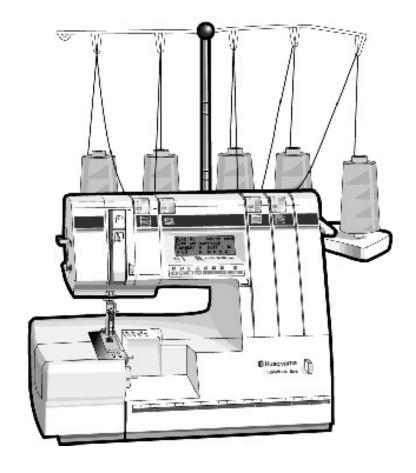


## **VIKING**

# SERVICE MANUAL



HUSKYLOCK MODEL 936

## Contence

GENERAL DISMOUNTING	5
Basic setting for cams	6
SEETINGS	_
1. NEEDLE HEIGHT	
2. HEIGHT OF LOWER LOOPER	
3. CLEARANCE BETWEEN LOWER LOOPER AND NEEDLES	
4. END POSITION OF LOWER LOOPER - SETTING OF	
THE LOWER LOOPER IN RELATION TO THE NEEDLE	
5. CLEARANCE BETWEEN NEEDLES SUPPORT AND NEEDLE - NEEDLES (C) AND (D)	
6. POSITION OF UPPER LOOPER CLUTCH EXHANGE BODY	
7.SETTING OF UPPER LOOPER POSTION	
8. TIMING OF UPPER LOOPER AND LOWER LOOPER	
9. CLEARANCE BETWEEN UPPER LOOPER AND LOWER LOOPER	
10. HEIGHT OF CHAIN STITCH LOOPER	15
11. CLEARENCE BETWEEN DOUBLE CHAIN LOOPER AND NEEDLE	
12. TIMING OF DOUBLE CHAIN LOOPER AGINST THE NEEDLE	17
13. CLEARANCE BETWEEN NEEDLES SUPPORT AND NEEDLE	
- NEEDLES (A),(B) AND (E)	18
14. CLEARANCE BETWEEN FEED DOG AND STITCH PLATE SIDEWAYS	
15. POSITION OF FEED DOG FRONT TO BACK	_
16. FEED DOG HEIGHT	
18. POSITIONS OF LOWER KNIFES	_
19. POSITIONS OF UPPER KNIFES	
20. BELT TENSION	
21. SPEED SENSOR ADJUSTMENT	_
22. SETTING BETWEEN THREAD TAKE-UP AND UPPER / LOWER THREAD GUIDE	_
23. CHAIN STITCH LOOPER TAKE UP LEVER	
24. STITCH LENGTH	
25. DIFFERENTIAL FEEDING	
26. THREAD TENSION	
27. PRESSERFOOT HEIGHT	31
Wiring diagram	32
Fault finding diagram- mechanically	
Fault finding diagram - Electronically	

## DIRECTIONS FOR USE

These service instructions are intended to be used by service workshop personnel, or by salesmen who carry out servicing their own districts. They assume a thorough knowledge of the handling of precision appliances and accessibility to service tools.

The manual is divided into two sections and covers all service operations and checks which should be carried out when making a complete overhaul of a overlock machine.

Before carry out any setting always make sure that the machine is <u>not</u> connected to mains.

## **SPECIFICATION**

Type of sewing 5-thread overlock sewing with 5 needles

Needles 130/705H # 75 - 90

Stitch length Maximum: 5,0 mm

Minimum: 0.8 mm

Cutting width ~ 7.0 mm

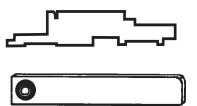
Presser foot lifter Lever type

Motor Built-in the body

Sewing speed  $1300 \pm 80$ 

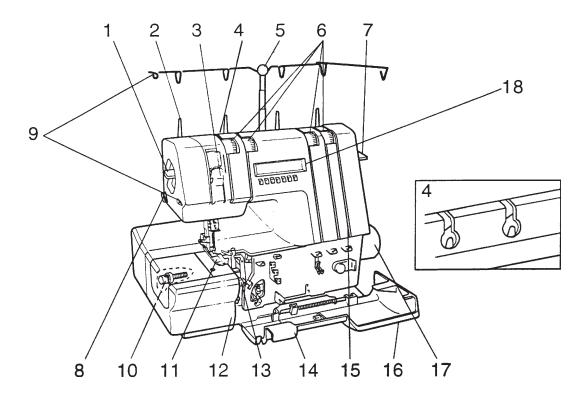
## SERVICE TOOLS

- 1 .Gauge Ref. No 2150009-215
- 2. Distance gauge Ref. No 412 38 85-01
- 3. Allen key 2.5 mm Ref. No 411 86 01-01
- 4.Allen Key 2 mm Ref. No 411 86 00-01
- 5.Allen Key 1,5 mm Ref. No 411 66 89-01



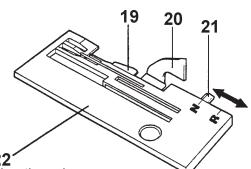


## **MACHINE PARTS**



## Model 936

- 1. Pressure adjustment lever
- Spool pin 2.
- 3. Thread take-up lever cover
- 4. Thread guides
- 5. Telescopic thread stand
- Thread tension dials 6.
- Presser foot lift lever 7.
- 8. Thread cutter
- Thread cutter
  Thread holders for decirative thread /cording thread 9.
- Upper cutter knob 10.
- Presser foot 11.
- Sewing surface, flat bed cover 12
- Cutting width / stich width adjusting dial 13.
- 14. Cutter cover
- 15. Front panel
- 16. Front cover
- 17. Handwheel
- Sewing advisior liquid crystal display (LCD) 18.
- Stitch finger 19.
- 20. Upper cutter
- 21. Stitch finger lever
- 22. Stitch plate



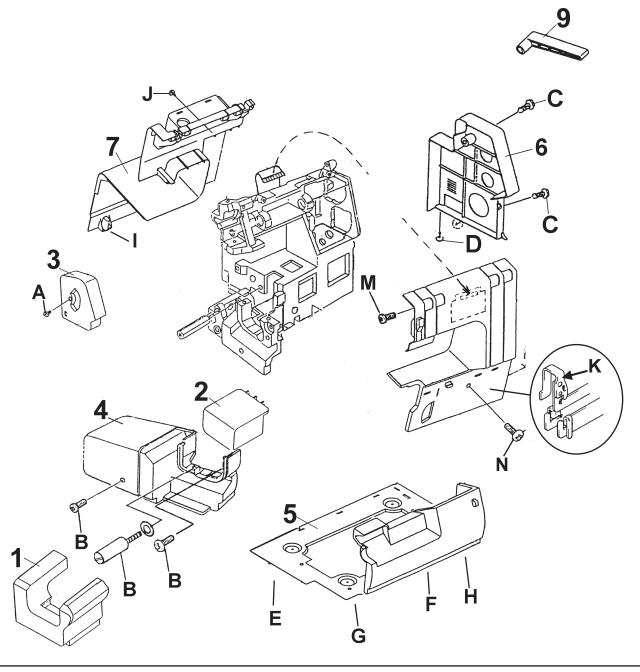
## GENERAL DISMOUNTING

To carry out all the recommended settings in this service manual the following parts should be dismounted first.

- 1. Remove support bed (1) and free arm (2).
- 2. Dismount upper side cover (3) by removing the screw (A) .
- 3. Dismount lower side cover (4) by removing the three screws (B) .
- 4. Remove screws (D, E,F,G,H and I) then open front cover, and remove the base plate (5) towards left side.
- 5. Remove presser foot lifter (9).
- 6. Remove the two screws (C) and dismount the motor cover (6).
- 7. Dismount the rear cover (7) by removing screw (J).
- 8. Remove thread take up (K).
- 9. Remove screws (M,N) and dismount the front cover.

NOTE! Set the needle in its lowest position.

- 10. Remove the cable from the circuit board on the front cover.
- 11. Mounting in reverse order.



## BASIC SETTING FOR CAMS

A,B = Chain stitch loopers calibration mark.

C = First cams first calibration mark.

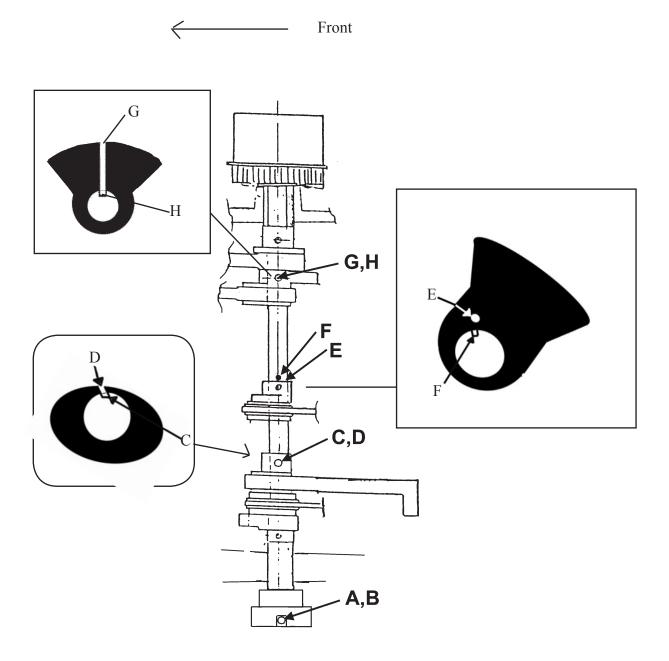
D = First cams second calibration mark.

E = Second cams first calibration mark.

F = Second cams second calibration mark.

G = Third cams first calibration mark.

H = Third cams second calibration mark.



## 1. NEEDLE HEIGHT

## **CHECK**

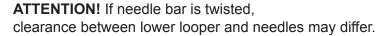
When the needle is in it's highest position the distance between the right needle (D) and the surface of the stitch plate shall be  $10 \pm 0.1$  mm

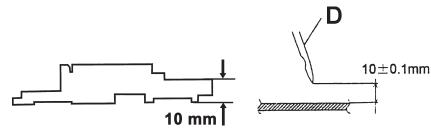
## **ADJUSTMENT**

- 1. Move needle by turning the handwheel so it comes to it's highest position.
- 2. Loosen screw (B) holding the needle bar. Move needle bar until the distance between the right needle (D) and the surface of the stitch plate is  $10 \pm 0.1$  mm.
- 3. Tighten screw.

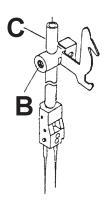
C = Needle bar

D = Right Needle -D









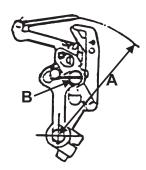
## 2. HEIGHT OF LOWER LOOPER

## Check

The distance (A) should be  $68.5 \pm 0.2$ mm

## **Adjustment**

Loosen screw (B) and adjust the height of the looper.



## 3. CLEARANCE BETWEEN LOWER LOOPER AND NEEDLES

## **CHECK**

When point of lower looper is behind the needle, the clearance between needle and lower looper should be 0 - 0.03 mm.

## **ADJUSTMENT**

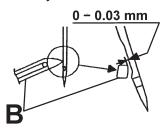
- 1. Then set point of lower looper behind centre line of the needle by turning the handwheel towards you.
- 2. Loosen screw (A) on the lower looper and adjust clearance between needle and point of looper by moving the lower looper until it is 0 0.03 mm.
- 3. Tighten screw.

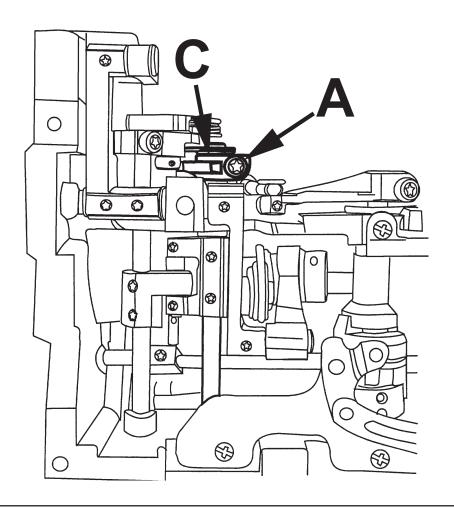
B = Lower looper

C= Lower looper stand

Note! If The Needle guard setting

**ATTENTION!** If needle bar is twisted, clearance between lower looper and needles may differ.





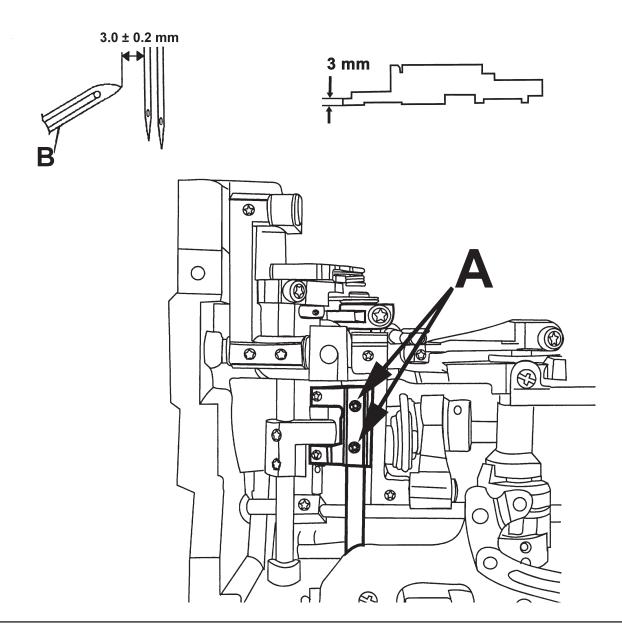
# 4. END POSITION OF LOWER LOOPER - SETTING OF THE LOWER LOOPER IN RELATION TO THE NEEDLE

## **CHECK**

When lower looper is positioned at it's left end turning position, the clearance between its point and left side of left needle should be  $3.0 \pm 0.2$  mm.

