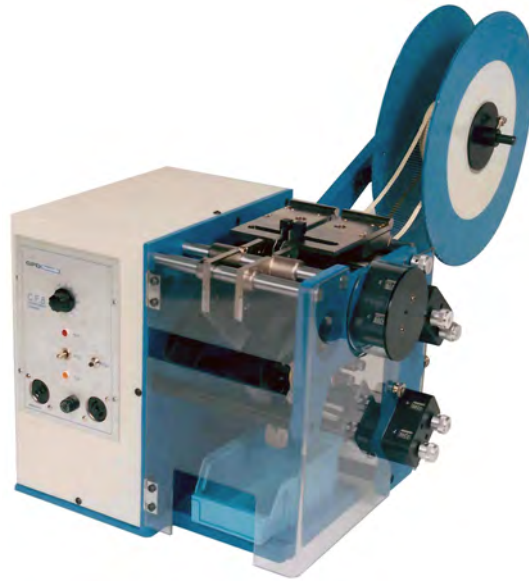

CF-8 Set Up Gauge Instructions

Version 1.0
November 5, 2012
Part No: 801-1-04



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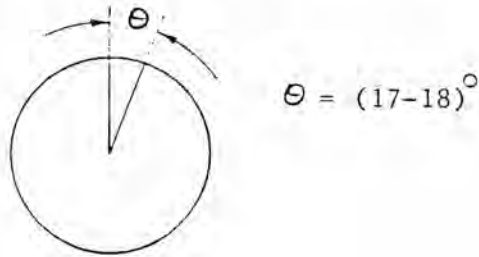
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Timing the gears and pulleys

The machine is timed and tested before leaving the factory. If however new pulleys or belts are installed, the rear support plate is removed for any reason, or any other adjustment that has altered the timing it may be retimed by the following routine.

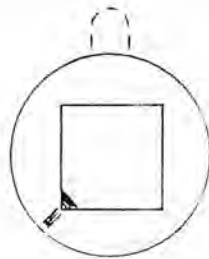
The machine when viewed from the front, (the adjustment knobs for #'s 1, 4, 5, 6 & 7 facing you) all keyways to be facing in the upward position, except one. That being the pulley that drives the crimping dies. This keyway is at approximately 17 - 18 degrees in the clockwise direction as shown in Fig. 1.

Fig. 1



The square shaft location when viewed at this setting should be as in Fig. 2, with the flat in one corner as indicated. The spring plunger which locates the shaft when in this position can be seen to be facing upwards. This plunger is between the main upright and rear support plate.

Fig. 2



If the keyways do not appear to be in the upward position the machine can be turned through a few cycles until it is. This keyway pattern repeats itself once in every six revolutions of the main gear, Part #803-1-12. If the keys or keyways are not always visible the set screws which locate on top of the keys can be seen in the upright position. To get the keyways into position it will be necessary to turn the driven shaft by hand while the cutting wheel is stationary.

With a component in the transport wheels the component lead should be in the centre of the roller as shown in Fig. 3, or centre of the pad in Fig. 4 (same position), depending on which is easiest to check. This is most easily located by turning the machine one position back and then moving forward into this position. If it is in the position the timing is correct and if the other settings have been made it is ready to operate.

Fig. 3

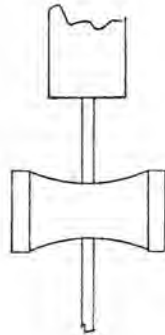
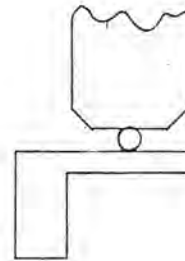


Fig. 4



If the transport wheel is not in the position it can be advanced or retarded by loosening the two screws that hold the idler gear and moving the bracket that supports the gear. In doing this the component in the transport wheel moves forward or backward until it is in the position shown in Fig. 3 & 4. Tighten the screws again with minimum back-lash between the gears in the correct position and the machine is timed. After tightening, check that it did not move whilst being tightened. The idler gear could be one of two types as shown in Fig. 5 & 6.

Fig. 5

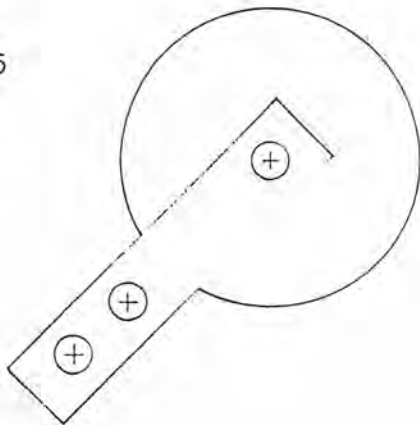
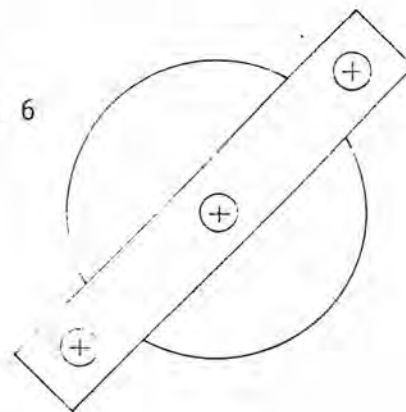


