulation

3.2 SCHEDULED USE

The Machine is designed and constructed to execute junctions of frames.

The machine is projected for manual use only.

3.3 INADVISABLE USE

The machine has not to be used:

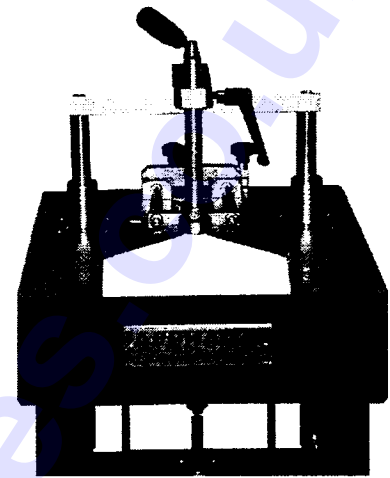
- For uses different from those listed in 3.2 paragraph
- In explosive or aggressive atmosphere, at high density of dust or oily substances suspended in the air
- In flammable atmosphere
- Outside in all weather severity
- For working materials not suitable with machine characteristics

3.4 DANGEROUS AREAS

The area of frames leaning is defined "working area"

The dangerous areas of machine, include the movable parts and surrounding zones.

Figure 3.4.A-Dangerous areas



Dangerous areas

3.5 SAFE WORKING PROCEDURES



The machine is projected and realized to eliminate any risk connected with its use. The utilizer is requested to achieve an adequate training to be instructed by Alfamacchine's technicians.

The other risks related with manual working way, are the fingers crushing in the vertical clamp working area

It is necessary to follow carefully the following instructions:

- 1 Keep the fingers away from the vertical clamp working area
- 2 Keep the foot away from the pedal during machine regulation

3.6 RESIDUAL RISKS

During the normal working cycle and while maintenance, the operators are exposed to several residual risks that, because of operations own nature, can not be totally eliminated.

- Risk of finger crushing due to the presence of vertical clamping

4. INSTALLATION

4.1 SHIPPING AND HANDLING

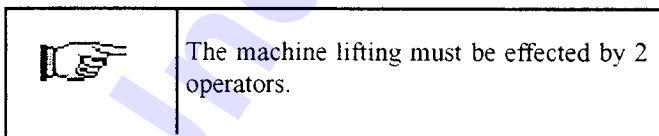
The shipment must be effected by high qualified technical staff. The machine has to be shipped in a safe way to avoid any damage to its parts.

- The machine has to be shipped like positioned for installation.
- Before the shipment, it is necessary to lubricate the not painted parts to avoid their detriment.
- According to the type of shipment, it is necessary to protect the machine from any jarring impact or stress

Figure 4.1A – machine handling indications



Machine total weight: about 50 Kilos



Any damaging of the machine caused during its shipment or handling is not covered from warranty.

Repairs or replacements of damaged parts are charged to the customer.

4.2 STORAGE

In case of long inactivity, the machine must be stored with cautions concerning storage place and times.

- Store the machine indoor
- Protect the machine from jarring impacts and stresses
- Protect the machine from humidity and high thermic excursion
- Avoid the machine could touch corrosive materials
- Lubricate the not painted parts

4.3 PRELIMINARY ARRANGEMENTS

To install the machine it is necessary to prepare a working area adequate to the machine dimensions, lifting devices chosen and length of mouldings to be worked.

4.4 UNPACKING

The machine, bench version, is shipped packed into an appropriate carton and protected with polystyrene sheets. Remove the external packing and save it for future re-utilization.

Check for any casual shipping damage and communicate them immediately. Shipping damages or any other defects must be reported to *Alfamacchine* within and not later than 8 days from receipt of machine.

4.5 PRELIMINARY CONTROLS

The Machine preliminary operations before the 1st starting, must be executed by a technician appointed from the customer. Before machine commissioning, it is necessary to execute certain verifications and checks to prevent mistakes or accidents during commissioning step.

Verify that machine has not been damaged during assembly steps.

4.6 MACHINE ARRANGEMENT

4.6.1 V-nails magazine loading

To load the V-nails magazine proceed as follows:

• Move backward the claw pusher by means of the special control wire located on back side of the machine working bench to make accessible the V-nails magazine (see fig. 8).