## **ADJUSTMENT**

- 1. Move lower looper to its left end position by turning the handwheel towards you.
- 2. Loosen screws of the lever (A) of the lower looper. Adjust distance between left side of the needle and the piont of the lower looper to  $3.0 \pm 0.2$  mm.
- 3. Tighten screws.
- B = Lower looper



# 5. CLEARANCE BETWEEN NEEDLES SUPPORT AND NEEDLE - NEEDLES (C) AND (D)

## **CHECK**

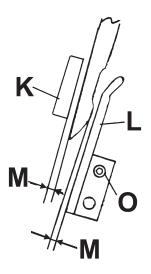
When needle is in its lower turning position, the right hand needle should not touch the needle support (K,L) at any point. Valid for Schmetz #80.

## **ADJUSTMENT**

- 1.Loosen screws (O) of the needle support and turn it until its clearance (M) to the needle is between 0-0.10 mm.
- 2. Tighten screw (O).

K= Front needle support.

L= Rear needle support.



## 6. POSITION OF UPPER LOOPER CLUTCH EXCHANGE BODY

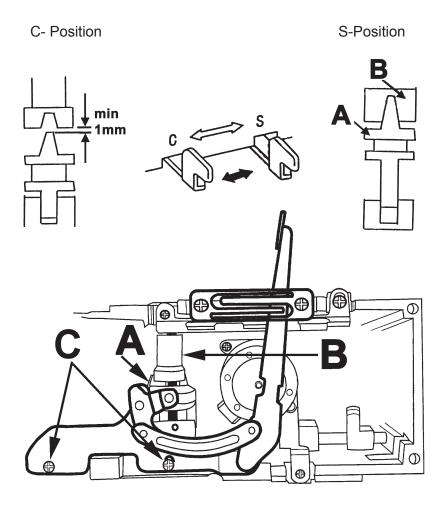
## Check

When the looper clutch is at the S-Position (on) position there should not be any distance or play between exchange body (A) and looper link (B).

When the looper clutch is at the C-position (off) position the distance should be at least 1mm between the exchange body (A) and looper link (B).

## **Adjustment**

- 1. Put the looper clutch in the S-position.
- 2. Loosen the 2 screw's (C) and move the clutch assemblyuntil there is no play between exchange body (A) and looper link (B) and tighten the screws (C).



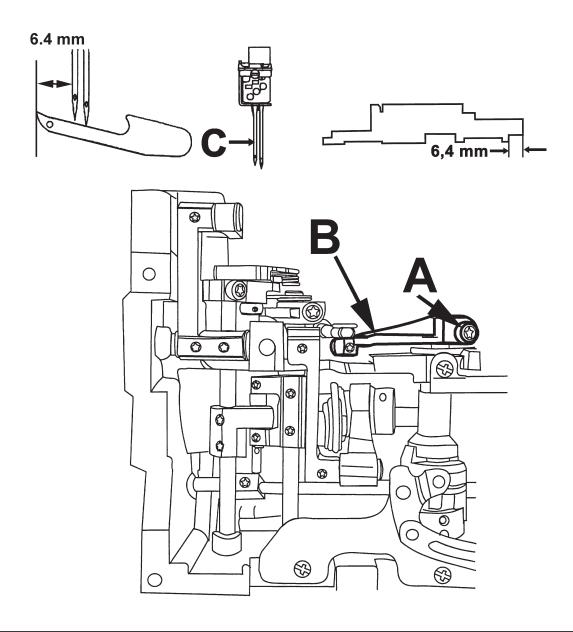
## 7.SETTING OF UPPER LOOPER POSTION

## **CHECK**

When upper looper is set at its highest position the clearance between the point of the the upper looper and the left side of the (C) needle should be 6.4 mm.

## **ADJUSTMENT**

- 1. Move upper looper to its highest position by turning the handwheel towards you.
- 2.Loosen screw (A) of the link arm of the upper looper lever (B) and adjust the looper so that the clearance between the point of the the upper looper and the left side of the (C) needle is 6.4 mm.
- 3. Tighten screw (A).



## 8. TIMING OF UPPER LOOPER AND LOWER LOOPER

## **CHECK**

When point of upper looper (A) is aligned with back of upper end of lower looper, the clearance between the point of the upper looper and the hole of the lower looper should be 3.8 mm.

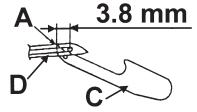
## **ADJUSTMENT**

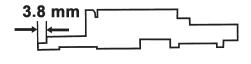
- 1. Align the point of the upper looper with back of upper end of the lower looper by turning the handwheel towards you.
- 2.Loosen cam the screws (B) on the driver cam (E) and adjust the position of the upper looper so that the clearance between the point of the upper looper and the surface of the lower looper is 3.8 mm.
- 3. Tighten the screws (B).
- N.B. That (G) is equal to the distance (H).

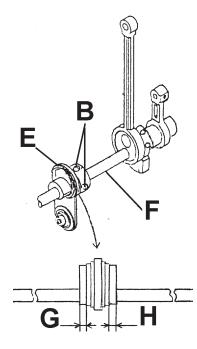
C= Upper looper

D= Lower looper

F= Lower shaft







# 9. CLEARANCE BETWEEN UPPER LOOPER AND LOWER LOOPER

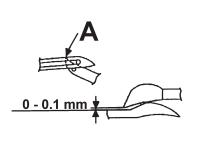
## **CHECK**

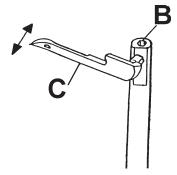
The clearance between upper looper and lower looper should be 0 - 0.10 mm. See ill.

## **ADJUSTMENT**

- 1. Align point of upper looper (A) with back of upper end of lower looper by turning the hand wheel towards you.
- 2. Loosen fixing screw (B) of the upper looper and adjust the clearance between upper looper and lower looper. (0 0.10 mm).
- 3. Tighten screw (B).

C = Upper looper





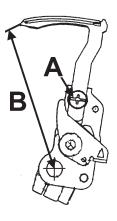
## 10. HEIGHT OF CHAIN STITCH LOOPER

## Check

The distance B should be  $64.5 \pm 0.4$ mm

## Adjustment

Loosen screw (A) and adjust the height of the looper.



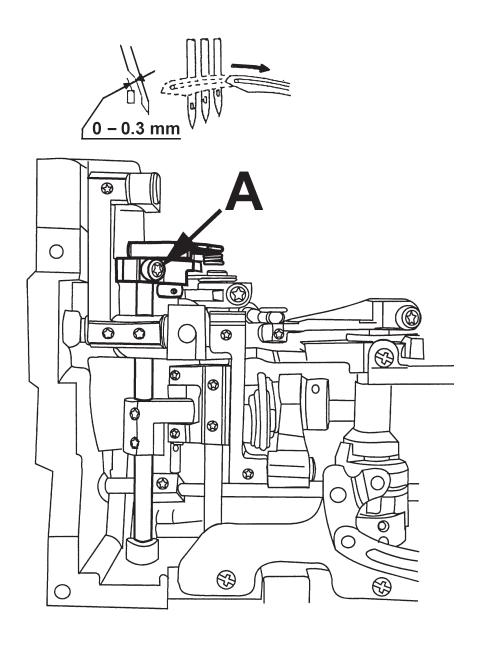
## 11. CLEARENCE BETWEEN DOUBLE CHAIN LOOPER AND NEEDLE

## Check

When point of the double chain looper is behind the needle, the clearance between needle and double chain looper should be 0 - 0.3 mm.

## **Adjustment**

- 1. Set point of the double chain looper behind the centre line of the needle by turning the handwheel towards you.
- 2. Loosen screw (A) on the double chain looper and adjust clearance between needle and point of looper by moving the double chain looper until it is 0 0.3 mm.
- 3. Tighten the screw (A).



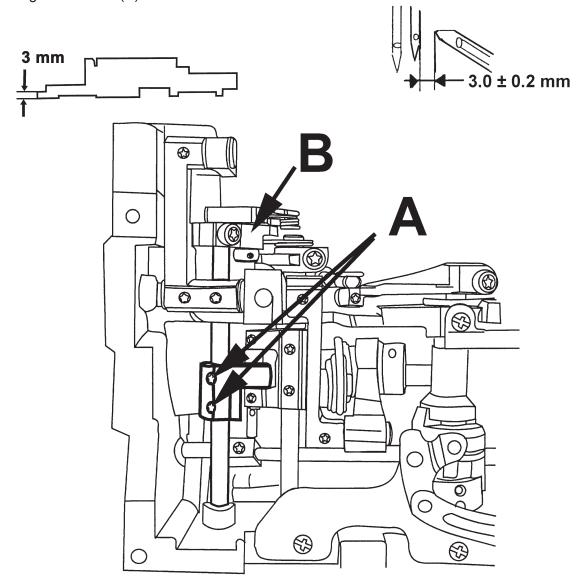
## 12. TIMING OF DOUBLE CHAIN LOOPER AGINST THE NEEDLE

## Check

When double chain looper is positioned at end of right side, the clearance between the needles right side to the tip of the double chain looper should be  $3.0 \pm 0.2\,$  mm.

#### **ADJUSTMENT**

- 1. Move the double chain looper to its right end position by turning the handwheel towards you.
- 2. Loosen screws (A) on the lever of the double chain looper. Adjust distance between right side of the needle and the tip of the double chain looper to  $3.0 \pm 0.2$  mm.
- 3. Tighten screws (A).



# 13. CLEARANCE BETWEEN NEEDLES SUPPORT AND NEEDLE - NEEDLES (A),(B) AND (E)

## **CHECK**

When needle is in its lower turning position the needle shall not at any point touch the rear needle support (F) .

Valid for Schmetz #90.

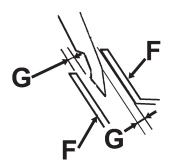
## **ADJUSTMENT**

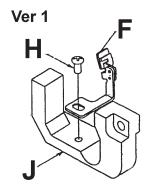
- 1. Loosen screw (H) of the needle support
- 2. Adjust the needle support until the clearance to the needle is G = 0.05-0.1 mm
- 3. Tighten screw (H).

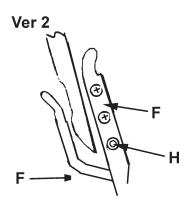
F = Needle support

J = Frame

Note! On Ver 2 the Needle support is located on the Chain stitch looper







## 14. CLEARANCE BETWEEN FEED DOG AND STITCH PLATE

## - SIDEWAYS

## CHECK

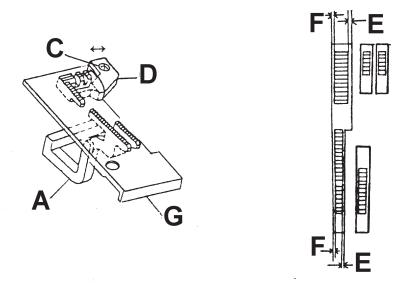
The feed dogs shall not at any point touch the stitch plate.

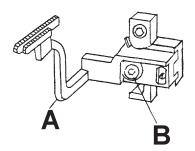
## **ADJUSTMENT- Rear feed dog**

- 1. Loosen screw (C).
- 2. Adjust the distance between the feed dog and the stitch plate so that (E) is be equal to the distance (F).

## **ADJUSTMENT- Differential feed dog**

- 1. Loosen screw (B).
- 2. Adjust the distance between the feed dog and the stitch plate so that (E) is be equal to the distance (F).





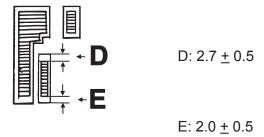
## 15. POSITION OF FEED DOG FRONT TO BACK

## Check

When checking the position of the feed dog, connect the cable from circuit board to the front cover and set the machine to:

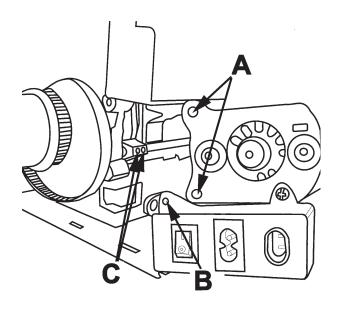
stitch length = 5mm differential ratio = 2.0

The distances should be as follows:



## **Adjustment**

- 1. Demount the Motor and the Terminal box by removing the two screws (A) on the motor and the screw (B) on Terminal box and then fold the Motor and Terminal box away.
- 2. Loosen the 2 screws (C) and adjust the distance between the feed dog and stitch plate so distance D and E is correct.
- 3. Tighten the screws (C).
- 4. Mount the Motor and the Termnial Box.



## 16. FEED DOG HEIGHT

- Rear feed dog

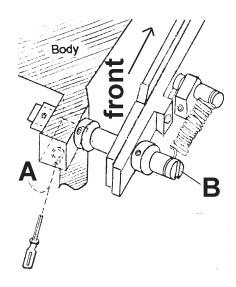
## **CHECK - Rear feed dog**

Height of rear feed dog above the stitch plate should be  $1 \pm 0.1$  mm.

## **ADJUSTMENT - Rear feed dog**

- 1. Move feed dog to its highest position by turning the handwheel towards you.
- 2. Loosen screw (A) and turn screw (B) so that the rear feed dog is  $1 \pm 0.1$  mm above the stitch plate.
- 3. Tighten screw (A).
- C = Stitch plate





## 17. DIFFERIENTIAL FEED DOG HEIGHT

## - Front feed dog

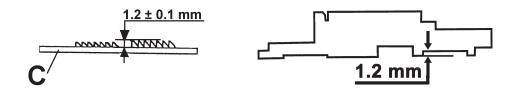
## **CHECK - Front feed dog**

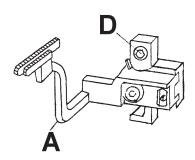
Height of front feed dog above the stitch plate should be 1.2  $\pm$  0.1 mm.

## **ADJUSTMENT - Front feed dog**

- 1. Move feed dog to its highest position by turning the handwheel towards you.
- 2. Loosen screw (D) and adjust so that the front feed dog (A) is  $1.2 \pm 0.1$  mm above the stich plate (C).
- 3. Tighten screw (D).

