

# **Bonis Bros.**

## **Sewing Machinery Corp.**



**BONIS BROS. SEWING MACHINERY CORP.**

111 West 26th Street • New York, N.Y. 10001 • Phone 212/645-0001

Cable Address: "BONIBRO"

TELEX 442449

FACSIMILE (212)645-0914

## **BONIS 3000 SERIES SEWING MACHINES**

### **INTRODUCTION**

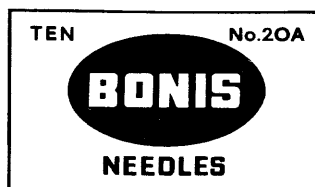
This booklet contains notes about installation, setting up and maintenance of the BONIS 3000 Series Auto Oiler which will help you have a better knowledge of the machine and the best way to use it.

Before the BONIS machine leaves our factory it undergoes stringent tests, to insure you that the machine you receive is one of quality and reliability BONIS machines are known for.

Before using this machine we advise you to read the following information and instructions carefully.

## **USE ONLY GENUINE BONIS**

### **NEEDLES and PARTS**



It is imperative to use Genuine Bonis Needles **ONLY**, as all Bonis machines are timed in the factory using Bonis needles, therefore, for trouble-free performance, it is mandatory to use *only* genuine Bonis needles which are of superior quality and perfected by intensive research. They have been designed and made especially for Bonis Machines; precision made with the proper temper and smooth eye. They are also the exact length and perfect fit to produce maximum efficiency in sewing heavy or fine work. They eliminate skipping of stitches; needle and thread breakage.

**GENUINE BONIS MACHINE PARTS** are equally important. It is not possible to put old parts into a new type machine and make it work right. All Bonis machines and their parts are meticulously manufactured in our own plant under the supervision of fully skilled mechanics and sold by us or our authorized Bonis agents. These agents are located in all important cities of the U.S. and the entire world. They are equipped to give you excellent sales and service. **BE SURE** to order directly from our New York office or from one of the authentic agents.

**WHEN ORDERING PARTS YOU *MUST* STATE MODEL NUMBER OR MACHINE AND PART NUMBER.**

## INSTALLATION

Not all machines are placed in the same position on the tables. There are so many variations in mounting the machine head that it is impossible to give accurate instructions for each machine mounting and alignment with pulleys, therefore we have tried to simplify it for you by supplying a template that can be removed from the back of this book. This template has the exact location of all mounting holes in the oil pan.

PLEASE REFER TO TEMPLATE MOUNTING INSTRUCTIONS.

- 1) Place template down on table top at desired location
- 2) Drill holes as instructed on template
- 3) Cut slot for belt groove making sure the belt has clearance
- 4) Connect the machine hand wheel to the motor pulley by V-Belt
- 5) Attach machine to table top with oil pan table screws (#3765)
- 6) Adjust the belt tension by moving the motor coupling up or down, belt should be taut "not tight"  
(Important if belt is too tight machine may vibrate)
- 7) If machine is purchased complete with table, disregard the above.