Fig. 6

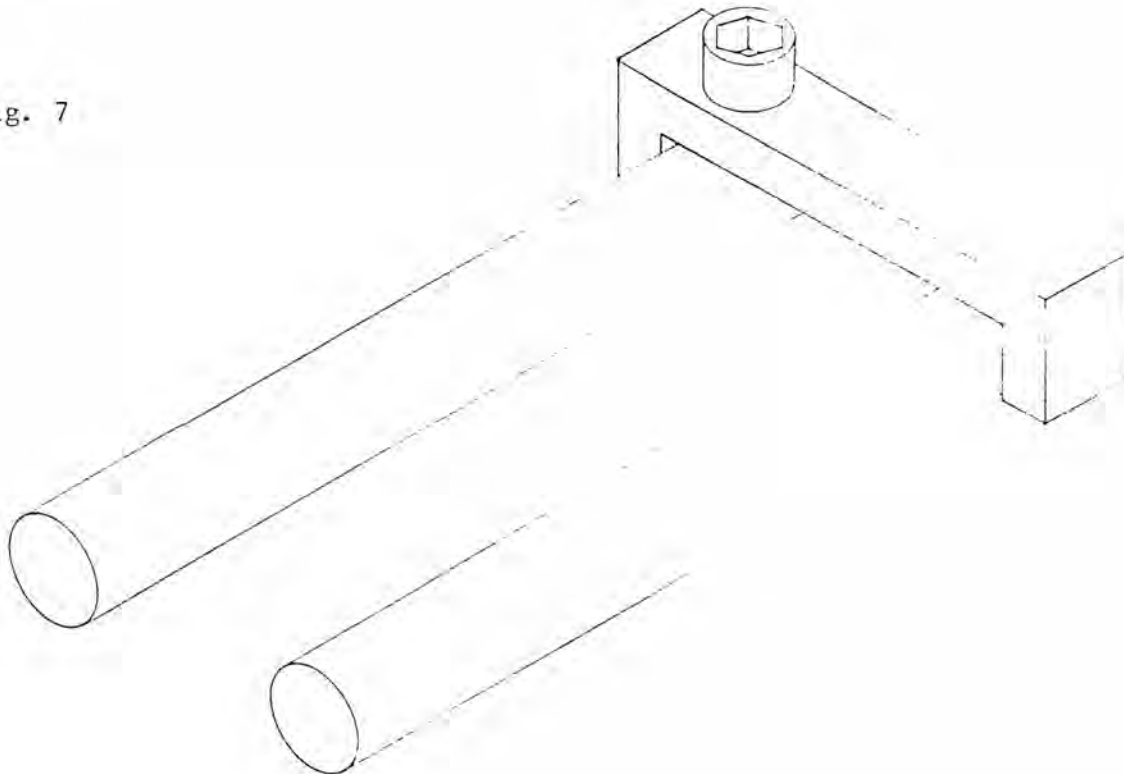


Counter bracket positioning

The tapped hole alignment block is required when installing infeed chutes and bulkfeeder support block shaft, part #809-4-19A. The 8-32 caphead locates the counter positioning block on the shaft as shown in Fig. #7.

Set the block in the horizontal position and up against the main frame upright. In this position the tapped hole is set perpendicular to the base and the correct distance from the upright to locate the counter bracket. When in this position tighten the two set screws, part #SS1032025 to locate these shafts permanently. (Remove alignment block when setting is completed).

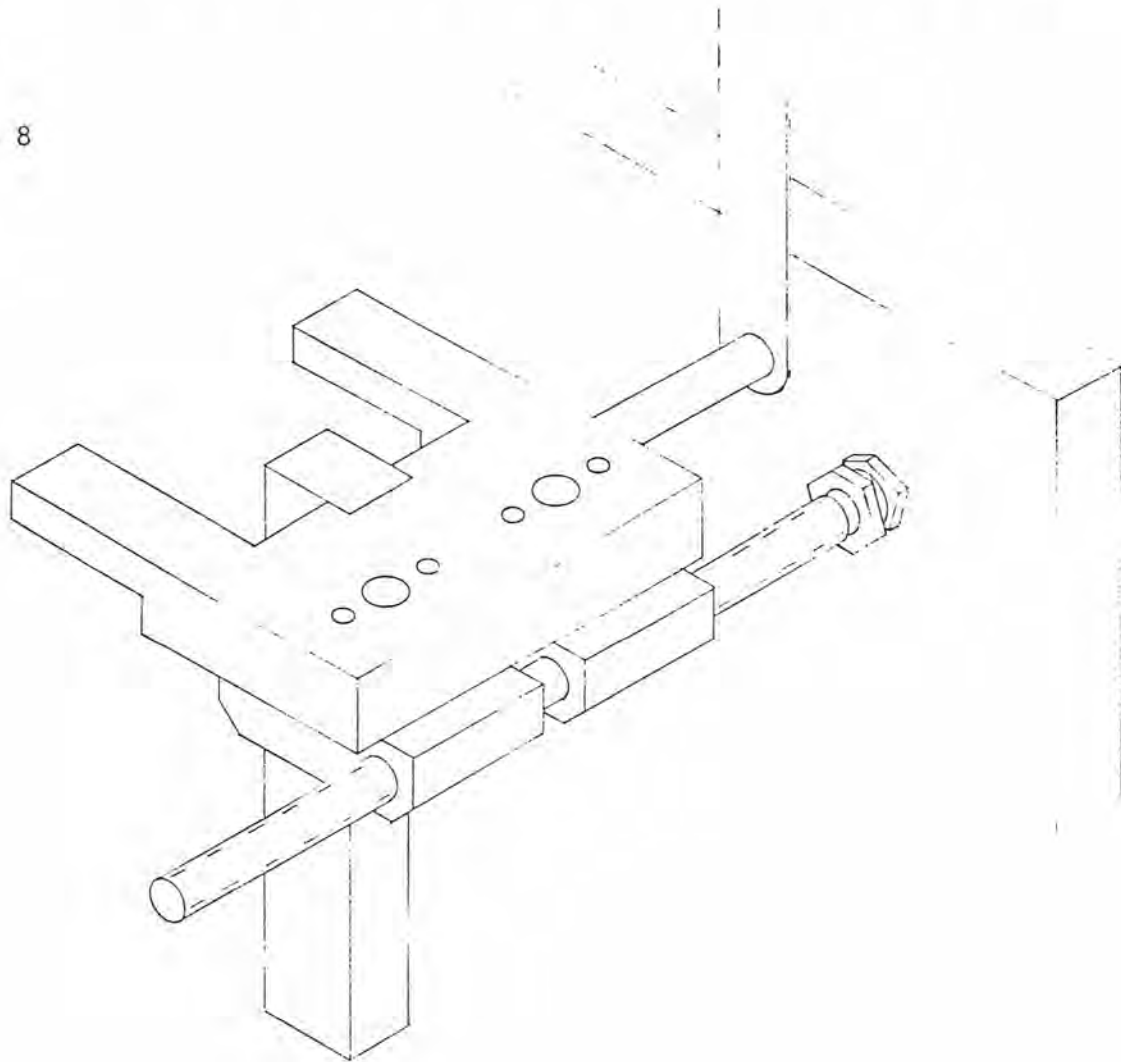
Fig. 7



Setting the centre line of the machine

The central position of the machine is established with the main set-up gauge. This is achieved by locating on the infeed chute and bulkfeeder support blocks. The four 1/8" holes in the gauge locate on four dowels in support blocks (2 in each), by turning the #1 adjustment knob until the gauge just slips into place without any forcing or pushing. The two 1/4 - 20 set screws clamp the gauge to the blocks. The shaft which protrudes from one side of the gauge is then set to .010" from the upright by adjusting the ball retaining screw and lock-nut as shown in Fig. 8.

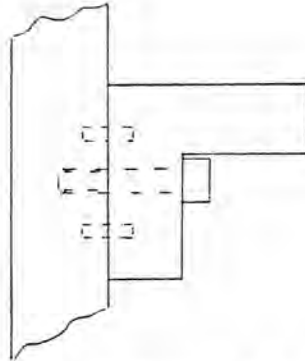
Fig. 8



Setting the crimping die stations.

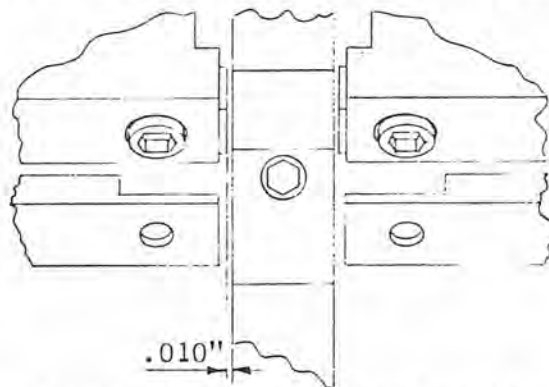
Place the L shaped bracket on the perpendicular shaft attached to main set-up gauge, which will be through the middle of the machine. The 10-32 cap head screw will clamp the bracket in place as shown in Fig. 9.