## C = Stitch plate





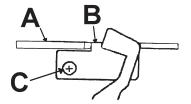
## 18. POSITIONS OF LOWER KNIFES

## **CHECK - LOWER KNIFE**

1. The lower knife cutting edge (B) should be aligned with the surface of the stitch plate (A).

## **ADJUSTMENT**

Loosen screw (C). Adjust so the lower knife cutting edge is aligned with the surface of the stitch plate.



## 19. POSITIONS OF UPPER KNIFES

## **CHECK - 1. UPPER KNIFE**

When upper knife is in its lowest position, its cutting edge (A) should be positioned 5.0 mm from the stitch plates knife opening (D).

## **ADJUSTMENT**

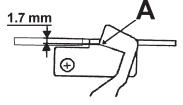
- 1. By turning handwheel towards you, move upper knife to its lowest position.
- 2. Loosen lower knife fixing screw (B). Adjust by turning the eccentric screw (C) until the distance between the stitch plates knife opening (D) and the cutting edge of the upper knife (A) is 5.0 mm
- 3. Tighten screw (B).

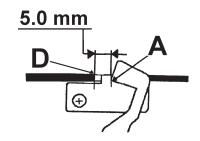


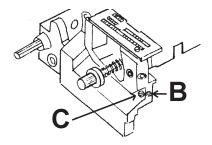
When upper knife is in its lowest position, its cutting edge (A) should be positioned 1.7 mm lower than the cutting edge of the lower knife.

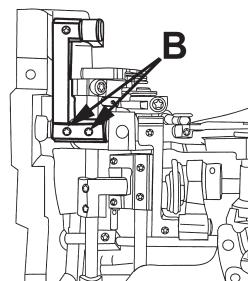
## **ADJUSTMENT**

- 1. By turning handwheel towards you, move upper knife to its lowest position.
- 2. Loosen upper knife fixing screws (B).
- 3. Adjust position of upper knife downwards 1.7 mm from the utting edge of the lower knife.
- 4. Tighten the screws (B).









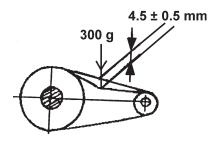
## 20. BELT TENSION

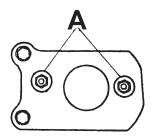
## **CHECK**

It should be possible to push down the belt  $4 \pm 0.5$  mm when applying a pressure of 300 g.

## **ADJUSTMENT**

- 1. Loosen both screws (A) holding the motor.
- 2. Adjust belt tension by moving the motor back or forth
- 3. Tighten the screws.





## 21. SPEED SENSOR ADJUSTMENT

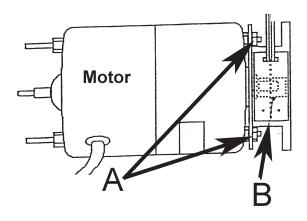
This check and adjustment can only be performed with the front cover conneted to the circuit board.

#### CHECK

Run the machine, if the machine stops running and the LCD indicates "overload" the speed sensor needs to be adjusted.

## **ADJUSTMENT**

- 1. Loosen the two nuts (A)
- 2. Adjust the speed sensor housing (B) up or down until the motor runs without stopping for the "Overload" message.
- 3. Tighten the nuts (A).



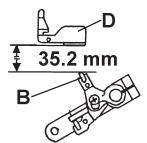
## 22. SETTING BETWEEN THREAD TAKE-UP AND UPPER / LOWER THREAD GUIDE

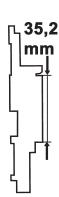
## Front cover must be mounted

#### **CHECK**

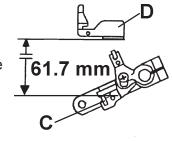
When the upper looper is in its lowest position the distance between the upper looper thread guide (D) and...

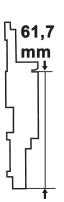
the upperlooper thread take-up (B) should be





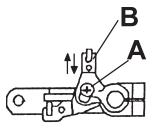
the lower looper thread take-up (C) should be

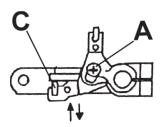




## **ADJUSTMENT**

- 1. Move the upper looper to its lowest position by turning the handwheel towards you.
- 2. Loosen the screw (A).
- 3. Adjust the distance between the thread guide (D) and the upper looper thread take-up (B) so it's 35.2 mm.
- 4. Adjust the distance between the thread guide (D) and the lower looper thread take-up (C) so it's 61.7 mm.
- 5. Tighten the screw (A).





NOTE! Both upper and lower thread take-up is adjusted at the same time.

## 23. CHAIN STITCH LOOPER TAKE UP LEVER

## Base plate must be mounted

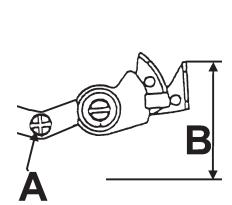
## **CHECK**

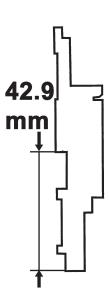
When the chain stitch looper is in it's upper turning point the distance between Chain stitch looper take up lever and base plate should be  $42.9 \pm 0.3$  mm.

## **ADJUSTMENT**

Loosen screw (A) and adjust the height of the take up lever.

B= 42.9 <u>+</u> 0.3 mm





## 24. STITCH LENGTH

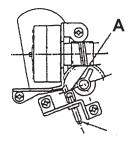
## This check and adjustment can only be performed with the Front cover connected to the circuit board

## **CHECK**

- 1.In order to get the starting point of step motor switch the machine off then on.
- 2.Set stitch length to 5.0 mm and differential feed ratio to 1,0.
- 3. Run the machine and then switch it off.
- 4. Check if the movement of of feed dog represents 5.0  $\pm$  0,2mm.

## **ADJUSTMENT**

- 1. Remove base plate.
- 2.In order to get the starting point of step motor switch the machine off then on.
- 3.Set stitch length to 5.0 mm and differential feed ratio to 1.0.
- 4. Turn the adjusting screw (A).
- 5.Re-check.



## 25. DIFFERENTIAL FEEDING

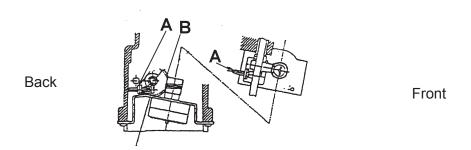
# This check and adjustment can only be performed with the Front cover connected to the circuit board CHECK

- 1. In order to get the starting point of step motor switch the machine off then on.
- 2.Set stitch length to 5.0 mm and differential feed ratio to 1.0.
- 3 Run the machine and then switch it off.
- 4 Check if the movement of of feed dog and differential feed dog have the same amount of feeding  $(0 \pm 0.2 \text{ mm})$ .

## **ADJUSTMENT**

- 1. Remove base plate.
- 2.In order to get the starting point of step motor switch the machine off then on.
- 3 Set stitch length to 5.0 mm and differential feed ratio to 1.0.
- 4. Turn the adjusting screw (A).
- 5 Re-check

B= Worm wheel



## 26. THREAD TENSION

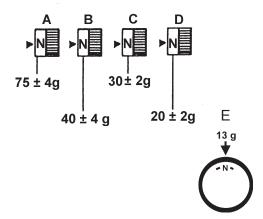
## **CHECK**

Check thread tension according to manual.

Thread: Cotton # 60/3

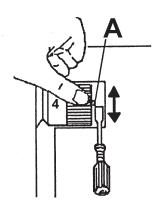
Power of thread tension

Α	75 ± 4g
В	$40 \pm 4g$
С	$30 \pm 2g$
D	$20 \pm 2g$
E	13 ± 3g



## **ADJUSTMENT**

- 1. Set thread tension dial at normal position "N".
- 2. The basic setting may be adjusted by blocking the plate sheet at the edge of the tread tension dial by means of a small screw driver while moving the thread tension dial.



Thread tension harder

Thread tension looser

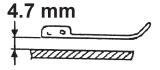
## 27. PRESSERFOOT HEIGHT

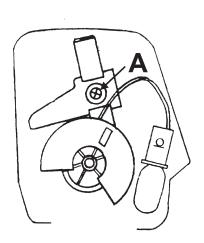
## Check

When the presser foot is in it's highest position the distance between the stitch plate and the presser foot should be 4.7 mm.

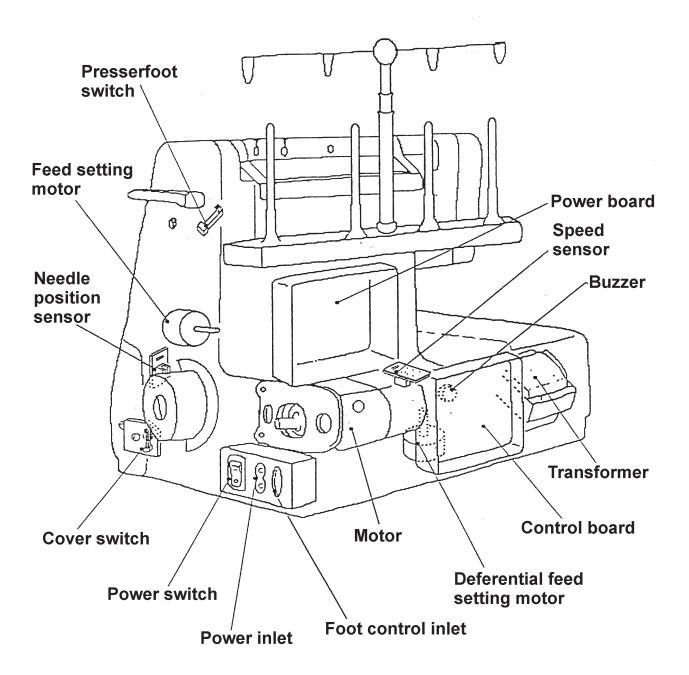
## **Adjustment**

- 1. Loosen the screw (A).
- 2. The presser bar height can now be adjusted up or down until the distance is
- 4.7 mm between the presser foot and the stitch plate.
- 3. Tighten the screw (A).

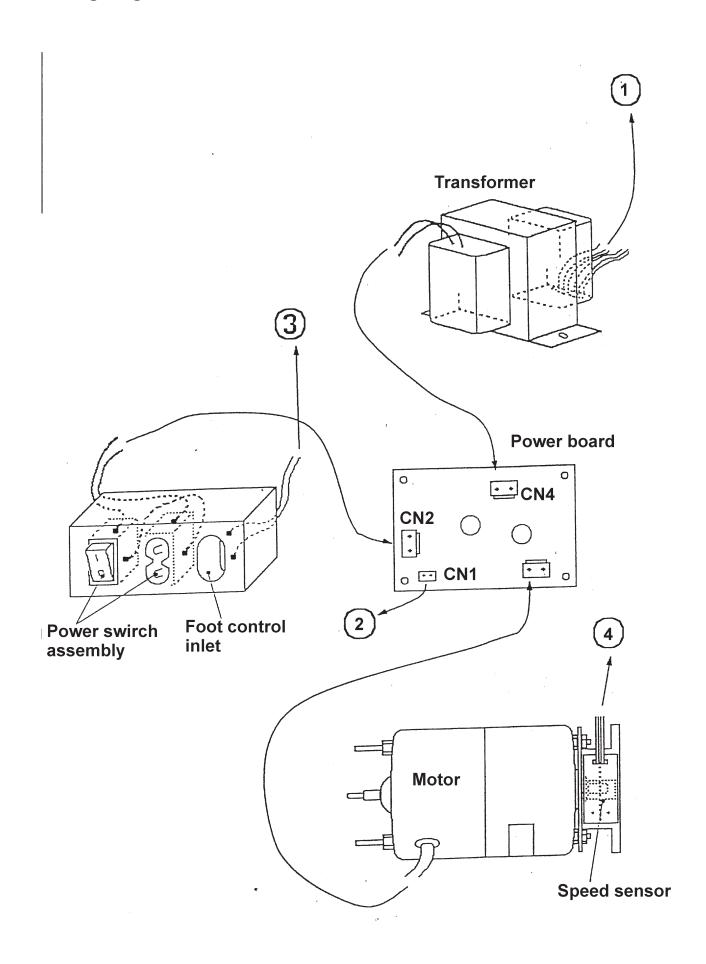




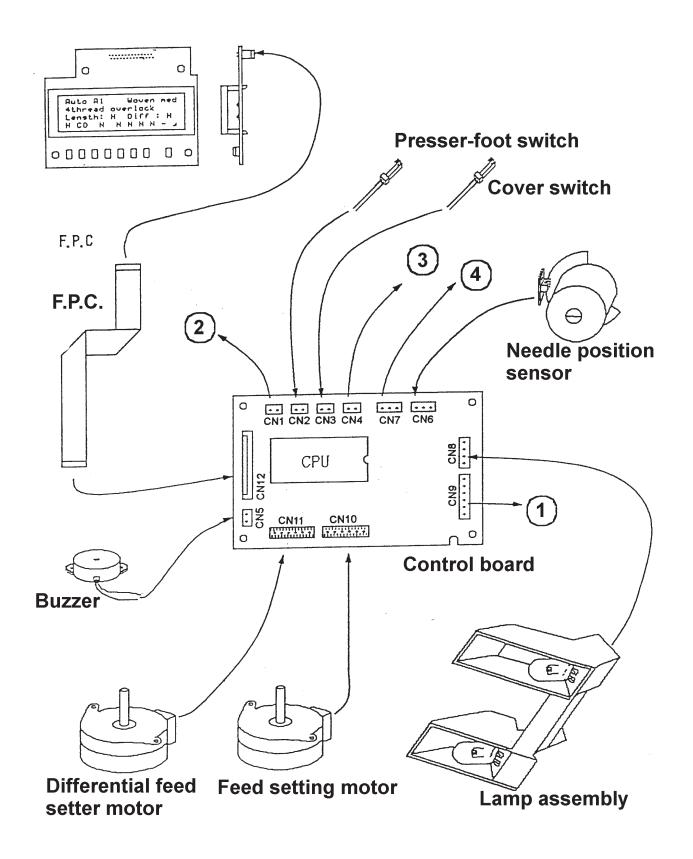
## Wiring diagram



## Wiring diagram



## Wiring diagram



## Fault finding diagram- mechanically

## 1. Skipped stitches - Lower looper can't catch the needle thread

## Make sure that...

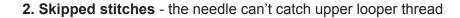
the needle is a SCHMETZ 130/705 H.

the needle is set correctly.

the needle is not bent.