• Insert one or more V-nails sticks, taking care that the sharpened edge of the V-nails (glue side) faces up and that they are loaded with the V of the V-nails pointing in the direction indicated in the figure 9 and 10; on the top of that check the V-nails size is suitable with the type of claw head mounted.

• Release the control wire to move forward the claw pusher (see fig.7).

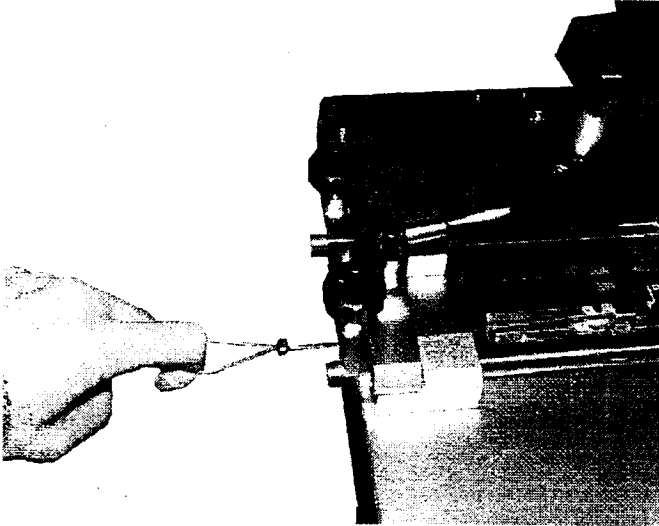


figure 7



figure 9

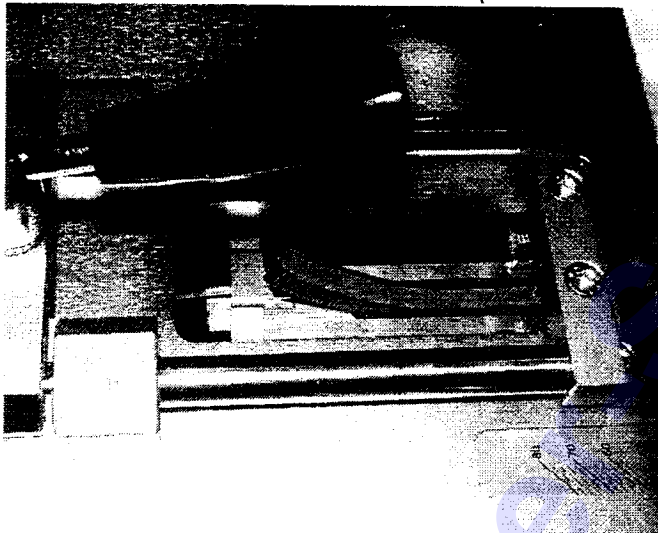


figure 8



figure 10

4.6.2 V-nail guide head replacement to change V-nails size

The V-nail guide head must be changed each time you use V-nails of different sizes.

Proceed as follows to replace it:

- Loosen the locking screw of the V-nail guide head by using the proper 5 mm Allen wrench (the screw is on the opposite side from the V-nails magazine (See fig. 9)
- Take out the V-nail guide head
- Move backward the claw pusher by means of the special control wire located on the back side of the machine working bench to make accessible the V-nails magazine (see fig. 8).
- Remove all the V-nails that are still in the magazine (using the proper brass magnet, if necessary) (see fig. 10).
- Insert the new V-nail stick (of desired height) into the magazine
- Move forward the claw pusher by releasing the control wire (see figure 8).
- Insert the new size V-nail guide head to match the V-nails to be used (see fig. 11).
- Tighten the locking screw of the V-nail guide head (see fig. 9).

