**Industrial Sewing Machines**
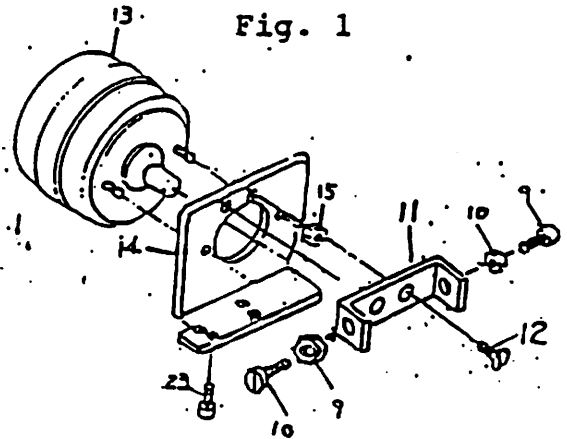
# Kansai Special

# INSTRUCTION
# MANUAL

## V-7000/UTC
## M-5000/UTC

# ADJUSTMENT INSTRUCTIONS FOR THREAD TRIMMER
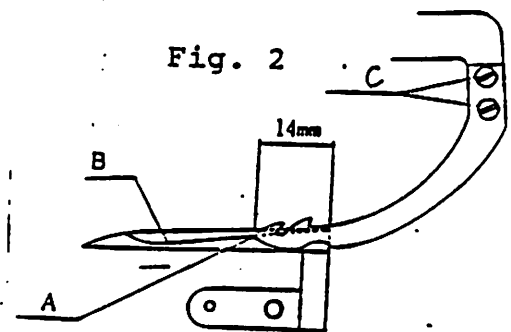## V-7000/UTC & L-5000/UTC

## ADJUSTMENT OF UTC SOLENOID STROKE

The stroke of the solenoid is
adjustable to accommodate diff-
erent needle guages. The stroke
of the solenoid (Fig. 1) is limited
by the stopper screws (Fig. 1, #9).
To adjust loosen lock nut (#10) and
turn the screw to the desired adjust-
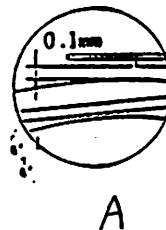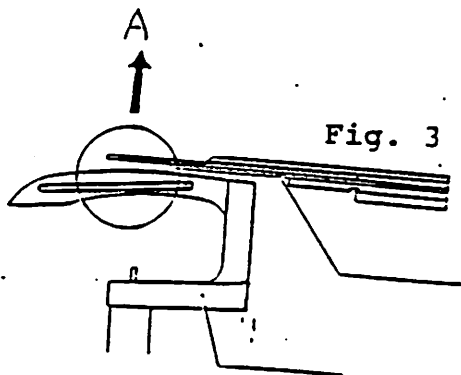ment and tighten the lock nut.

**Fig. 1**

## KNIFE ADJUSTMENT

The initial setting for position of
the movable knife is done with the
motor turned off. Raise the needles
to their highest point (TDC) and move
the knife to the position shown in
Fig. 2. The tip of the knife 14mm past
the right side of the looper at this
position the tip of the knife is directly
above the back edge of the looper, where
it begins to slope down (Fig. 2, B). To
adjust loosen screws C and set knife in
the correct position then tighten screws C.
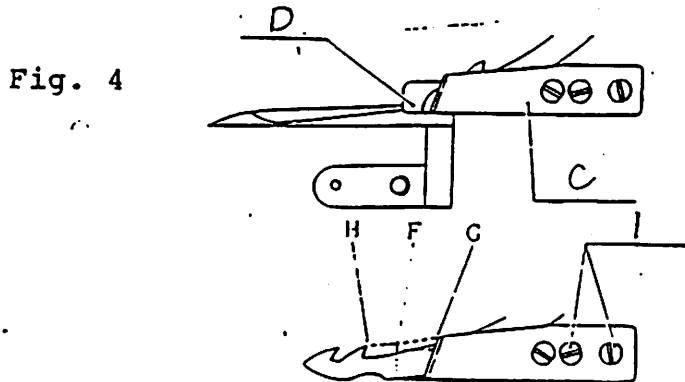
**Fig. 2**