## Check or adjust the following settings

- A. 2. Clearance between lower looper and needles
- B 11. Clearance between needle supports and needle.
- C. 3. Setting of the lower looper in relation to the needle.
- D. 4. Needle height setting between needle and lower looper.
- E. The point of the llower ooper has been broken change looper



#### Make sure that...

the needle is set correctly. the needle is not bent.

## Check or adjust the following settings

- A. 5. Setting between upper looper in relation to the needle.
- B. 4. Needle height setting between needle and lower looper.
- C. 6. Timing of upper looper and lower looper.
- D. 7. Clearance between upper looper and lower looper.

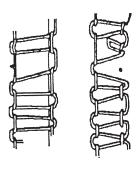
## 3. Skipped stitches - Lower looper can't catch upper looper thread

#### Make sure that...

the threading is correctly

## Check or adjust the following settings

- A. 6. Timing of upper looper and lower looper
- \_B. 7. Clearance between upper looper and lower looper.
- C. The point of thelower looper has been broken change looper







## **4. Skipped stitches-** The double chain looper can not catch lower looper thread

## Make sure that...

the thread tension of thread guide is set correctly. the size of needle is correctly. the LCD selection is set correctley

## Check or adjust the following settings

- A. Clearance between double chain looper and needle
- B. Distance from double chain looper needle
- C. Clearance between needle guide and needle



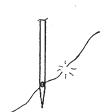
## 5. Needle thread breaks

#### Make sure that...

the thread is an overlocker thread the threading is correctly the thread tension is correctly the thread guide isn't damaged - change thread guide the lower looper isn't damaged - change lower looper

## Check or adjust the following settings

- \_\_\_\_\_A. 2. Clearance between lower looper and needles
  - B. 3. Setting of the lower looper in relation to the needle
  - C 4. Needle height
  - D. 11. Clearance between needle supports and needle.



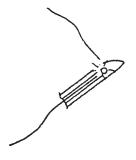
## 6. Looper thread breaks

## Make sure that...

the threading is correctly
the thread tension is correctly
the thread guide isn't damaged - change thread guide

## Check or adjust the following settings

- \_\_\_\_A. 13. Setting between thread take up and upperlooper thread guide
  - B. 13. Setting between thread take up and lower looper thread guide
  - C. 6. Timing of upper looper and lower looper.
  - D. 7. Clearance between upper looper and lower looper.



#### 7. Needle breaks

#### Make sure that...

the thread is an overlocker thread.

the needle is set correctly.

the thread is inside of the thread guide.

the needle is not bent.

#### Check or adjust the following settings

- \_\_A. 2. Clearance between lower looper and needles.
  - B. 11. Clearance between needle support and needle.
  - C. 4. Needle height
  - D. 6. Timing of upper looper and lower looper.
  - E. 7. Clearance between upper looper and lower looper



#### 8. Thread breaks on double chain sewing

#### Make sure that...

the thread is an overlocker thread the threading is correctly

#### Check or adjust the following settings

- A. Feed dog height.
- B. Presserfoot height
- C. Sideways setting of presserfoot
- D.
- E. Thread tension

#### 9. Feeding is not correctly

#### Make sure that...

the stitch length is set correctly. the pressure foot pressure is set correctly the differential feeding is set correctly

#### Check or adjust the following settings

- \_\_\_\_A. 9. Feed dog height
  - B. Stitch plate isn't damaged.
  - C. Presser foot isn't damaged.
  - D. 10. Position of upper / lower knife

#### 10. Fabric is shrinking

#### Make sure that...

the differential feeding is set correctly the thread tension is set correctly. the threading is correctly.

#### Check or adjust the following settings

- A. 16. Thread tension
  - B. 15. Differential feeding
  - C. 13. Setting between thread take up and lower looper.
  - D. 13. Setting between thread take up and upper looper.

#### 11. Thread tension

#### Make sure that...

the thread tension is set correctly.

#### Check or adjust the following settings

- A. 16. Thread tension
  - B. 13. Setting between thread take up and upper looper thread guide
  - C. 13. Setting between thread take up and lower looper thread guide

#### 12. Motor is not running

#### Make sure that...

the front cover closes correctly. the power cord is correctly connected.

### Check or adjust the following settings

A. 12. Belt tension - motor belt.

#### 13. Cutting of the knifes

#### Make sure that...

the upper knife is set correctly. the upper knife is set tightly.

#### Check or adjust the following settings

- A. 10. Position of upper / lower knife
  - B. The upper knife isn't damaged change knife
  - C. The lower knife isn't damaged change knife

## Fault finding diagram - Electronically

<u>MAI</u>	N MOTOR
(1)	Machine runs with high revolution, after it's switched on.
	Remove connector (CN1) then switch on:  — If normal, change control board.  — If abnormal, change power board.
(2)	Machine runs after you connected the foot controller.
	— Change foot controller.
(3)	Machine runs with high revolution after steps on foot controller, then indicates"overload" in seconds, and the machine stops.
	— Change speed sensor board.
(4)	After steps on foot controller machine runs, but indicates "overload" in seconds and the machine stops.
	— Change upper stop sensor board.
(5)	After steps on foot controller, machine does not run but indicates "overload
Cha	nge power board: — If abnormal, change control board — If still abnormal, change motor.
(6)	After steps on foot controller, machine does neither run nor does it indicate "overload".
	<ul><li>— Change foot controller.</li><li>— If still abnormal, change control board.</li></ul>
(7)	After steps on foot controller, machine runs, but with unstable revolution or sometimes stops.  Remove speed sensor board, check if disc is broken or not:  — If abnormal, change disc.  — If normal, change speed sensor.  — If still abnormal, change control board.

LCD
(1)Not indicating normally.
<ul><li>— Change LCD.</li><li>— Control board.</li><li>— Change flexible.</li></ul>
(2)Indicating vague.
<ul><li>— Regulate the volume on control board.</li><li>— Change LCD.</li></ul>
(3)Back-light not working. (Can indicate lettering.)
— Change LCD.  — Change control board.
SAFETY SWITCH
(1)Machine runs with the cover opened.
—- Change cover switch assembly.
(2)Machine does not run with closed cover, and indicates "Close front cover"
<ul><li>Regulate the position of the switch.</li><li>If defective cover switch, change cover switch</li></ul>
BUZZER
Buzzer does not sound.
— Change control board.

#### **FEED & DIFFERENTIAL**

#### Feeding is abnormal.

- Change control board.
- Change transformer.
- Change step motor.

#### **LIGHTING**

#### **Bulb not working**

- If bulb defective, change bulb.
- If loose contact of lamp terminal, tighten the bulb.
- Measure the voltage to (CN8) on control board, change control board if abnormal voltage.
- Change transformer.

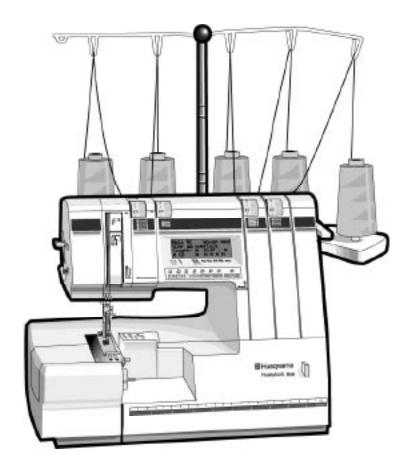
#### **OTHERS**

Machine does not run, LCD back light & lamp does not work.

- Change power supply cord.
- Measure the voltage of CN2, if abnormal change power switch assembly
- Measure the voltage on CN4, if abnormal change power board
- Change transformer.
- Change control board.

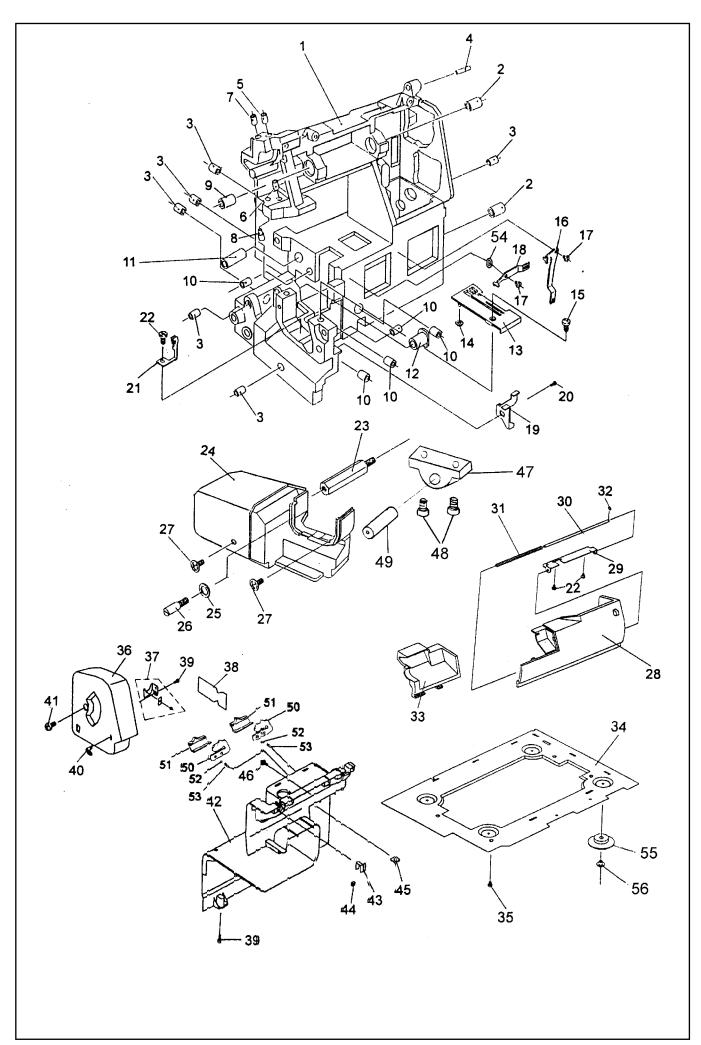


# Parts List

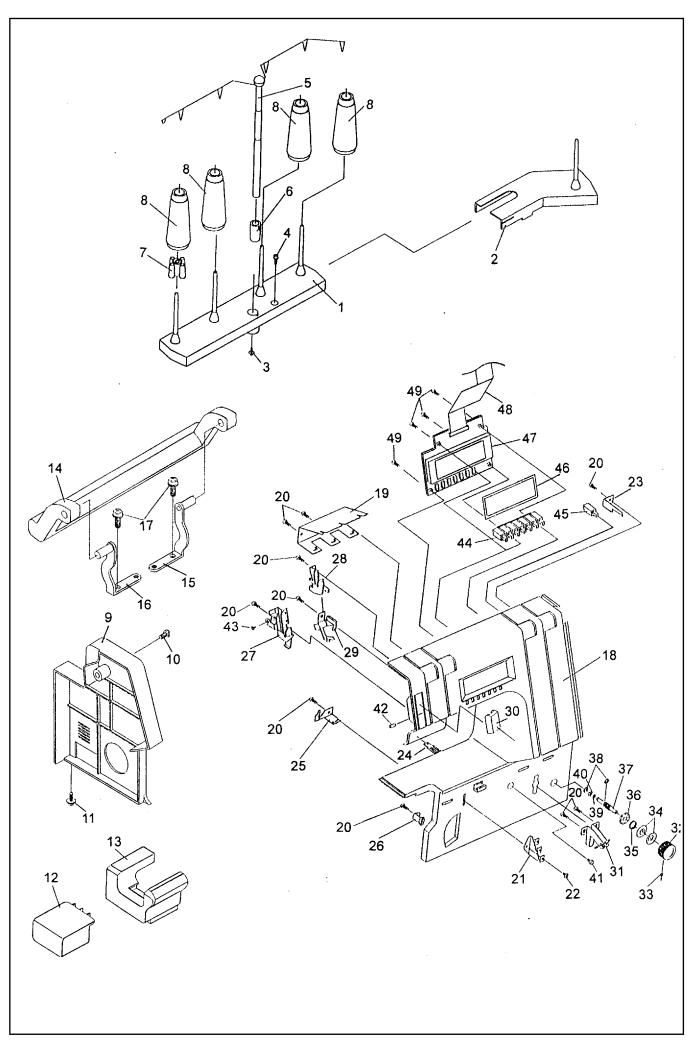


Huskylock 936

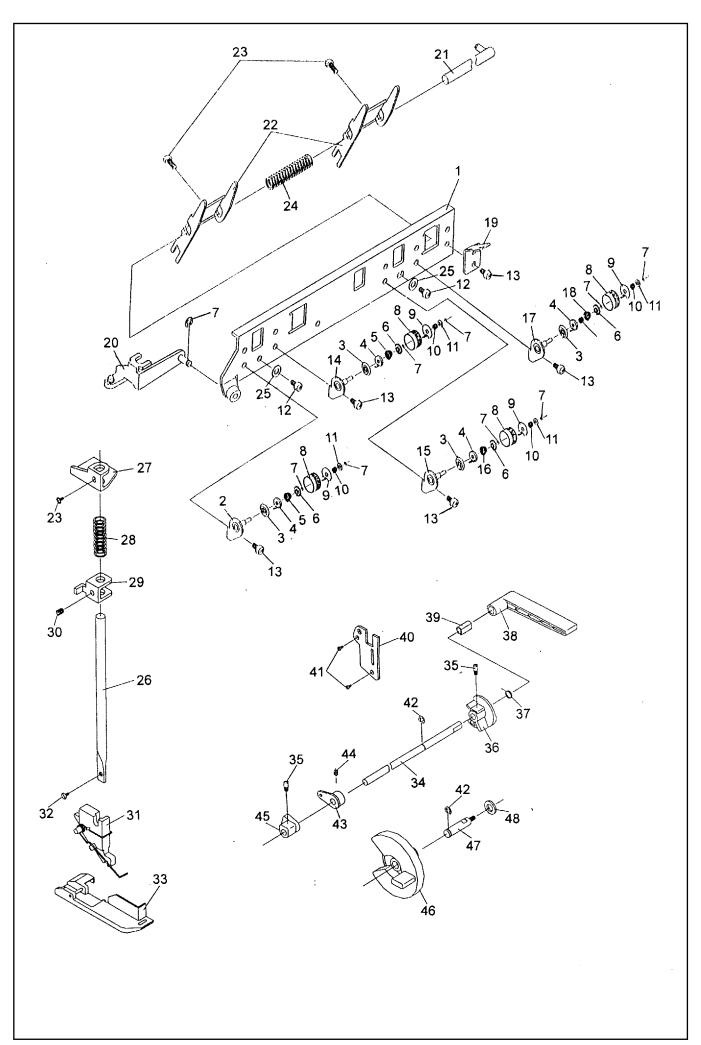
Made in Sweden Printed in Sweden May 2006