\*\*\*\*\* IF NECESSARY BELT GUARDS ARE AVAILABLE UPON REQUEST. \*\*\*\*\*

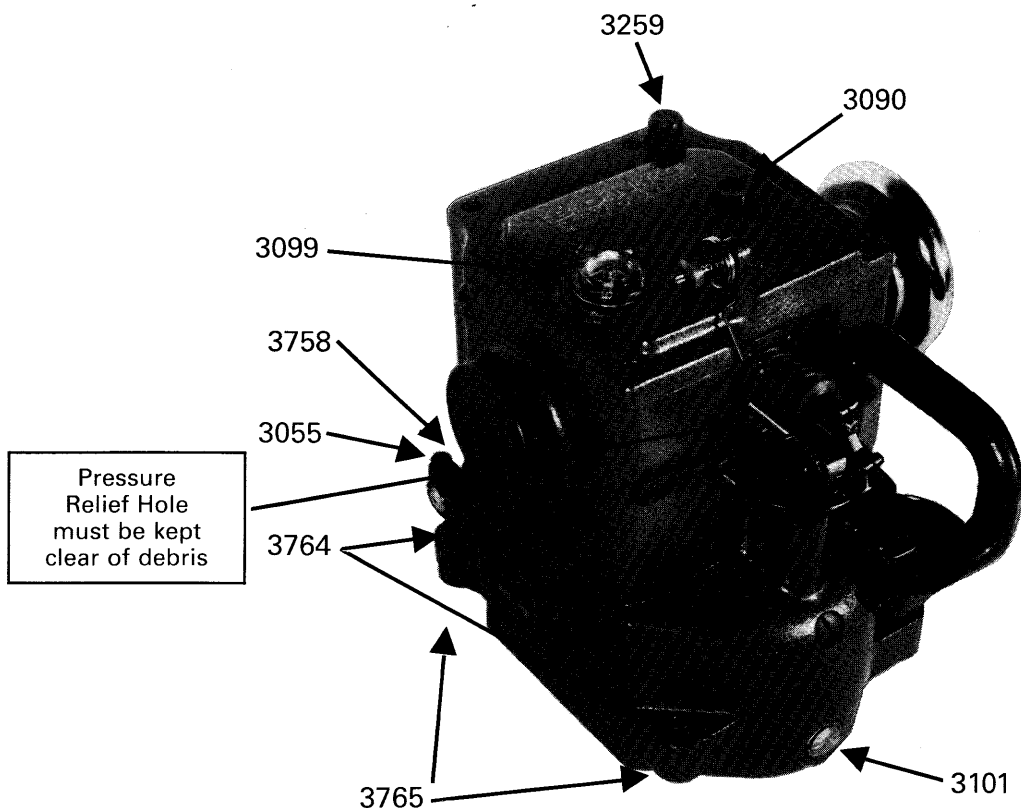


FIG. 2

## **ADDING OR REFILLING OIL**

The machine is shipped from our factory without oil, before running the machine oil must be added. Read the following instructions:

- 1) Remove by unscrewing oil sight glass (#3099) counter clockwise.
- 2) Pour oil supplied from factory, until oil level window on oil pan shows full, approximately 8 ounces.
- 3) Use SAE 10W40 weight oil only
- 4) Hand tighten oil sight glass after filled
- 5) It is advisable to lubricate the needle bar plunger (#215) before starting to use machine. One drop of oil only!
- 6) While the machine is running, check to see if oil is pumping up to sight glass
- 7) The oil must appear between the two red lines on the oil level window. If oil is too low oil pump will get air bound and will not oil machine sufficiently.

## **CHANGE OIL**

- 1) Loosen four oil pan table screws under table top (#3765) (Figure 2)
- 2) Disconnect pressure release crank (#3055) (Figure 2)
- 3) Loosen four machine head screws (#3764) separate machine head from oil pan (Figure 2)
- 4) Empty spent oil into waste can. Do not use this oil again.
- 5) Wipe oil pan thoroughly
- 6) Clean oil pump filter of any debris
- 7) Reattach machine head to oil pan and oil pan to table top
- 8) Make sure the oil pan gasket is in proper position, tighten machine head screws evenly!

## **QUICK OIL CHANGE METHOD**

To change the oil on your Bonis 3000 machine quickly, just unscrew the four oil pan table screws (#3765) so that machine is disconnected from the table. After machine is off the table, unscrew drain cap (#3758) in the back of oil pan, see Fig. 2. After drain cap is off tilt machine over to make sure all oil has drained from oil pan.

\*\*\*This method is faster but we at the factory do not suggest the quick change.\*\*\*  
Take the time to change your oil properly to insure long life on your Bonis machine.

## **SPEED**

The speed of these machines can be 3,000 R.P.M., although we recommend 2,800 R.P.M.

# **MINOR ADJUSTMENTS**

## **THREADING**

To thread the machine; take thread for #1 spool holder, through #2 rear pig tail (thread guide) forward and over between the tension discs #3, from the top continue through front pig tail #4, down and through the hole #5 in the needle bar tension plate. Now turn the machine belt wheel until the needle bar tension plunger #6 opens; holding the thread tight, open front disc and pass thread under the needle and back under the needle bar into thread slot #7. Loop thread over tension plunger #6 draw forward, close up under the needle bar and into #8 in the tension plate through which the needle protrudes. Now, from the underside pass the thread up through the needle eye #9. Make sure you follow these simple instructions by number. (See Figure 3)

## **THREAD TENSION ADJUSTMENT**

The thread is pressed between the two tension discs by the spring inside the tension nut in order to have the correct stitch tension.

The pressure of the spring must be adjusted by tightening or slackening the tension nut. If tension spring is too tight thread breakage will occur.