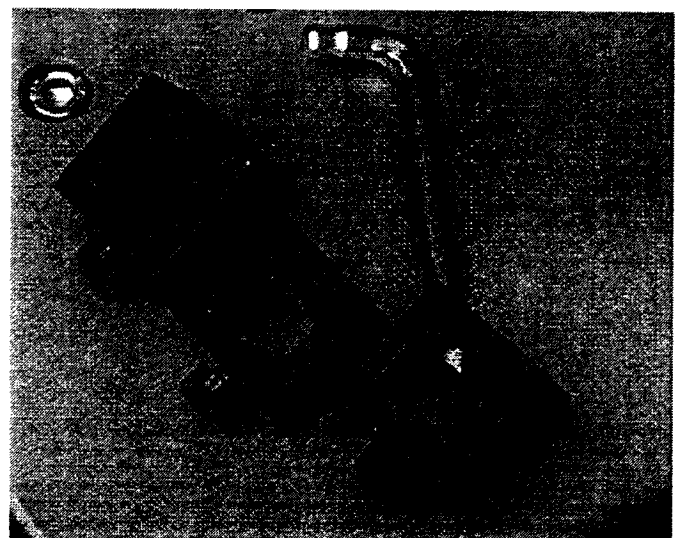


figure 11

4.7 ADJUSTMENTS

The machine is completely tested and checked in Alfamacchine's plants before its shipment, so the operator has only to effect the following adjustments:

4.7.1 V-nails inserting positions adjustment

To position properly the mouldings to be assembled, the Alpha 1/M is equipped with a 90° fence.

The fence can be shifted forward or backward in order to allow the proper positioning of mouldings of several sizes. The fence limits (backward and forward) can be set with precision by means of locking clamps A-B (see fig. 12). So the operator can easily use the Alpha 1/M to insert V-nails with extreme precision into 2 different positions.

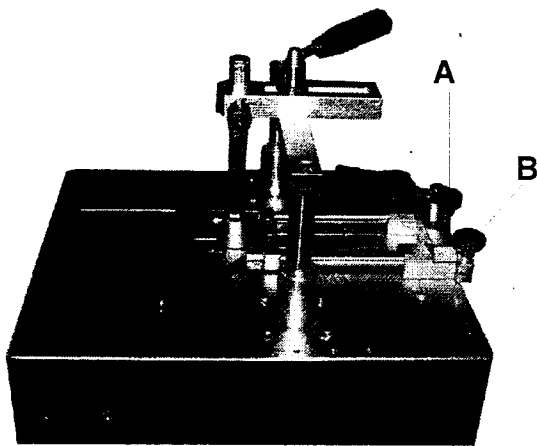


figure 12

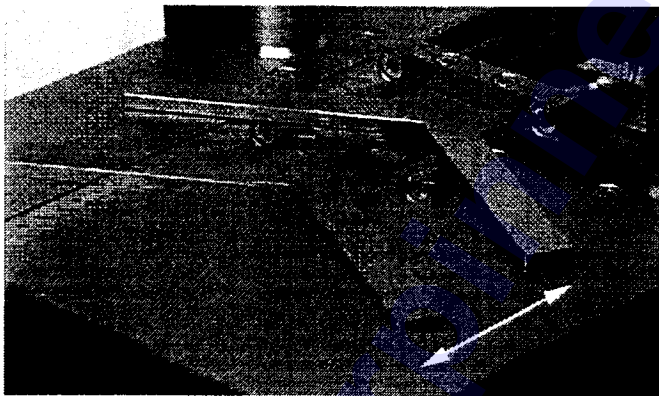


figure 13

4.7.2 Vertical clamp adjustment

The vertical clamp can be adjusted in height and position. Proceed as follows to adjust them:

4.7.2a Vertical clamp position adjustment

- Position the mouldings to be assembled on the working bench
- Loosen by means of the over placed handle (see fig. 14) the clamp that locks the pressure pad bar to allow its shifting forward or backward up to reach the pressure pad directly in line with V-nail inserting point.
- Tighten the handle once reached the proper position

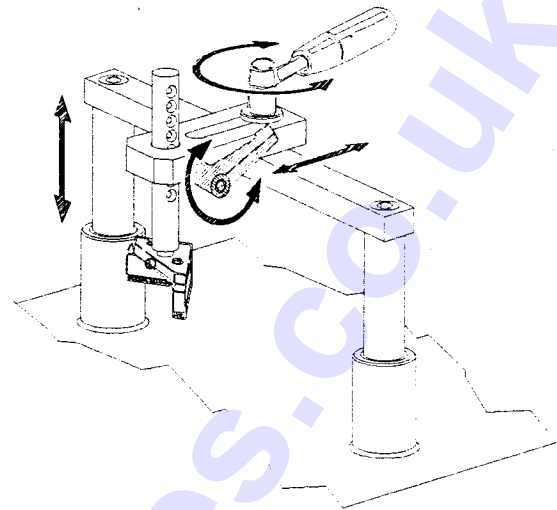


figura 14

4.7.2b Vertical clamp height adjustment

- Loosen the side clamp (see fig. 15) by means of the handle and adjust the pressure pad height over the frame (it suggested to reach an height between 5 and 8 mm. to avoid any accidental fingers crushing).
- Tighten the handle once reached the proper position
- Lower the vertical clamp by pressing half way the foot pedal to verify that the mouldings to be assembled are properly locked
- Press full down the foot pedal to insert the V-nail.