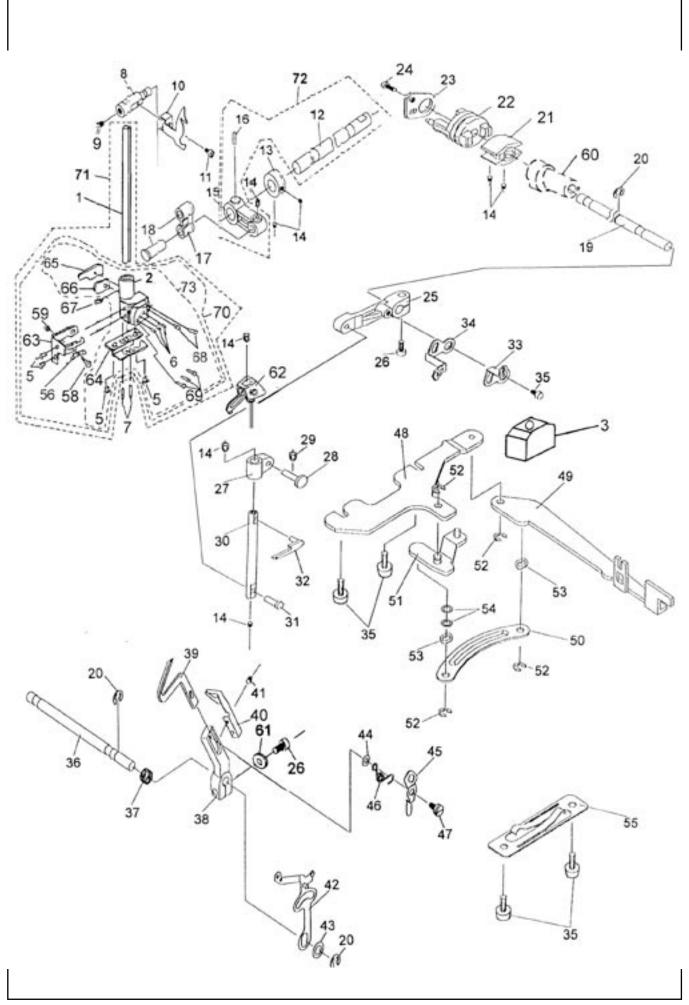
INDEX NO.	REF. NO.	PART NAME
NO. 2	2141003-542	Lower shaft husbing (1)
		Lower shaft bushing (1)
3	2141004-221	Cutter link bushing (1)
4	50405-E	Spring pin
5	2141002-271	Needle bar bushing (1)
6	2141002-272	Needle bar bushing (2)
7	2141002-585	Presser bar bushing (1)
8	2141002-586	Presser bar bushing (2)
9	2141003-543	Lower shaft bushing (2)
10	2141004-222	Cutter link bushing (2)
11	2141004-455	Differential feed shaft bushing
12	2150003-543	Lower shaft bushing (2)
13	2150001-501	Needle plates ass'y up to #389611
	2150001-501-E	Needle plates ass'y from #389612
14	90301	O-Ring
15	10811	Set screw
16	2150001-505	Needle plate sensor levi
17	11509	Screw
18	2150001-507	Needle plate sensor link
	2150001-507-B	Needle plate sensor link from #389612
19	2141002-475	Stopper
20	10941	Screw
21	2150002-509	Chain stitch needle guide assy' (up to #389611)
22	11907	Screw (up to #389611)
23	2141001-145	Side cover assembly foot
24	2141001-162-651	Side cover
25	60159	Washer
26	2141001-185	Assistant plate shaft
27	10981	Screw
28	416 10 40-01	Front Cover - Husqvarna Viking
29	2141001-178	Front cover hinge
30	2141001-125	Front cover shaft
31	2141001-126	Front cover spring
32	40110	E-Ring
33	416 10 41-01	Cutter Cover
34	416 11 12-01	Base
35	10946	Screw
36	416 10 42-01	Face Cover
37	1840002-660	Thread cutter
38	2141001-323	Face cover seat
39	11203	Set screw
40	2141002-673	Assistant thread guide
41	11913	Set screw
42	416 10 43-01	Rear cover
43	2141002-111	Thread guide-A
44	2141002-118	Felt
45	30301	Square nut
46	10986	Screw
47	416 11 18-01	Lower shaft bushing support
48	9701516-507	Hexagon screw
49	2150003-553	Lower shaft bushing
50	2141012-116	Thread guide (F)
51	2141002-149	Thread giude (F) holder
52	90206	Position decided bal
53	1650004-424	Position decided spring
54	60167	Washer
55	2141001-153	Swallow rubber foot
56	2141001-122	Set pin for swallow rubber foot



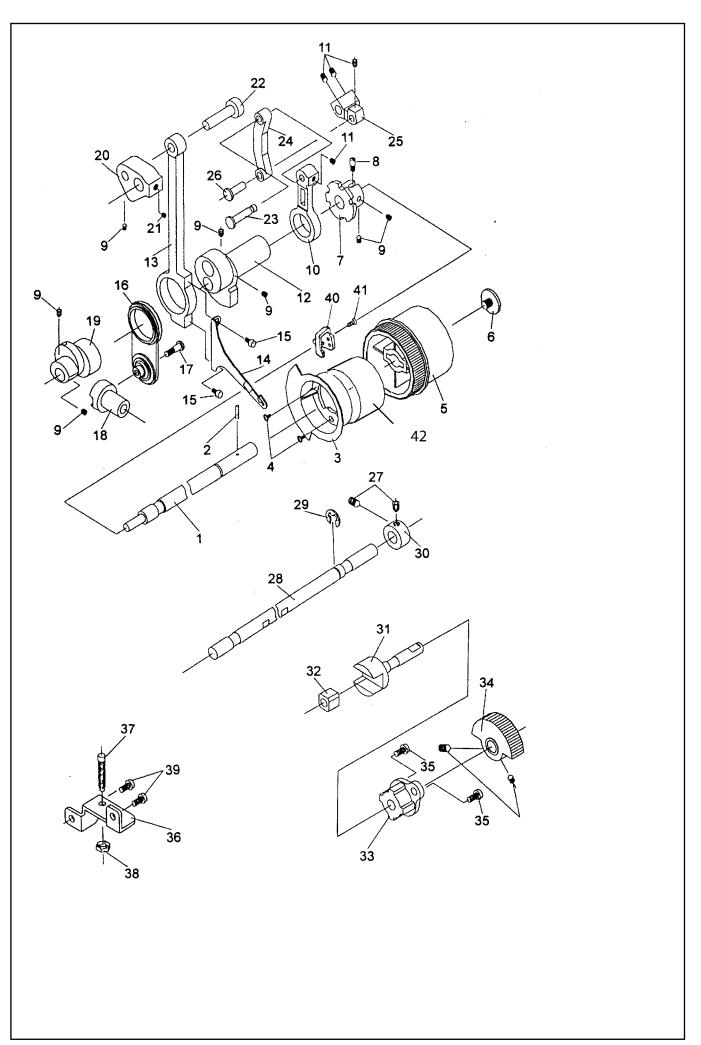
	REF. NO.	PART NAME
INDEX NO. 1 2 3 4 5 6 7 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44	2141002-180-651 2150002-180 11054 11207 2150002-190 2141002-196-651 1250002-197 416 10 44-01 11936 11203 2141001-163-651 2141001-373-651 2141001-376 2141001-377 10955 416 10 45-01 2154012-112 10985 2150002-113 2154012-113 10408 2150002-114 2150002-115 2141102-284 2141012-284 2141012-285 2150002-281 2150002-280 416 10 46-01 2150002-280 416 10 46-01 2150002-280 416 11 22-01 20304 5150002-245 416 11 22-01 20304 5150002-245 416 11 22-01 20304 5150002-246 40102 60138 60137 60416 10981 50302 11213	Spool pin stand Set screw Set screw for spool pin stand Telescopic thread stand (1) Telescopic thread stand collar Thread holder Motor Cover Set screw for motor cover Set screw for motor cover Set screw for motor cover Free-Arm cover Cover for flat bed Handle Handle hinge - L - Handle hinge - R - Set screw for handle hinge Front panel Thread guide (B) Tapping screw Thread guide (C) - Version 1 Thread guide (C) - fVersion 2 Tapping screw Thread guide (E) Upper looper thread guide Upper looper thread guide Lower looper thread guide - Face lift Lower looper thread guide - Face lift Take-up lever thread guide - R Take-up lever thread guide - R Take-up lever thread guide - C Take-up lever thread guide - C Take-up lever toover Thread guide for assistant take-up lever Assistant tension dial Assistant tension dial - Face lift Hexagon screw Chain stitch looper tension dial Tension spring Nut Assistant tension dial shaft E - ring Washer Washer- Face lift Wave washer Set screw Parallel pin Screw
41 42 43	10981 50302	Set screw Parallel pin
47 48 49 50	2143008-710 2143008-213 11203 416 10 50-01	Printing electric board Tapping screw LCD operating sticker



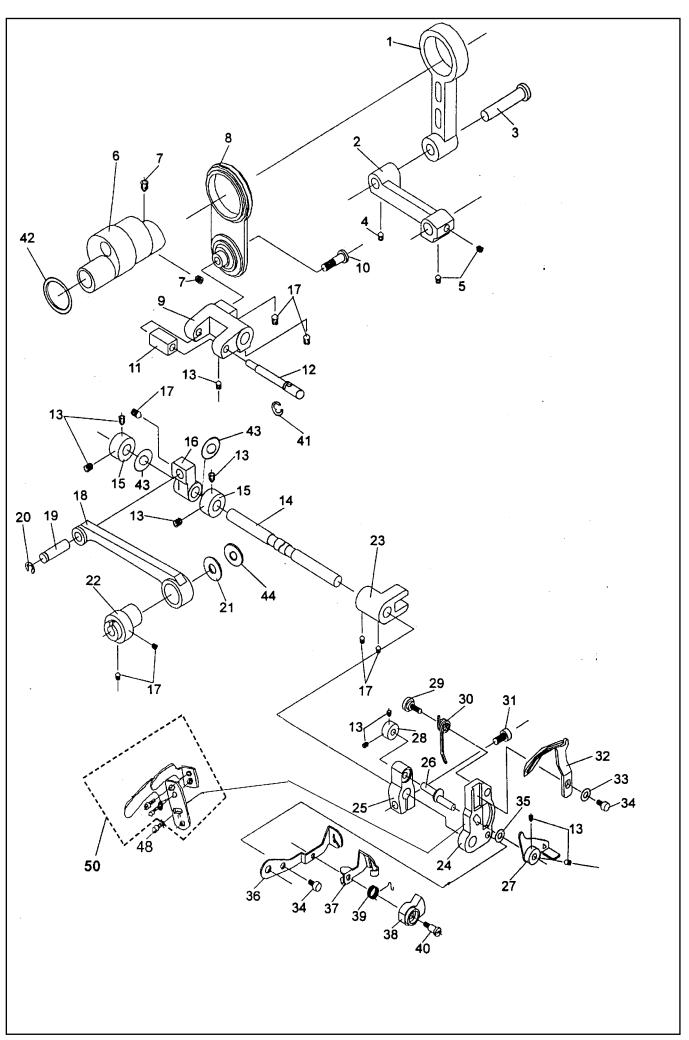
INDEX -NO.		REF. NO. PART NAME
-NO. 1	2141002-220	Tension holding plate
2	2141002-102	Tension bracket ass'y
3	2141002-131	Tension Disc - R -
4	2141002-156	Tension Disc bracket
5	1257002-138	Tension spring A
6	2141002-126	Tension nut
7	40110	E-Ring
8	416 11 21-01	Tension dial -Yellow
	2141022-153-651	Tension dial -Red
	2141032-153-651	Tension dial -Green
	2141042-153-651	Tension dial - Blue
9.	2141002-224	Tension Disc regulating plate
10	1650002-158	Tension Dial spring
11	60159	Washer
12	10964	Set screw
13 14	11907	Set screw
15	2141002-102 2141002-102	Tension bracket ass'y Tension bracket ass'y
16	1257012-138	Tension spring - B -
17	2141002-102	Tension bracket ass'y
18	1257022-138	Tension spring - C
19	2150002-102	Tension bracket (5) ass'y
20	2141002-580	Pressure adjusting plate
21	2141002-250	Thread release shaft
22	2141002-396	Thread release plate - B
23	11934	Set screw
24	1840012-138	Thread release stud spring
25	60181	Washer
26	2141002-361	Presser bar
27 28	2141002-237 2141002-362	Driver plate Presser bar spring
29	2141002-302	Presser bar spring Presser bar bracket
30	10125	Set screw for bracket
31	2141002-520	Presser foot holder
32	11921	Set screw for presser foot holder
33	2150002-510	Presser foot
34	2141002-542	Presser foot lifter shaft
35	1650004-696	Set screw for thread release cam
36	2141002-241	Thread release cam
37	2141002-365	Presser foot lifter spring
38	2141002-366-651	Presser foot lifter lever
39	50421	Spring ring
40 41	2141002-378 10941	Presser bar bracket stopper Set screw
41 42	40106	E Ring
43	2141002-543	Presserbar lifter stopper
44	10124	Set screw
45	2141002-541	Presser foot lifter cam
46	2141002-377-651	Pressure adjusting dial
47	2141002-584	Pressure adjusting stud
48	60113	Washer