Fig. 9



Place the two dummy die blocks market 4 & 5 set up in the #4 & #5 die holders. Make sure that they are set in the top position, (the fixed die holder casting). Tighten with the screws, part #801-1-19 that locate the dies when the machine is is use. (The crimping die stop brackets, part #818-1-11 L&R must be loose or set out of the way at this point). Bring both the #4 & #5 stations towards the centre of the machine. The perpendicular shaft on gauge will now be the reference position. The dummy die blocks should be adjusted in until they are set at .010" from the perpendicular gauge as shown in Fig. 10.

Fig. 10

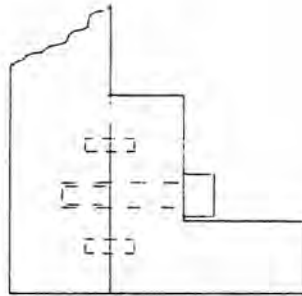


When this position is achieved the counters for the #4 & #5 stations should be set at 00350. To set counters, turn the small gears on counter to the desired setting. Slip the counter box over the two adjusting shafts and align with the two larger gears on these shafts. Replace counter box screws and tighten. Replace adjustment knobs on the protruding section of adjustment shaft and tighten.

Setting the bending die stations.

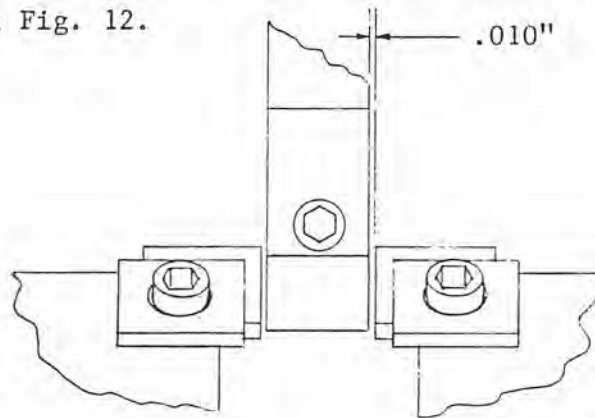
Place the second L shaped bracket on the perpendicular shaft the other way around and between the bending stations #'s 6 & 7. Clamp the bracket in place with the 10-32 cap head screw as shown in Fig. 11.

Fig. 11



Place the two dummy die blocks marked 6 & 7 set-up in the appropriate die holders and tighten with screws, part #801-1-19 that locate the dies when the machine is in use. In order for the die blocks to enter the die holders the machine must be turned to the position in which the wire clamp and roller, part #'s 801-1-9 & 801-1-11 are fully up (out of the way). Bring both the #6 & #7 station towards the centre of the machine. The perpendicular shaft on gauge will again be the reference position. The dummy die blocks should be adjusted in until they are set at .010" from the perpendicular gauge as shown in Fig. 12.

Fig. 12



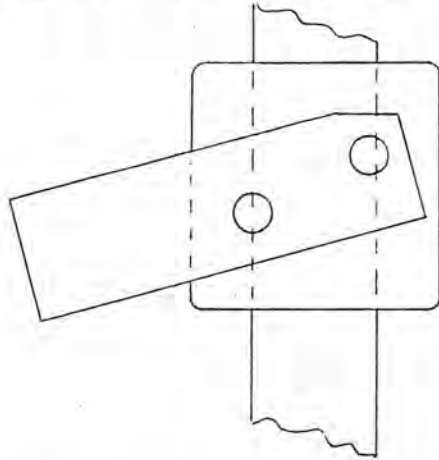
When this position is achieved the counters for the #6 & #7 station should be set at 00350. Set counters again as described in #4 & #5 set-up.

Now with #'s 4, 5, 6 & 7 counters all set the dummy die blocks may be removed before proceeding with the next stage.

Setting the magnets.

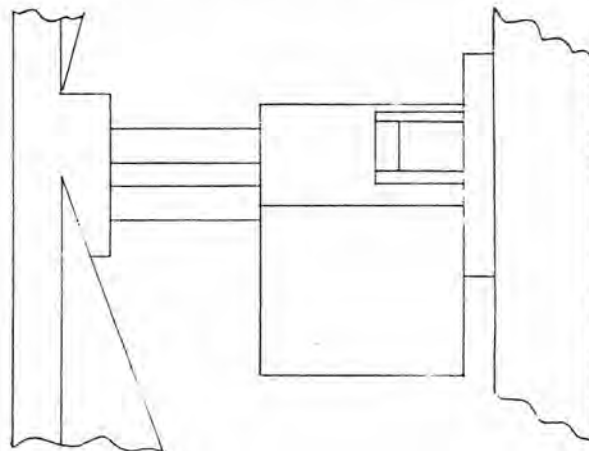
Place the $1\frac{1}{4}$ " square on to the magnet between the perpendicular shaft on the main set-up gauge as shown in Fig. 13.

Fig. 13



Move the square on the magnet in until it touches the perpendicular shaft, as shown in Fig. 14.

Fig. 14



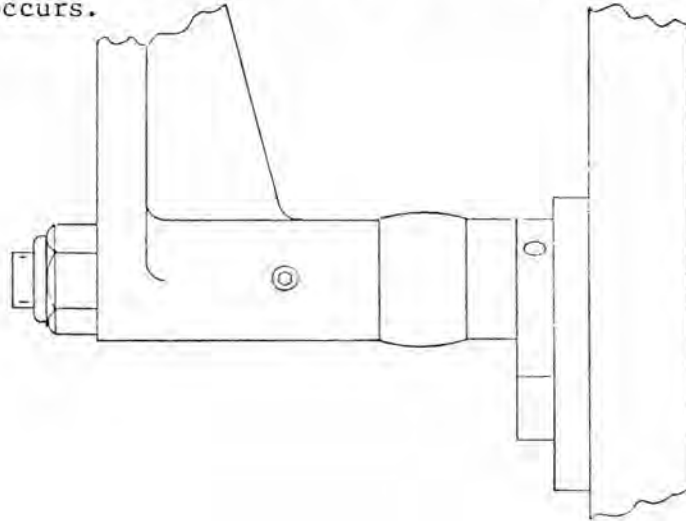
In this position lock the two set screws #SS-8320188 which hold the magnet in place via the rods from the magnet holder.

When this is completed repeat the same procedure on the other magnet on the opposite side of the perpendicular shaft.

Setting the transport wheel forks.

Setting the forks is done by placing the two diameter disc in the forks with the large diameter disc facing inwards. The fork can be brought closer to the perpendicular shaft by loosening the self-locking nut on the end of the shaft attached to the fork as shown in Fig. 15. (The set screw that positions the direction of the fork must be loose). The polyurethane acts as a spring washer and takes up the play from any movement that occurs.