4.8 CHECKING OPERATIONS TO BE EFFECTED BEFORE WORKING START

Once the machine has been properly installed (like previously described), check that:

- 1 The mouldings to be assembled are properly positioned on the working bench
- 2 The magazine is loaded with the type suitable with the mouldings to be assembled
- 3 The claw head match-up the chosen V-nails
- 4 The adjustment of vertical clamping is correct (chapter 4.7.2)
- 5 Pressing half stroke the foot pedal the vertical clamping locks perfectly the frame to be assembled
- 6 Then press the pedal full down to insert the V-nail



If you want to insert 2 or more V-nails one upon the other in the same position, you must release the pedal until half of its stroke and then press again it full down to insert the second V-nail

5. FUNCTIONING

5.1 OPERATORS

The machine has been projected to be used by only one operator.

The staff assigned to operate on the machine, must be in possession (or acquire through an adequate training) the requirements indicated here below, and, in addition, to have the knowledge of this handbook and of every information concerning safety:

- General and technical culture sufficient to comprehend this handbook contents and understand properly drawings and schemes
- Knowledge of main sanitary, technological and anti-accidental norms
- Overall knowledge of line and plant where is inserted the machine
- Specific experience of frames assembly working technologies
- To know how operate in case of emergency, where to find the individual protection means and how to use them properly.

The Maintenance Men, in addition to the above mentioned characteristics, must be in possession of an adequate technical education.

5.2 FUNCTIONING DESCRIPTION

The only possible way of operating of the machine is the manual mechanic functioning by using the foot pedal.

Press the foot pedal half way to get the frames clamping

Press the foot pedal full down to get the V-nail ejection.

To effect a junction, you must operate as follows:

- 1 Set the inserting positions by means of fence locking clamps
- 2 Lean the mouldings on the working bench positioning the fence on the first inserting point
- 3 Adjust the vertical clamp height and position
- 4 Press the foot pedal half way down and verify the proper positioning and holding of the mouldings to be assembled
- 5 Press the pedal full down to insert the V-nail. If you want to insert 2 or more V-nails one upon the other in the same position, you must release the pedal until half of its stroke and then press again it full down to insert the second V-nail and so on.
- 6 Release completely the foot pedal
- 7 Shift the mouldings and the fence on the next inserting point and repeat the steps 5,6 and 7.

5.3 TIPS FOR PERFECT JUNCTIONS

a) V-nail types

In order to allow the machine to make excellent quality junctions using different materials, it has been necessary to manufacture different V-nails types for different uses.

V-nails can be classified in three different groups:

for soft woods and soft plastic	Suggested V-nails code 60.0 – 58.3
for medium woods	Suggested V-nails code 50.3 - 48.3
for hard woods	Suggested V-nails code 48.3 - 45.3

b) Assembling positions

It is advisable to operate as follows in order to achieve the best results in terms of junction quality:

⇒ Never drive V-nails near the junction vertex. The minimum recommended distance from the external vertex is at least 10 mm.

⇒ When you want to make the junction using only one V-nail, the most suitable position is in the middle of the moulding.

⇒ In case you want to insert 2 or more V-nails into each junction, we recommend you to insert the most external one $1/3$ from the external vertex and the most internal one $1/4$ from the internal vertex.

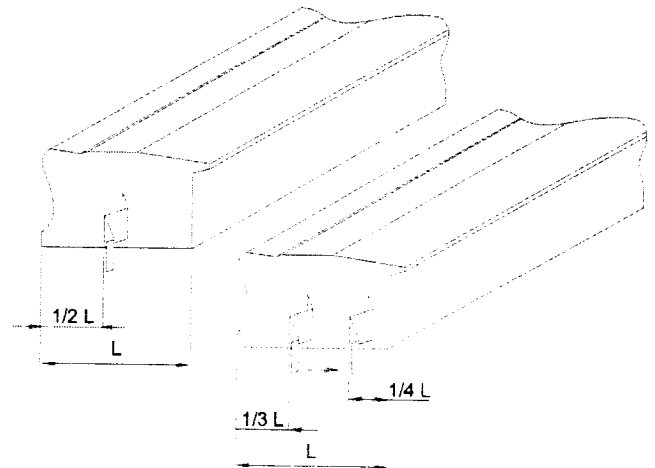


figura 15

5.4 MACHINE STOP

The machine can work only by pressing the foot pedal; to stop it is enough to lift the foot from the pedal.

