

Z14 TECHNICAL INSTRUCTIONS

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- 11.- Initial cups and copier setup

1. - OPENING THE MACHINE

Disconnect the appliance from the power supply.

Remove all the external parts (Fig. 1)

Remove the 4 bolts from the top and the 4 securing the front to the base

Loosen the front mounts by 2 to 3mm.

Extract the right-hand side plate top plug. (Fig. 2 and 2b)



1



2



2b

Extract the electronic circuit board by pressing with the short end of a No.5 Allen key on the circuit board tab. (Fig. 3)



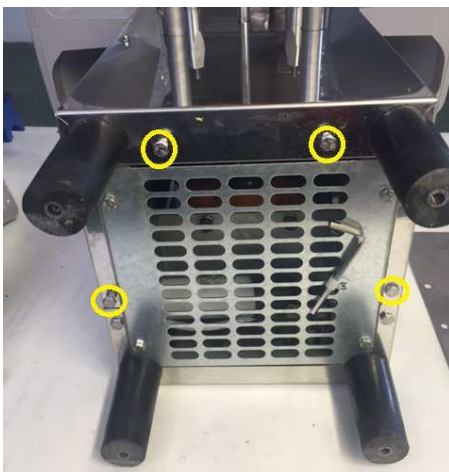
N.B. Insert the short end of the key (Fig. 3), do not use punches or screwdrivers as these may damage the electronic circuit board.

3

Remove the board completely from the machine.
Disconnect the wires from the short micrometer. (Fig. 4)
Extract the wiring from inside the side plate.
Extract the front of the machine.

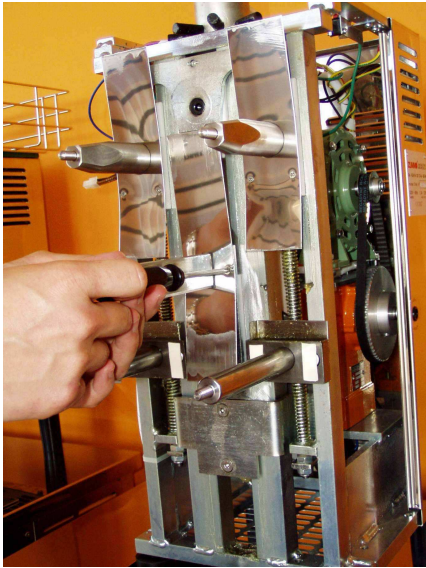


4



We will unscrew the four hexagonal screws from the base.

We lose both feet from the front side of the machine. This will let us be able to dismantle the front cover.



5

Extract the front cover of the machine.




Extract the three runner covers (to be able to work safely). (Fig. 5)

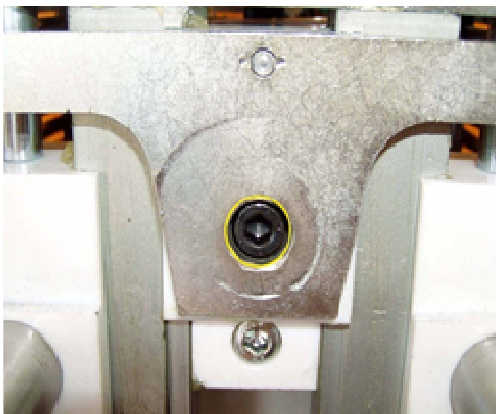


2.- CHANGING THE BRIDGE

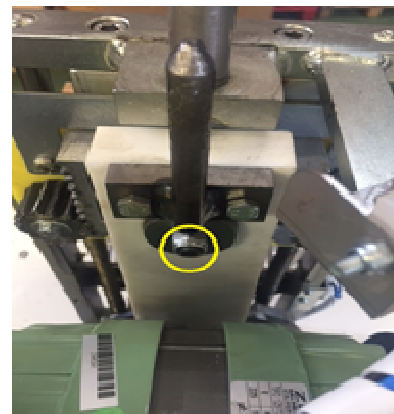
Stop the machine at the position when the cups remain vertical. The rod must be completely vertical at the upper position.

Extract the top bolt from the bridge.  (fig. 6)

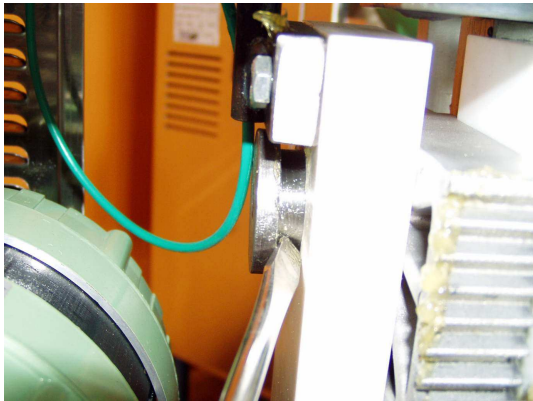
While blocking the Allen screw extract the hexagonal brake torque (fig.7)





6



7



Extract the top pin  with the aid of a screwdriver. (Fig. 7)

Extract the pusher assembly  . (Fig. 6)

Extract the bottom bolt from the bridge, thereby releasing it. (Fig. 6)

8


Fit the new bridge in gearing with the cup's shaft pinions and secure it with the bottom bolt.