With knife fully extended the looper retaining spring is
0.1 mm above the looper. Should adjustment be necessary
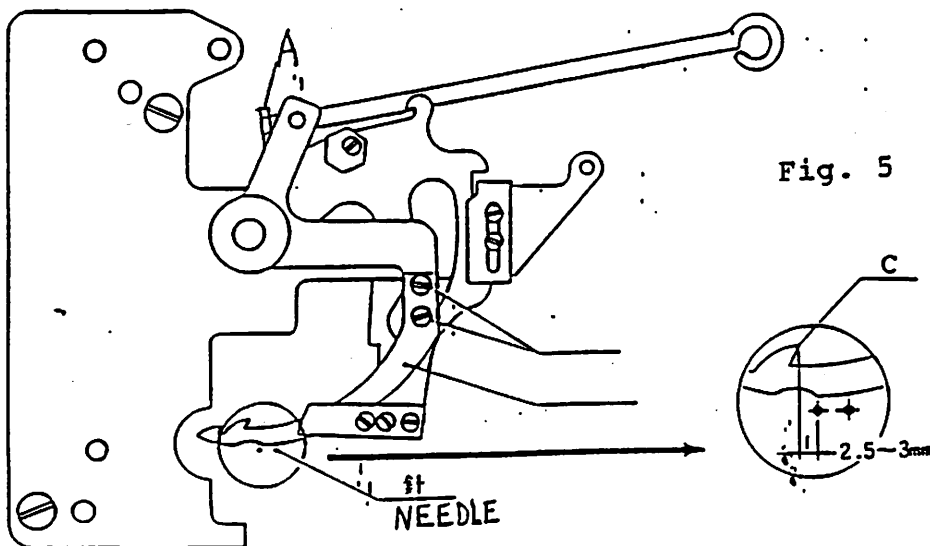CAREFULLY BEND the knife mounting bracket. (Fig. 3, A)

**Fig. 3**

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## KNIFE ADJUSTMENT (Continued)

The stationary knife and looper retaining spring are set
in relation to the movable knife.(See Fig. 4) The tip of
needle catcher blade H must pass under stationary knife G
and the edge of the looper retainer spring even with (F)
side of movable knife.Loosen screws (I) to adjust then
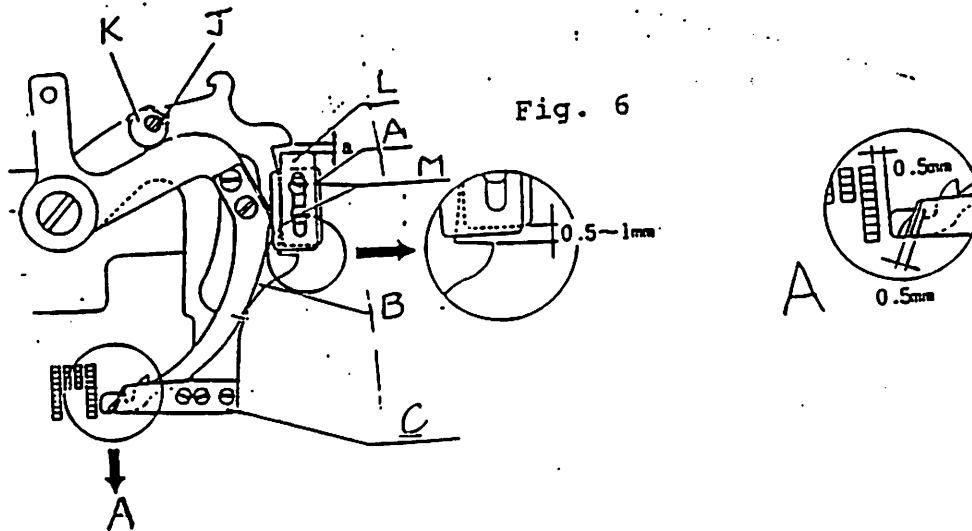tighten the screws and check adjustment.

Fig. 4

Knife stroke is set as shown in Fig 5 & Fig 6.
When fully extended the looper thread catcher (C) must be
2.5 to 3.0 mm past the left needle.

