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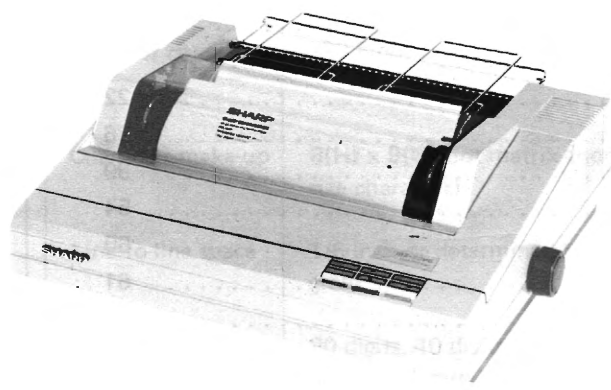
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MZ-80P6

# SHARP SERVICE MANUAL

"KUMA"

PDSM881009-MZ



## Dot Printer MODEL MZ-80P6

### FEATURES

- **Printing paper**      4 to 10 inch width fanfold paper and 8.3 to 8.5 inch width sheet paper.
- **Character printing**      Four character sizes are possible.
- **Bit image printing**      Printing is possible with dot units.
- **Paging**      Number of lines printed on 1 page can be determined.
- **Tabulation**      Both vertical and horizontal tabulation control is possible.
- **Feed**      Switch for line by line paper feed and paper feed in page units.  
Control is also possible through software.
- **Copies**      Simultaneous copies, up to 3 pages including the original, are possible.
- **Alarm bell**      Alarm bell sounds to warn the user of mechanical trouble, lack of printing paper, etc.
- **Bi-directional printing**      Along with bi-directional printing, there is very effective printing thanks to the use of logical seeking. (Except for bit image printing or for non line space mode)
- **Printing ribbon**      It can be easily put in and taken out without getting ones hands dirty because a special cartridge ribbon is used.

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# SPECIFICATIONS

## ■ General

Item	Specification	Item	Specifications
Printing method	Serial impact dot matrix	Printing paper	Fanfold paper (4–10 inch wide). Cut paper sheet (8.3–8.5 inch wide)
Feed method	Variable sprocket feed or friction feed selectable manually	Copies	Max. of 3 copies (including original)
Kinds of characters	230 kinds	Printing paper thickness	Within 0.3mm
Character make-up	8(H) x 9(W) dot matrix (normal size character)	Ink ribbon	Special cartridge ribbon
Line-to-line space	1/6 inch or determined by program	Head life	Approx. 50 million characters (14 dot character printing)
No. of digits	80 digits, 40 digits, 136 digits, 68 digits or determined by program	Interface	8 bit parallel interface
Page	66 lines/page (line space mode) or determined by program	Power supply	AC 220V ±10% 50Hz AC 240V ± 10% 50Hz
Printing speed	80 cps (characters per second) (ordinary size characters)	Power consumption	75W
Printing direction	Bi-direction for line space mode of character printing. Uni-direction for bit image printing and non line space mode of character printing.	Working temperature	5 to 35°C
		Storage temperature	-20 to 50°C
		External dimensions	Approx. 377(W)x 352(D) x 105(H)mm (including an assistant guide)
		Weight	Approx. 7.2 kg

## ■ CPU Board Section

Item	Specifications
CPU	8085A (Data process I/O) 8039P-6 (Step motor control)
ROM	2732* (8085A control and CG-ROM) 2716 (8039P-6 control ROM)
I/O counter IC	8155
Other IC's	17
Head drive TR	2SD986 x 8
Step motor TR	2SD986 x 8

## ■ Power Supply Unit

Item	Specifications
Input	AC 220V ±10% 50Hz AC 240V ±10% 50Hz
Output	DC 26V (21.5 to 26.5V) DC 15V . DC 5V

\*ROM 2732 (IC16) is not standard and needs to be **ordered separately** because the programs being stored are different by the computer to be connected.

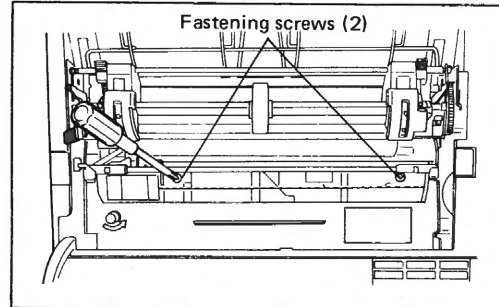
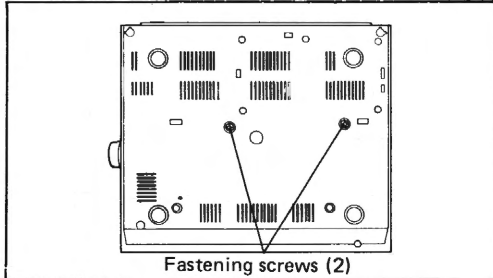
### Types of ROM

Host computer	Applicable model of ROM
MZ-80B	MZ-8BP5R
MZ-80K	MZ-8KP5R (Under development)
MZ-80A (Under development)	MZ-8AP5R (Under development)

Note: Specifications and appearance are subject to change without prior notice for improvement. In such a case, the explanation here may be a little different from the product.

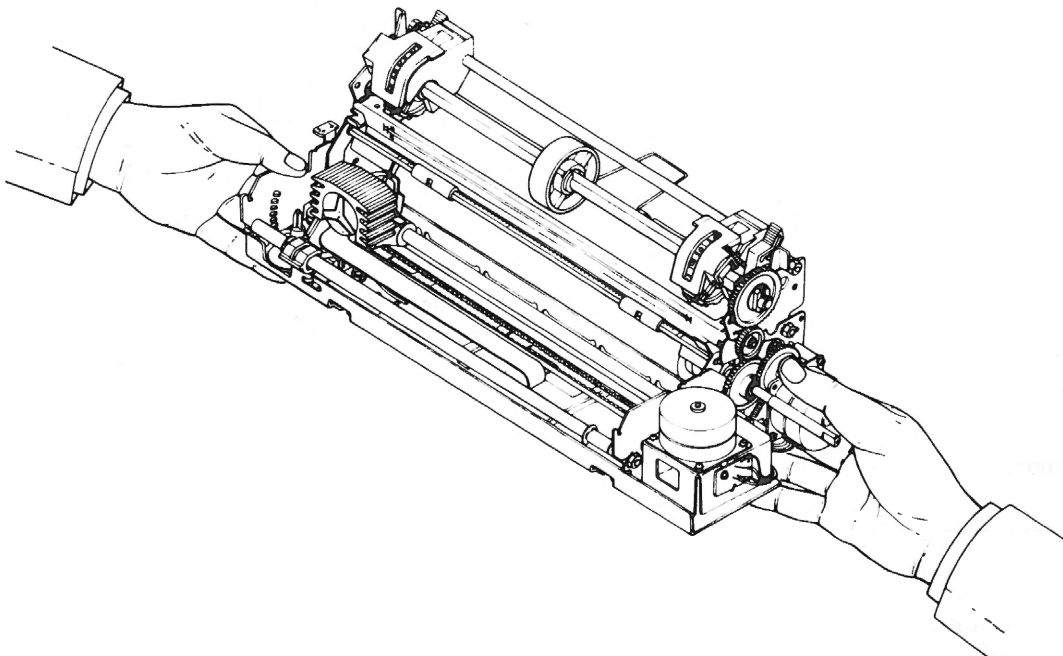
# PRECAUTIONS BEFORE SERVICING

- The printer mechanism is fixed to the chassis with four screws to keep it from being damaged by vibration, etc. during transport. Remove these screws when using, maintaining or repairing the printer.  
Fix the mechanism again with these screws when transporting the printer.



## Remove the fastening screws

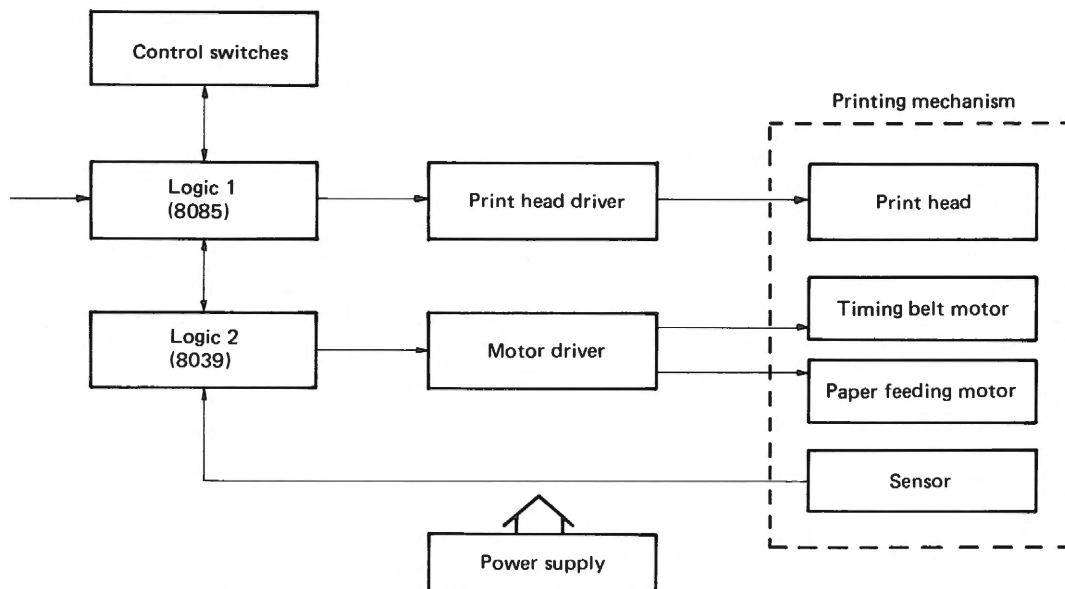
- Do not apply external force to the print head, such as by touching it when it is operating.
- The print head becomes very hot so do not touch it with your hand until it cools down sufficiently.
- Do not print when the ink ribbon is loose.
- When servicing and checking a printer that has been used for a long time, remove dirt, fuzz and dust from the inside, and oil the mechanism.
- There are two types of oil, G2 and O2. Use the proper oil for each oil point. (Refer to page 63, 64 for oil points.)
- There are screws and nuts which are fixed and then locked with paint for vibration-proof etc. during transport. Paint the screws to lock them after disassembling and replacing new parts. (Refer to page 63, 64 for the points to be painted to lock the screws.)
- To hold the printer mechanism only, hold at the points illustrated below. Especially do not hold the paper sensing device and the paper guide section.



# EXPLANATION OF MZ-80P6

## Construction

Model MZ-80P6 consists of a logic 1, logic 2, print head driver, motor driver, printing mechanism, control switches, and power supply, as illustrated below.

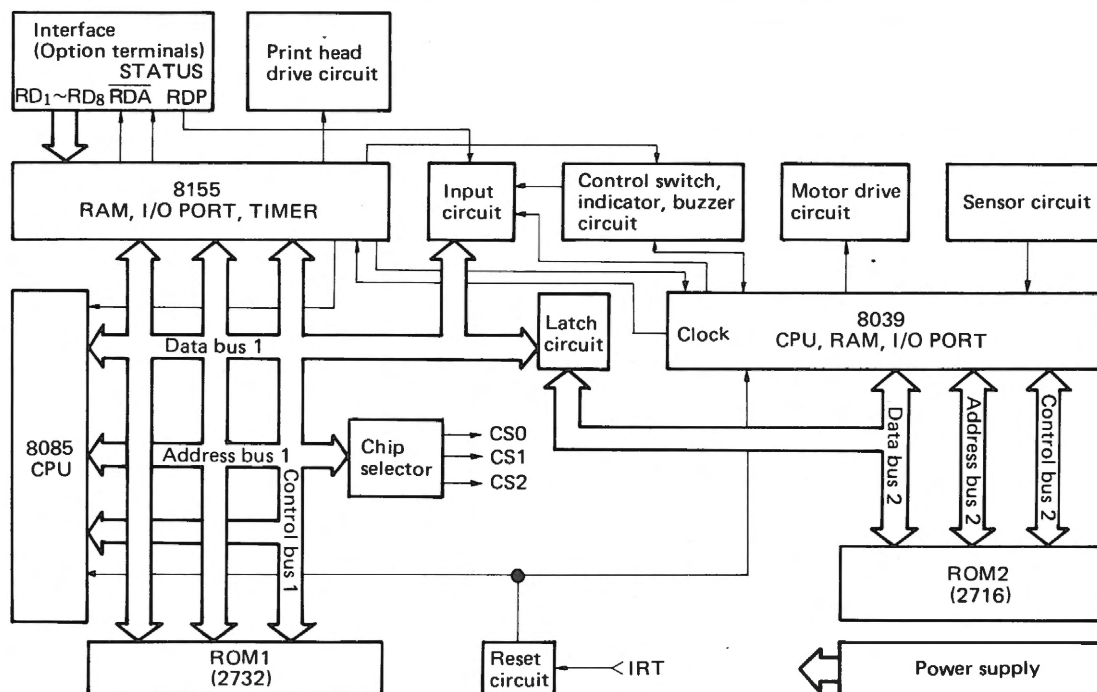


## Explanation of Logics and Drivers

### 1. Block diagram

The printer employs two microprocessors, 8085 and 8039. The former is primarily used for data process and print head control, and the latter for stepping motor control and control switch input process. Employed external ROM's are 2732 and 2716. The former stores processing programs and condensed characters for the microprocessor 8085, and the latter processing programs for 8039.

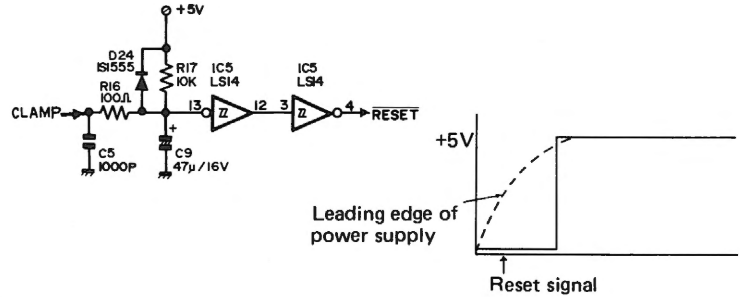
The 8155 is a RAM with I/O ports and counter/timer and used in conjunction with the 8085. Its capacity is 256 bytes of which 136 bytes are used for storing data and the rest for a work area. The I/O ports are connected to the parallel interface, print head drive circuit, control bus to the 8039, and display circuit. The 8039 incorporates I/O ports and RAM (128 bytes), and connected to the stepping motor drive circuit, external sensor circuit, and control bus from the 8085, through the I/O ports. The RAM is used as a work area.



## 2. Reset circuit

### (1) At switching on of power supply

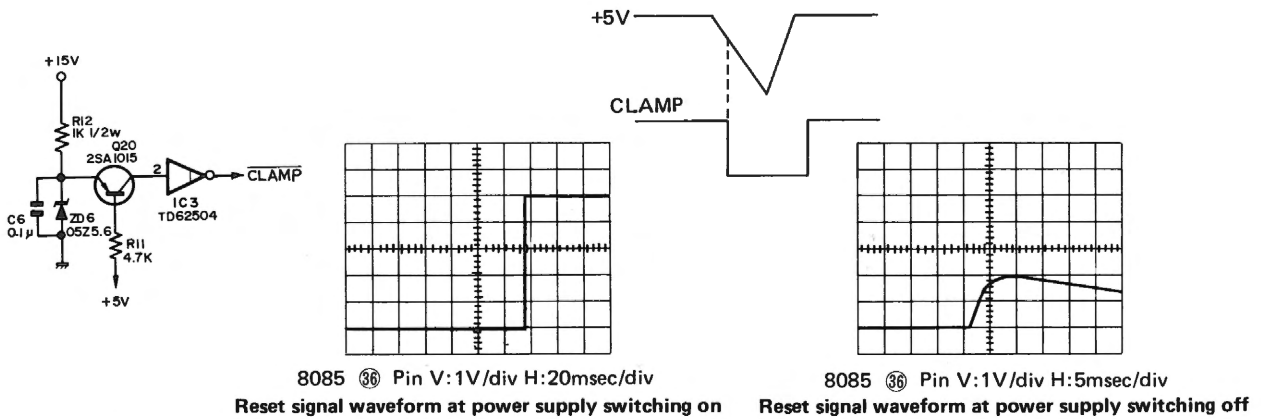
The circuit forms a reset signal by making use of a charging time of a resistor R17 (10K $\Omega$ ) and a capacitor C9 (47 $\mu$ F) and resets IC13 8085, IC12 8155, and IC21 8039.