Apply a little thread-locking adhesive to the bolt threads.

Do not screw in fully yet.

Grease the pin and fit into position.

Fit the pusher assembly and refit the bolt. Finish tightening the whole assembly.

If the pinions  will have become misaligned; to correct this:

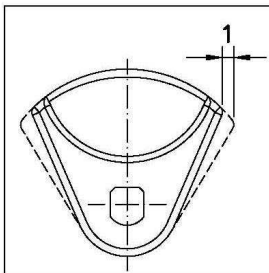
Fit the rod  in a vertical position (a position higher than the bridge).

Extract the cogs.

Turn the shafts so that they are in the vertical cup position and then refit the cogs.

N.B. YOU SHOULD NOW CHECK THE ADJUSTMENT BETWEEN THE COGS AND THE BRIDGE.

Fit the cups and secure them with the nuts. Move the cups from side to side, checking that the movement is not greater than 1mm.

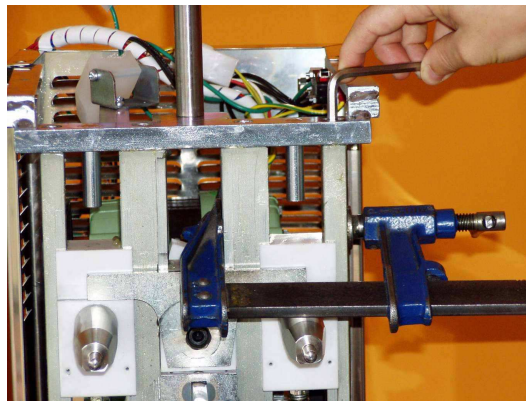


If it is greater, we should fix it like we see below:

- In the event of there being play (greater than 0.2mm) between the cup



runner and the bars guiding it, this play needs to be reduced. To do so, loosen the top chassis bolt corresponding to the outer bar of this runner, lower the runners as in Photo 8 and retighten the bolt but with the bar held closed with the aid of a clamp. You should then check that it has not been closed too much. The runner should rise and fall smoothly without catching.



8

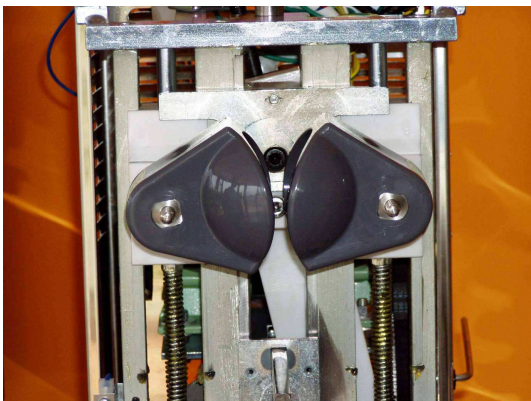
- If the runner play is incorrect, a set of cogs with special (oversized) teeth needs to be ordered from the manufacturer.

3.- CHECKING IF CLEANING AND GREASING IS NEEDED

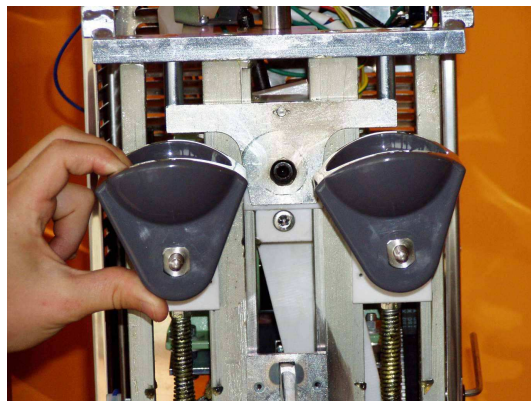
With the cups vertical, and the bridge at its highest point, lift the divider locking



tab and turn the cups in reverse direction (turn the reducer pulley in a clockwise direction) until the cups are facing each other. (Fig. 9)



9



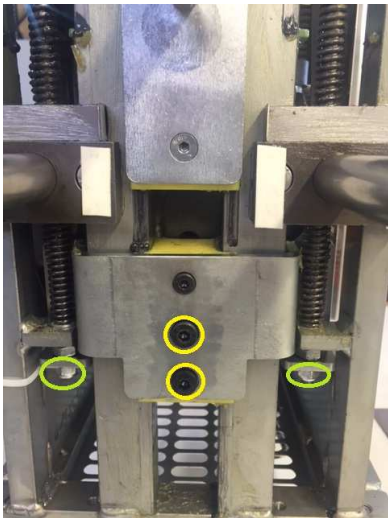
10

Raise the cups by hand to the vertical position and release them (Fig.10). The cups should rise and fall freely without any stiffness of movement. If they move stiffly, the guides, the runners hole and the cups shafts should be cleaned and greased.