Fig. 15



The setting for this is by rotating the discs by thumb until they touch the perpendicular shaft and no longer rotate freely. Set this distance so that the drag on both discs is equal. Do not lock the forks with the set screw yet, as they have to be aligned with the square shaft later on in the setting procedure (A wrench is supplied to hold the fork when the self-locking nut is being adjusted).

Setting the cutting wheels

The position of the cutting wheels can be set when the wheels are in the stationary position, using the 3/16" rod provided.

Insert the rod into two tooth spaces opposite each other on the cutting wheels. Press down on the shaft so that it is firmly seated in the cutting wheels and press back, so that both ends of the shaft are in contact with the protruding arms of the setting gauge as shown in Figs. 16 & 17. When in this position, lock the cutting wheels by tightening the six round head screws part #SR-832037, facing towards the centre of the machine. (Three on each side). Remove the shaft when both wheels are set.

Fig. 16

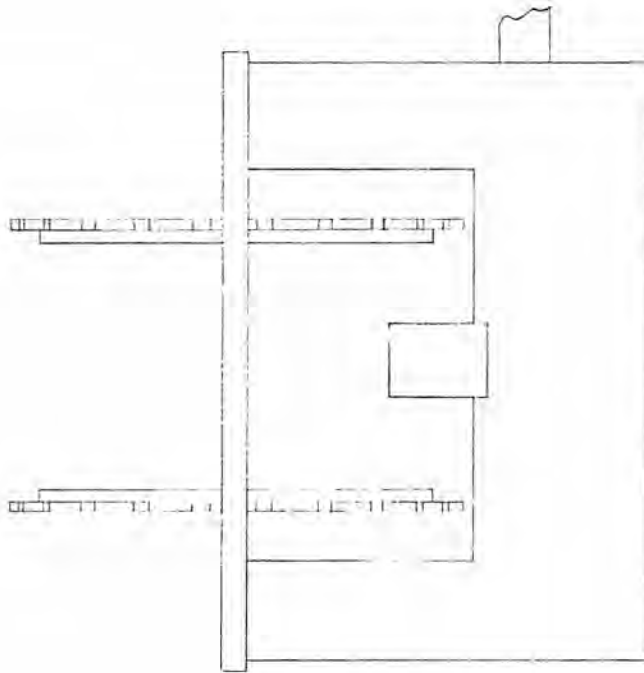
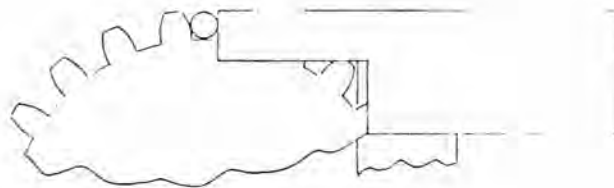
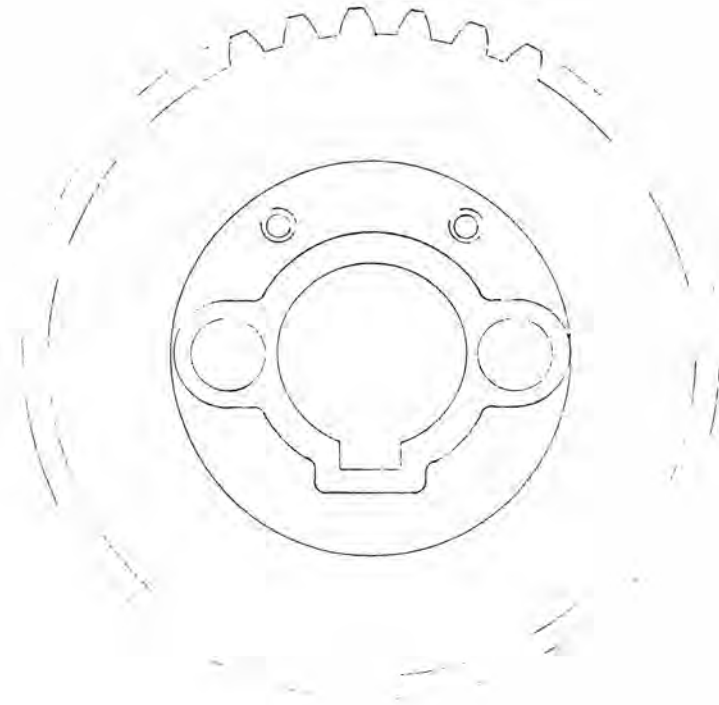


Fig. 17



Setting the cutting wheels (cont'd)

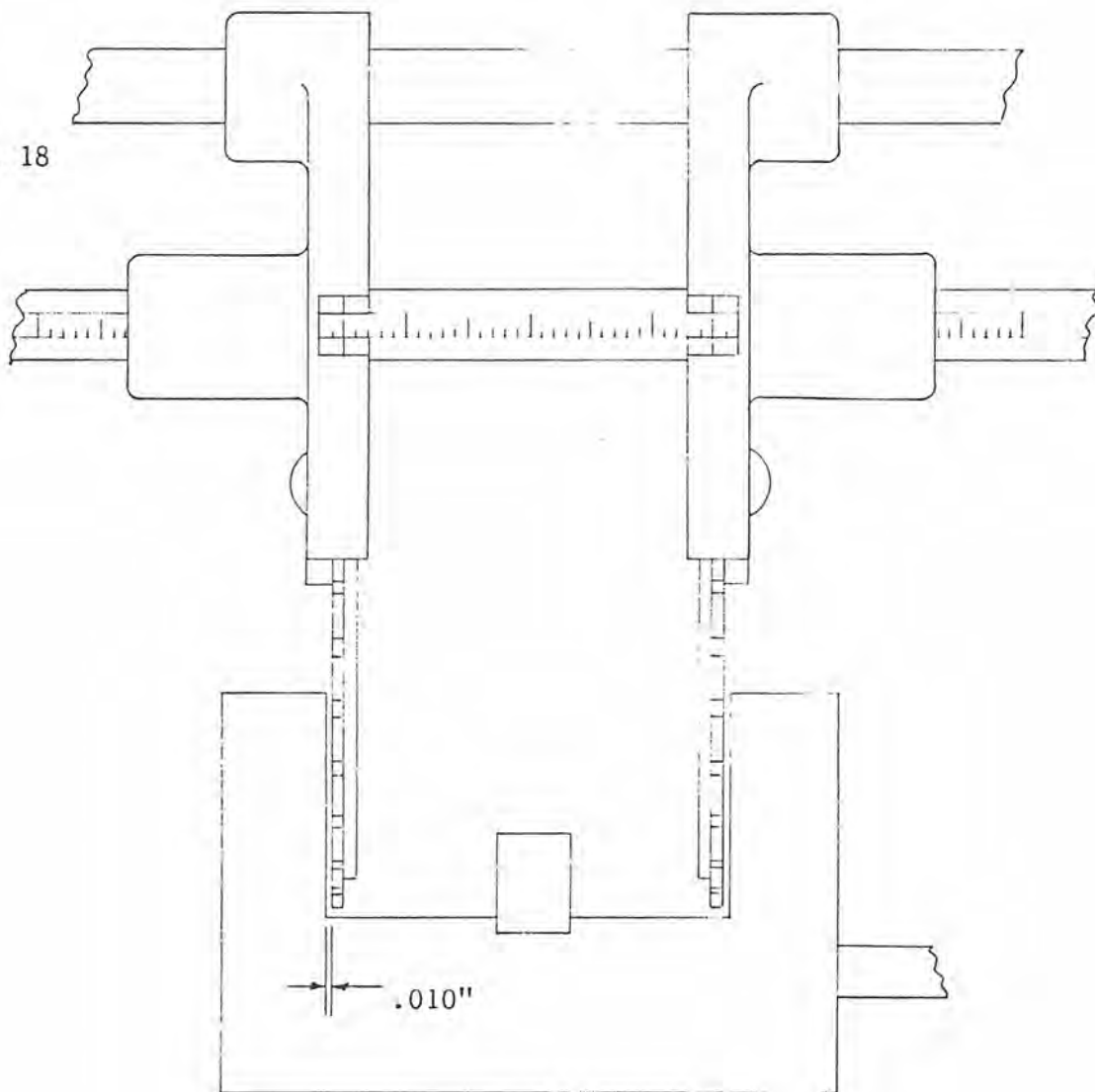
There are four set screws part #SS1032025 in the hubs on the outside of the cutting wheels (two in each). These ensure that the set position does not slip when in use. With the keyway on the cutting wheel shaft facing down these screws are easily accessible as shown in the sketch below. These screws should be just nipped tight as overtightening will result in damage to the cutting wheels.