### (2) At momentary interruption and turning off of power supply

If +5V power supply is reduced below approx. 4V, the clamping circuit is actuated to form a reset signal. Whereby, all the circuits are reset at momentary power supply interruption to protect the programs and drive circuits from the voltage drop of the +5V line.

When the power supply is turned off, a reset signal is generated at the same time of interruption to protect the drive circuits from faulty operation due to the residual voltage determined by the time constant of the power supply.



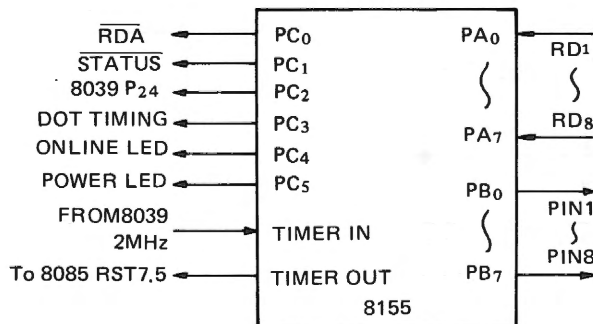
## 3. 8155 (256 bytes RAM, with I/O ports and timer)

136 bytes of the RAM in the 8155 are used for the character code storage area of one line character codes and the rest for a working area.

Data ( $RD_1$  to  $RD_8$ ) from the parallel interface is input from the I/O ports ( $PA_0$  to  $PA_7$ ) and stored in the accumulator of the 8085 where it is identified whether the data is character data, control code, code other than those listed in character code table, or image print data. If the data are character data, they are stored in the above mentioned RAM up to one line. When one line data are accumulated, the 8085 reads dot patterns corresponding to the character data from the character generator (2732) and outputs the pattern to the  $PB_0$  to  $PB_7$  of the 8155. With the image print data, they are not stored in the RAM but are output to  $PB_0$  to  $PB_7$  in every one piece of data.

When character printing data are input and being printed, an available space is judged and the bi-directional shortest printing is made. In the image printing and the condensed mode, the mono-directional quick return printing is employed.

The 8155 has also a function of the timer and the timing of half dot is formed by receiving clock signal (2MHz) from the 8039.

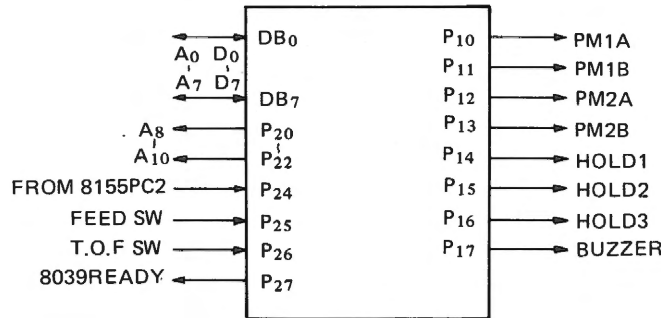


#### 4. 8039 (CPU with 128 bytes RAM and I/O ports)

The 8039 is used primarily for controlling the stepping motor. It outputs control signals from P<sub>10</sub> to P<sub>17</sub>. PM1A and PM1B are a driving pulse of the timing belt motor, and HOLD1 and HOLD2 control the timing belt motor to select normal characters (80 characters/line) or condensed characters (136 characters/line). PM2A, PM2B, and HOLD3 control the paper feeding motor. These functions are generated by decoding control data from the 8085, input to DB<sub>0</sub> to DB<sub>7</sub>.

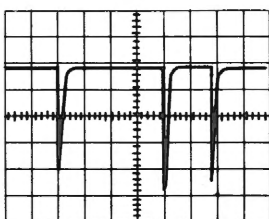
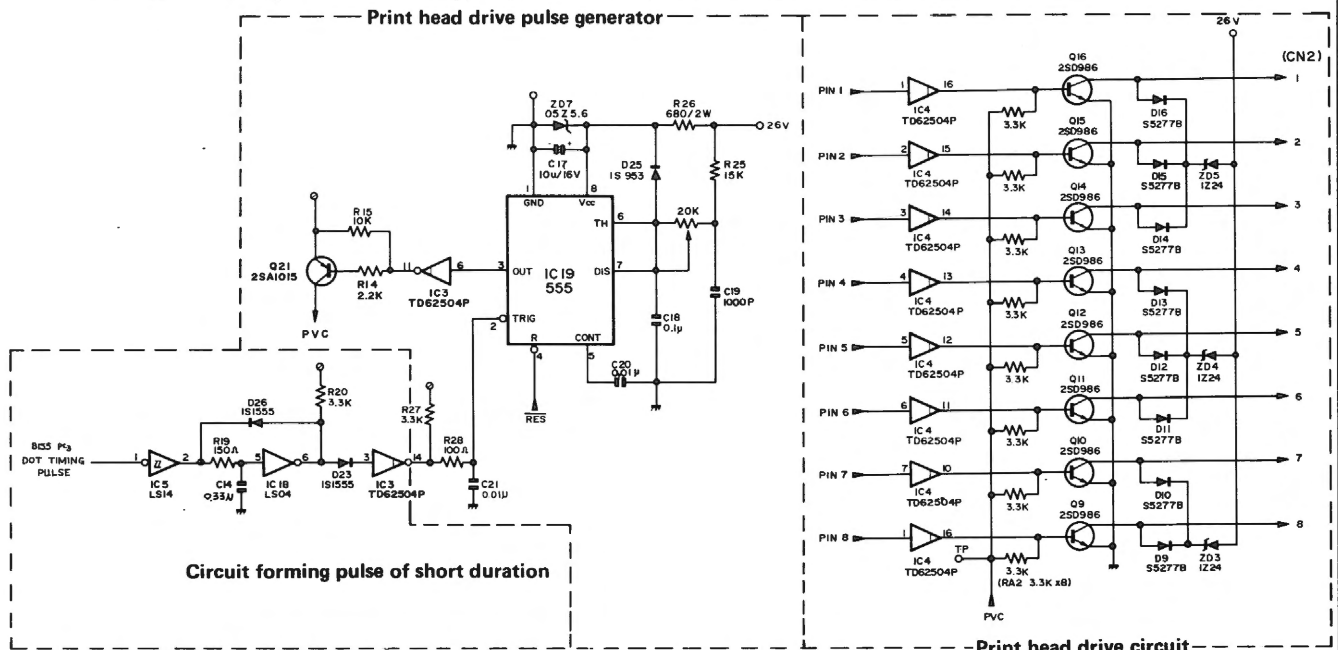
Signals for data communication between 8085 and 8039 are input to and output from P<sub>24</sub> (from 8155 PC<sub>2</sub>) and P<sub>27</sub> (8039 READY).

Square wave of 2KHz for signaling the buzzer is output from P<sub>17</sub>.

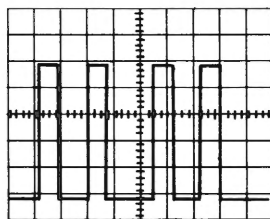


#### 5. Print head drive circuit

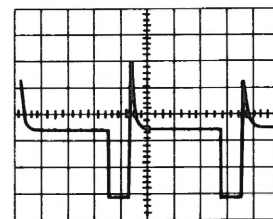
If dot pattern and dot timing pulse are output from I/O port IC8155, electric current flows through the print head. Dot timing pulse triggers the 555 through a circuit for generating short duration pulse to produce print head drive pulse of 400μsec (at a power supply voltage of 24V). The print head drive pulse is pulse-duration modulated with a power supply voltage of 26V (the pulse-duration is reduced at high power supply voltage and increased at low voltage), and the energy supplied to the print head is whereby constant.



V:1V/div H:500μsec/div  
Waveform (at test printing) at 555 ② pin



V:1V/div H:500μsec/div  
Waveform at test point (at test printing)

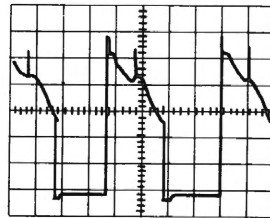


V:10V/div H:500μsec/div  
CN2 ① to ⑧ terminals (at test printing)

## 6. Timing belt motor drive circuit

When HOLD1 signal is low and HOLD2 signal high, the Q18 2SB743 is turned on and the Q19 2SB743 is turned off to pass +26V current through the stepping motor. In this case, the mode is 80-characters/line. Contrarily, when HOLD1 signal is high and HOLD2 signal is low, current of +15V flows and the mode is 136-characters/line. In both modes, the print head is driven from left to right, or vice versa by transmitting motor drive sequence pulse to PM1A and PM1B.

If both HOLD1 and HOLD2 signals are turned high, both Q18 and Q19 are turned off and a holding current flows through the stepping motor through the R2 (120Ω/5W). The intention of the holding current is to prevent the step-out of the stepping motor due to vibration etc. while the stepping motor is standing still.

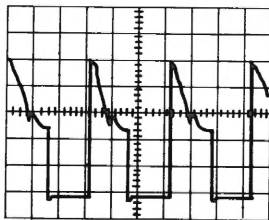


V:10V/div H:2msec/div

CN2 (21) to (24) terminals (At test printing)

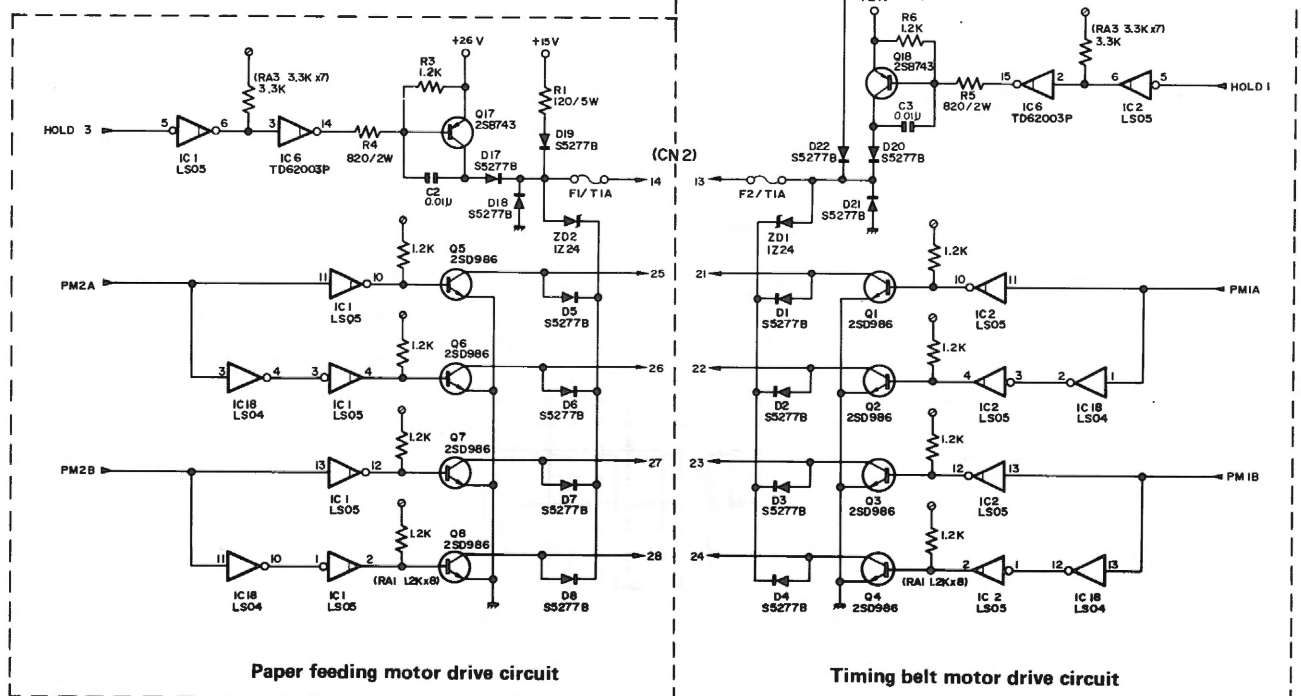
## 7. Paper feeding motor drive circuit

When HOLD3 signal turns low, the Q17 is turned on to pass a current of +26V through the stepping motor. In this situation, paper is fed by transmitting motor drive sequence pulse to PM2A and PM2B. When HOLD3 signal is high, a holding current is passed through the R1 (120Ω/5W).



V:10V/div H:5msec/div

CN2 (25) to (28) terminals (At test printing)