This operation can be done with the front cover assembled. In the event of the cups don't return due to the springs action, we must proceed to an intensive inside cleaning and greasing of the front cover as we see on the picture 19. Always use food grade grease on this surface

4. - PULLER RUNNER BOLTS


These are small head Allen type screws; 6x30, the bolt below and 6x16 the above one, (fig 11). In versions of 2015 towards nowadays it had 3 bolts (up of 6x16, middle 8x16 and below of 8x30).The screw below fastens the lower bearing and the other fastens runner.



11



12

Turn the reducer pulley until the central runner  allows the bottom bearing to be extracted. Once the bearing has been changed verify that the pin with the bearing remains fitted to the runner, with no play. If play is detected, extract it and use a punch to produce protuberances (Fig. 12) in order to eliminate this play.

THE HEAD OF THE PIN MUST NOT SIT IN THE RUNNER HOLE, EVEN WITHOUT A SECURING BOLT

Apply thread-locking adhesive to the bolt threads (Fig. 13 and 14) and fit them.



13



14

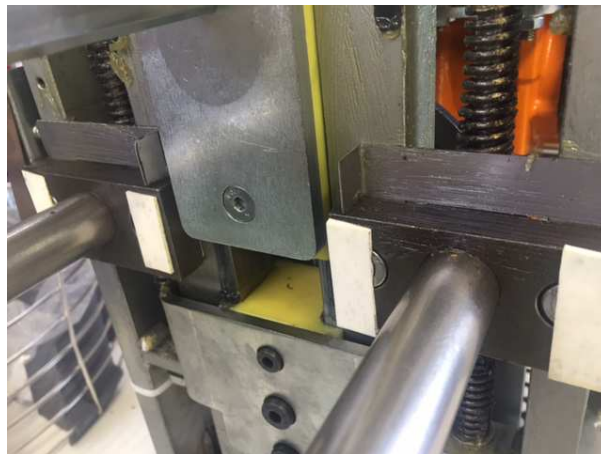
TAKE CARE WHEN TIGHTENING THE TOP BOLT, AS IT IS THREADED DIRECTLY ONTO PLASTIC AND COULD PASS THROUGH IT

5.- TRAY SHAFT SUPPLEMENTS

The machines were not originally fitted with these parts, which were incorporated from No. 2116011 onwards.

These parts (reference Nos. 1405017 and 1405018) are to prevent the juice entering through the cup runner covers from reaching the central guides.

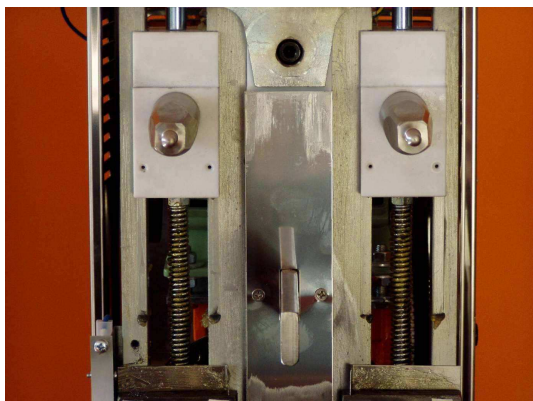
If your machine does not have these parts, they should be fitted. It is simply a question of fitting them as in Photo 15 and greasing the joints to prevent the juice from leaking through the slots.



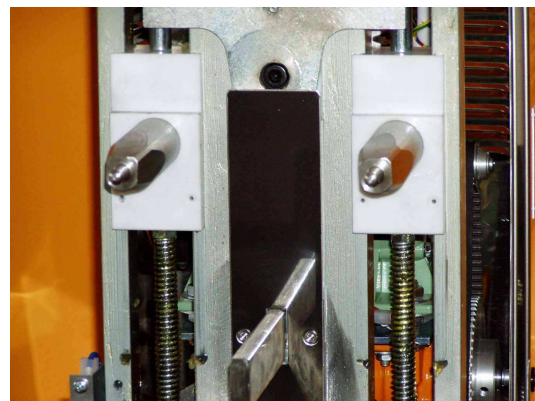
15

6.- BLADE RUNNER COVER

This part originally measured 214mm (Fig. 16) and was later lengthened to 230mm (Fig. 17). This change was made from machine No. 2077001 onwards, and the new one can be distinguished by its rounded edges. (Fig.17)