5.5 MACHINE REINSTATEMENT

The machine reinstatement is effected by pressing the foot pedal.

6. MAINTENANCE

6.1 STATE OF MAINTENANCE

The maintenance operations must be effected with the machine in the conditions described at the voice "state of the machine" in the tables 6.6-A and 6.7-A

6.2 SPECIAL CAUTIONS

During the maintenance or repair operations is suggested to proceed as follows:

- Before starting any operation place a sign-board "machine under maintenance" in a well visible position
- Do not use solvents or flammable materials
- Do not disperse in the environment refrigerant-lubricating liquids.
- Do not step on the machine parts, because they have not been projected to sustain the weight of persons.
- Once all the operations are finished, restore and place properly the protections and shields removed or opened

6.3 CLEANING

The machine structure is simple and robust constructed, thus it does not require any special mechanic maintenance. It is advisable to follow the rules listed here below:

- Regularly remove glue or other residues from the V-nail head and from the upper part of the driver blade;
- always keep clean and without residues the V-nails magazine
- remove any residues from the V-nails guide "L" shaped support.

Do not use water to clean the machine, otherwise metallic parts may oxidise.

6.4 ORDINARY MAINTENANCE

The following operations must be executed on times indicated here below. The not observance of following instructions exonerate the Producer from any responsibility regarding the warranty.

The operations described here below, even if simple, must be executed by qualified staff.

The scheduled ordinary maintenance includes overhauls, checks and interventions that, to prevent stops and breakdowns, keep under systematic control:

- Lubrication state of the machine
- Wear and tear parts state

Table 6.4-A

Maintenance	Description
V-nail driver blade	Replacement every 1.000.000 V-nails shot
Movable parts lubrication	Lubricate the driver blade every 200 working hours
V-nails claw heads	Replacement every 5.000.000 V-nails shot
"L" shaped supports (V-nails guide)	Replacement every 5.000.000 V-nails shot

7 DIAGNOSTICS

7.1 SAFETY WARNINGS

The interventions must be executed by personnel properly learned and must be taken all cautions in order to avoid accidental starts.

7.2 BREAKDOWN SEARCH

TABLE 7.2 - A

TROUBLE	CAUSE	CHECK AND REMEDY
Pressing the foot pedal the v-nails ejection is not regular	V-nails positioned not properly into the V-nails magazine	check that the sharpened side (glue side) faces up -check the V-nails pointing
Pressing the foot pedal the v-nails ejection is not regular	Guide channels obstructed or damaged	check that the V vertex of the V-nails is pointed to the machine external side difetti di incollaggio, di profilo irregolare ecc. ed eventualmente sostituirlle
Pressing the foot pedal the v-nails ejection is not regular	Insufficient pushing of claw pusher	check that the V-nails are not gluing defective or not regularly profiled, etc... -in case replace them
Pressing the foot pedal the v-nails ejection is not regular	The claw head does not match-up the v-nails height	check that V-nails guide channels are not dirty or jammed
Wishing to insert several V-nails one upon the other in the same point, they do not stack properly or tilt during their insertion	Not suitable V-nails	Replace the V-nails with suitable ones
Wishing to insert several V-nails one upon the other in the same point, they do not stack properly or tilt during their insertion	The frames clamping is not correct (the frame is movable during the V-nails insertion)	check and in case adjust the vertical clamp position -replace the vertical clamp with a more suitable one
Wishing to insert several V-nails one upon the other in the same point, they do not stack properly or tilt during their insertion	Jammed driver blade	Wear and tear driver blade Replace the driver blade
Wishing to insert several V-nails one upon the other in the same point, they do not stack properly or tilt during their insertion	Jammed driver blade	Clean the driver blade upper part by any obstruction residue.