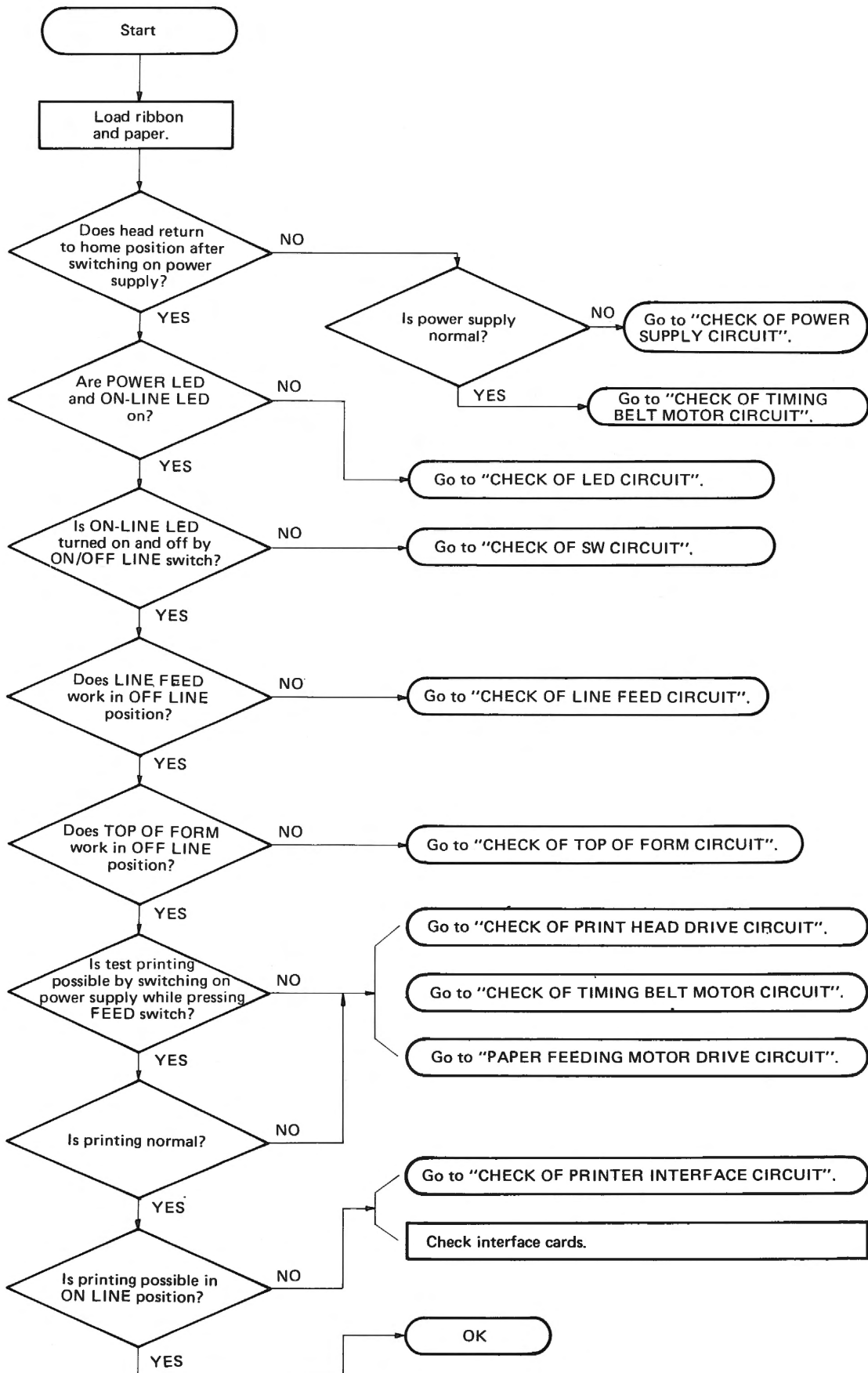


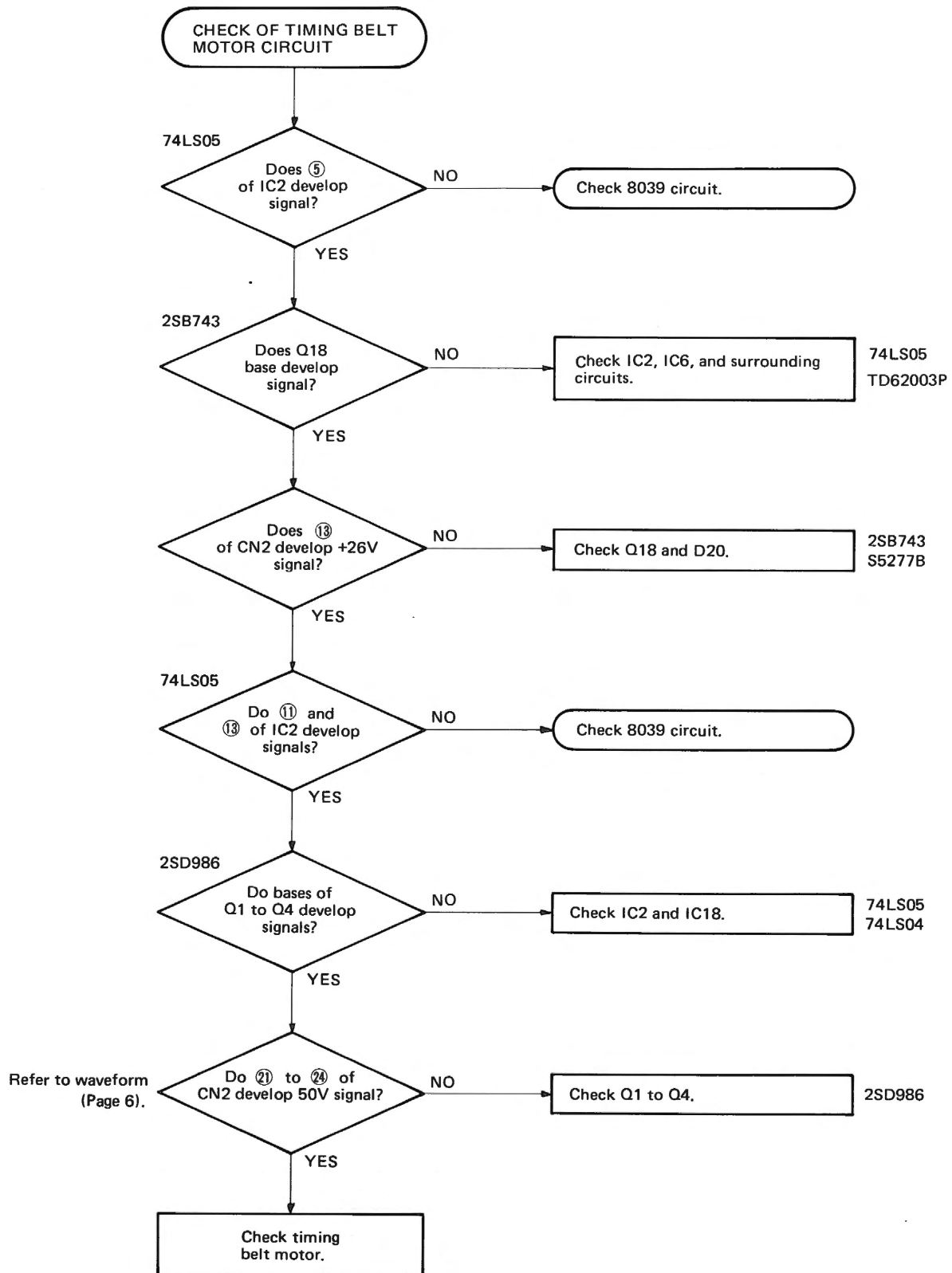
Paper feeding motor drive circuit

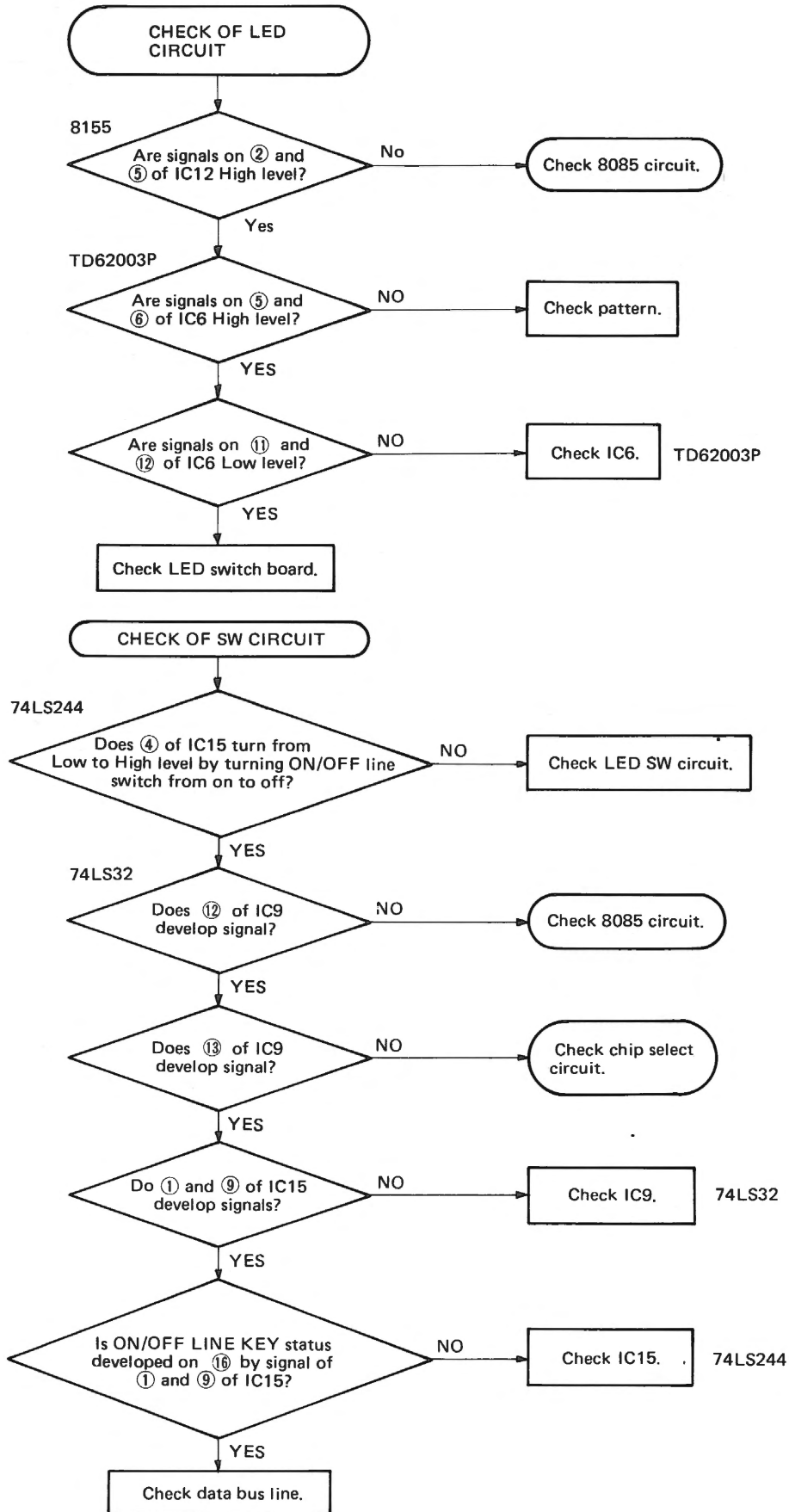
Timing belt motor drive circuit



# TROUBLESHOOTING CPU BOARD







CHECK OF PAPER FEEDING MOTOR DRIVE CIRCUIT

CHECK OF LINE FEED CIRCUIT

CHECK OF TOP OF FORM CIRCUIT

TC40H004P

Does ⑨ of IC19 turn Low or High level by on or off of FEED SW?

NO

Check LED SW board. Check R30, R33, and C25.

YES

Does ⑧ of IC19 turn High or Low level by on or off FEED SW?

NO

Check IC19. TC40H004P

YES

Does ⑤ of IC19 turn Low or High by on or off of TOP OF FORM SW?

NO

Check LED SW board. Check R29, R32, and C24.

YES

Does ⑥ of IC19 turn High or Low by on or off of TOP OF FORM SW?

NO

Check IC19.

YES

74LS05

Does ⑤ of IC1 develop signal?

NO

Check 8039 circuit.

YES

2SB743

Does base of Q17 develop signal?

NO

Check IC1, IC6, and surrounding circuits.

YES

Does ⑭ of CN2 develop +26V signal?

NO

Check Q17 and D18.

YES

Do ⑪ and ⑬ of IC1 develop signals?

NO

Check 8039 circuit.

YES

2SD986

Do bases of Q5 to Q8 develop signals?

NO

Check IC1, and IC18.

YES

Do ⑳ to ㉓ of CN2 develop +50V signal?

NO

Check Q5 to Q8.

YES

Check paper feeding motor.

Refer to waveform (Page 6)

74LS05 TD62003P

2SB743 S5277B

74LS05 74LS04

2SD986

CHECK OF PRINT HEAD DRIVE CIRCUIT

74LS14

Does ① of IC5 develop signal? NO → Check 8085 circuit.

YES

555

Is ④ of IC19 High level? NO → Check reset circuit.

YES

Does ② of IC19 develop signal? NO → Check timing pulse generator circuit.

YES

Does ③ of IC19 develop signal? NO → Check IC19 and surrounding circuits.

555

YES

Does TP develop +5V signal? NO → Check IC3 and Q21.

TD62504P  
2SA1015

YES

TD62504P

Do ① to ⑧ of IC4 develop signals? NO → Check 8085 circuit.

YES

2SD986

Do ① to ⑧ of CN2 develop +50V signal? NO → Check Q9 to Q16.

2SD986

YES

Refer to waveform (Page 5).

Check print head.

CHECK OF PRINTER INTERFACE CIRCUIT

Is interface card connected? NO → Connect cable.

YES

74LS244

Are in/out signals of IC11 same? NO → Check IC11.

74LS244

YES

75189

Does ⑧ of IC10 develop signal? NO → Check IC10.

75189

YES

TD62504P

Is ⑧ of IC3 High level? NO → Check 8085 circuit.

YES

Is ⑫ of IC3 Low level? NO → Check IC3.

TD62504P

YES

Is ④ of IC3 High level? NO → Check 8085 circuit.

YES

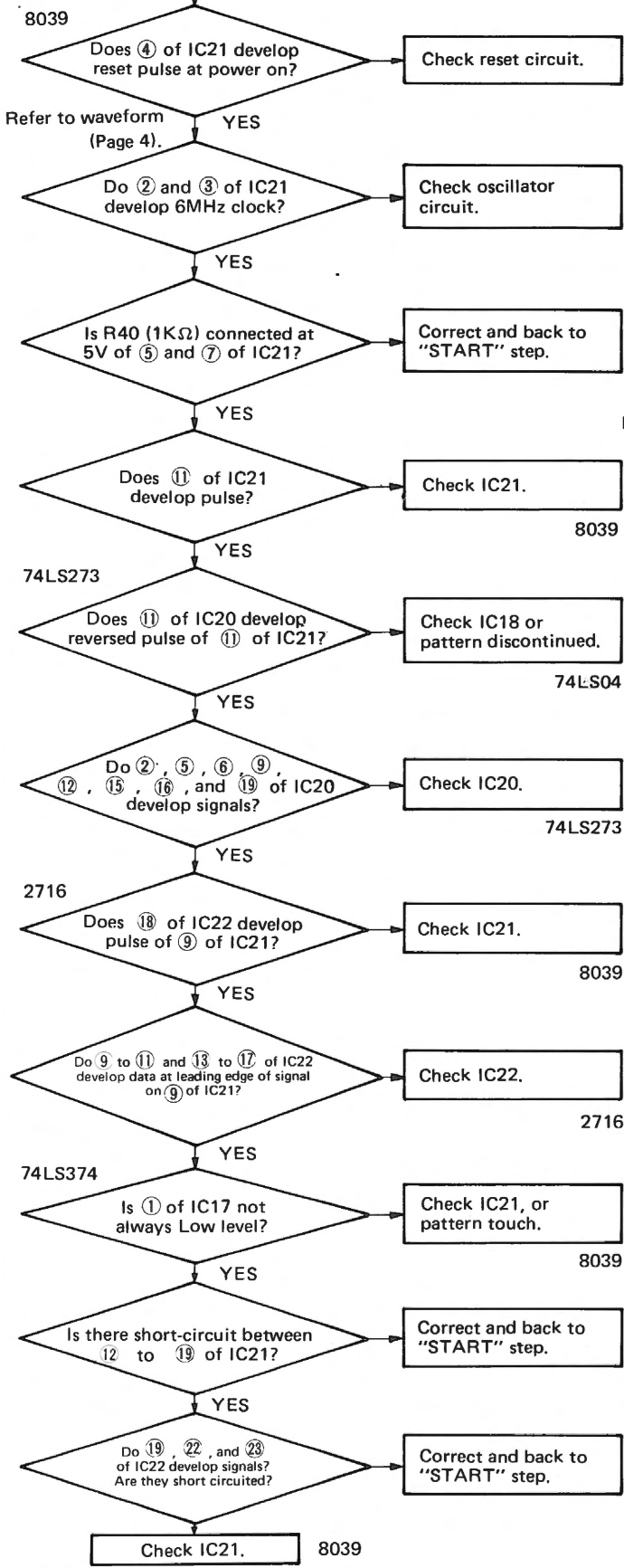
Is ⑬ of IC3 Low level? NO → Check IC3.