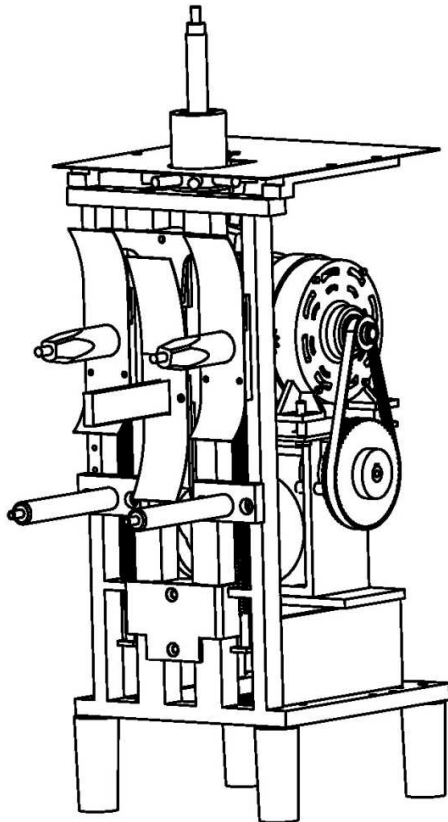


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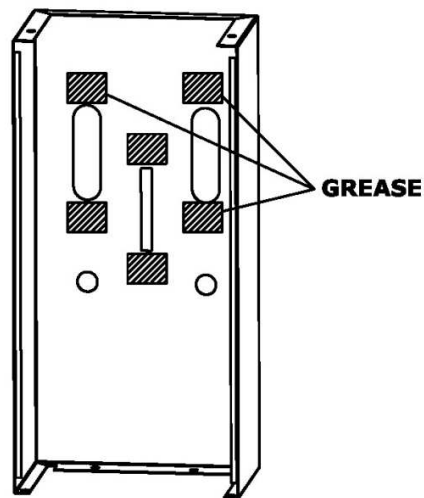
17

If your machine is fitted with the short one, it should be replaced with the new model. The three runner covers have to be bent slightly forwards by around 20mm (Figure 18), and at the front, grease should be added in the area where they rub (Figure 19).




18

STAINLESS STEEL FRONT



19

7.- REPLACING A CUP RUNNER

Remove the chassis closing device  and extract the runner with its rod. The rod has to be released from the two bottom bolts (spotted in green on the picture 11)

Fit the rod into the new runner and refit it into the chassis. at the upper position, the runner should touch the chassis block.

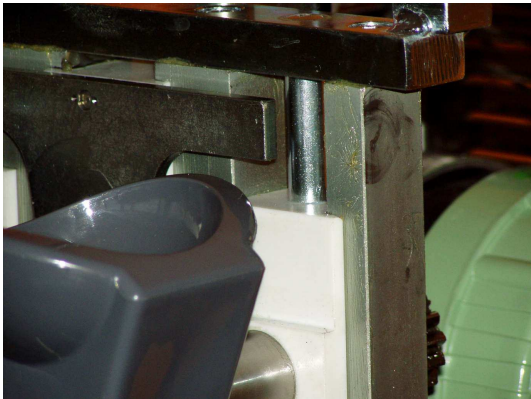
Fit the chassis closing device and adjust the top position of the bars so that the runners have the minimum play without dragging. This can be done with the aid of a clamp.

Check the movement play between cogs and bridge, as explained in the "CHANGING THE BRIDGE" section.

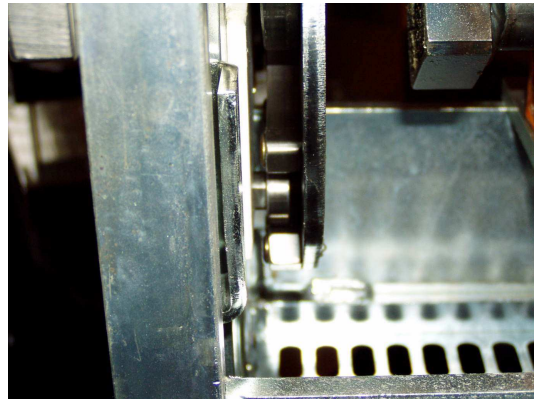
8.- ADJUSTING THE POSITION OF THE CUPS

Operate pulley by hand, until the rod is at its highest (Fig. 33). In this position the cups should be vertical. If not, remove the sprockets and reinsert so that the tops are vertical.

Move the cups to the vertical position. The runners should be touching the top end stops. (Fig. 20)



20

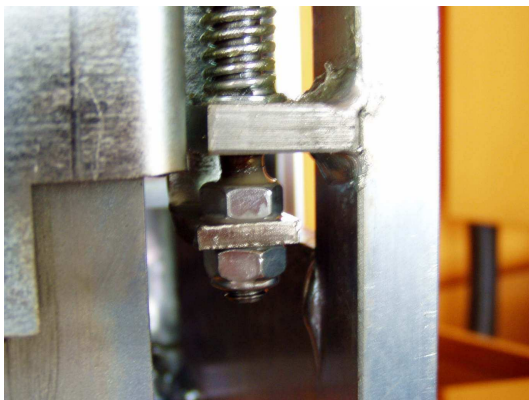


21

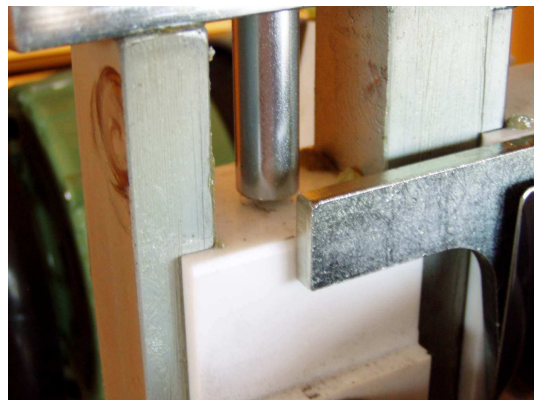
Turn the reducer pulley anticlockwise and observe how the sectors of the copier