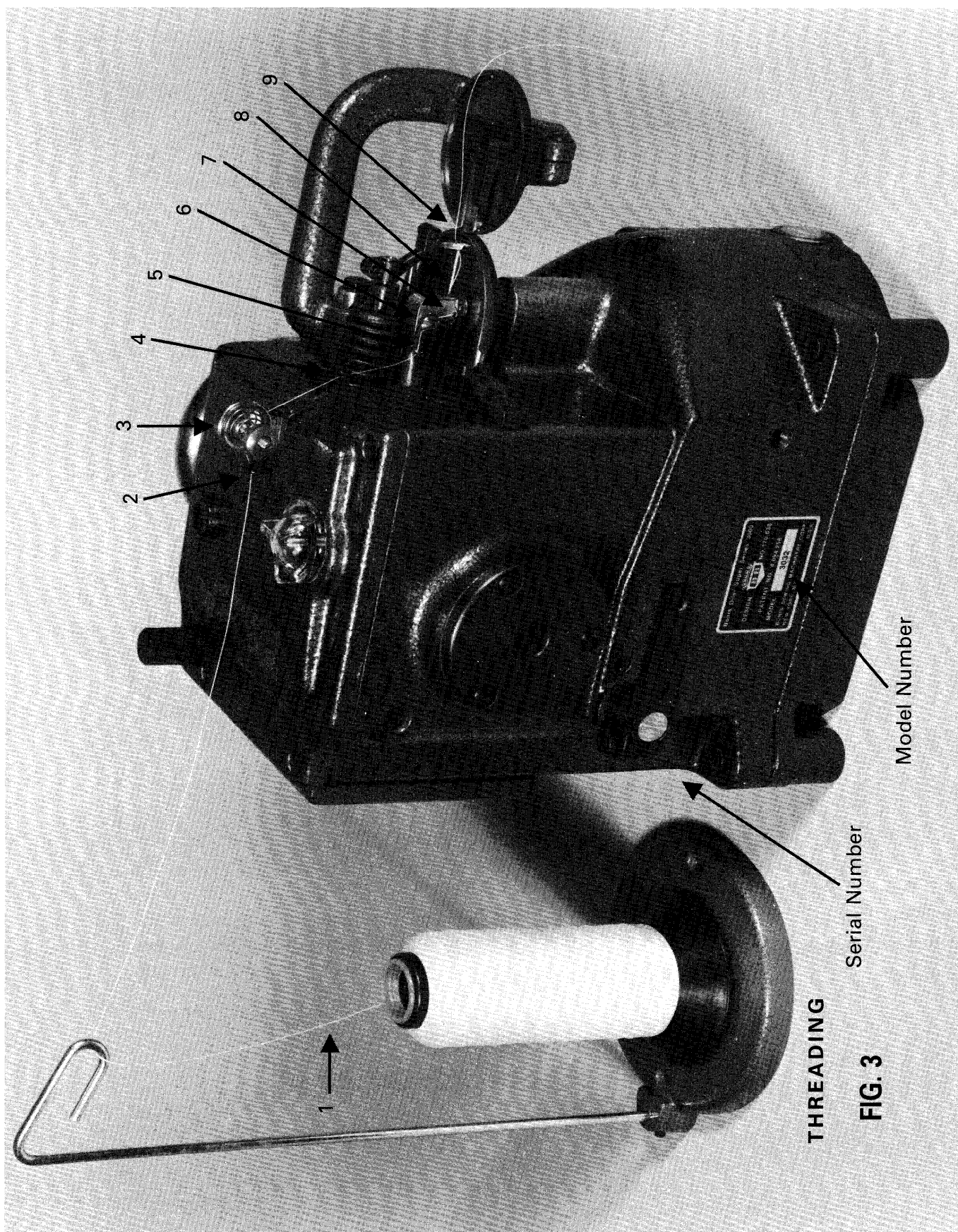
## **SETTING OF NEEDLES**

Turn the belt wheel until looper swings out of the way of needle path and feed discs. Hold the needle with short groove up. Place it into needle groove in needle bar head where clamp holds it and push it in as far as it will go. Tighten the clamp screw. Never release the needle clamp more than necessary to free needle; make sure there is no broken piece of needle left in the groove.

Caution: The short groove of needle must face up and the long groove face on the under side. The machine will not sew properly if needle is inserted on reverse side.