Fig. 5

NEEDLE

2.5~3mm

# KNIFE ADJUSTMENT (Continued)

When the knife returns to the rest position the edge of the looper catcher knife is 0.5 mm under the stationary blade (Fig. 6) and the looper retaining spring 0.5 mm from the feed dog. (Fig. 6, A) Adjust using solenoid stopper screws (Fig. 1, #9).
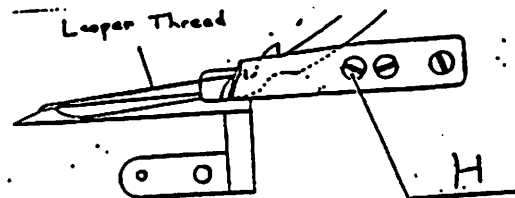


Fig. 6

## Adjusting thread tail length

By changing the gap (Fig. 6, a) the length of the tails after trimming can be changed. A larger gap will result in shorter tails, adjust by loosening screw J and turning eccentric K then tighten screw J.

The stationary knife stopper must have a small gap (0.5- 1mm) to reduce wear on the knife assembly. Adjust stationary knife stopper (Fig. 6, A) by loosening screws M set A and then tighten screws M.

Looper thread retainer tension is adjusted by screw H. Cotton thread should be held with more tension than threads with more elasticity such as texturized (wooly) polyester.
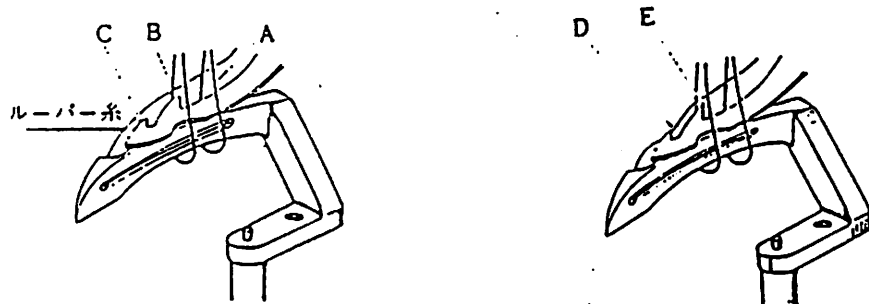


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KNIFE ADJUSTMENT (Continued)

The above are standard adjustments for the UTC, differences
in stitch length, material structure or thread design may
require minor changes in adjustment. With the solenoid plug
disconnected from the control box begin sewing then position
the needles up (TDC) bring the needles 0.5 mm past TDC and
set the needle positioner to stop at this point. Test several
times to be sure the needles are stopping in the correct posi-
tion after heeling back on the foot pedal.
Operate the solenoid by hand to see if the knife is entering
the triangle properly. See Fig. 8.  The needle thread catcher
(E) should pass needle thread (B) by 2-3 mm and looper thread
catcher (D) should pass looper thread (C). Adjust knife stroke
and position as necessary.
On the return stroke (E) will pull (A&B) back to the stationary
knife cut and release the needle threads. (D) will pull (C) to
the stationary knife cut the looper thread and hold it between
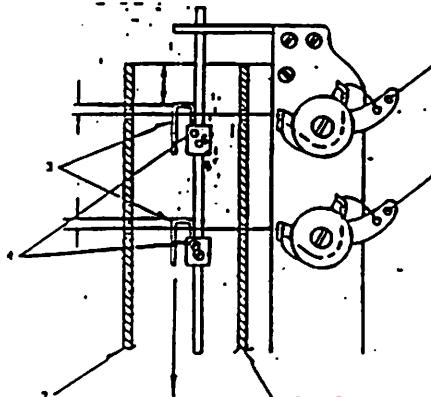the movable knife and retainer spring.

Fig. 8



TENSION RELEASE AND THREAD PULL-OFF ADJUSTMENTS

Adjust thread release cam (part # 06-712) by loosening the
thread release driving lever and positioning the cam to
release thread tension as soon as the trimming cycle begins.
Adjust pull-off hooks so the needle thread is long enough to
begin sewing on the first few stitches. (Fig. 9)

Fig. 9

# NEEDLE THREAD WIPER ADJUSTMENT

After trimming operate the wiper by hand. The wiper must
not come in contact with the presser foot or the needles.
The threads are pulled back and held between springs (2&3)
(Fig. 10 & Fig. 11)
Wiper height above the needle plate 7 mm as shown in Fig. 14
adjust by loosening screw (A, Fig 12) and turning the shaft
as needed then tighten screw (A).