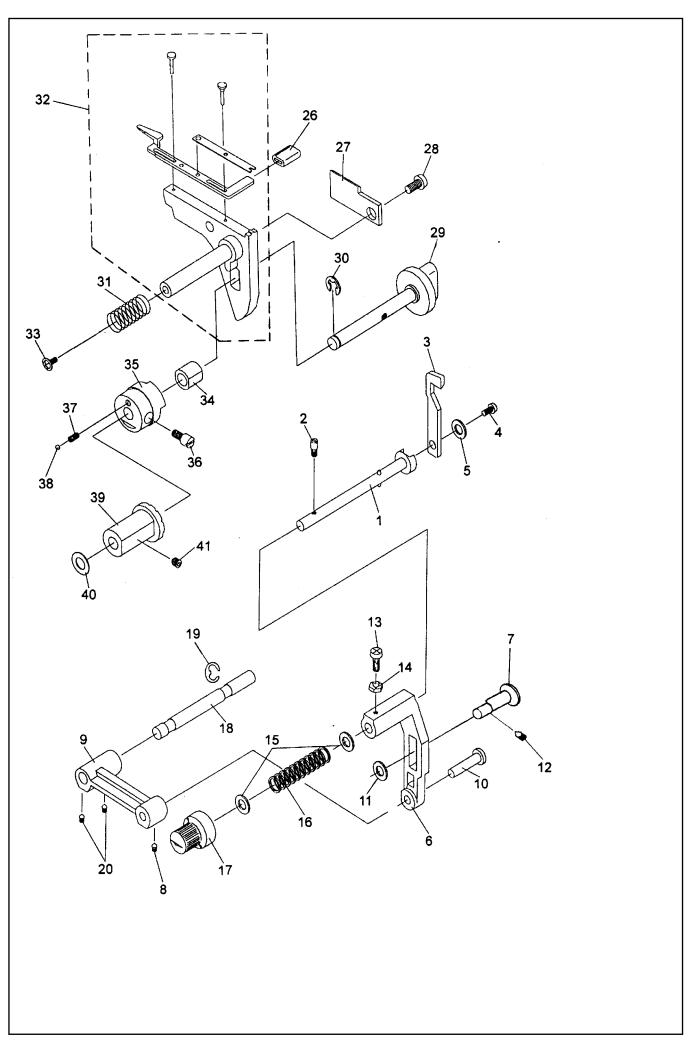
```
INDEX REF. NO.
                                     PART NAME NO.
          2141002-311
                                     Needle bar
12345678
          416 11 16-01
                                     Needle clamp
          416 11 17-01
                                     Clutch connecting block
          10601
                                     Set screw for thread guide
                                     Set screw for needle
          10141
          411 31 04-01
                                     Needle 5 x 80 #
          2141002-322
                                     Needle bar crank
9
          10132
                                     Set screw for needle bar crank
          2150002-411
10
                                     Take-up lever
11
          10965
                                     Set screw for take-up lever
          2141003-111
                                     Uppershaft
12
13
          5150003-138
                                     Upper shaft collar (up to #389611)
          2141003-115
                                     Upper shaft collar (from #389612)
          10124
                                     Screw
15
          2141002-314
                                     Needle bar driver lever
          50406
                                     Spring pin
Needle bar driver link
16
          2141002-321
1250002-315
17
18
                                     Needle bar driver link pin
19
          2150003-415
                                     Upper looper shaft
20
21
22
23
24
          40116
                                     E-Ring
          2150003-491
                                     Looper clutch exchange body
          2150003-492
                                     Looper clutch driver
          2150003-499
                                     Clutch adjusting plate
          11927
                                     Set screw
25
26
27
          2141003-417
                                     Upper looper driver lever
          20204
                                     Set screw
          2141003-426
                                     Upper looper fulcrum
28
29'
          2141003-436
                                     Upper looper fulcrum shaft
          10125
2141003-412
                                     Set screw
30
                                     Upper looper stand shaft
31
          2141003-418
                                     Upper looper stand pin
32
33
          2141003-433
                                     Upper looper
          416 10 52-01
                                     Upper/lower looper take-up lever
35
          10941
                                     Set screw
          2150003-425
36
                                     Lower looper shaft
37
          2141003-443
                                     Lower looper adjusting spring
38
          2141003-424
                                     Lower looper stand
          2141003-441
39
                                     Lower looper
40
          416 11 13-01
                                     Needle guide plate
          20308
41
                                     Hexagon screw
42
          416 11 20-01
                                     Lower looper thread guide plate (up to #389611)
          2154012-590
                                     Lower looper thread guide plate (from #389612)
          60145
43
                                     Washer
44
          60504
                                     Washer
          416 11 14-01
2141002-594
                                     Thread guide plate change lever 
Thread guide plate spring
45
46
47
          11052
                                     Set screw
48
          2150003-497
                                     Looper clutch connecting plate
49
50
51
52
53
54
          2150003-496
                                     Looper clutch connecting rod
          2150003-495
                                     Looper clutch connecting rod-B
          2150003-493
                                     Looper clutch rod
          40110
                                     E-Ring
          60405
                                     Wave washer
          60141
                                     Washer
55
          2150003-498
                                     Looper clutch connecting spring
56
57
          2150002-718
2150002-719
                                     Needlebar tension disc
                                     Needle bar tension spring
58
          5150002-227
                                     needle bar tension screw
59
          30110
60
          2150003-445
                                     Upper looper link lever
61
          60148
                                     Wäsher
                                     2-thread converter ass,y (from #389612)
Needle bar thread guide (1)
Needle bar thread guide (2)
62
          2141003-405
63
          2150002-341
64
          416 11 19-01
                                     Needle holder (1)
Needle holder (1)
          2150002-715
65
          2150002-716
66
                                     set screw ( for néedle clamp)
          10137
67
                                     Screw (for needle holder)
Screw (for needle clamp cover)
          20309
68
69
          10953
          2150002-340
70
                                     Needle clamp ass'y
71
          2150002-500
                                     Needle bar ass'y
          2141003-101
72
                                     Upper shaft ass'y
          2150002-230
                                     Needle clamp sub assy'
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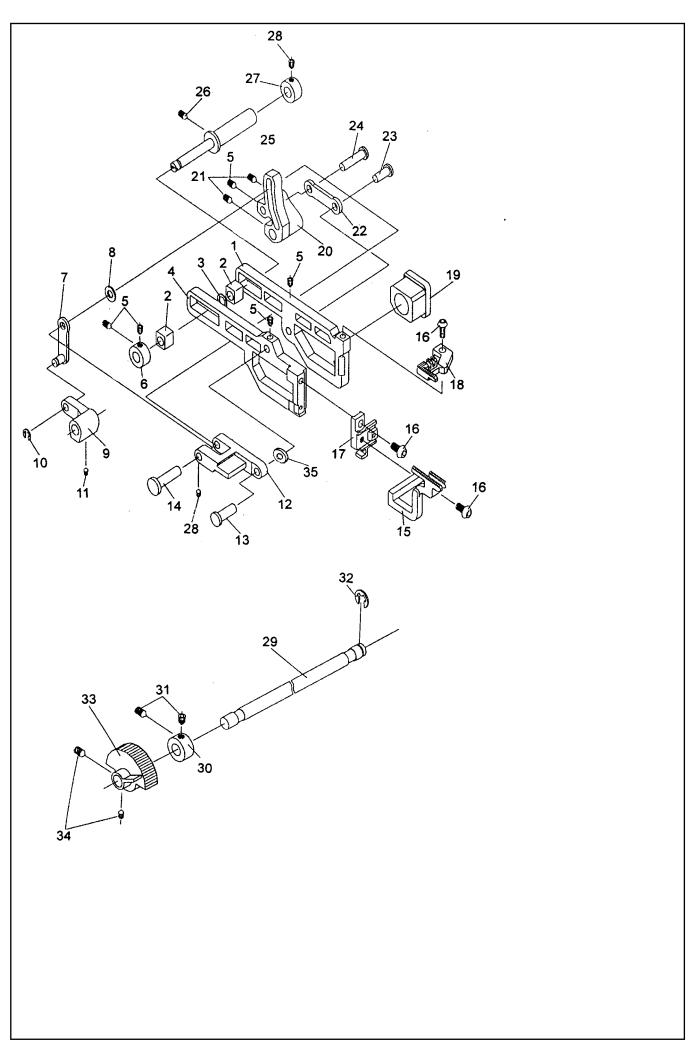
INDEX NO.	REF. NO.	PART NAME
100.	2150003-541	Lower shaft
2	50415	Spring pin
3	2150008-262	Upper stop sensor disc
4	10988	Set screw
5	2150003-151-651	Handwheel
6	10936	Set screw
7		Lower shaft collar
8	2141003-551	
9	1650004-696	Set screw Note! Only up to #389611 Set screw
9 10	10125	Feed link
10	2141004-241	
	10124	Set screw
12	2141003-119	Driver cam-A
13	2150003-331	Upper shaft driver link
14	2150002-617	Chain stitch looper for assistant take-up lever
15	10962	Set screw
16	2141003-460	Looperlink
17	11051	Set screw
18	2150003-445	Upper link lever
19	2141003-431	Driver cam-B
20	2141003-117	Balance crank
21	10126	Set screw
22	2141003-116	Upper shaft driver link pin
23	2141004-247	Feed link pin
24	2150004-671	Feed inter link
25	2150004-631	Feed lever(1) (up to #389611)
	2141004-631	Feed lever (from #389612)
26	2141004-647	Feed differiential pin
27	10135	Set screw
28	2150004-263	Feed shaft (up to #389611)
	2141004-263	Feed shaft (from #389612)
29	40106	E-Ring
30	416 01 55-01	Differential feed shaft collar
31	2150004-111	Feed regulator bushing
32	2141004-122	Feed regulator
33	2150004-165	Feed regulator bushing
34	2150004-287	Feed cam
35	10976	Set screw
36	2150004-133	Feed reglulator stand
37	10134	Set screw
38	30403	Adjusting nut
39	10964	Set screw
40	2150002-616	Chain stitch looper for assistant take-up cam
41	416 11 00-01	Set screw
42	416 11 11-01	Handwheel bush



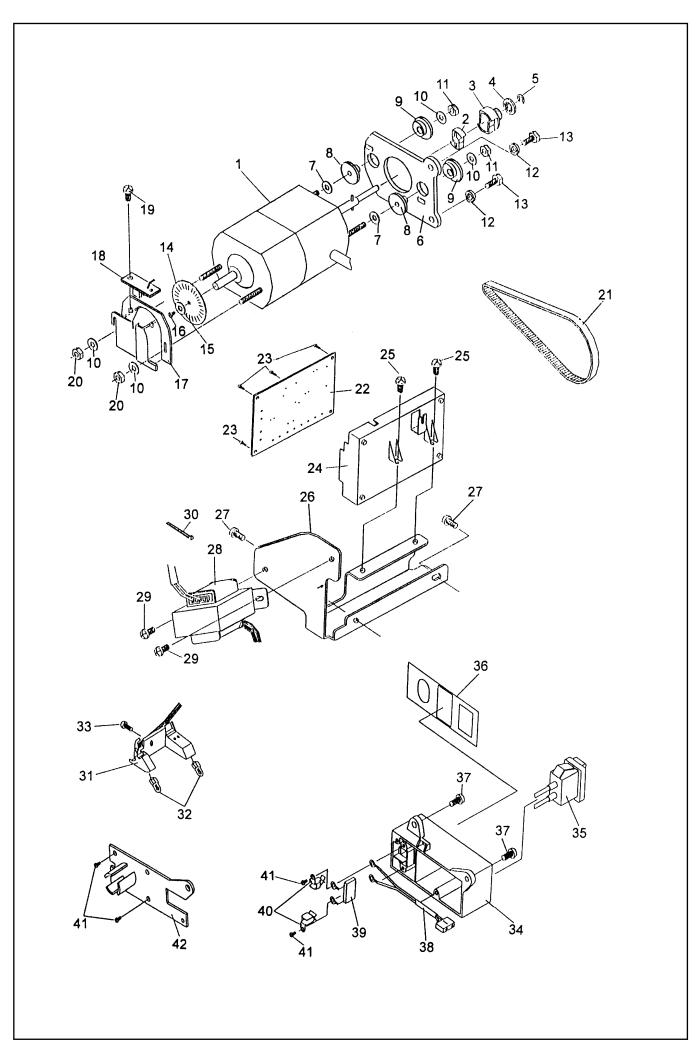
INIDEV	REF. NO.	PART NAME
NO.	REF. NO.	PART NAME
1	2141004-232	Cutter driver link
2	2141004-215	Cutter link (1)
3	2141004-217	Cutter link (1) pin
4	9624504-407	Set screw
5	10131	Set screw
6	2141003-432	Driver cam-C
7	10125	Set screw
8	2141003-460	Looperlink
9	2150003-446	Lower looper side block shaft
10	11051	Screw
11	2150003-447	Chain stich looper side block
12	2150003-448	Chain stich looper side block shaft
13	10135	Set screw
14	2150003-474	Chain stich looper shaft
15	416 01 55-01	Differential feed shaft collar
16	2150003-473	Chain stich looper drive rod
17	10124	Set screw
18	2150003-472	Chain stich looper drive lever
19 20	2150003-482	Chain stich looper drive lever pin
20	40106	E-Ring
21	40103 60105	E-Ring - Face lift Washer
22	2150003-471	Chain stich looper drive cam
23	2150003-471	Chain stich looper connecting lever
24	2150003-449	Chain stich looper rod
25	2150003-477	Chain stich looper rod lever
26	2150003-477	Chain stich looper exchange pin
27	2150003-478	Chain stich looper exchange connecting rod
28	2150003-544	Exchange connecting rod collar
29	11509	Screw
30	2150003-481	Ring looper exchange spring
31	20204	Hexagon screw
32	2150003-475	Chain stich looper
33	60138	Washer
34	10941	Set screw
35	60106	Washer
36	2154013-483	Chain stich looper take-up lever
37	2154013-486	Chain stich looper thread guide
38	2150003-487	Spring cover
39	2150003-488	Spring
40	11055	Screw
41	40110	E-ring
42	60513	Washer
43	415 52 51-01	Washer
44	60107	Washer
48	20308	Screw ( from #389612)
<b>5</b> 0	0450000 500 0	· ·
50	2150002-509-C	Needle guide ass'y (from #389612)



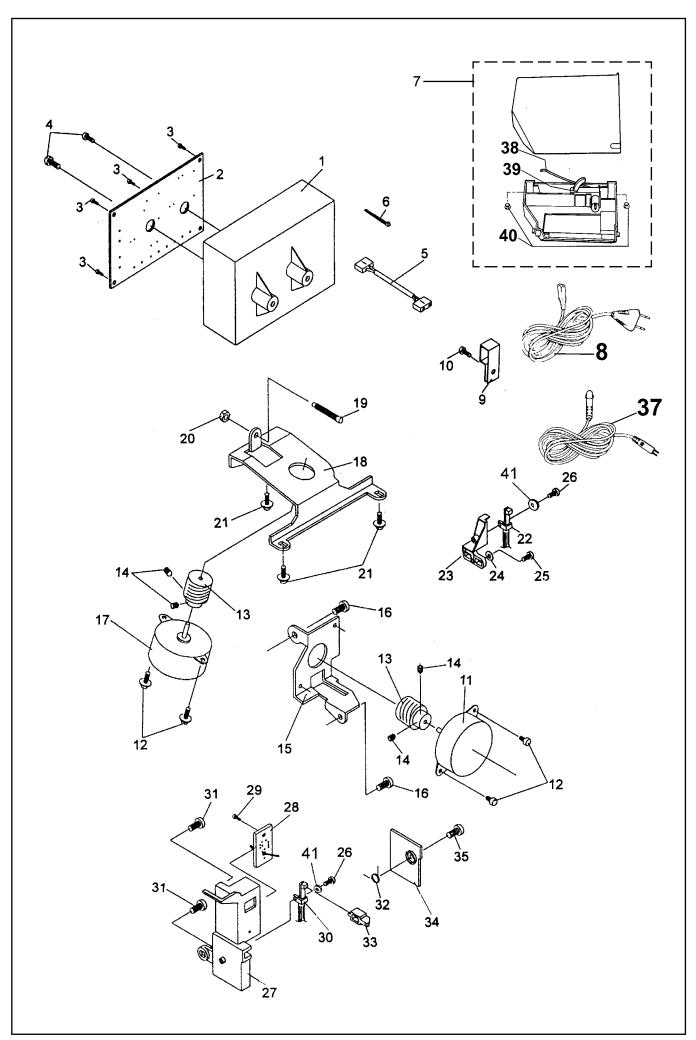
INDEX	REF. NO. NO.	PART NAME
1	2141004-220	Cutter stand shaft
2	1650004-696	Set screw for feed cam
3	2141004-229	Upper cutter
4	10941	Set screw
5	60138	Washer
6	2141004-233	Upper cutter lever
7	2141004-224	Upper cutter lever pin
8	9624504-407	Set screw
9	2141004-216	Cutter link (2)
10	2141004-218	Cutter link (2) pin
11	416 11 03-01	Washer
12	10124	E-Ring
13	10972	Screw
14	30410	Adjusting nut
15	60127	Washer ( to # 389611)
	60112	Washer (from #389612)
16	2141004-226	Cutter pressure spring
17	2141004-225	Cutter rotating dial
18	2141004-219	Cutter link shaft
19	40116	E-Ring
20	10131	Set screw
26	1650001-565-651	Stitch finger knob
27	2150004-237	Lower cutter
28	10945	Screw
29	416 10 54-01	Cutter-width adjusting dial
30	40104	E-Ring
31	2141004-234	Lower cutter spring
32	2141004-250	Lower cutter stand ass'y( to #389611)
00	2150004-250	Lower cutter stand ass'y (from #389612)
33	11934	Screw
34	2141004-423	Dial shaft bushing
35	2141004-431	Cutting-width adjusting cam
36 37	1650004-696	Set screw
37 38	1650004-424 90206	Position decided spring Position decided ball
39	2141004-422	Cutting-width adjusting dial bushing
40	60103	Washer
41	10146	Screw
71	10170	COLON



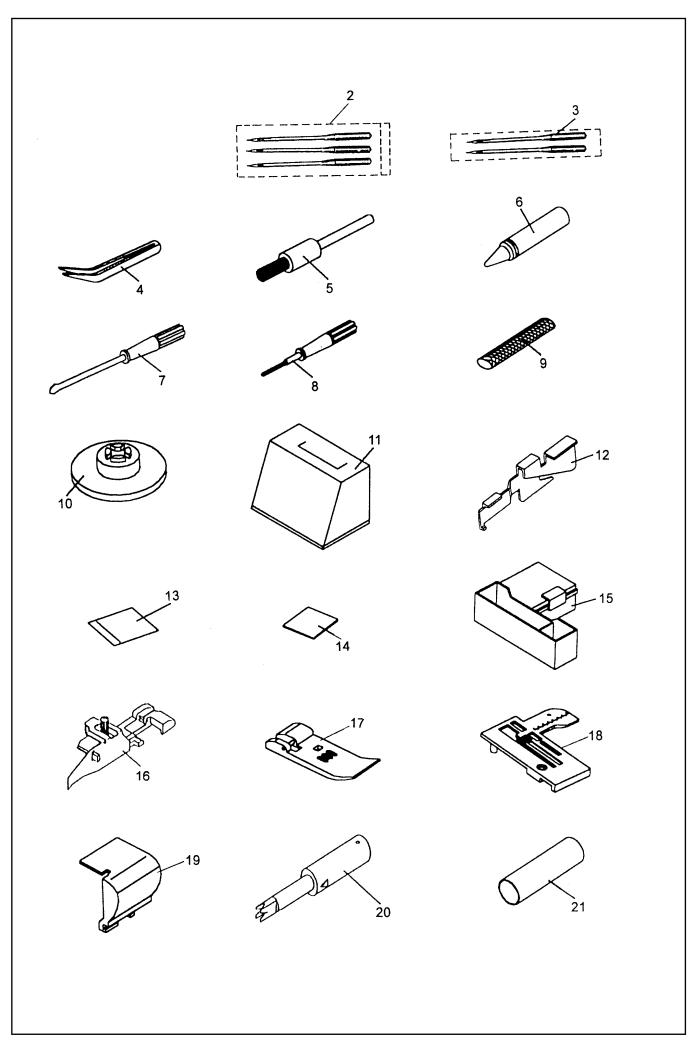
INDEX NO.	REF. NO.	PART NAME
1	2150004-621	Feed plate
2	2141004-629	Feed lifting block (3)
3	60507	Washer
4	2150004-622	Differential feed plate
5	10124	Set screw
6	2141004-656	Differential feed shaft collar (1)
7	2150004-643	Differential feed inter lever
8	60140	Washer
9	2150004-645	Differential adjusting lever
10	40104	E-Ring
11	10133	Set screw
12	2150004-614	Differential feed rod
13	2141004-637	Feed plate pin (1)
14	2150004-672	Differential feed rod pin
15	2150004-612	Differential feed dog
16	20210	Set screw
17	2141004-628	Feed adjusting plate
18	2150004-611	Feed dog
19	2150004-627	Block
20	2150004-641	Differential feed lever
21	10131	Set screw
22	2150004-623	Feed rod
23 24	2150004-637	Feed plate pin (2)
2 <del>4</del> 24	2141004-637 416 01 60-01	Feed plate pin (1) Washer
2 <del>4</del> 25	2141004-685	Differential feed plate shaft
26	10132	Set screw
27	2141001-657	Differential feed shaft collar (2)
28	10135	Set screw
29	2150004-687	Differential feed shaft
30	416 01 55-01	Differential feed shaft collar
31	10135	Set screw
32	40106	E-Ring
33	2150004-287	Feed cam
34	10124	Set screw



	REF. NO.	PART NAME
NO. 1	2144510 025	Motor (220, 240 volt)
Ī	2144518-835 2144508-835	Motor (230-240 volt)
2		Motor (120 volt) Cushion rubber
2	1650008-842	
3	2150008-844	Motor pulley
4 5	2150008-845	Motor pully stopper
	40110	E - Ring Motor bracket
6 7	2141008-824 60162	Washer