## **CHANGING STITCH LENGTH**

- 1) Depress push button (#3090) on top of machine (Figure 2)
- 2) With push button still depressed turn hand wheel clockwise until notch is found.
- 3) Once slot is found turn hand wheel to desired stitch number.
- 4) Then let push button spring up.
- 5) The numbers on hand wheel are for reference only "not number of stitch per inch. Number 1 indicates maximum stitches, number 9 indicates minimum stitches per inch.



### MINOR ADJUSTMENTS

When operating your machine, if it does not function properly, if it skips, or the thread breaks often, it may need some minor adjustment which you can do yourself.

- 1) Check front disc and see that it is running smoothly and not clogged with loose fur, remove needle plate, take wheel apart, wipe off entire wheel, bearing and stud. By doing this you will get excellent results in producing a proper even seam. It also eliminates skipping and thread breakage.
- 2) Make sure needle plate slot is free of ridges and any foreign matter. Also be sure needle is not bent, see that tension is free of dirt. Take it apart and clean it.

See that thread runs through eye of needle freely.

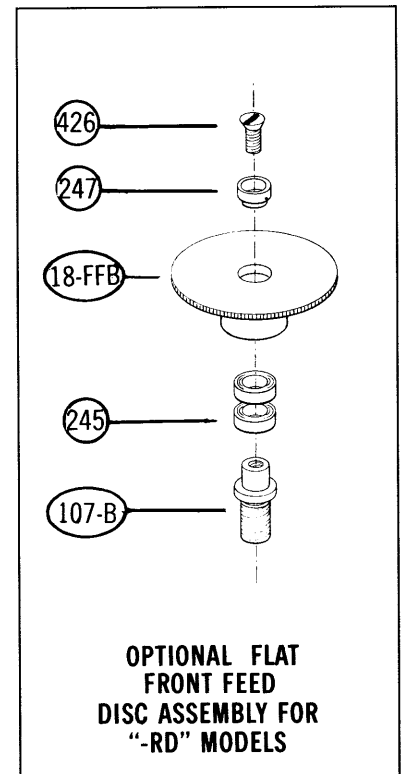
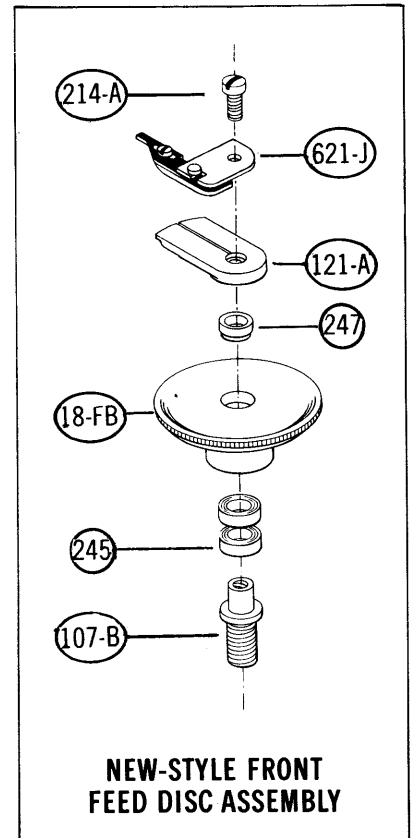
### MAINTENANCE

DAILY: Clean and or wipe machine

Keep (pressure relief) hole which is directly under needle bar clear of any debris. (See Fig. 2)

WEEKLY: clean front feed wheel, clean fur or dust from 107-B, 247, 121, 18FB part number 245 wheel do not come out of part number 18FM do not try to remove! (See Figure 4)

Change oil every six months, follow oil changing instructions.



**FIG. 4**



## **INSTALLATION OF FEED DISCS**

### **#18FB/18R REPLACEMENT**

Machine head must be removed before replacement of feed wheels. #18R-Back wheel has two screws (#202). Unscrew (#3758) access screw run machine until (202) set screw is visible. Slacken (202) set screw then turn hand wheel by hand until second set screw is visible then slacken it.

Loosen these screws to remove back wheel, being careful not to hit needle bar (#113) and drive shaft out of wheel.