Wiper hook must pass left needle
by 2-3 mm  adjust eccentric stopper
(#2, Fig.14)

Height of wiper in rest position
21-22 mm  (Fig. 13) loosen set
screws for solenoid actuating
lever (#28, Fig. 14) and wiper
actuating lever (#19, Fig. 14).

Thread retaining spring is set
at 10 mm  above needle plate
(Fig. 13). Adjust with  screws
4&5 (Fig. 10)
Retaining springs are set 16-17
mm from center of the needle
bar (Fig. 13). Adjust with screws
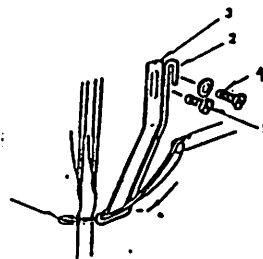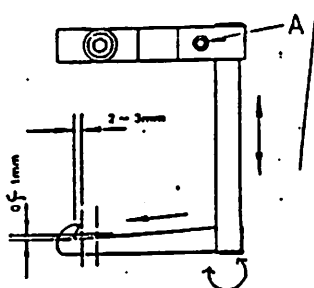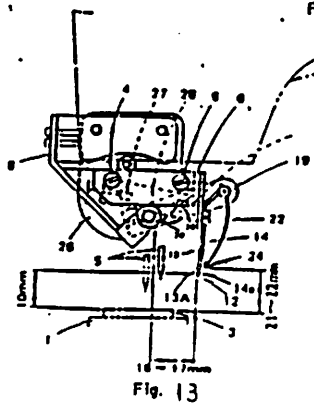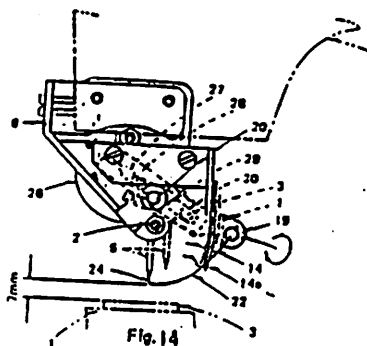4&5 (Fig. 13) and slide the bracket.

Fig. 10

Fig. 11

Fig. 12

Fig. 13

Fig. 14

# TRIMMER TROUBLESHOOTING

| Condition | Causes | Cures |
|---|---|---|
| Both threads not cut | Solenoid not working | Check fuse, check solenoid movement by hand. |
| | Solenoid jammed by linkage of tension assembly | Re-adjust tension assembly linkage for free movement |
| | Improper synchronizer timing | Reset synchronizer |
| | Solenoid plug disconnected, | Connect plug for solenoid |
| | Power lead to motor not connected | Connect motor power lead |
| | Bent relay contacts | Reshape relay contacts |
| | Loose lower knife | Tighten lower knife |
| Needle thread too short after trimming | Needle thread pull-off set too high on tension assembly | Adjust thread strike-off lower for more needle thread |
| | Lower knife trims both sides of needle loop around looper | Re-adjust lower knife |
| Needle thread pinched after trim cycle | Not enough spring tension between upper and lower knife | Adjust spring tension between upper and lower knife |
| | Lower knife and clearance cut in looper thread retaining spring not aligned properly | Re-adjust knives |
| | Dull knife | Replace knives |
| | Upper and lower knives do not overlap enough for proper shearing | Re-adjust knives |
| Machine does not start sewing after trimming | Thread tail too short, thread pull-offs set too high | Re-adjust pull-offs for sufficient needle thread and looper thread |
| | Looper thread control cam, and tension not adjusted properly | Re-adjust looper thread control cam, and tension |
| | Looper thread retaining spring does not retain looper thread | Remove lint from between knives and re-adjust knives |
| Needle thread cut but looper thread not caught | Lower knife does not move far enough to the left | Re-adjust knife assembly and connecting rod (see adjusting instructions) |
| | Lower knife not properly adjusted | Adjust lower knife |
| Too much needle thread on top side of garment when starting to sew | Needle thread pull-off set too low | Raise needle thread pull-off |