8	150008-825	Insulating ring (inside)
9	150008-825	Insulating ring (outside)
10	60159	Washer
11	30111	Nut
12	60205	Spring washer
13	20107	Hexagon screw
14	2150008-252	Speed sensor plate
15	60122	Washer
16	11934	Washer
17	2150008-253	Speed sensor cover
18	2144508-250	Speed sensor ass'y
19	10985	Screw
20	30108	Nut
21	2150008-843	Timing Belt
22	2144508-202	Control electric board
23	11203	Screw
24	2143008-285	Control electric board case
25	10981	Screw
26	2143008-286	Control electric board bracket
27	10978	Screw
28	2143018-381	Transformer (230-240 volt)
	2143008-381	Transformer (120 volt)
29	11912	Screw
30	2143008-848	Cord binder
31	2144508-110	Lighting set
32	2143008-116	Light bulb Set screw
33 34	10942 2150008-838	Terminal box
3 <del>4</del> 35	2144518-870	Switch ass'y (230-240 volt)
33	2144508-870	switch ass'y (120 volt)
36	2150008-836	Power supply plate
37	10964	Set screw
38	2144508-903	Repeating connector ass'y
	555 555	. Topodaning contribution doosy
40	2150008-837	End of controller
41	10986	Screw
42	2150008-846	Termial box holder plate



1 2144518-201 Electric board (220-240 Volt) 2 2141008-811 Electric board (120 volt) 2 2141008-811 Electric board case 3 11203 Screw 4 10955 Screw 5 2144508-860 Connecting electric cord 6 950008-848 Cord binder 7 412 31 41-01 Foot control 8 412 15 78-01 Cord device, stand 412 15 80-02 Cord device, UK 412 15 81-01 Cord device, Australia 9 150008-142 Cord guide plate 10 416 11 01-01 Set screw 11 2144508-243 Feed stepping motor ass'y 12 10940 Screw 13 2150008-211 Feed stepping motor bracket 16 10964 Screw 17 2144508-244 Differential stepping motor bracket 18 2150008-212 Differential stepping motor bracket 19 850004-730 Adjusting screw 20 30403 Adjusting screw 21 10961 Screw 22 2144508-190 Presser foot lifting switch ass'y 23 2150008-263 Upper stop sensor bracket 24 60138 Washer 25 11927 screw 26 416 11 02-01 Screw 27 2150008-263 Upper stop sensor bracket 28 2144508-260 Upper stop sensor bracket 39 11203 Screw 30 2144508-882 Switch button spring 30 2144508-882 Switch button spring 31 10981 Screw 37 412 31 44-01 Cable, standard 412 31 44-02 Cable USA, Can 38 412 15 80-01 Spring 39 412 31 89-01 Control unit	INDEX NO.	REF. NO.	PART NAME
2122508-201   Electric board (120 volt)		2144518-201	Electric board (220-240 Volt)
2         2141008-811         Electric board case           3         11203         Screw           4         10955         Screw           5         2144508-860         Connecting electric cord           6         950008-848         Cord binder           7         412 31 41-01         Foot control           8         412 15 78-01         Cord device, stand           412 15 80-02         Cord device, UK           412 15 81-01         Cord device, Australia           9         150008-142         Cord guide plate           10         416 11 01-01         Set screw           11         2144508-243         Feed stepping motor ass'y           12         10940         Screw           13         2150008-213         Feed stepping motor bracket           15         2150008-221         Fiferential stepping motor ass'y           16         10964         Screw           17         2144508-244         Differential stepping motor bracket           18         2150008-212         Differential stepping motor bracket           19         850004-730         Adjusting screw           20         30403         Adjusting screw           21         10961 <td></td> <td></td> <td></td>			
4         10955         Screw           5         2144508-860         Connecting electric cord           6         950008-848         Cord binder           7         412 31 41-01         Foot control           8         412 15 78-01         Cord device, stand           412 15 80-02         Cord device, UK           412 15 81-01         Cord device, Australia           9         150008-142         Cord guide plate           10         416 11 01-01         Set screw           11         2144508-243         Feed stepping motor ass'y           12         10940         Screw           13         2150008-213         Feed worm gear ass'y           15         2150008-211         Feed stepping motor bracket           16         10964         Screw           17         2144508-244         Differential stepping motor ass'y           18         2150008-212         Differential stepping motor bracket           19         850004-730         Adjusting screw           20         30403         Adjusting nut           21         10961         Screw           22         2144508-190         Presser foot lifting switch ass'y           23         2150008-1	2	2141008-811	
5         2144508-860         Connecting electric cord           6         950008-848         Cord binder           7         412 31 41-01         Foot control           8         412 15 78-01         Cord device, stand           412 15 79-01         Cord device, UK           412 15 80-02         Cord device, Australia           9         150008-142         Cord guide plate           10         416 11 01-01         Set screw           11         2144508-243         Feed stepping motor ass'y           12         10940         Screw           13         2150008-223         Feed worm gear ass'y           14         10135         Screw           15         2150008-211         Feed stepping motor bracket           16         10964         Screw           17         2144508-244         Differential stepping motor ass'y           18         2150008-212         Differential stepping motor bracket           19         850004-730         Adjusting screw           20         30403         Adjusting nut           21         10961         Screw           22         2144508-190         Presser foot lifting switch ass'y           23         2150008-	3	11203	Screw
6         950008-848         Cord binder           7         412 31 41-01         Foot control           8         412 15 78-01         Cord device, stand           412 15 80-02         Cord USA, Canada           412 15 81-01         Cord device, Australia           9         150008-142         Cord guide plate           10         416 11 01-01         Set screw           11         2144508-243         Feed stepping motor ass'y           12         10940         Screw           13         2150008-223         Feed worm gear ass'y           14         10135         Screw           15         2150008-211         Feed stepping motor bracket           16         10964         Screw           17         2144508-244         Differential stepping motor bracket           18         2150008-212         Differential stepping motor bracket           19         850004-730         Adjusting screw           20         30403         Adjusting screw           21         10961         Screw           22         2144508-190         Presser foot lifter holding plate           24         60138         Washer           25         11927         Scr			
7       412 31 41-01       Foot control         8       412 15 78-01       Cord device, stand         412 15 79-01       Cord USA, Canada         412 15 80-02       Cord device, UK         412 15 81-01       Cord device, Australia         9       150008-142       Cord guide plate         10       416 11 01-01       Set screw         11       2144508-243       Feed stepping motor ass'y         12       10940       Screw         13       2150008-223       Feed worm gear ass'y         14       10135       Screw         15       2150008-211       Feed stepping motor bracket         16       10964       Screw         17       2144508-244       Differential stepping motor bracket         19       850004-730       Adjusting screw         20       30403       Adjusting screw         21       10961       Screw         22       2144508-190       Presser foot lifter holding plate         24       60138       Washer         25       11927       screw         26       416 11 02-01       Screw         27       2150008-263       Upper stop sensor bracket         28			
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412 15 79-01 412 15 80-02 412 15 81-01 Cord device, UK 412 15 81-01 Cord device, Australia  9 150008-142 Cord guide plate  10 416 11 01-01 Set screw  11 2144508-243 Feed stepping motor ass'y  12 10940 Screw 13 2150008-223 Feed worm gear ass'y  14 10135 Screw 15 2150008-211 Feed stepping motor bracket  16 10964 Screw 17 2144508-244 Differential stepping motor ass'y  18 2150008-212 Differential stepping motor bracket  19 850004-730 Adjusting screw  20 30403 Adjusting nut 21 10961 Screw 22 2144508-190 Presser foot lifting switch ass'y  23 2150008-191 Presser foot lifter holding plate  4 60138 Washer 25 11927 Screw 26 416 11 02-01 Screw 27 2150008-263 Upper stop sensor bracket  28 2144508-260 Upper stop sensor bracket  29 11203 Screw 30 2144508-180 Front cover switch ass'y 31 10981 Screw 32 2141008-882 Switch button 34 2150008-827 Switch cover 35 10985 Screw  37 412 31 44-01 Cable, standard 412 31 44-02 Cable USA, Can 38 412 15 98-01 Spring			
412 15 80-02 412 15 81-01 Cord device, Australia  9	8		•
412 15 81-01			•
9			
10       416 11 01-01       Set screw         11       2144508-243       Feed stepping motor ass'y         12       10940       Screw         13       2150008-223       Feed worm gear ass'y         14       10135       Screw         15       2150008-211       Feed stepping motor bracket         16       10964       Screw         17       2144508-244       Differential stepping motor ass'y         18       2150008-212       Differential stepping motor bracket         19       850004-730       Adjusting screw         20       30403       Adjusting nut         21       10961       Screw         22       2144508-190       Presser foot lifting switch ass'y         23       2150008-191       Presser foot lifter holding plate         24       60138       Washer         25       11927       Screw         26       416 11 02-01       Screw         27       2150008-263       Upper stop sensor bracket         28       2144508-180       Front cover switch ass'y         31       10981       Screw         32       2141008-882       Switch button spring         33       2141008-883	a		
11         2144508-243         Feed stepping motor ass'y           12         10940         Screw           13         2150008-223         Feed worm gear ass'y           14         10135         Screw           15         2150008-211         Feed stepping motor bracket           16         10964         Screw           17         2144508-244         Differential stepping motor ass'y           18         2150008-212         Differential stepping motor bracket           19         850004-730         Adjusting screw           20         30403         Adjusting screw           20         30403         Adjusting screw           21         10961         Screw           22         2144508-190         Presser foot lifting switch ass'y           23         2150008-191         Presser foot lifter holding plate           24         60138         Washer           25         11927         screw           26         416 11 02-01         Screw           27         2150008-263         Upper stop sensor bracket           28         2144508-180         Front cover switch ass'y           31         10981         Screw           32			•