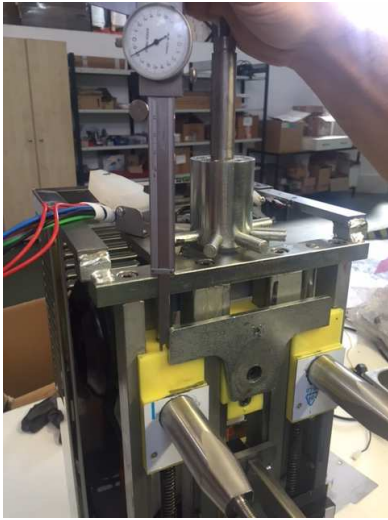
move towards the bottom bearing. (Fig. 21)



22

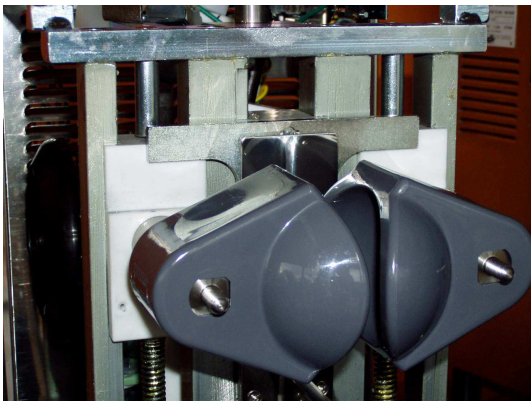


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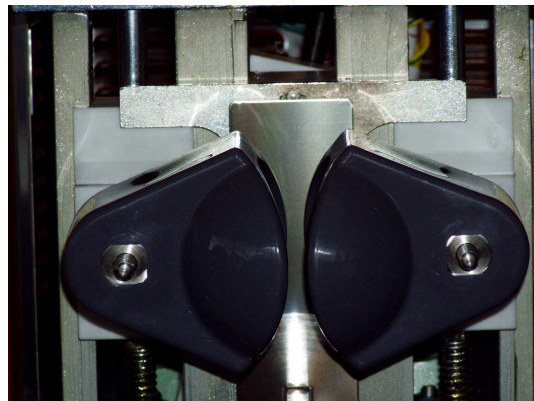


For achieve a good cups adjust and have a reference for find them really aligned, we will use a gauge for measure the distance between the chassis block and the upper side of the runner. We must measure both runners and check if both measures are the same.

The bearing needs to be raised or lowered by adjusting the bottom nuts on the pullers (Fig. 22), so that the bearing enters the copier barely touching it. Keep turning the reducer pulley, and at the point where the cups stop turning and begin their descent, **they should be facing each other (Fig. 24 and 25), at the same level, and the runners should come away from the end stops at the same time (Fig. 23)**



24



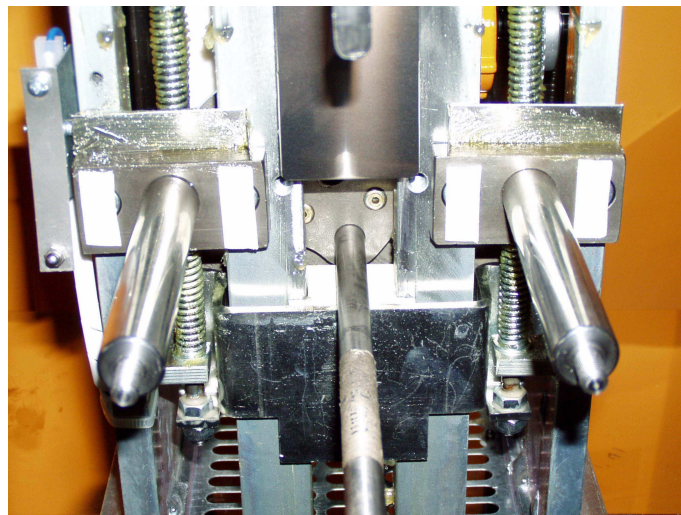
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For further information, you can check out the point 11 of these instructions, where you can see the bearing and cups in different positions

9.- REPLACING A REDUCER, A COPIER OR A ROD



In these three cases the reducer needs to be released from its position, however, the most important point is that when refitting the reducer, the center of the reducer must be aligned perfectly with the center of the chassis. To do so, use a 12Ø rod inserted into the reducer shaft. This should be centered between the two central bars of the chassis. (a 12Ø drill bit can be used) (Fig. 26)