TD62504P

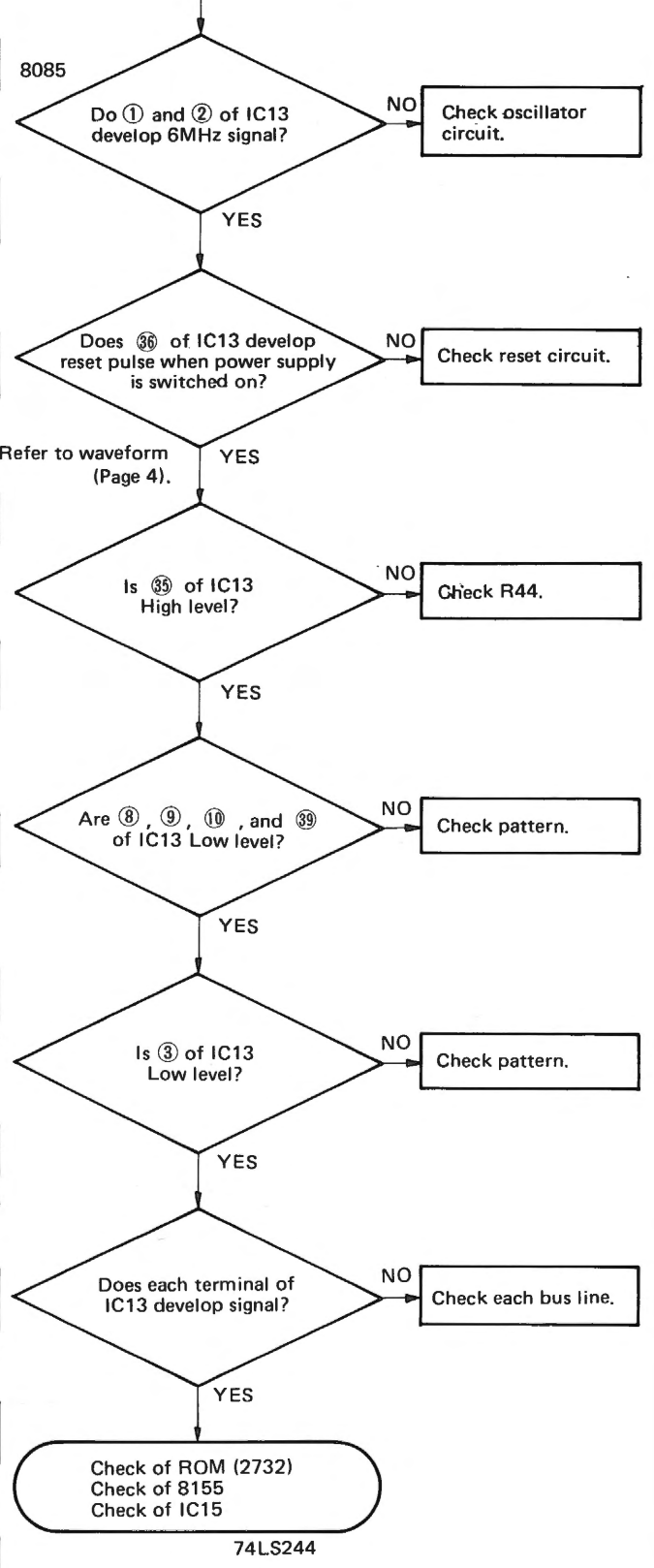
YES

Check 8085 circuit.

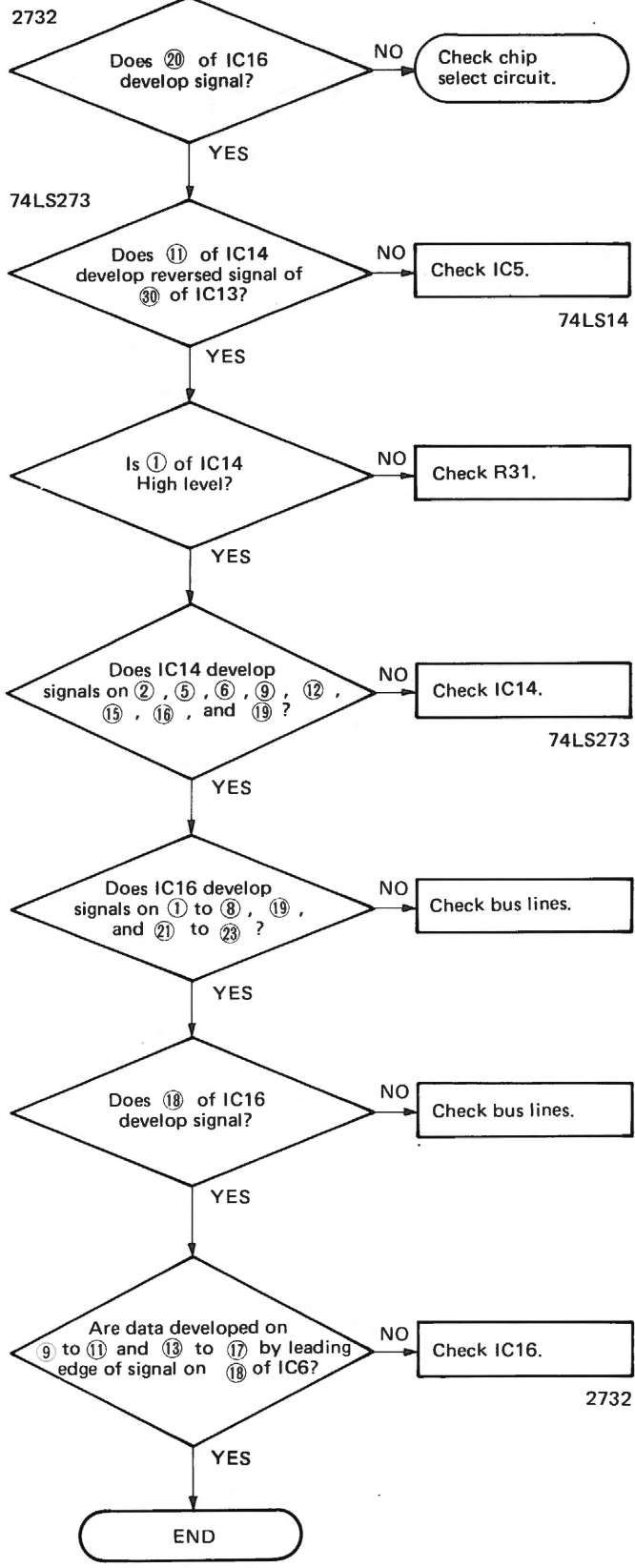
**ASSOCIATION WITH 8039 CIRCUIT**



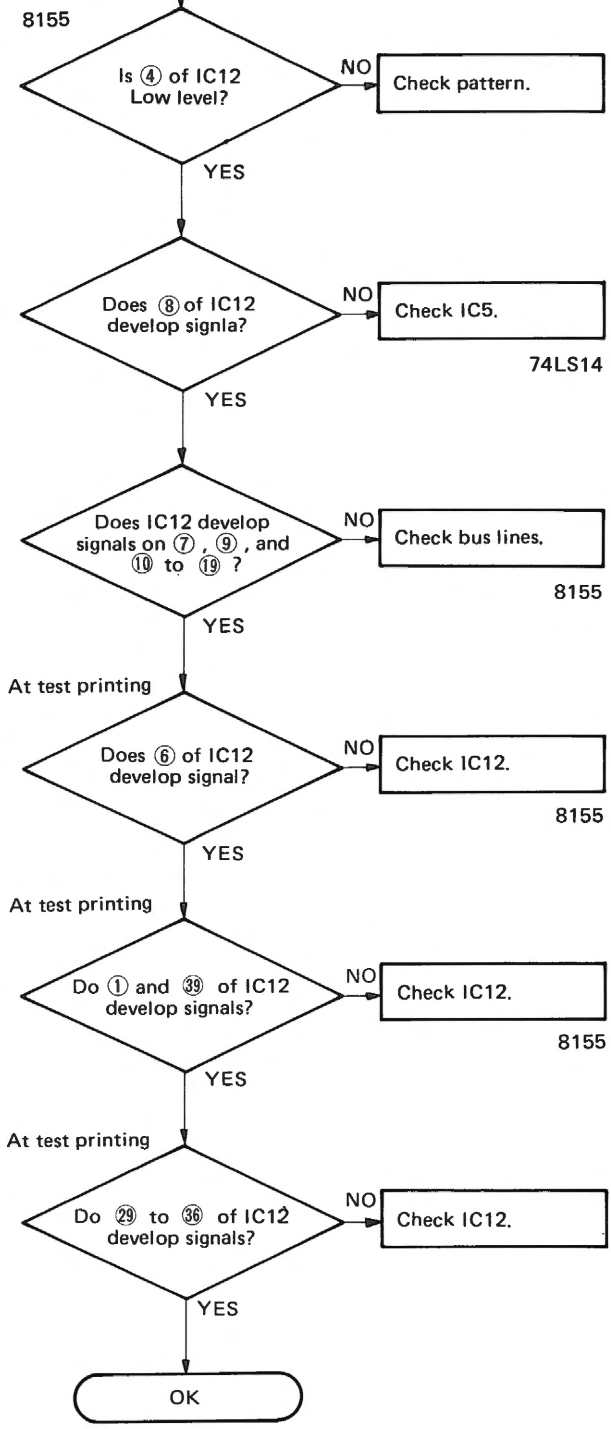
**CHECK OF 8085 CIRCUIT**

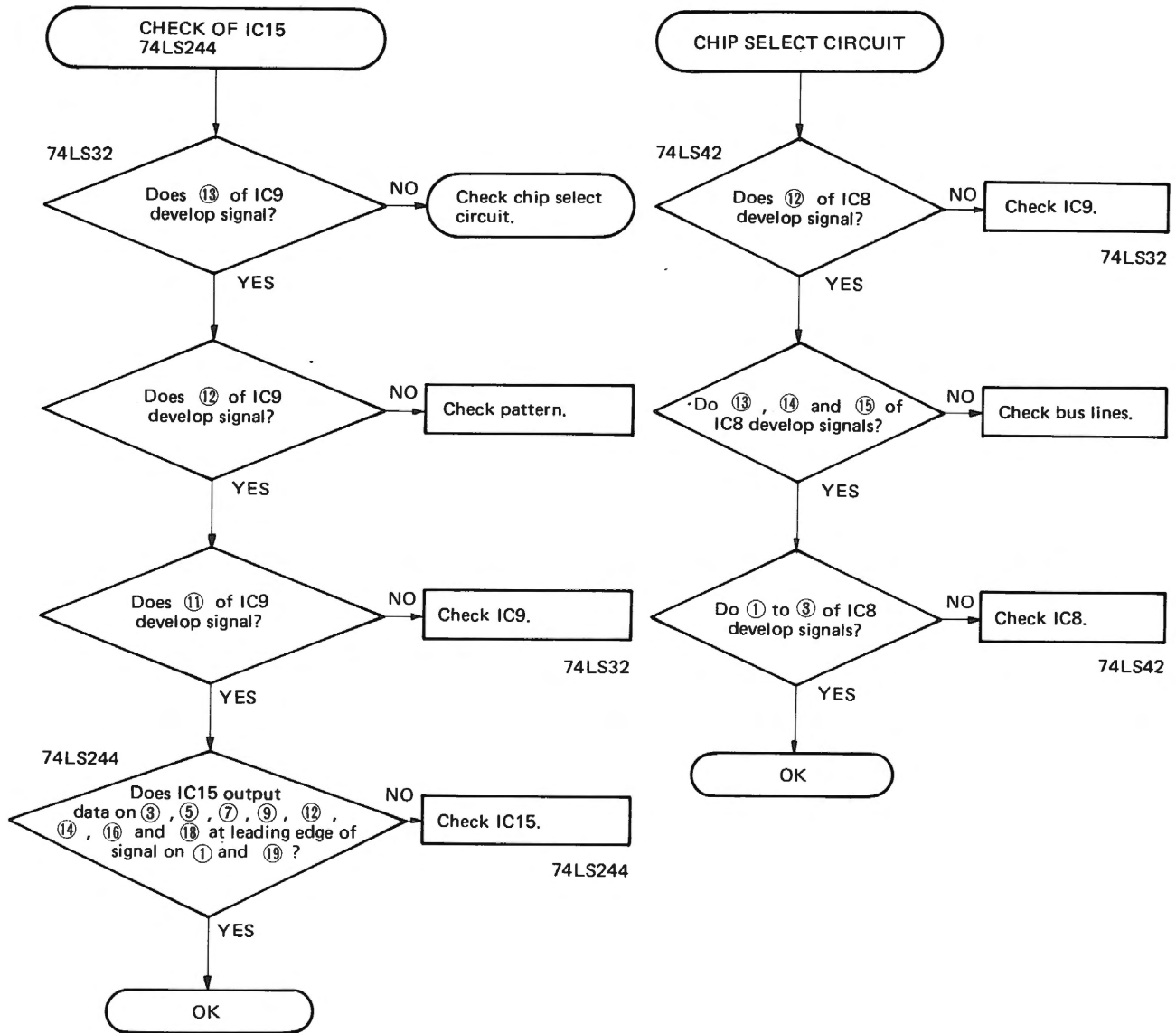


CHECK OF ROM



CHECK OF 8155







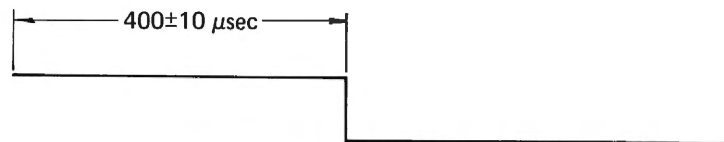
## ADJUSTMENT OF HEAD DRIVING COIL ENERGIZING PULSE WIDTH

This concerns the printing energy force for the head wire to print a dot and its length in time as well. The shorter the energizing pulse width (time) is, the smaller the printing energy is, thus weakening printed letters. To the contrary, the larger pulse width prolongs the printing time of head wire, thereby feeding the head with the head wire clacking out. In most cases, the head wire is caught by the ink ribbon, and what is worse, the tip of head wire is broken.

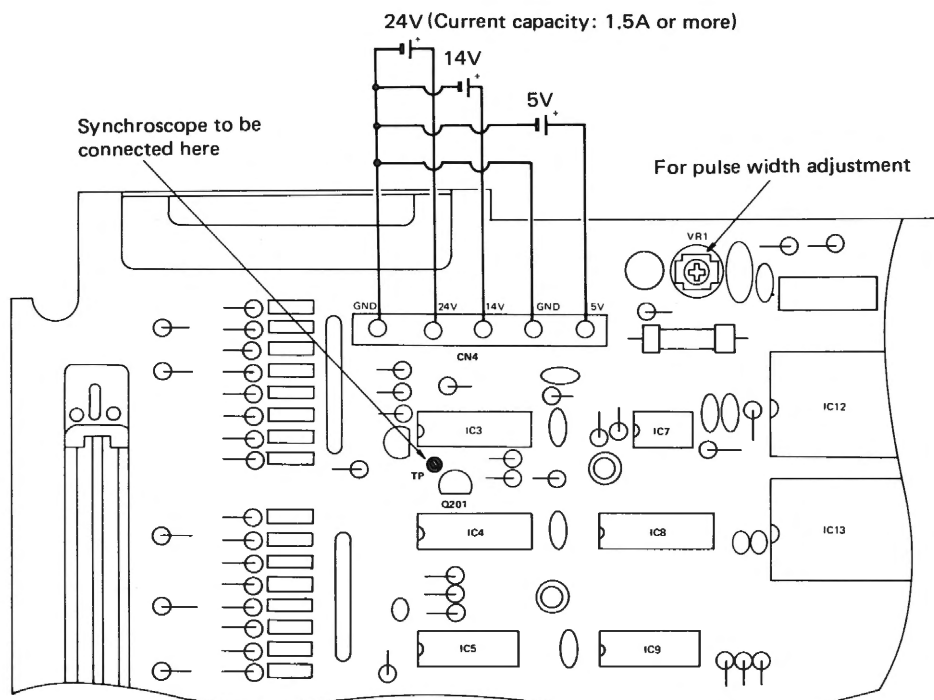
This adjustment is required to give an appropriate printing energy to the head wire. Make an adjustment in the following manner.