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13         2150008-223         Feed worm gear ass'y           14         10135         Screw           15         2150008-211         Feed stepping motor bracket           16         10964         Screw           17         2144508-244         Differential stepping motor ass'y           18         2150008-212         Differential stepping motor bracket           19         850004-730         Adjusting screw           20         30403         Adjusting nut           21         10961         Screw           22         2144508-190         Presser foot lifting switch ass'y           23         2150008-191         Presser foot lifter holding plate           24         60138         Washer           25         11927         screw           26         416 11 02-01         Screw           27         2150008-263         Upper stop sensor bracket           28         2144508-260         Upper stop sensor ass'y           29         11203         Screw           30         2144508-180         Front cover switch ass'y           31         10981         Screw           32         2141008-882         Switch button spring           33			
14         10135         Screw           15         2150008-211         Feed stepping motor bracket           16         10964         Screw           17         2144508-244         Differential stepping motor ass'y           18         2150008-212         Differential stepping motor bracket           19         850004-730         Adjusting screw           20         30403         Adjusting nut           21         10961         Screw           22         2144508-190         Presser foot lifting switch ass'y           23         2150008-191         Presser foot lifter holding plate           24         60138         Washer           25         11927         screw           26         416 11 02-01         Screw           27         2150008-263         Upper stop sensor bracket           28         2144508-260         Upper stop sensor ass'y           29         11203         Screw           30         2144508-180         Front cover switch ass'y           31         10981         Screw           32         2141008-882         Switch button spring           33         2141008-883         Switch button           34	13		Feed worm gear ass'y
16         10964         Screw           17         2144508-244         Differential stepping motor ass'y           18         2150008-212         Differential stepping motor bracket           19         850004-730         Adjusting screw           20         30403         Adjusting screw           21         10961         Screw           22         2144508-190         Presser foot lifting switch ass'y           23         2150008-191         Presser foot lifter holding plate           24         60138         Washer           25         11927         screw           26         416 11 02-01         Screw           27         2150008-263         Upper stop sensor bracket           28         2144508-260         Upper stop sensor ass'y           29         11203         Screw           30         2144508-180         Front cover switch ass'y           31         10981         Screw           32         2141008-882         Switch button spring           33         2141008-883         Switch button           34         2150008-827         Switch button           35         10985         Screw           37         412 31 4	14	10135	-
17       2144508-244       Differential stepping motor ass'y         18       2150008-212       Differential stepping motor bracket         19       850004-730       Adjusting screw         20       30403       Adjusting nut         21       10961       Screw         22       2144508-190       Presser foot lifting switch ass'y         23       2150008-191       Presser foot lifter holding plate         24       60138       Washer         25       11927       screw         26       416 11 02-01       Screw         27       2150008-263       Upper stop sensor bracket         28       2144508-260       Upper stop sensor ass'y         29       11203       Screw         30       2144508-180       Front cover switch ass'y         31       10981       Screw         32       2141008-882       Switch button spring         33       2141008-883       Switch button         34       2150008-827       Switch cover         35       10985       Screw          37       412 31 44-01       Cable, standard         412 31 44-02       Cable USA, Can         38       412 15 98-01	15	2150008-211	Feed stepping motor bracket
18       2150008-212       Differential stepping motor bracket         19       850004-730       Adjusting screw         20       30403       Adjusting nut         21       10961       Screw         22       2144508-190       Presser foot lifting switch ass'y         23       2150008-191       Presser foot lifter holding plate         24       60138       Washer         25       11927       screw         26       416 11 02-01       Screw         27       2150008-263       Upper stop sensor bracket         28       2144508-260       Upper stop sensor ass'y         29       11203       Screw         30       2144508-180       Front cover switch ass'y         31       10981       Screw         32       2141008-882       Switch button spring         33       2141008-883       Switch button         34       2150008-827       Switch cover         35       10985       Screw         37       412 31 44-01       Cable, standard         412 31 44-02       Cable USA, Can         38       412 15 98-01       Spring			
19       850004-730       Adjusting screw         20       30403       Adjusting nut         21       10961       Screw         22       2144508-190       Presser foot lifting switch ass'y         23       2150008-191       Presser foot lifter holding plate         24       60138       Washer         25       11927       screw         26       416 11 02-01       Screw         27       2150008-263       Upper stop sensor bracket         28       2144508-260       Upper stop sensor ass'y         29       11203       Screw         30       2144508-180       Front cover switch ass'y         31       10981       Screw         32       2141008-882       Switch button spring         33       2141008-883       Switch button         34       2150008-827       Switch cover         35       10985       Screw         37       412 31 44-01       Cable, standard         412 31 44-02       Cable USA, Can         38       412 15 98-01       Spring			
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22       2144508-190       Presser foot lifting switch ass'y         23       2150008-191       Presser foot lifter holding plate         24       60138       Washer         25       11927       screw         26       416 11 02-01       Screw         27       2150008-263       Upper stop sensor bracket         28       2144508-260       Upper stop sensor ass'y         29       11203       Screw         30       2144508-180       Front cover switch ass'y         31       10981       Screw         32       2141008-882       Switch button spring         33       2141008-883       Switch button         34       2150008-827       Switch cover         35       10985       Screw         37       412 31 44-01       Cable, standard         412 31 44-02       Cable USA, Can         38       412 15 98-01       Spring			•
23       2150008-191       Presser foot lifter holding plate         24       60138       Washer         25       11927       screw         26       416 11 02-01       Screw         27       2150008-263       Upper stop sensor bracket         28       2144508-260       Upper stop sensor ass'y         29       11203       Screw         30       2144508-180       Front cover switch ass'y         31       10981       Screw         32       2141008-882       Switch button spring         33       2141008-883       Switch button         34       2150008-827       Switch cover         35       10985       Screw         37       412 31 44-01       Cable, standard         412 31 44-02       Cable USA, Can         38       412 15 98-01       Spring			
24       60138       Washer         25       11927       screw         26       416 11 02-01       Screw         27       2150008-263       Upper stop sensor bracket         28       2144508-260       Upper stop sensor ass'y         29       11203       Screw         30       2144508-180       Front cover switch ass'y         31       10981       Screw         32       2141008-882       Switch button spring         33       2141008-883       Switch button         34       2150008-827       Switch cover         35       10985       Screw         37       412 31 44-01       Cable, standard         412 31 44-02       Cable USA, Can         38       412 15 98-01       Spring			- · · · · · · · · · · · · · · · · · · ·
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29	27	2150008-263	Upper stop sensor bracket
30       2144508-180       Front cover switch ass'y         31       10981       Screw         32       2141008-882       Switch button spring         33       2141008-883       Switch button         34       2150008-827       Switch cover         35       10985       Screw         37       412 31 44-01       Cable, standard         412 31 44-02       Cable USA, Can         38       412 15 98-01       Spring	28	2144508-260	Upper stop sensor ass'y
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32 2141008-882 Switch button spring 33 2141008-883 Switch button 34 2150008-827 Switch cover 35 10985 Screw  37 412 31 44-01 Cable, standard 412 31 44-02 Cable USA, Can 38 412 15 98-01 Spring			•
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37 412 31 44-01 Cable, standard 412 31 44-02 Cable USA, Can 38 412 15 98-01 Spring			
412 31 44-02 Cable USA, Can 38 412 15 98-01 Spring	33	10905	Sciew
412 31 44-02 Cable USA, Can 38 412 15 98-01 Spring	37	412 31 44-01	Cable, standard
38 412 15 98-01 Spring			•
· •	38		·
	39	412 31 89-01	Control unit



INDEX NO.	REF. NO.	PART NAME	
2	411 31 04-01	Needle 5x 80 #	
	411 31 05-01	Needle 10x 80#	
3	411 31 06-01	Needle 5 x 90 #	
	411 31 07-01	Needle 10 x 90 #	
4	2141009-191	Tweezers	
5	401 55 55-01	Cleaning brush	
6	1650009-842	Oiler	
7	412 38 15-01	Driver L	
8	411 66 89-01	Hexagon driver 1,5 mm	
9	1250009-192	Net	
10	1350002-198	Spool adapter	
11	2141009-112	Vinyl cover	
12	1651003-435	2-Thread overlock convertor -	( up to #389611)
13	150012-483	Plastic bag	
14	2141009-844	Needle holder	
15	2141001-350	Accessory box	
16	2141002-730	Multipurpose foot	
17	2150012-510	Presser foot	( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (
18	2150011-501	Needle plate	22
19	2150001-124-651	Cutter cover -C	
20	2150002-486	Thread piercer	
21	412 35 56-01 Accessories	Sleeve, light bulb change	Elizabeth Barrens Constitution of the constitu
22	2141002-501	Pearl foot	23
23	2141002-502	Gathering foot	23
24	2141002-407	Elastic foot	
25	2141002-408	Piping foot - large	
26	2141012-408	Piping foot - small	
	2154002-701	Clear foot	
	2141001-154	Waste tray	24
	416 01 71-01	by pass for thread guide E	<del>-</del> ·
	412 53 31-01	Instruction book - Swe	
	412 53 31-01	Instruction book - Swe	. William
	412 53 31-00	Instruction book - Fin	
	412 53 31-21	Instruction book - Nor	
	412 53 31-26	Instruction book - Eng	25
	412 53 31-20	Instruction book - Fra	25
	412 53 31-36	Instruction book - Dutch	
	412 53 31-41	Instruction book - Ita	
	412 53 31-46	Instruction book - Spa	
	412 53 31-51	Instruction book - Ger	
	412 53 31-56	Instruction book - Russian	
			26