IT IS IMPOSSIBLE TO POSITION THE CUPS UNLESS THE REDUCER IS PROPERLY CENTERED




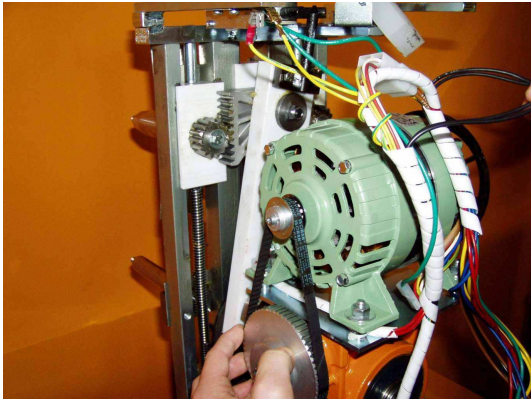
26

10.- ADDING A “CUP RUNNER BRIDGE”

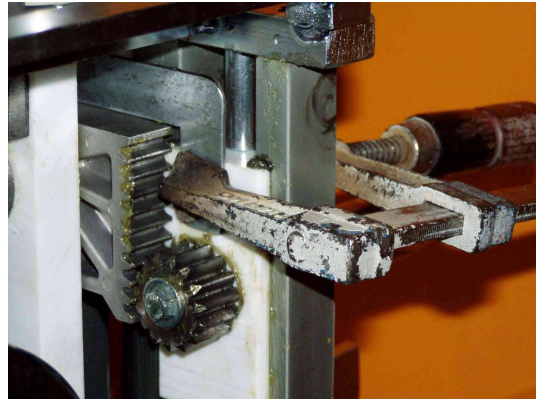
This part is designed to prevent the cogs  from being able to come away from the toothed area of the bridge . This part was factory fitted from machine No. 2117054 onwards. If you need to carry out work on any machine not having this part, it should be fitted.

This is done as follows:

Raise the rod  to its highest point and position it completely vertically. To do so, turn the reducer pulley until this is achieved. (Fig. 27)




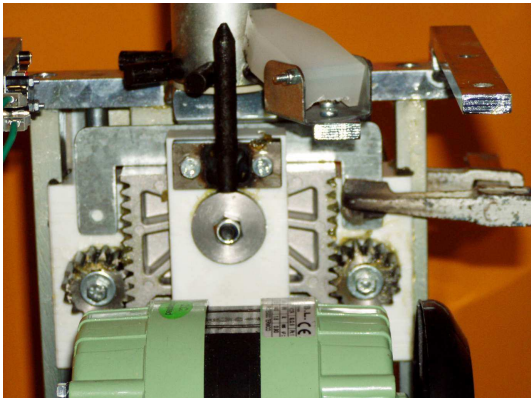
27



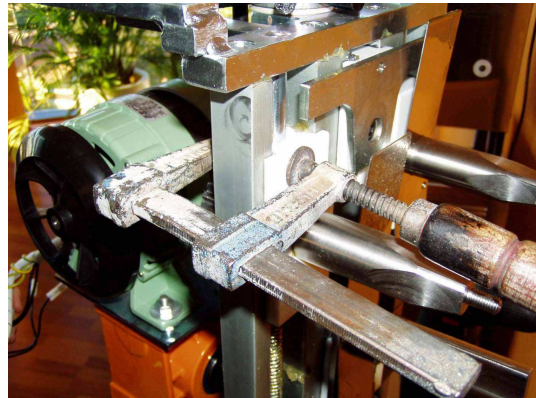
28

Once the rod is at its highest position, fit the new part. This should rest on the bridge and be centered, and held in place using a clamp (Figs. 28, 29, 30) to

ensure that it does not move during drilling. To do so, a cup runner cover  will have to be removed.

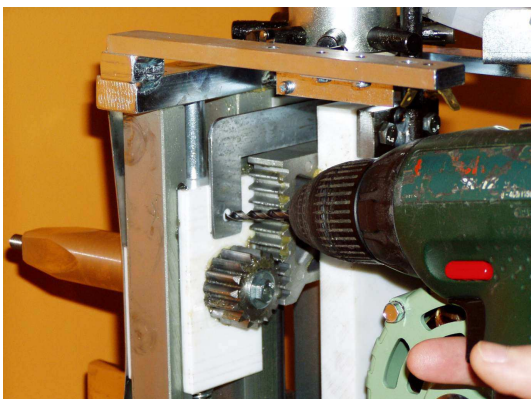


29

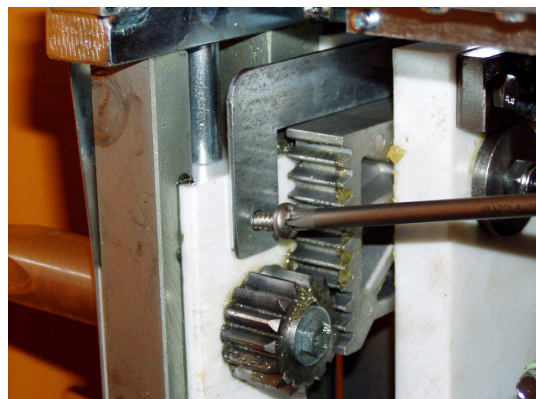


30

Drill 4.75Ø holes to a depth of 25mm. (Fig. 31)
The motor will prevent the holes from being drilled completely horizontally, however this is not important.