Setting the graduated shaft

The cutting wheels when being timed can be moved out using the #2 & #3 adjustment positions. Set the wheels to a .010 gap using a feeler gauge between the inside of gauge and outside of cutting wheel as shown in Fig. 18. When the cutting wheels are in this position, the graduated shaft can be set to read 1.5 in each window on the knife holders. When the shaft is set equidistant with 1.5 on both scales, the two set screws part #SS-1032025 in the upright and front plate at either end of this shaft should be tightened.

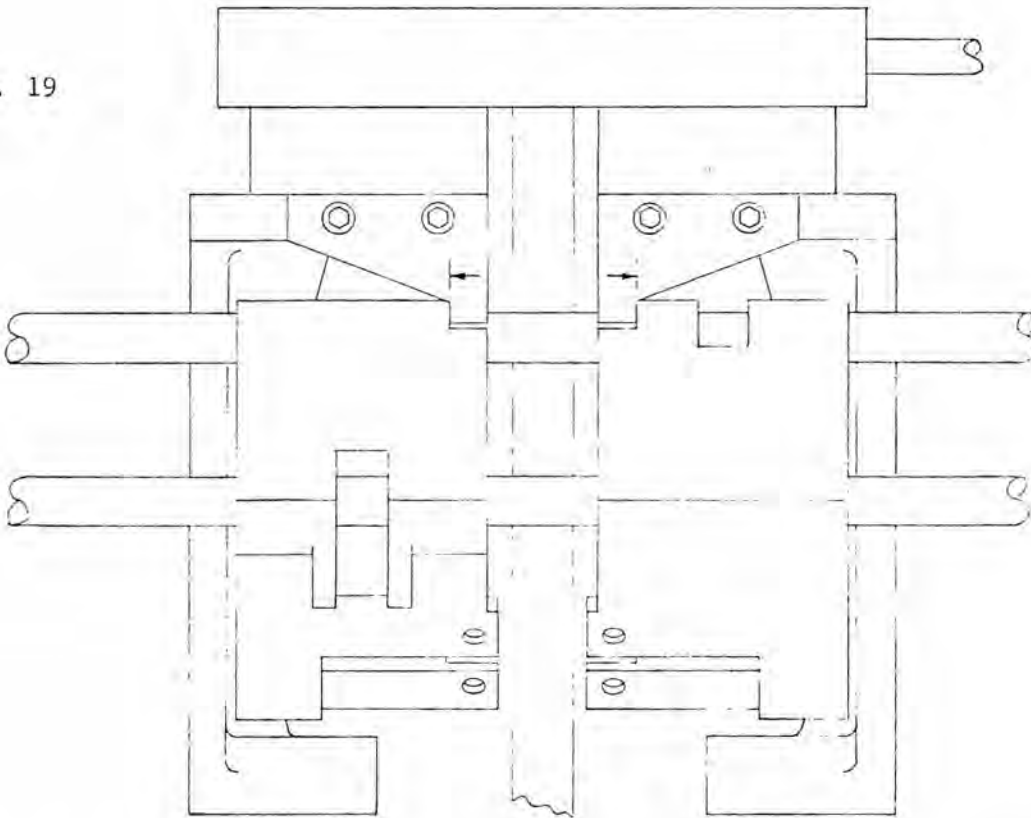
Fig. 18



Setting the crimping die stops

To set the stops on the crimping die station, dial the settings on the #4 & #5 stations to 00325. Move the crimping die stop bracket part # 818-1-4L&R into contact with the cut out on the die stations as shown in Fig. 19. When in this position lock the four cap head set screws, part #SC-832025 that hold the die stop brackets. (Two in each). This setting now prevents the crimping die stations from accidentally damaging the transport wheels when being adjusted.

Fig. 19



When the settings in Figs. 8 - 19 are completed. Remove the two L shaped brackets from the perpendicular shaft and remove the two $\frac{1}{4}$ " caphead screws holding the set-up gauge to the infeed chute and bulkfeeder support blocks. The set-up gauge may now be lifted out of the machine.

Aligning the forks

Slip the brass hub over the square shaft and inset the square shaft into its location position. (If one, or both of the forks is out of alignment it may be necessary to move it up or down to enable the square shaft to go between the forks). Slide the brass hub down the shaft, and move forks up and down again if necessary until the hub can slide freely between both forks. To set forks in this position tighten the set screws, part # SS-8320188 in the back of infeed block bracket part #818-1-5L&R as shown in Figs. 20 & 21.