Replace the wheel by driving shaft back up into wheel (#18R) until shaft is flush with inside of wheel, then tighten the two screws (202) on back wheel #18R, then follow instructions in setting of wheels. (Step 1)

18FB disc simply loosen screw (#3755) on feed disc arm (#3019 or 3020) and unscrew complete disc for replacement. When installing 18FB disc, screw disc stud into arm (#3019 or 3020) and follow (Step 2).

## **SETTING FEED WHEELS**

### **1) Setting of wheels (18R)**

(Step 1) Set the back wheel 18R up to the needle, leaving enough room for the thread to pull freely between the needle and the back wheel. Tighten both set screws (#202) on gear #17. Be careful if back wheel is too close needle will break.

### **2) Setting front feed wheel (18FB)**

The front feed wheel should be positioned so that its top surface is level with and never higher than, the top surface of the back feed wheel. The front feed wheel position is acceptable, on the other hand if it is slightly lower than the back one. To obtain this setting slacken screw (#3755) turn wheel clockwise to lower and counter clockwise to raise until the exact position is reached.

### **3) Turn the needle plate to meet the needle. Set needle to run straight into needle plate slot, making sure that there is about .003 play between the needle and the bottom of needle plate slot.**

## **ADJUSTING FEED WHEEL PRESSURE**

To increase the pressure of the front feed wheel against the back one, turn pressure arm adjustment knob (#3259) in the clockwise direction. To reduce pressure, turn knob counter clockwise. It is advisable not to have too much feed wheel pressure, the best conditions being obtained when pressure is just sufficient to hold the material.

## **SETTING OF MACHINE**

### **NEEDLE POSITIONING**

Make sure that the needle bar is positioned at an angle of 90 degrees to the rear feed wheel plane. Turning the handwheel, bring the needle bar to its front dead center position, that is, fully forward, then make sure that the needle eye is exactly in the position shown in (Diagram A) on the adjacent page to obtain it, slacken screws (#218) on needle bar yoke then move the needle bar to the desired position is then tighten (#218) screws, making sure that the needle bar does not turn at all.

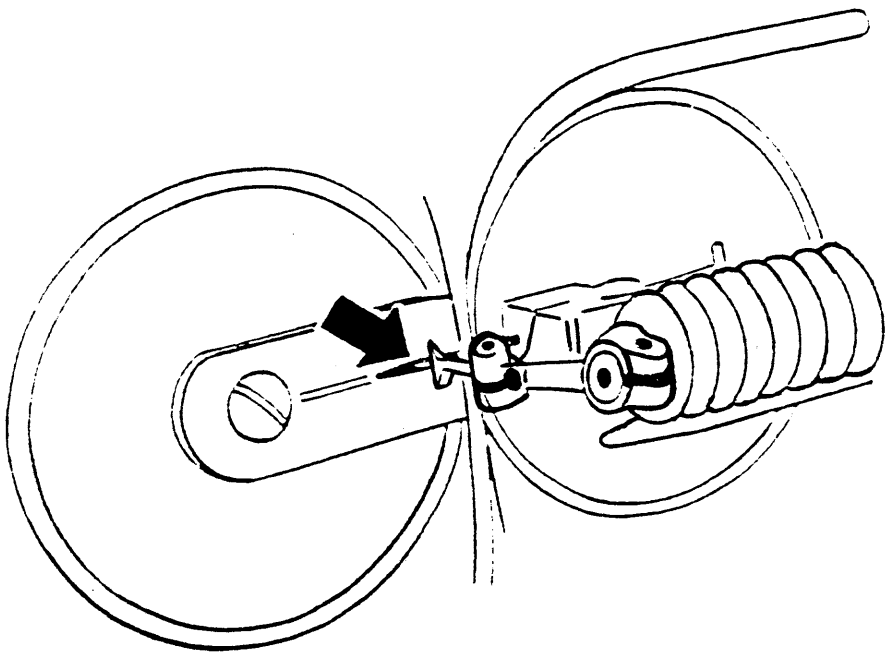
(Timing is a complex procedure it is not advised by any one other than a skilled technician)

### **LOOPER ADJUSTMENTS**

The BONIS 3000 machine has the capability of adjusting the looper with just a turn of a screw. Adjustments can be made horizontally, laterally, as well as vertically. The looper holder (#3628) allows an exact and precise adjustment with great simplicity. Without removing the top cover. (See Diagram A B)

- 1) Loosen (#3629) looper set screw and move looper or looper holder as depicted on adjacent page.

(DIAGRAM A)



(DIAGRAM B)