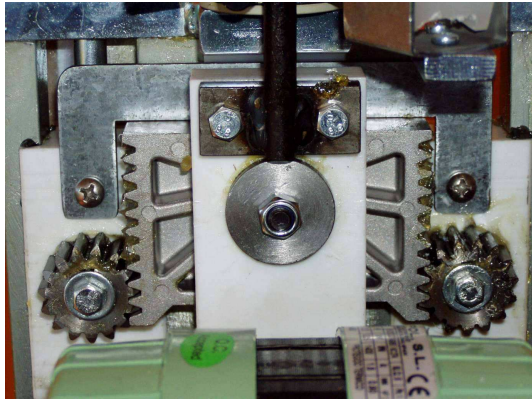


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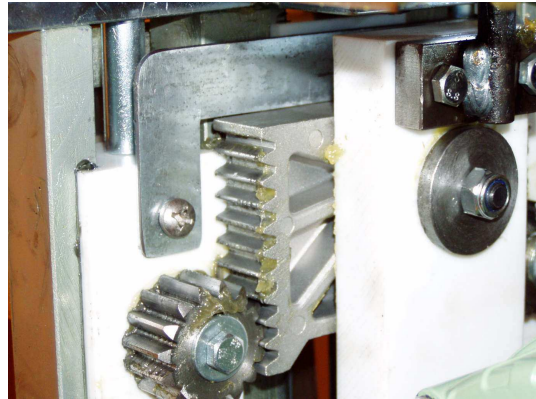


32

Fit the screws (Fig. 32). They must not be over-tightened.

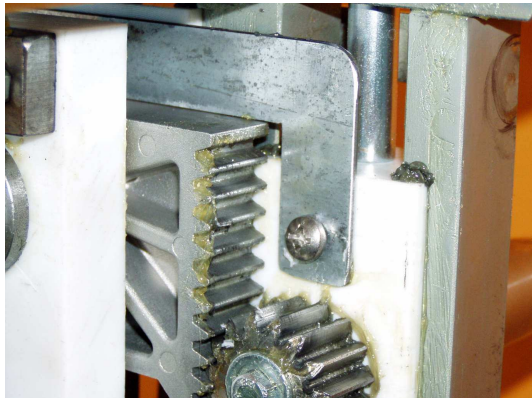


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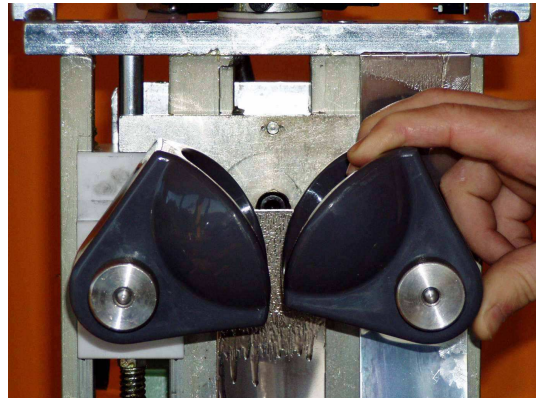


34

See the final result, Photos 33, 34 and 35.



35



36

To check proper functioning:

Turn the reducer pulley clockwise until the cups are horizontal. Turn the cups by hand to the vertical position and release them (Fig. 36). On releasing them, the runners should reach the top end stop under the action of the springs, without manual assistance. Grease the runners and the springs if necessary.

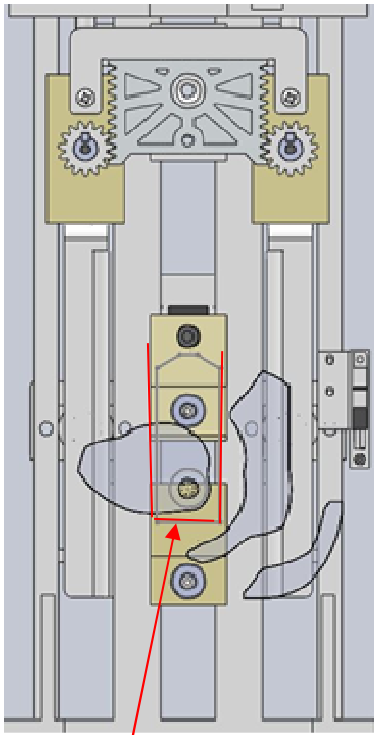
11.- INITIAL CUPS AND COPIER SETUP

In order to adjust the cups and the copier in a proper position to perform a good work, we have to strictly follow the steps below. Performing all these verifications we will achieve a perfect machine operation.

Following, we will have a graphic description by explaining the cycle steps of the bearing through the copier.