- 1) Remove upper cabinet. (Do not disconnect the connector of on/off line, top of form and line feed switch circuit.)
- 2) Take out the head cord PWB connector from the connector of terminal PWB. Be careful not to damage the head cord PWB.
- 3) Turn on the paper end sensor. (Put a piece of paper in the paper sensor lever located at printing paper insertion area.)
- 4) Draw out the power supply socket (CN4) with 5-pin lead from the CPU board.
- 5) Connect 3 units of D.C. power supply to the 5-pin connector (CN4) of CPU board as shown below: 24V D.C. (current capacity: 1.5A or more), 14V D.C. and 5V D.C.
- 6) While pushing the line feed switch of the set, turn on the power switches of the three D.C. power supply units. (The head is shifted right and left.)
- 7) Connect the synchroscope to the test point which is connected to the collector of the transistor Q21 (2SA1015) on the CPU PWB to check to see if the pulse width on the synchroscope is  $400 \pm 10 \mu\text{sec}$ . If the width is out of standard value, rotate the semi-variable resistor (VR1) at the CPU PWB to adjust the width. (The semi-variable resistor is to be fixed with lacquer after adjustment.)

Note: Before checking pulse width, calibrate the synchroscope to eliminate error in time base.



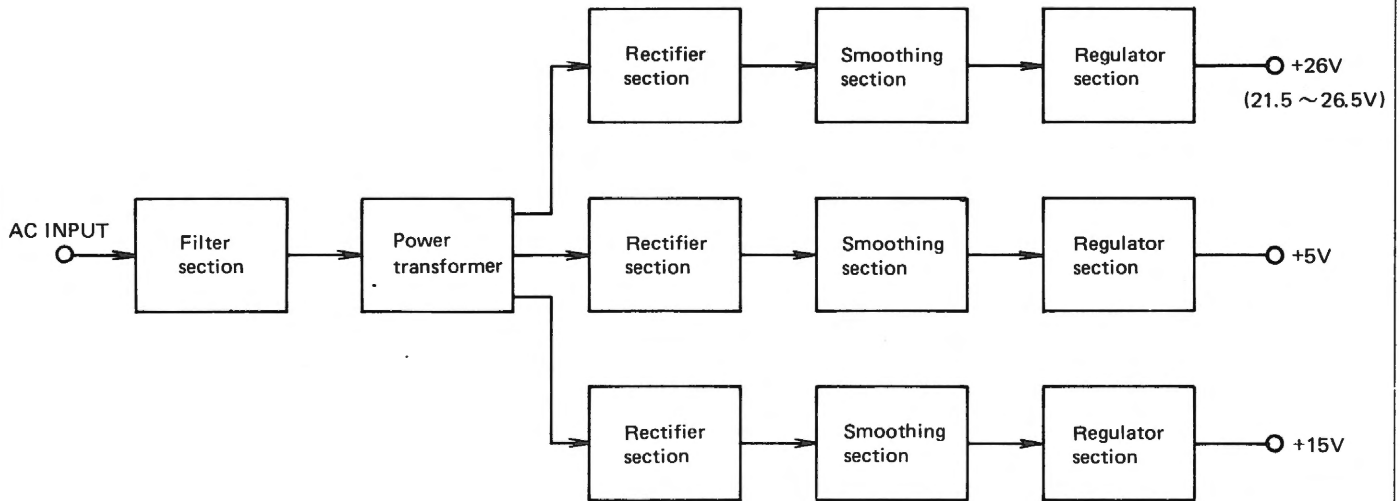
Head driving coil energizing pulse signal



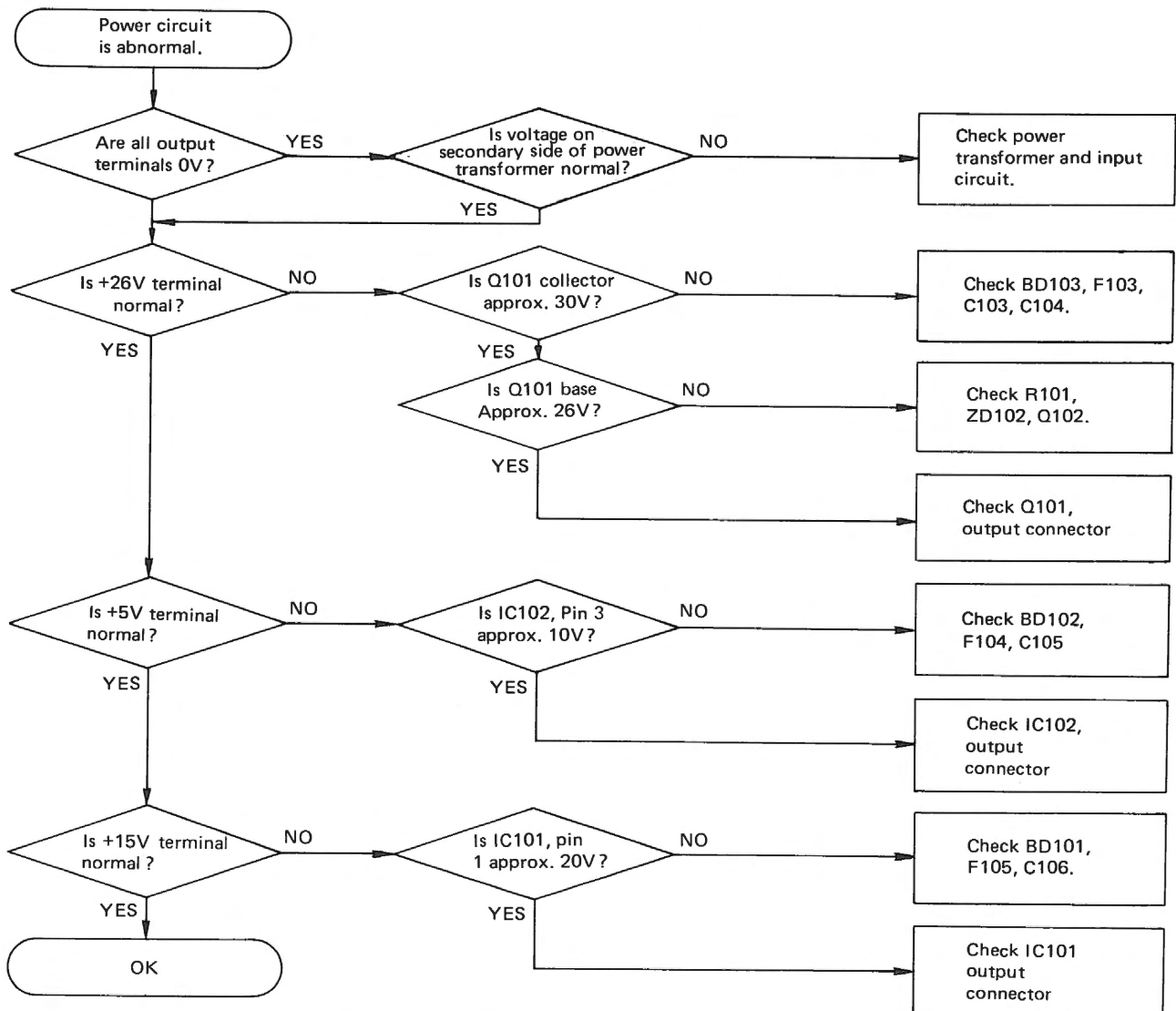
Connecting diagram for power supply and synchroscope

# POWER SUPPLY SECTION

## ■ Block Diagram of Power Supply Circuit

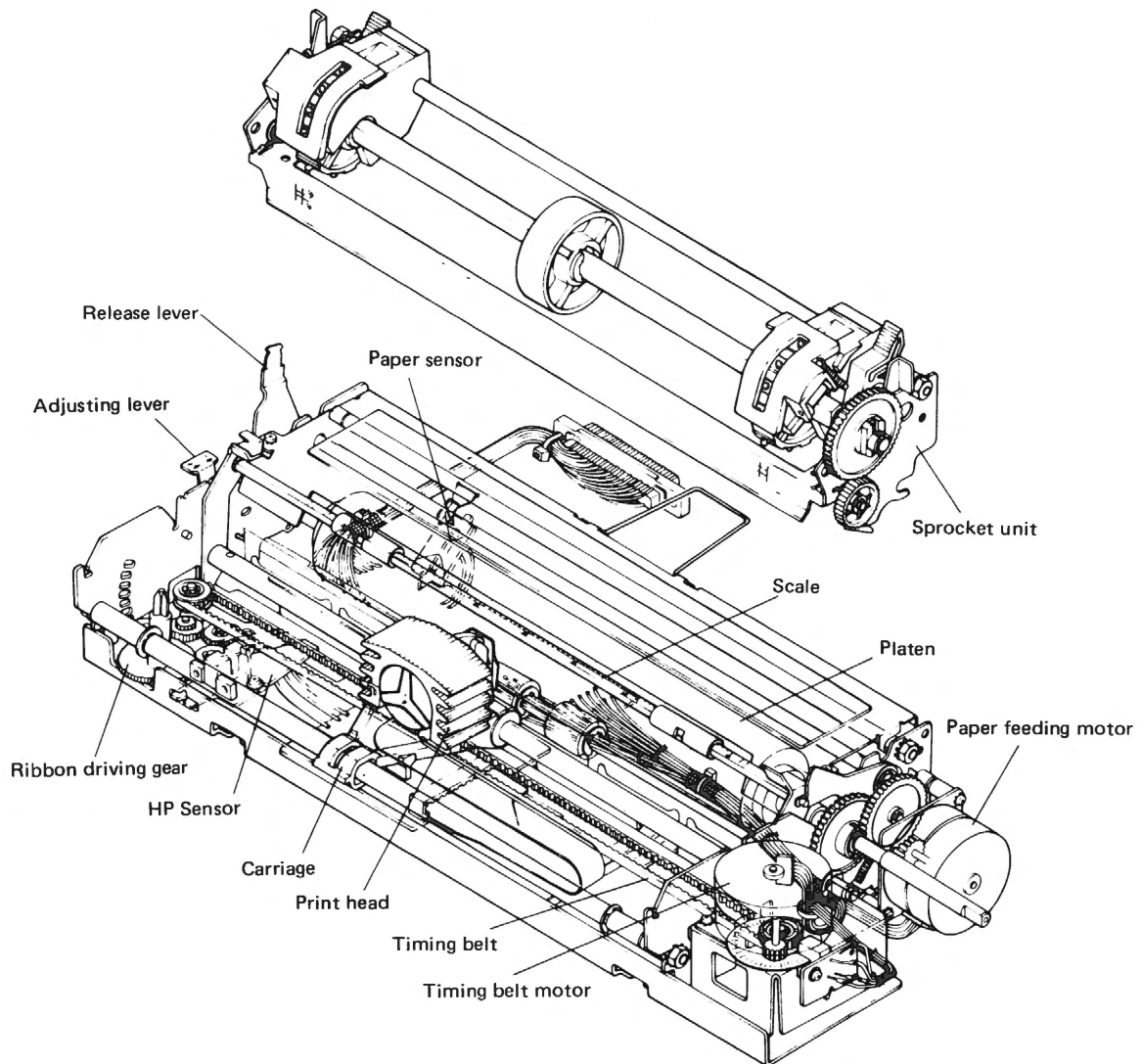


## ■ Troubleshooting



# FUNCTIONS OF PRINTER PARTS

## ■ Exterior of Mechanism and Names of Parts



## ■ Sensing Mechanisms

Sensing mechanisms consist of HP sensor, PTS sensor and PE sensor. The HP sensor is attached to determine the Home Position of the carriage and generates the reference signal for printing. The PTS sensor generates the timing signal used to determine printing position. It detects this signal and adjusts carriage speed. The PE sensor detects the presence or absence of paper.

### 1. HP Sensor (Home Position Sensor)

The HP sensor consists of the home position sensor assembly and sensor board on the lower part of the carriage. The signal is High when the sensor board interrupts the light shaft of the photo coupler. (It is an open collector output)

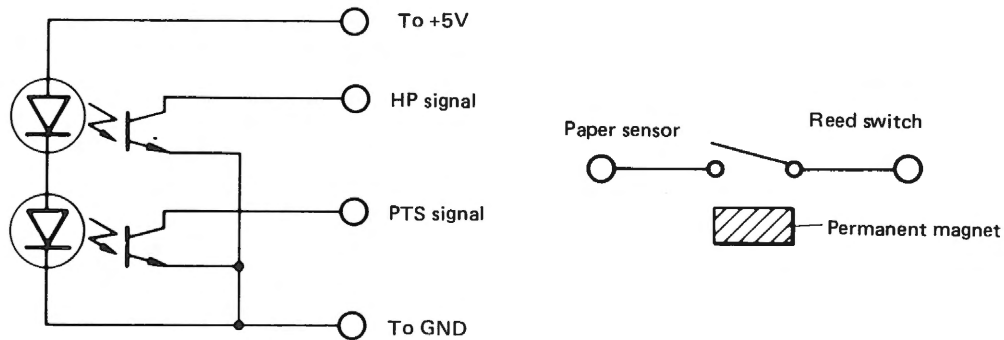
## 2. PTS Sensor (Print Timing Signal Sensor)

The PTS sensor consists of the PTS sensor board assembly and the sensor board on the timing belt motor shaft. The signal is Low when the slit of the sensor board appears. (It is an open collector output.)

## 3. Paper Sensor

The paper sensor consists of the reed switch attached to paper sensor board and the permanent magnet attached to the paper sensor lever. The permanent magnet approaches the reed switch and the signal passes when there is no paper.

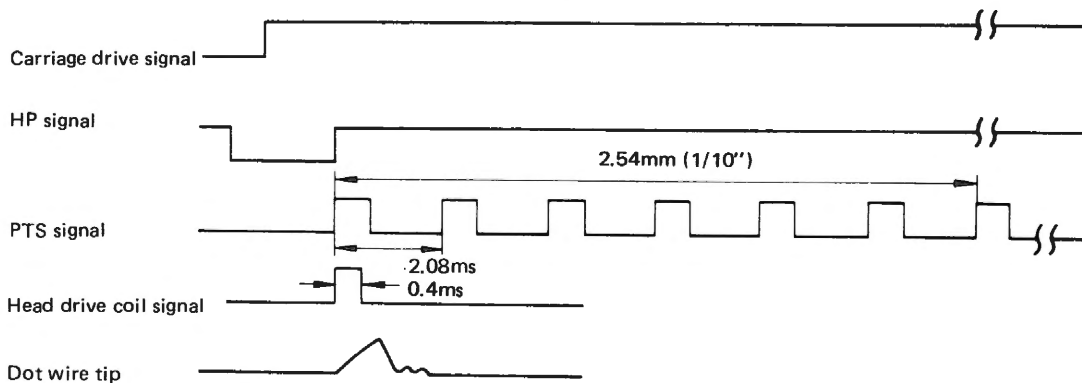
## 4. Sensor Circuit



## ■ Printing Mechanism

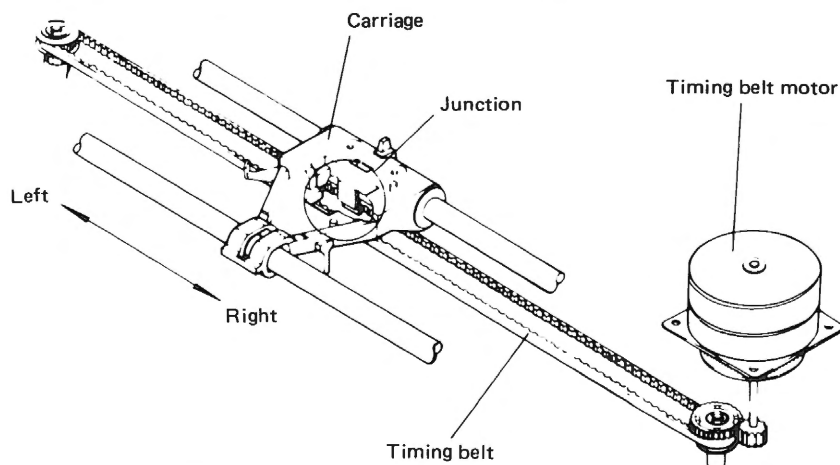
The main elements of the printing mechanism are print head unit, carriage, timing belt, timing belt motor and platen. The print head unit on the carriage is moved to the right and left by the timing belt on shafts A and B of the carriage guide. The timing belt is driven by the timing belt motor through the belt driving pulley and belt driven pulley.