7.3 REQUEST OF ASSISTANCE

For any information regarding Use, Maintenance, Installation, etc.. we remain at your disposal. The Customer has to formulate clearly their questions by sending us a fax listing detailed descriptions of the problem. For eventual explanations you should use this handbook and the instructions listed in the paragraph 1.2.

E_Mail: info@alfamacchine.com
FAX: ++39 0543 480770
via Dell'Artigiano, 12 - 47100 Forlì - Italy

8. SPARE PARTS

8.1 SPARE PARTS LIST

Even though the machine has been submitted to several tests and functional checks, we listed below the components that we suggest you have a minimum and sufficient set of. This will help guarantee the shortest possible downtime.

TABLE 8.1 - A

COMPONENT
V-NAILS DRIVER BLADE
V-NAILS CLAW HEADS "L"
SHAPED SUPPORT (V-NAILS GUIDE)

8.2 SPARE PARTS ORDERING

We remind you that only a qualified technician can repair the machine.

Therefore we suggest the intervention of your local distributor or ALFAMACCHINE's Center of Technical Assistance, which has the qualified staff, proper equipment and tools, and who uses original spare parts.

To order the spare parts listed above, follow the instructions listed in the paragraph 1.2

9 DEMOLITION

9.1 DEMOLITION

At the act of demolition it is necessary to separate the parts in plastic material from electric components. Sometimes they must be sent to different gatherings respecting the current Norms.

Concerning the machine metallic mass, it is enough to subdivide the steel parts and those of other metals or alloys, for a proper recycling by smelting.

10. ATTACHMENTS

10.1 SCHEMES

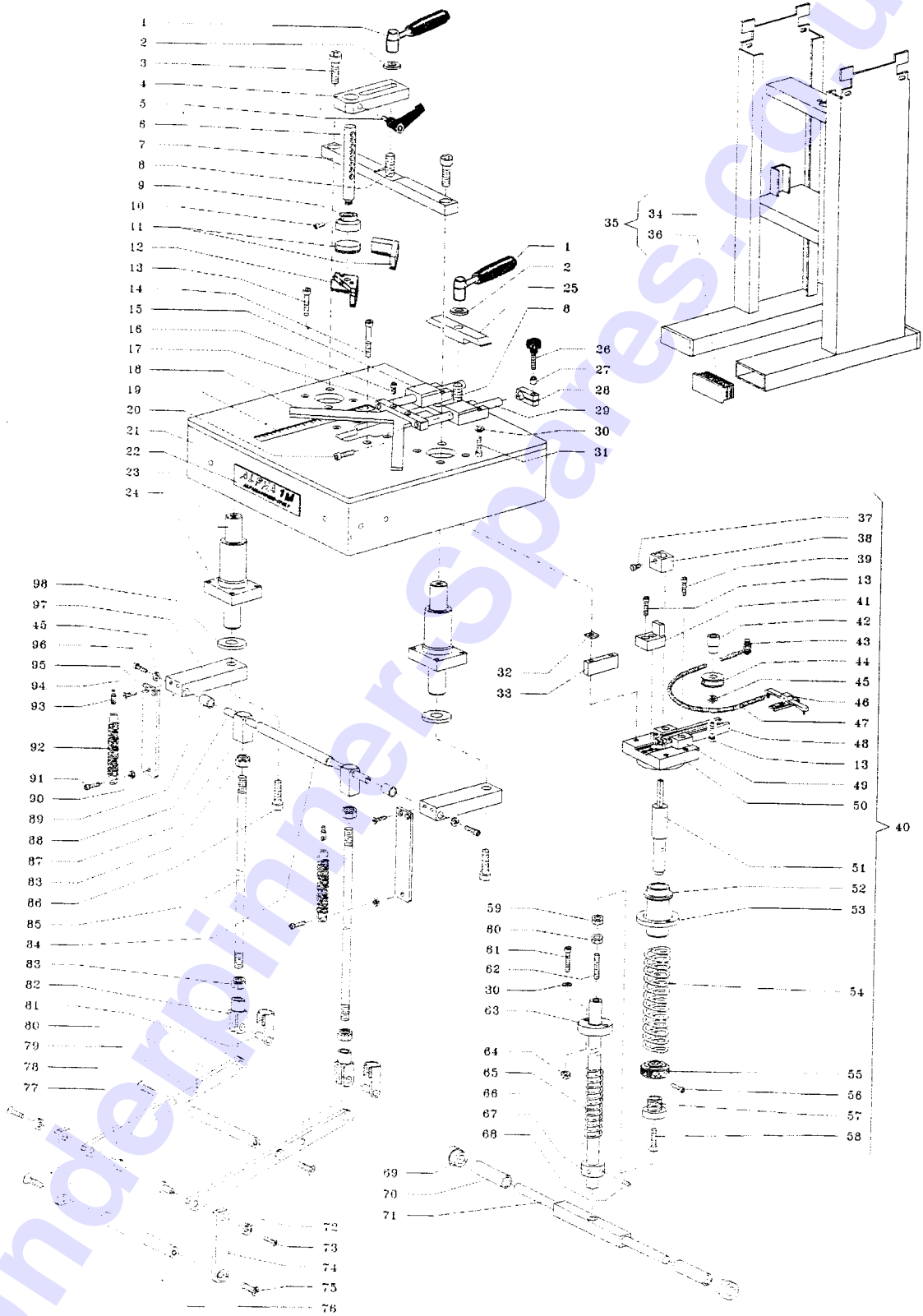
You can find here attached the following schemes:

- (A) Mechanic Schemes
- (B) Sharpening Table

10.2 OPTIONAL ACCESSORIES

- (C) Foot pedal turnover
- (D) Frontal clamping of the mouldings (Model Alpha 1M super)

SCHEMES A - Mechanic Schemes (code: DWG n° 006.1.100)



Alpha 1M

Ref. Description

Ref.	Description	Ref.	Description
1	Handle	55	Ring nut
2	Washer	56	Screw
3	Screw	57	Bushing
4	Support	58	Screw
5	Handle	59	Nut
6	Rod	60	Nut
7	Support	61	Screw
8	Headless screw	62	Set screw
9	Magnetic support	63	Bushing
10	Screw	64	Nut
11	Round pressure plate with felp	65	Spring
11	Round pressure plate with caoutchouc	66	Stem
11	Square pressure plate with felp	67	Spacer
11	Square pressure plate with caoutchouc	68	Set screw
12	Square pressure plate with caoutchouc	69	Bushing
13	Screw	70	Spacer
14	Screw	71	Support
15	Support	72	Washer
16	Screw	73	Screw
17	Support	74	Support
18	Connecting plate	75	Screw
19	Inch rule	76	Spacer
20	Screw	77	Pin
21	Casing	78	Screw
23	Stem	79	Spacer
24	Head	80	Support
25	Support	81	Clips
26	Knob	82	Fork
27	Spacer	83	Nut
28	Clamp	84	Spacer
29	Slide	85	Rod
30	Washer	86	Screw
31	Screw	87	Support
32	Spacer	88	Rod
33	Support	89	Spacer
34	Base	90	Nut
35	Complete floor stand	91	Screw
36	Lid	92	Spring
37	Screw	93	Spring support
38	Head H7	94	Screw
38	Head H10	95	Plate
38	Head H15	96	Screw
39	Screw	97	Support
40	Complete head	98	Washer
41	L block		
42	Spacer		
43	Spring support		
44	Pulley		
45	Washer		
46	Nail pusher		
47	Spring		
48	Nail magazine		
49	Block		
50	Head		
51	Piston and driver blade		
52	Slide bushing		
53	Washer		
54	Spring		

SCHEMES B - Sharpening Table

	SOFT WOOD			HARD WOOD		
	A	B	C	D	E	F
Height mm	Very soft wood	Soft wood	Averaged soft wood	Averaged hard wood	Hard wood	Very hard wood
H 3* mm	◇	◇	◇	50	48 (50)	45
H 5* mm	60	60	58	58	48 (50)	45
H 7 mm	60	60	58	50 (48)	48 (50)	45
H 10 mm	60	58	58	50 (48)	48 (45)	42
H 12 mm	60	58	58	48 (50)	45 (48)	42
H 15 mm	60	58	58	48 (50)	45 (48)	42

* V-nails available only on customer's request for order higher than 500.000 pcs.