****All the pictures following below are all a graphic description seeing the back side of the machine.***

Gearbox shaft position



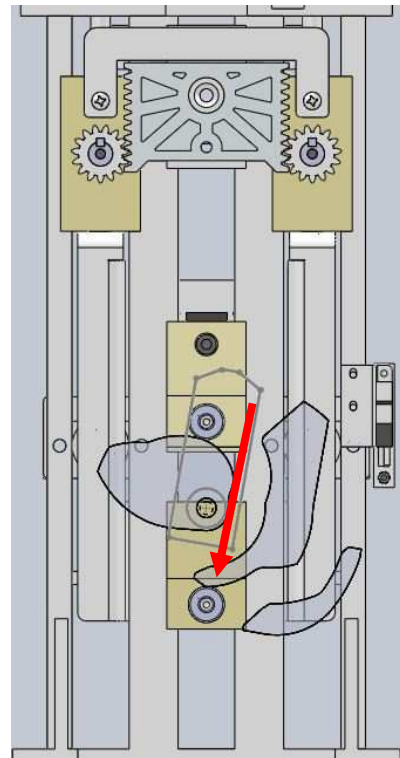
Gearbox shaft at 0°

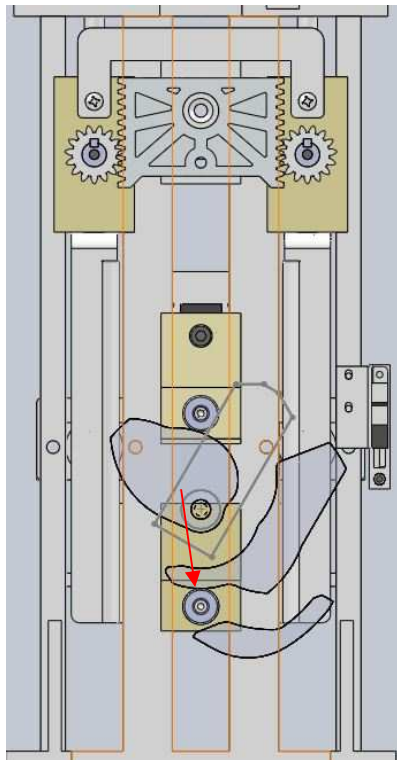
11.1.- For setting up the cups runners and the copier we first fit both cups in the vertical position. While having the cups in the vertical position, the bearing will remain faced at the entrance of the copier slot.

With the gearbox shaft at 0°, we will balance the bearing in that way, achieving that it doesn't touch the upper side of the slot.

The bearing must remain faced as seen on the picture.

11.2.- When the gearbox shaft will be at 10° the bearing starts getting inside the copier slot. It never has to touch the upper side of the copier and the lower side only has to rub against the bearing.





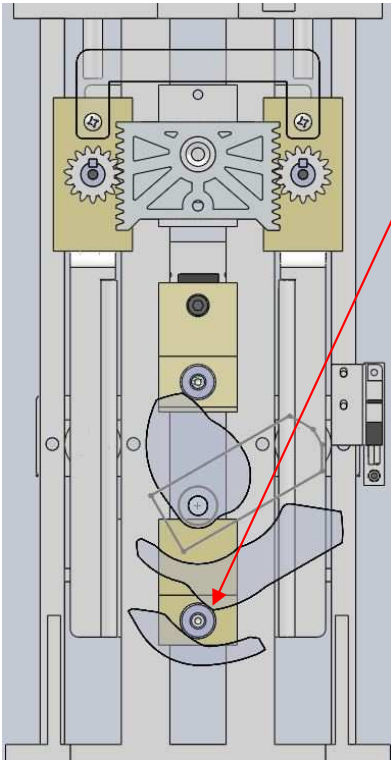
11.3.- When the gearbox shaft will be at 30° , if the bearing is well fitted, it will pass rubbing against the lower side of the copier and will remain closer to the upper edge but without rubbing so much. With this initial adjustment, we will avoid an extra effort of the bearing while the process is running and we will gain durability of all the assembly.

These settings must be done always when some change of any mechanic pieces of the machine (runners, bearings, copier...) has been done. The machine will always start working properly thanks to all these settings without any overload either on the bearing and the copier, so that we avoid future breakdowns.

11.4.- CUTTING PROCESS FAILURE OR BLADE BLOCKING

Sometimes we could find the machine blocked or breaking down at the cutting process, so that we must always verify that the bearing is working properly at this moment of the process.

Following, we will see some pictures with the mechanical operation sequence of the cutting process detailed.



When the copier shaft will be at 60°, the cups start going down already and the bearing will be at the middle of the process (see picture beside). As we see the bearing about to leave the copier slot and it should pass through it with the minimum rub possible.

At the cutting moment, the copier will be at the same position as in the picture. The blade will be at its higher position. In the event of the machine blocked at this moment of the process, we must check that the exit of the bearing through the end of the copier slot is well fitted and check if the bearing is at the right place.