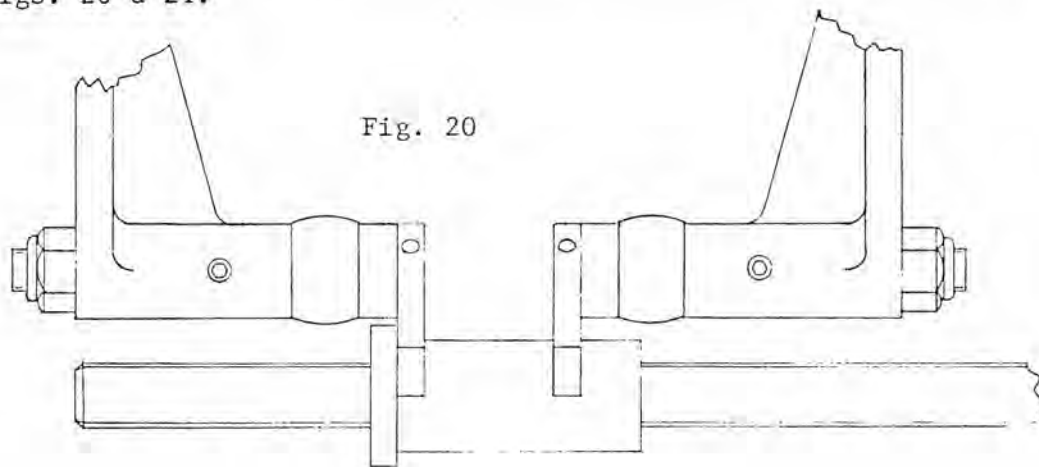
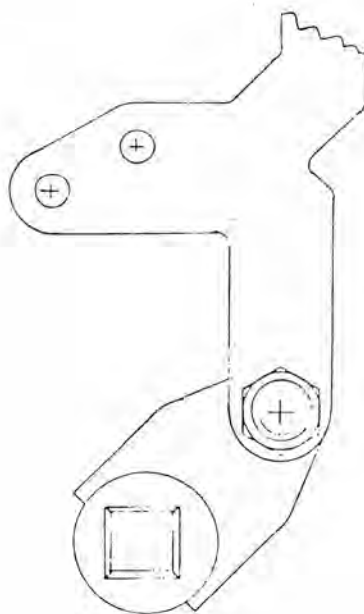


Fig. 20

Fig. 21



Setting the crimping die station stroke

The #4 & 5 crimping die stations reach their closest setting at different times and therefore must be set independently at the closest setting of each. When in this position the gap between the two pads that locate the dies is .837. The gap is set using the .837 size block with a handle attached, as seen in Figs. 22 & 23 below. The handle allows relatively easy access to an awkward position in the machine.

The adjustment on here is by rotating the eccentric bushing in the crank arm that operates this station. The eccentric bushing has a hole in its outside boss which can be adjusted with the use of a small allen key. When the correct gap is set, the set screws part #SS6320188 should be tightened. Repeat the same procedure for the other crimping die station when that is at its closest setting.

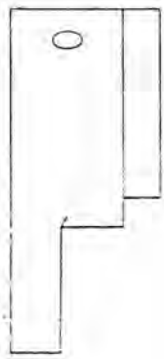


Fig. 22

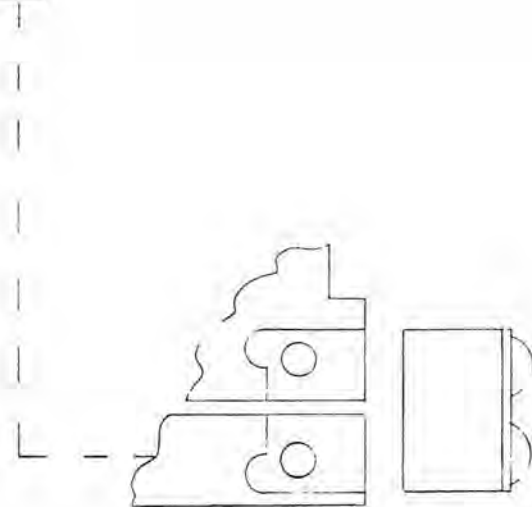
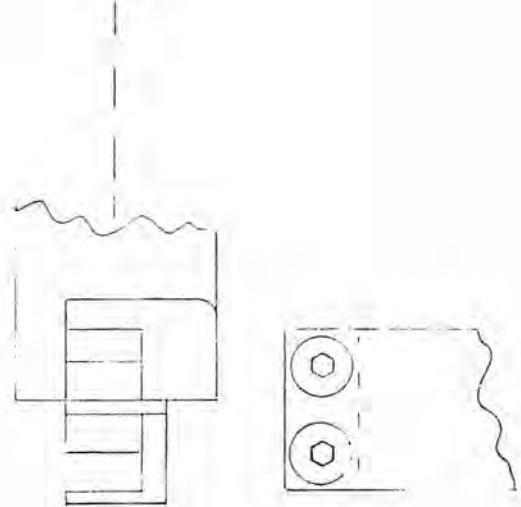
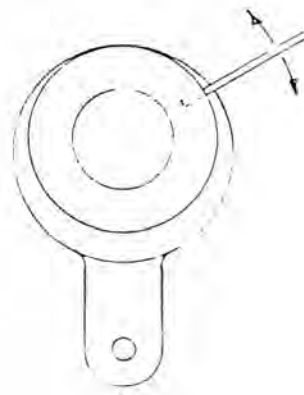


Fig. 23



For the machines with metric readings the counters should be set at the figures given below.

		<u>Imperial</u>	<u>Metric</u>
Page 5	#4 & #5	00350	00089
Page 6	#6 & #7	00350	00089
Page 11	#2 & #3	01500	00381
Page 12	#4 & #5	00325	00083

The part # changes from imperial to metric are shown in the list below:

<u>Exploded View #</u>	<u>Imperial</u>	<u>Metric</u>
801-3-OE & 802-3-OE	802-1-5	802-1-5M
802-3-OE	802-1-6	802-1-6M
803-2-OE	803-1-4	803-1-4M
"	803-1-5	803-1-5M
809-5-OEA	809-4-8	809-4-8M
813-1-OE	813-1-1	813-1-1M
"	813-1-2	813-1-2M

CF 8 SET-UP SEQUENCE

1. KNIFEHOLDER SEQUENCE AND CHECK

- A. OPEN KNIFEHOLDER POSITIONS TO .500" IN STATION'S 2 AND 3,
AS VIEWED ON THE GRADUATED SHAFT.
- B. OPEN CRIMPING STATIONS IN COUNTER POSITION'S 4 AND 5 TO 01.000".
- C. OPEN BENDING STATIONS IN COUNTER POSITIONS 6 AND 7 TO 01.000".
- D. OPEN INFEED CHUTES UNTIL THE CRIMPING STATIONS STOP.
- E. CHECK KNIFEHOLDERS FOR WEAR.
UTILIZING A .010" SHIM CHECK THE GAP BETWEEN THE CUTTING BLADE
AND THE CUTTING WHEEL.
IF THE GAP IS .010" OR GREATER, THE KNIFEHOLDER SHOULD BE REPLACED.
CHECK THE CUTTING BLADES. (REVERSE THEM ON A MONTHLY BASIS).