Printing performs when the dot wire springs out toward the platen due to the flow of current in the head driving coil. The current flows when the PTS signal is generated by the belt motor rotation.

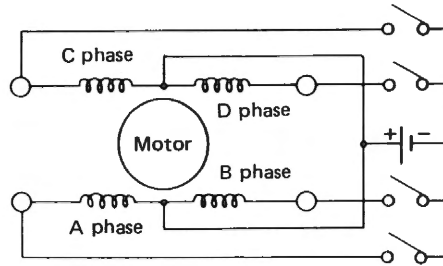


## 1. Principle of Carriage Movement

The carriage is moved to the right and left by the drive of the timing belt motor with the timing belt inserted in the carriage.



Drive for the timing belt motor is basically 2-2 phase excitation.



Sequence of the belt motor drive to move the carriage is as follows.

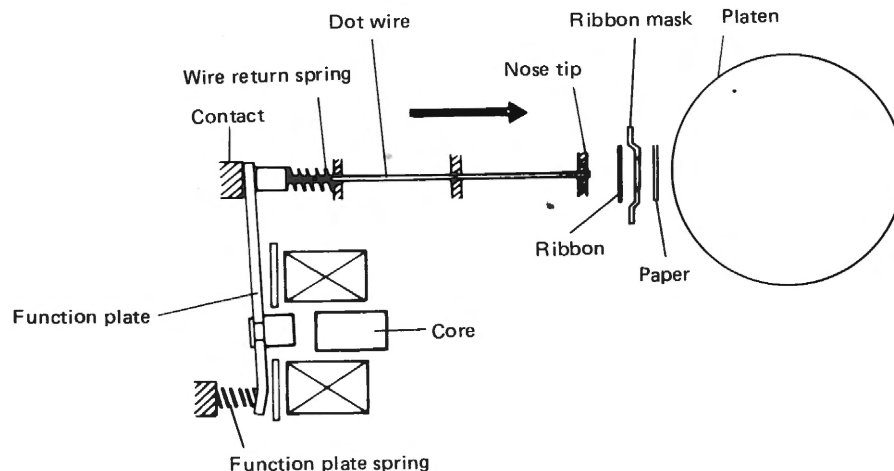
Carriage	Step	A phase	B phase	C phase	D phase
From left to right	1	ON	OFF	OFF	ON
	2	ON	OFF	ON	OFF
	3	OFF	ON	ON	OFF
	4	OFF	ON	OFF	ON
From right to left	1	ON	OFF	ON	OFF
	2	ON	OFF	OFF	ON
	3	OFF	ON	OFF	ON
	4	OFF	ON	ON	OFF

## 2. Printing function of the Print Head

This explanation is for the wire movement of one dot when one character is formed.

- 1) The function plate is pulled in to the core when current flows in the driving coil and thus the dot wire springs toward the platen since it is connected with the function plate.
- 2) The forced dot wire springs out till it strikes the platen and one dot is printed on the paper through the ribbon when it strikes the platen.
- 3) The function plate is reset to its former position by the force of the function plate spring when current no longer passes through the driving coil.

The dot wire, after it strikes the platen, returns to its position, which is connected with function plate, by its striking force and the wire return spring and maintains itself in a waiting condition.



## ■ Paper Feeding Mechanism

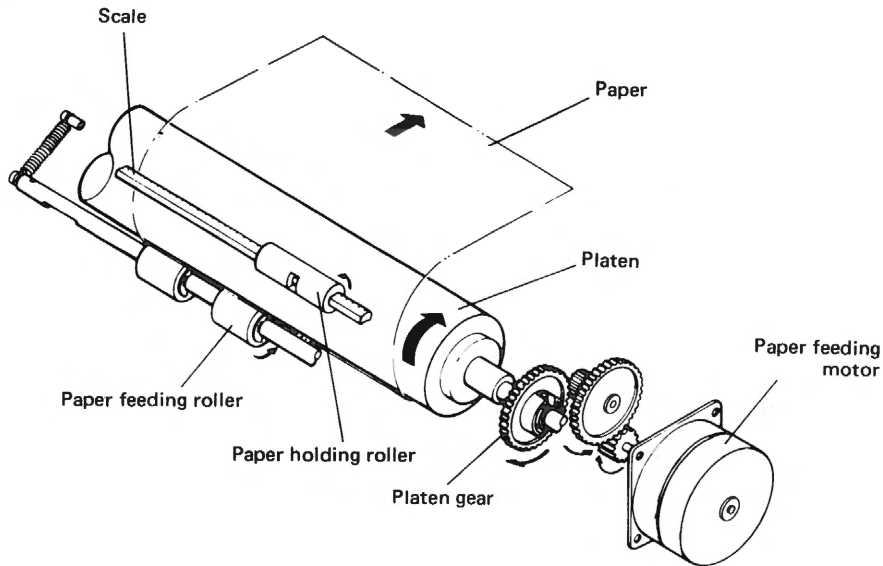
There are two types of paper feeding mechanism; one is a friction feed type and the other is a sprocket feed type. Each type is provided with normal feeding and quick feeding functions.

### 1. Friction feed type

Paper is held between the platen and the paper feeding and holding rollers.

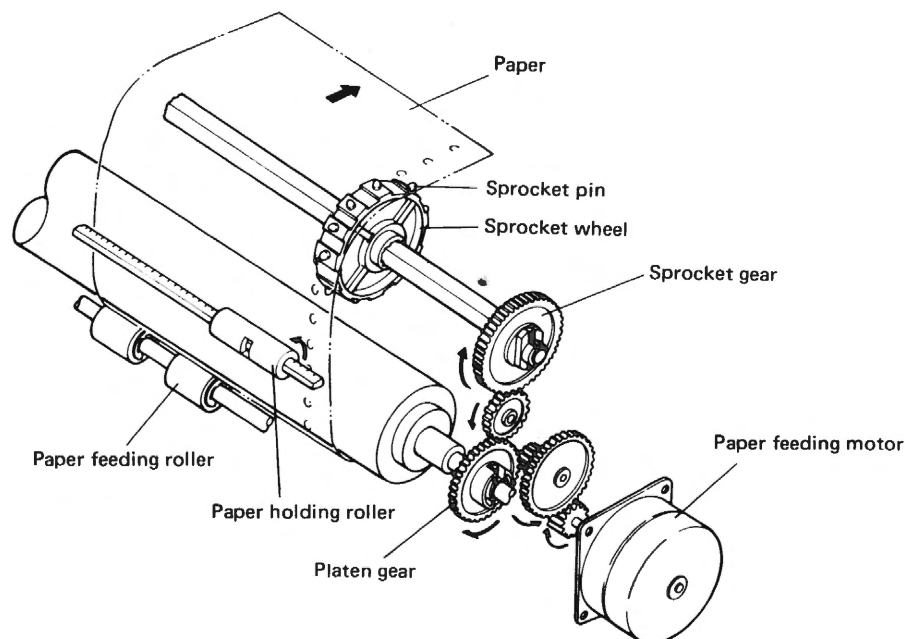
The platen is driven by a motor through a gear on the motor shaft and a gear train in the direction shown by an arrow and feeds paper.

Paper is pressed against the platen by the spring loaded paper holding rollers and paper feeding rollers, and can be set free by the release lever.



### 2. Sprocket feed type

Paper is fastened to the sprocket pins on the sprocket wheel. The motor drives the sprocket wheel in the direction shown by an arrow through a gear on the motor shaft and a gear train to feed paper. The paper feeding roller which presses paper against the platen is released by the release lever. (The release lever is set to the forward side in sprocket feeding.) The paper holding roller is in contact with paper in such a degree as gives light tension to paper.

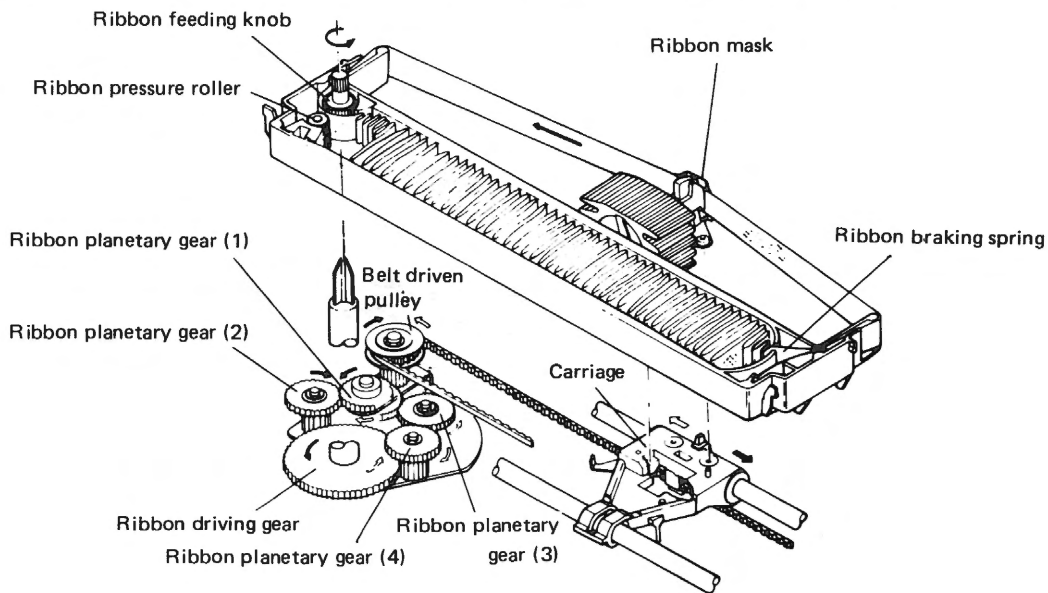


## ■ Ribbon Feeding Mechanism

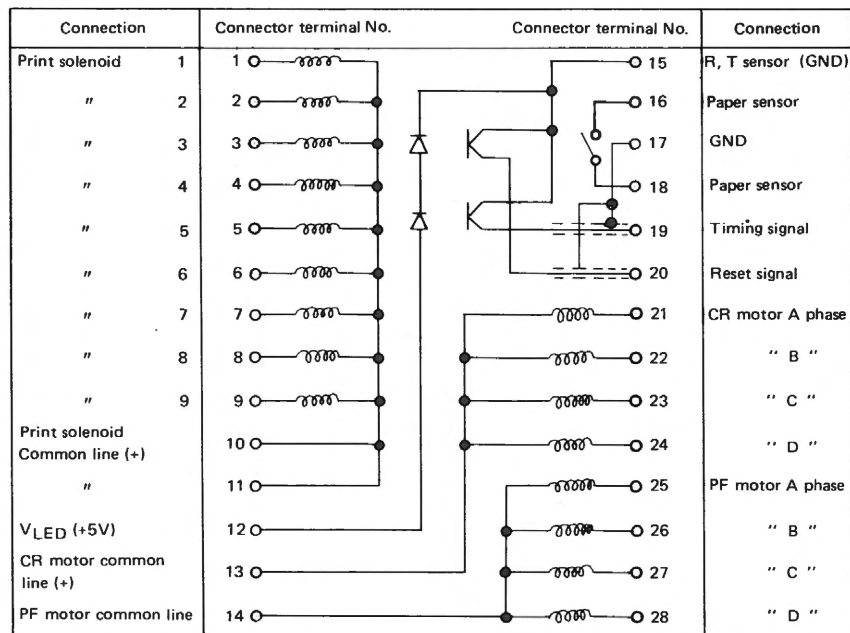
The ribbon mechanism consists of the cartridge ribbon and ribbon feeding mechanism. The ribbon feeding mechanism is attached to the belt tension plate assembly. Movement of the timing belt to the right and left is through the following arrangement of wheels. The ribbon driving gear normally turns counterclockwise.

	Carriage movement	Arrangement of wheels
1	Left → Right (In direction of arrow →)	• Belt driven pulley → Planetary pinion (1) → Planetary pinion (2) → Ribbon driving gear
2	Right → Left (In direction of arrow ⇐)	• Belt driven pulley → Planetary pinion (1) → Planetary pinion (3) → Planetary pinion (4) → Ribbon driving gear

The ink ribbon is stored endlessly in the cartridge case. This ink ribbon, pinched between the ribbon feeding knob and ribbon pressure roller, is wound up by the ribbon feeding knob set on the ribbon driving gear. Furthermore, there is a ribbon braking spring at the outlet of the cartridge case to prevent the ribbon from becoming loose as it is wound. A ribbon mask is attached to prevent the paper from becoming dirty.



## ■ Connector Diagram



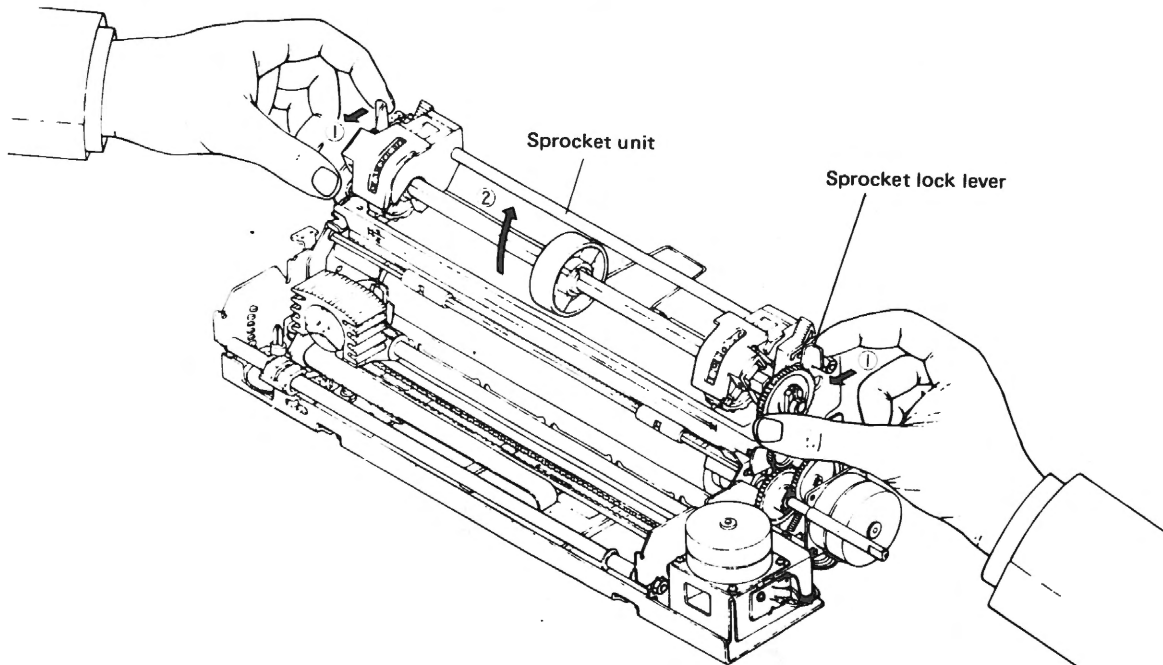
Note: Print solenoids are counted 1, 2, . . . . 9 from the upper side of the characters.