60 Suitable for soft wood such as: Thailand and Asian South-East wood, Cedar, Pine, Bass, Banak, Obeche, Poplar
Other materials: Cellular, Polystyrene, Vertical Grain MDF

58 Suitable for soft wood such as: Thailand and Asian South-East wood, Cedar, Pine, Bass, Banak, Obeche, Poplar
Other materials: Vertical Grain MDF

50/48/45 Suitable for soft wood such as: Cedar, Cherry, Oak, Ramin, Poplar, Maple, Pine
Other materials: Vertical grain MDF, Polystyrene, PVC

42 Suitable for soft wood such as: Oak, Ash, Hickory, Pecan, Maple, Cherry, Ramin
Other materials: Horizontal grain MDF



In order to stack 2 or more V-nails per junction, use V-nails coded **58.3** or lower.

SCHEMES C - FOOT PEDAL TURNOVER

1. Lower the foot pedal
2. Insert a (i.e. a screwdriver or an allen wrench; detail B of figure 1) in the central rod (detail A of figure 1) appointed to the driver blade lifting in order to keep lowered the foot pedal

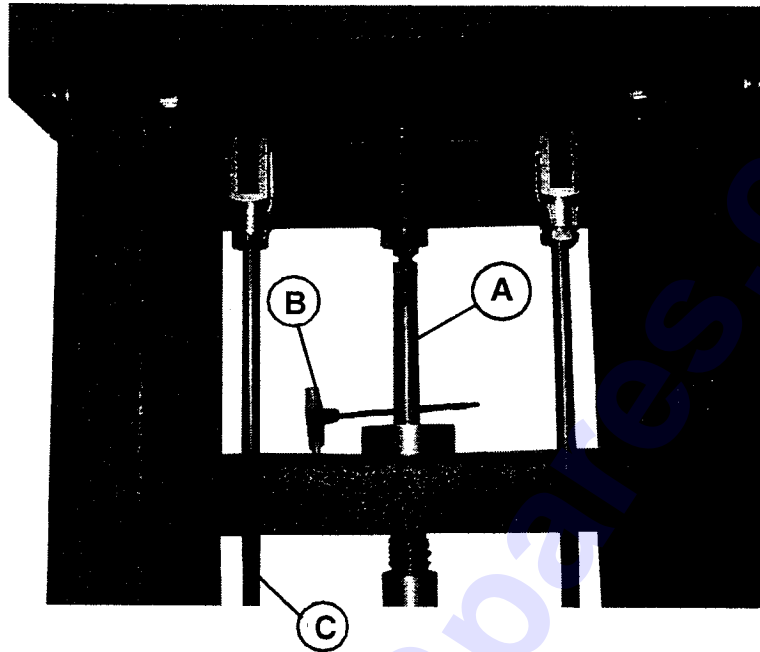


Figure 1

3. Unhook the locks (detail "D" of figure 2) by turning them clockwise
4. Take the D locks off the side rods (detail "C" of figure 1)

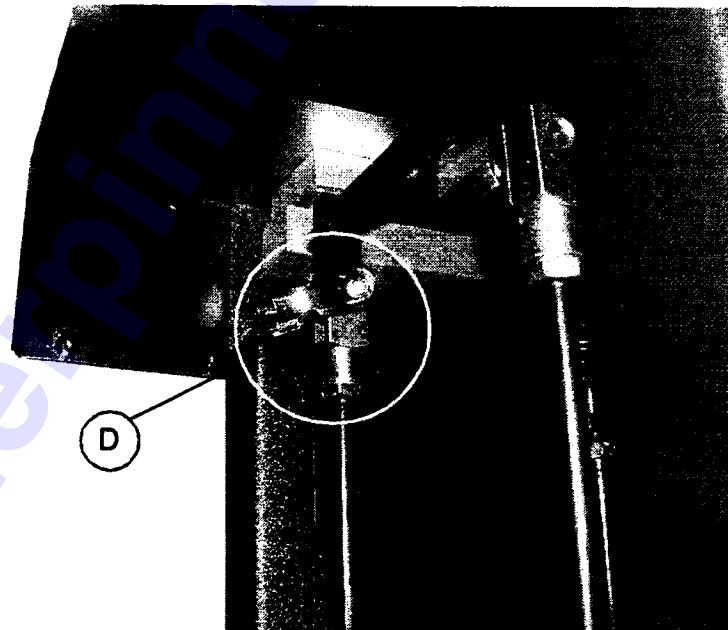


Figure 2