2. REMOVE KNIFEHOLDER AND CLEAN.

3. COUNTER BRACKET POSITIONING. PAGE 3.

4. SETTING THE CF 8 CENTERLINE. PAGE 4.

5. SETTING THE CRIMPING STATIONS. PAGE 5.

6. SETTING THE BENDING DIE STATIONS. PAGE 6.

7. SETTING THE MAGNET ASSEMBLY. PAGE 7.

8. SETTING THE TRANSPORT WHEEL FORKS. PAGE 8.

9. SETTING THE CUTTING WHEELS. PAGE 9.

10. INSTALLING THE KNIFEHOLDERS.

11. SETTING THE GRADUATED SHAFT. PAGE 11.

12. SETTING THE CRIMPING DIE STOPS. PAGE 12.

13. ALIGNING THE FORKS. PAGE 13.

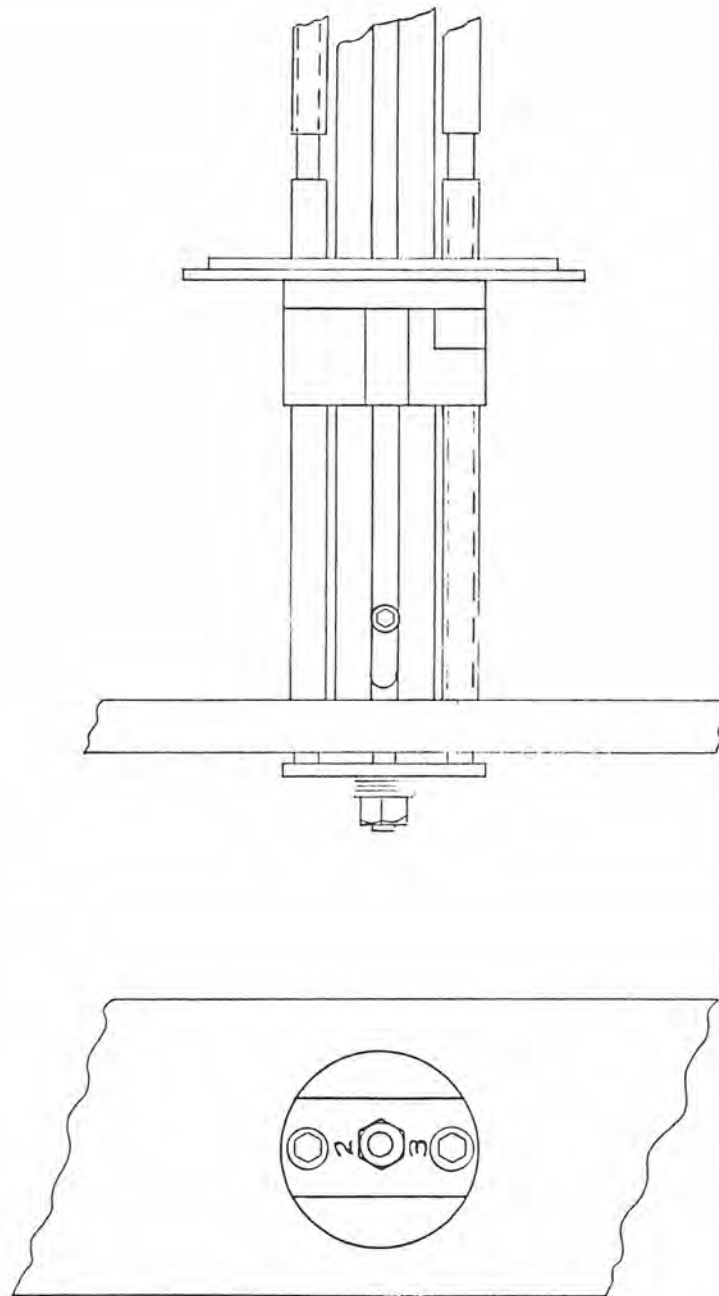
14. SETTING THE CRIMPING DIE STATION STROKE. PAGE 14.

*Installation Procedure for
#2 & #3 Station Counters on CF-8*

Position of #2 & #3 Station

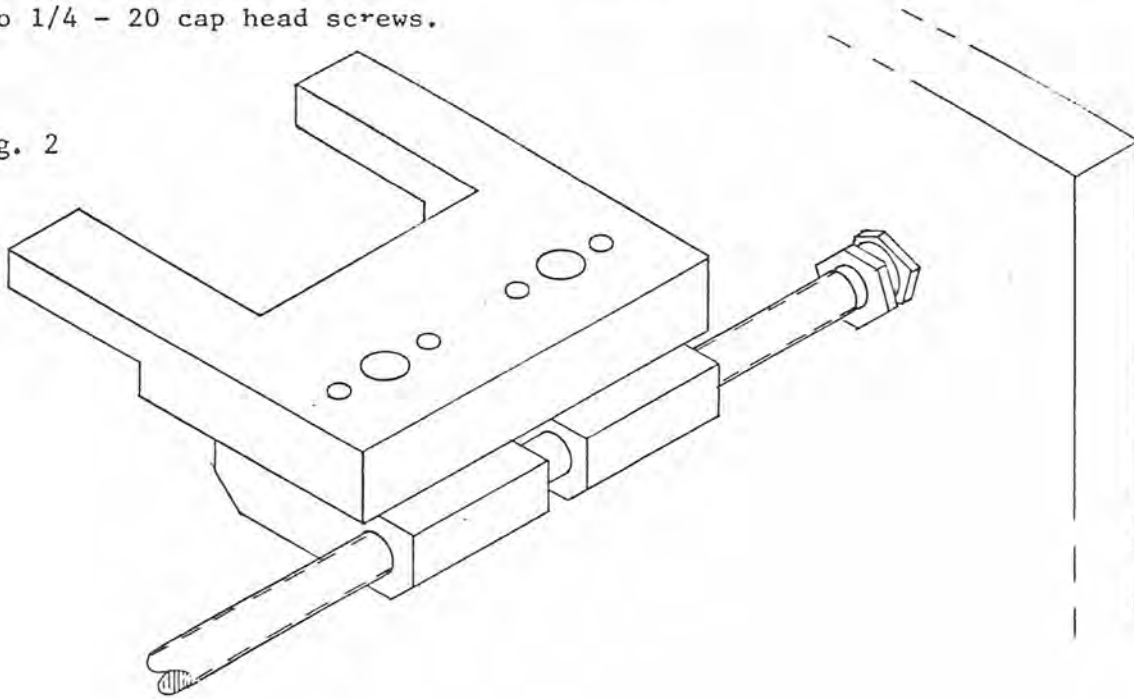
Turn the machine to the position where the keyway in the main shaft part #803-1-1 is facing up and the adjustment plate for the #2 & #3 station are in the position as shown in Fig. 1.

Fig. 1



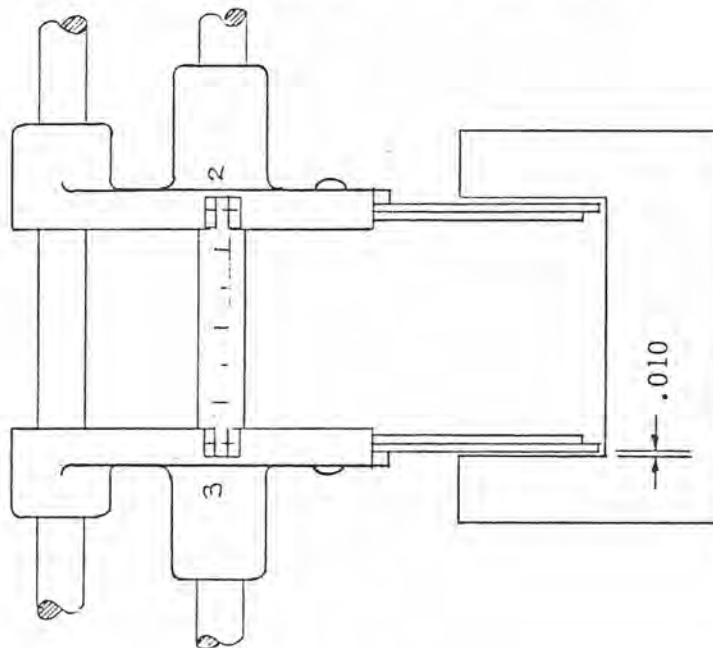
Place the set up gauge on infeed support blocks part #809-4-20 as shown below in Fig. 2. It locates on four dowel pins and is held in place by two 1/4 - 20 cap head screws.