# REPLACING OF MAIN PRINTER PARTS

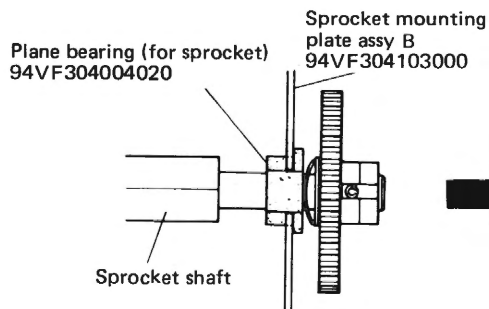
## 1. Sprocket unit

### 1-1 Disassembly

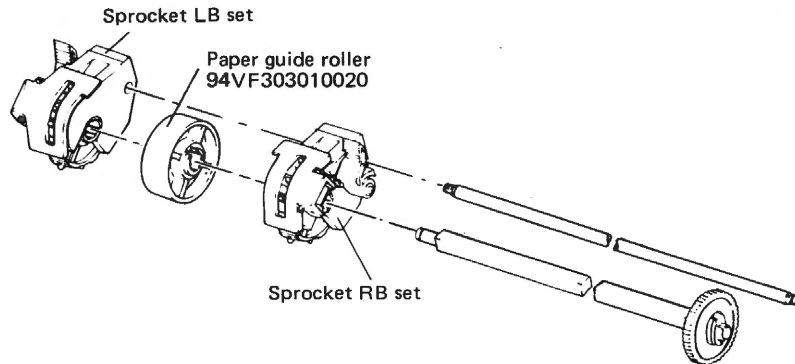
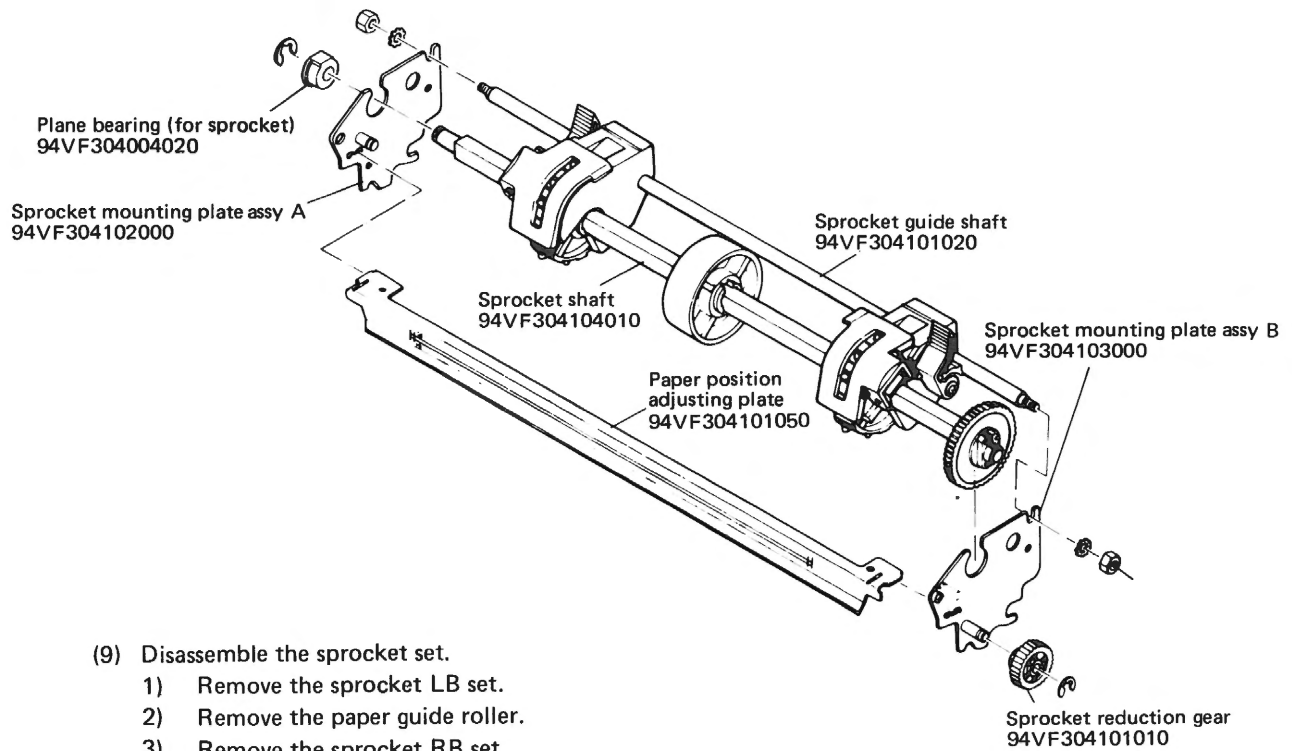
- (1) While pressing the sprocket lock levers in the direction shown by arrows ①, turn the sprocket unit away to remove it. (In the direction shown by an arrow ②.)



- (2) Remove the sprocket lock levers L and R, and the lock lever springs. ("E" ring x 2)  
(3) Remove the sprocket reduction gear. ("E" ring x 1)  
(4) Remove the plane bearing for sprocket. ("E" ring x 1)  
(5) Remove the nuts (4N x 2, 4W x 2) on the both ends of the sprocket guide shaft.  
(6) Remove the sprocket mounting plate assy "A".  
(7) Remove the paper position adjusting plate.  
(8) Remove the sprocket shaft in the direction shown by an arrow in the ring illustration.  
Remove the sprocket mounting plate assy "B".

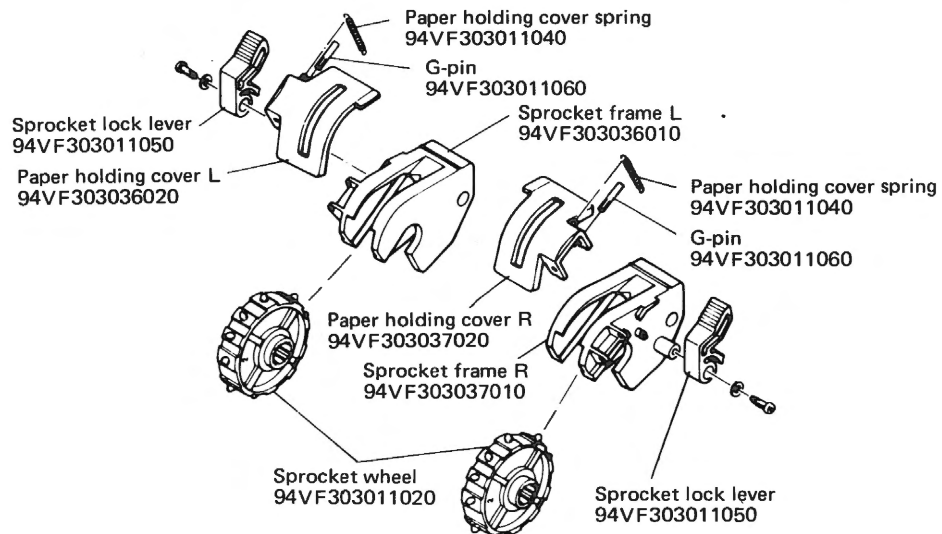






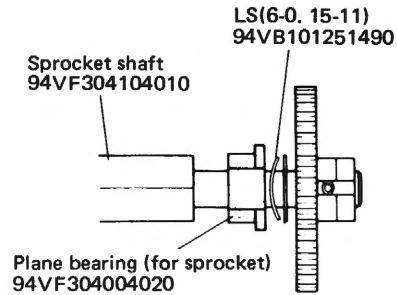
(10) Disassemble the sprocket LB and RB sets.

Remove the sprocket lock lever, sprocket wheel, paper holding cover spring, G-pin, and paper holding cover.

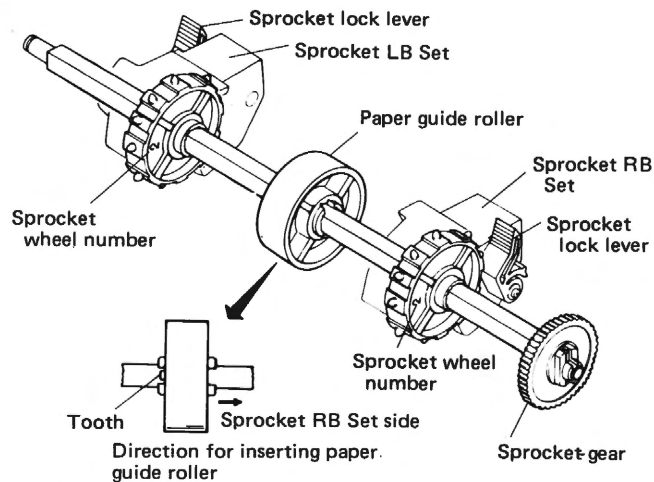


## 1-2 Assembly

- (1) Assemble the sprocket unit in the reverse order used for disassembly.
  - Note the direction for inserting LS (leaf spring).



- The sprocket wheel identification numbers of the LB and RB sets must be the same.
- Install the sprockets so that the sprocket wheel identification numbers face in the same direction in the same angle.
- Pay attention to the assembling direction of the paper guide roller. The counter-tooth side of the roller shall be on the RB set side.

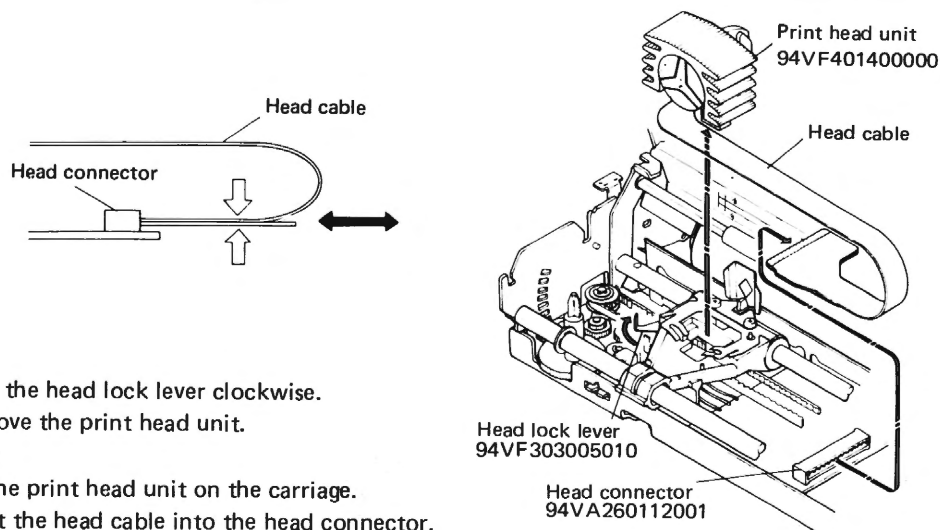


- (2) Attach the sprocket unit to printer.

## 2. Print Head Unit

### 2-1 Disassembly

- (1) Pull the head cable from the head connector.
  - When inserting or pulling out the head cable, hold the place marked with arrows ( $\rightleftarrows$ ) and move the head cable horizontally in the direction of the arrow ( $\longleftrightarrow$ ), while pushing the head connector.



- (2) Turn the head lock lever clockwise.
- (3) Remove the print head unit.

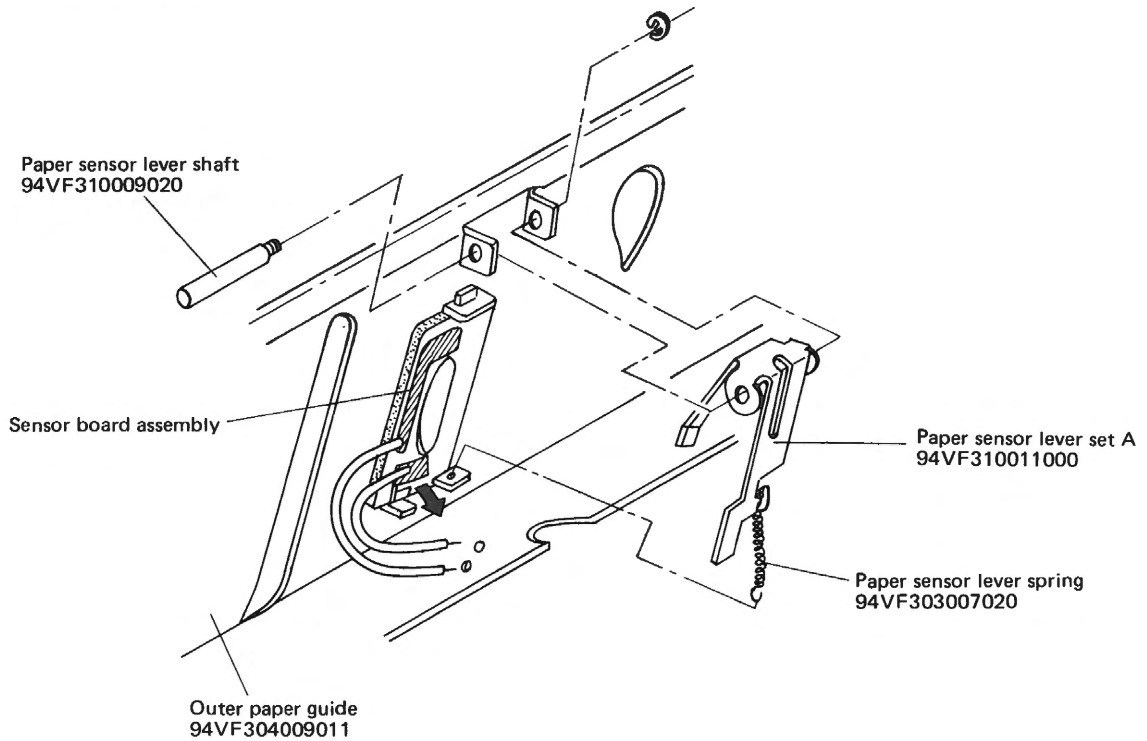
### 2-2 Assembly

- (1) Set the print head unit on the carriage.
- (2) Insert the head cable into the head connector.

### 3. Paper Sensor

#### 3-1 Disassembly

- (1) Remove the soldered lead wire from the terminal board.
- (2) Stretch the bend in the outer paper guide [In the direction of the arrow.]
- (3) Remove the paper sensor lever spring.
- (4) Remove the paper sensor board assembly.
- (5) Remove the soldering of the reed switch.



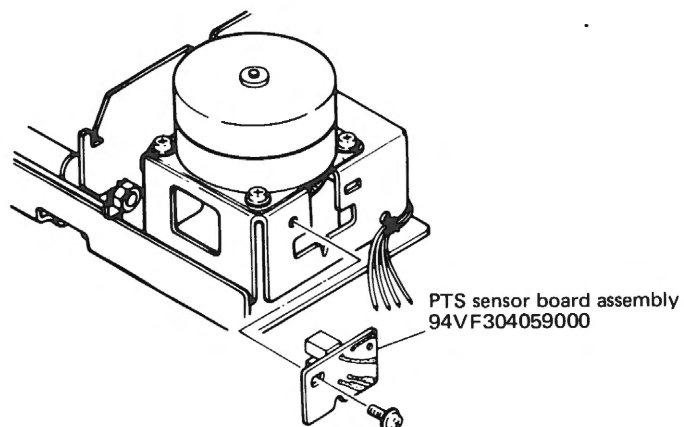
#### 3-2 Assembly

- (1) Assemble in the reverse order used for disassembly.

### 4. PTS Sensor

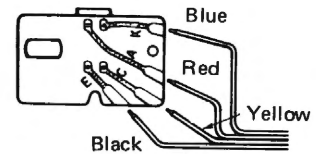
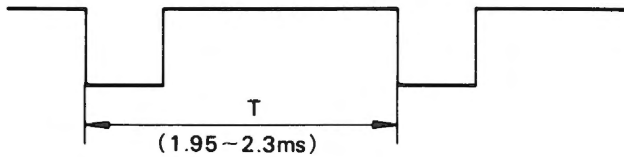
#### 4-1 Disassembly

- (1) Remove the soldered lead wire from the PTS sensor board.
- (2) Remove the PTS sensor board assembly (2.5mm screw x 1).