Fig. 2



Move the #2 & #3 cutting wheels out towards the gauge until there is only a .010" gap between them, using the .010" feeler gauge. This position is shown in Fig. 3 below. The graduated shaft part #809-4-8 in this position will indicate 1.5 in each window of the knife holders.

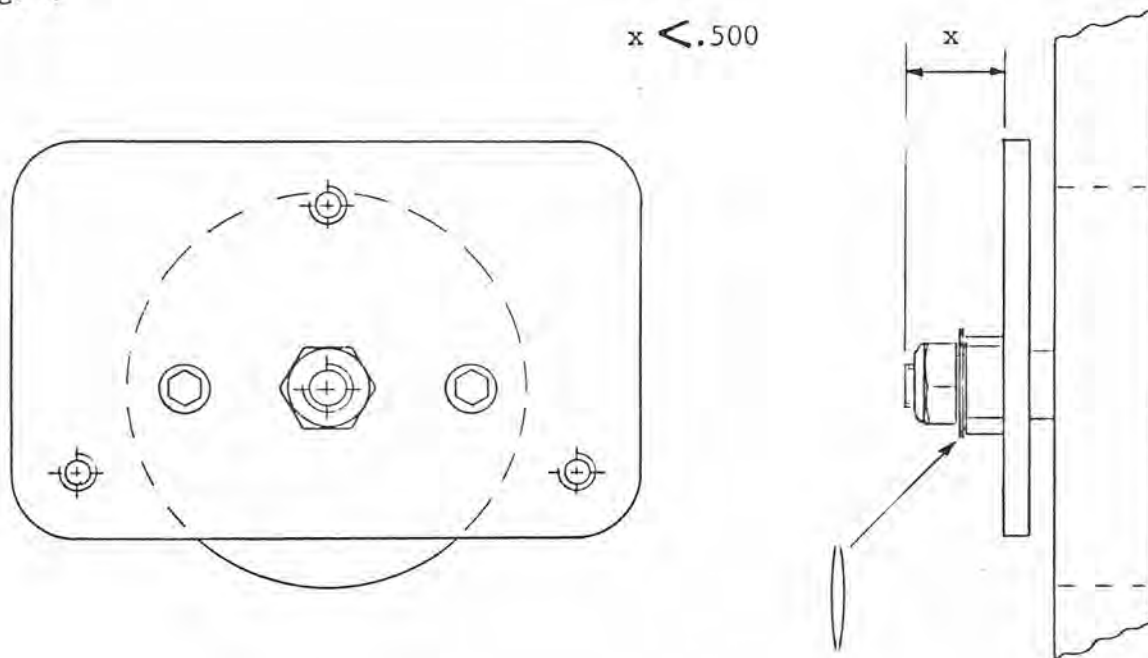
Fig. 3



Undo and remove the 1/4 - 20 self locking nut part # N25 that holds the spring washers, the plate part # 803-1-7 for the #2 & #3 adjustment and two brass washers W25. The washers W25 are still required with the new assembly.

Place the washers W25 back over the hexagon adjustment screws as before. Position the new plate part #825-3-4 where the old adjustment plate was as shown in Fig. 4 below. The stud through the centre here should be less than .500 from the front face of plate (if not it will need to be filed until it is). Replace two or four spring washers in the configuration shown, depending on the available space and lock plate again using the new 1/4 - 20 self locking nut part #LN250. This should be tightened until the adjustment of #2 & #3 knife holders is approximately the same as it was before. After checking the tension on adjustment screws for the knife holders they should be put back again in the position shown in Fig. 3.

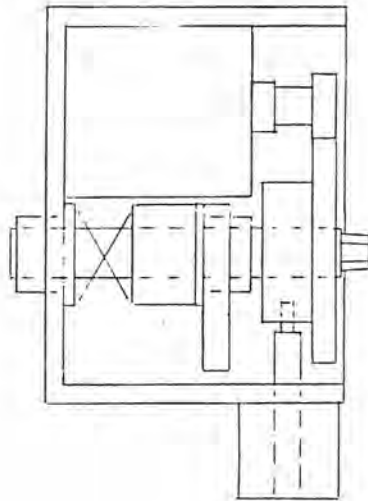
Fig. 4



Adjust the counters in the counter box so that 01500 is showing in both #2 & #3 windows. When in this position, put the large gears part #813-1-2 on the bottom shaft. These have to be positioned so that 01500 is visible in each window and the set screw in the gear is facing the hole at the bottom of the box for tightening (The reading on the counter may change to 01501 or 01499. Try gears on opposite shafts to minimise this effect.)

In this position the gauge consisting of a block with two pins is put in place as shown in Fig. 5. The small diameter on shaft locates in the set screw in each gear with screws loose) keeping it stationary, therefore stopping movement on the counter. The spring loaded shafts should be able to be depressed without binding on the gears when positioned by their gauge (This movement of the shafts is required for assembly).

Fig. 5



Place the counter box up against the rear plate so that the nut goes between the two bottom gears. Press the box forward so that the two shafts, that the large gears are on, retract under spring pressure. Slide the box down until the hexagons in the box are in position with the hexagons in the adjustment shafts on the machine. The counter box will also be in alignment with the new rear plate.

The hexagon end of the shafts are unlikely to be inline with the hexagon in the adjustment shafts. It will need to have a 9/64 allen key inserted and turned slightly until it pops into place on both shafts. Although under spring pressure a tap with a mallet will help ensure a firm location for the mating hexagon parts.

Put in the three 8 - 32 cap head screws that hold the counter box to its mounting plate. Position the box so that it is seated evenly on the rear plate and tighten the screws.

Index the machine until the counter box is upside down and the holes at the bottom are facing up.

The gears can now be locked on the shaft with a 5/64 allen key. With the allen key inserted into the set screw there is a little movement available to bring a counter at 01501 or 01499 back to 01500 before tightening the screw onto the shaft. This is the final setting for these gears so they should be firmly locked. The black plastic snap-in caps can now be placed in these two remaining uncovered holes on the base.

Index the machine again until the readings from the counter box are in the upright position. The acrylic guard may now be placed over the box and held in place with the 4-40 button head screw approximately in the centre.