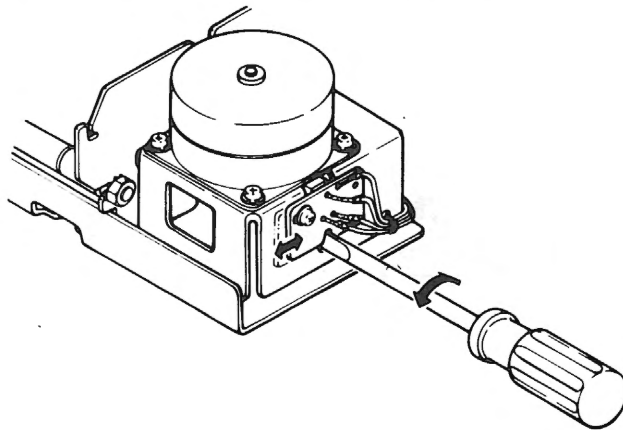


## 4-2 Assembly and Adjustment

- (1) Temporarily fasten the PTS board assembly.
- (2) Solder the lead wire.
- (3) Adjust the period of the PTS signal.
  - 1) Check T period while printing.
    - Check the wave form with a synchroscope.
    - Check that the print head has been fitted.



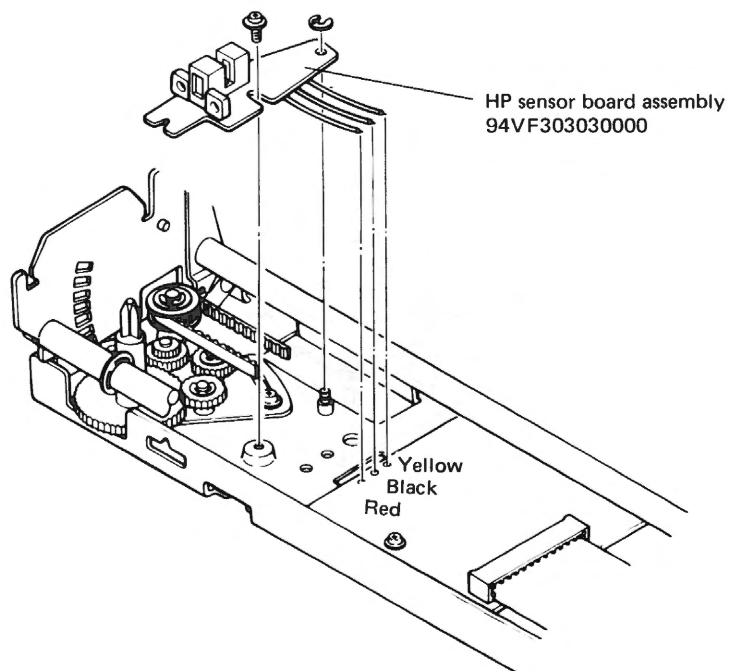
- 2) Adjust the PTS sensor board in the direction shown by the arrow in the figure so that the going and return T periods are almost equal.
- 3) After adjusting, fix the screw lock and paint the screw to lock it.



## 5. HP Sensor

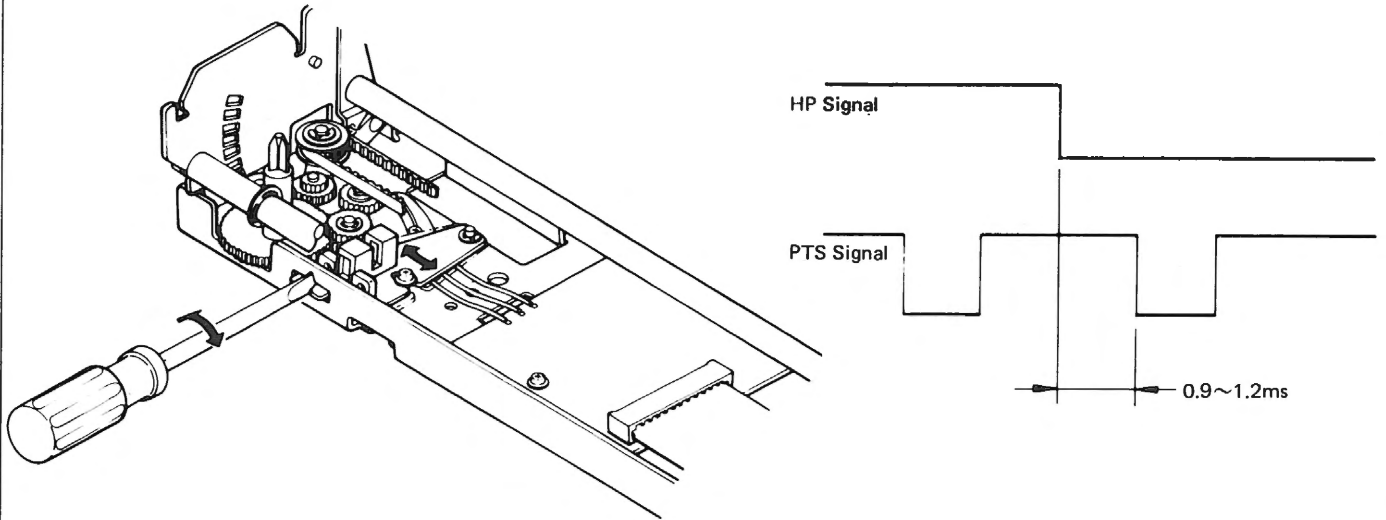
### 5-1 Disassembly

- (1) Remove the soldered lead wire of the HP sensor board from the terminal board.
  - Do not touch the timing belt the soldering iron.
- (2) Remove the HP sensor board assembly (2.5mm screw. E ring).



## 5-2 Assembly and Adjustment

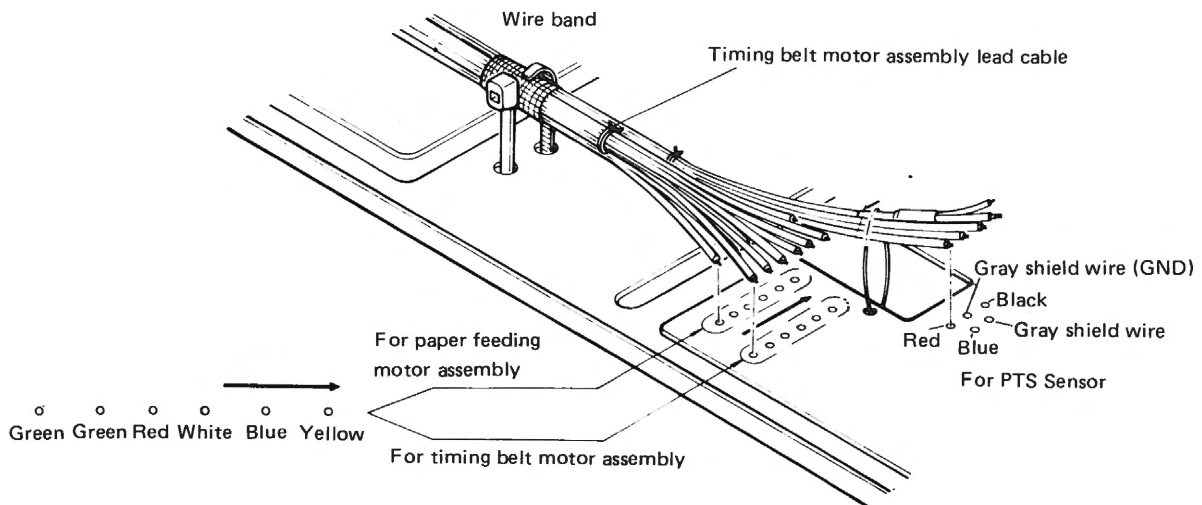
- (1) Attach the HP sensor board assembly
  - Put in the screws temporarily.
- (2) Solder the lead wire to the terminal board.
- (3) Check the relation between the PTS signal and HP signal.
  - Check the wave form with a synchroscope.
  - Check that the print head has been set.
- (4) When the phase is not right, adjust it by moving the HP sensor board in the direction of the arrow.
- (5) After adjusting, fix the screw lock and paint the screw to lock it.



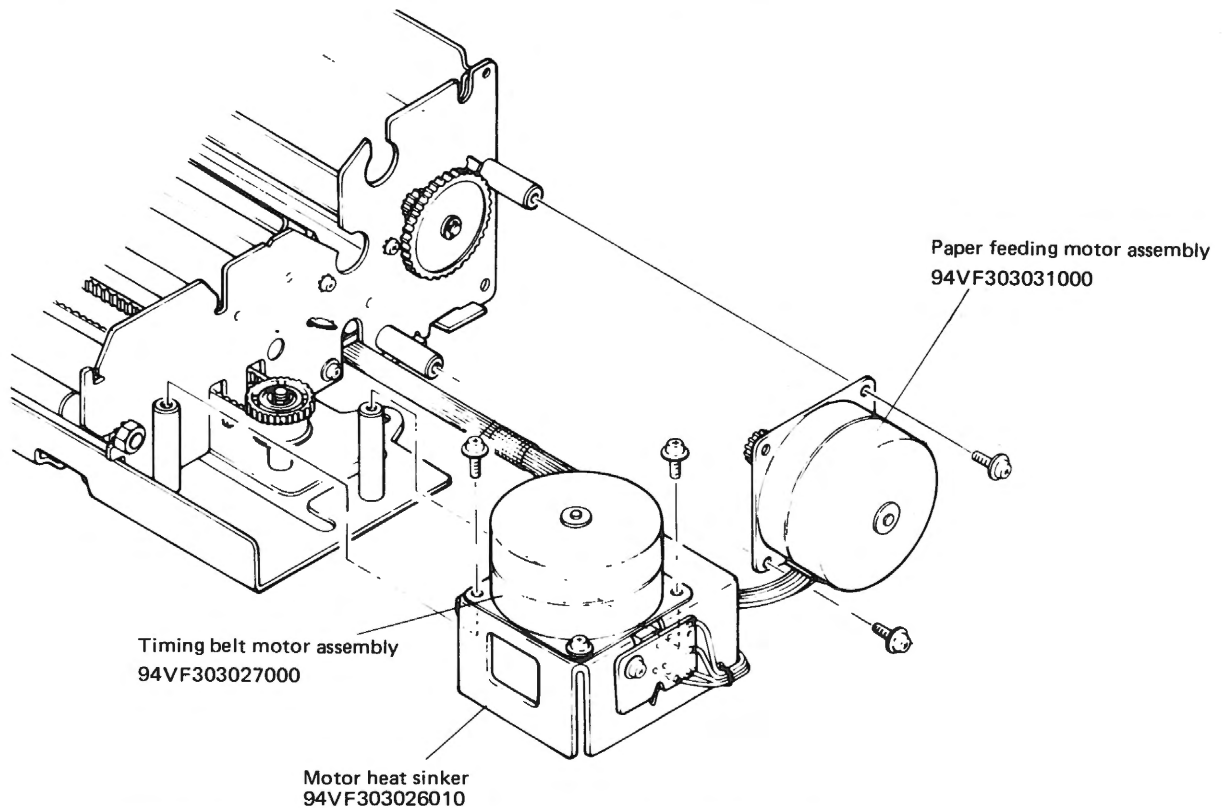
## 6. Motor Assembly (Timing belt motor assembly, paper feeding motor assembly, belt driving pulley)

### 6-1 Disassembly

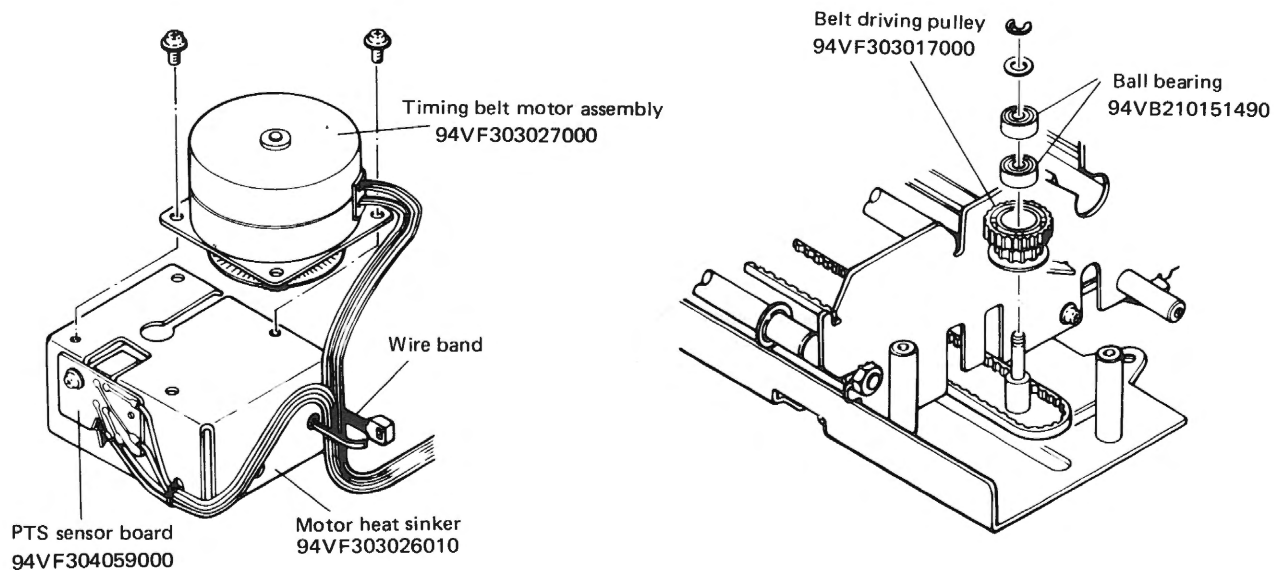
- (1) Remove lead wires of the timing belt motor assembly from the terminal board.
- (2) Remove lead wires of the paper feeding motor assembly from the terminal board.
- (3) Remove the PTS sensor lead wires from the terminal board.
- (4) Take off the wire band.



- (5) Remove the paper feeding motor assembly. (2.5mm screw x 2)
  - When removing it, only take out the two screws shown in the figure so that the motor heat sinker and HP sensor board assembly come out together.
- (6) Remove the timing belt motor assembly. (2.5mm screw x 2)

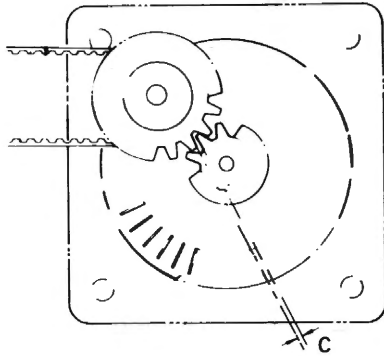


- (7) Remove the timing belt motor assembly from the motor heat sinker.
- (8) Remove the PTS sensor board assembly.
- (9) Remove the belt driving pulley (E ring).
  - When removing the belt driving pulley, first loosen the timing belt. (Refer to page 29)
- (10) Remove the ball bearing from the belt driving pulley.

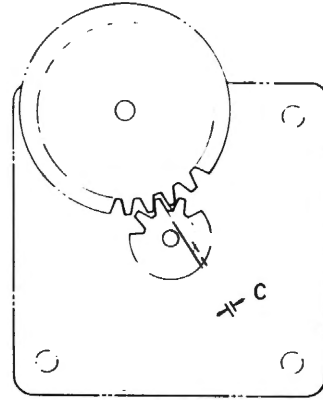


## 6-2 Assembly and Adjustment

- (1) Attach the timing belt motor assembly to the motor heat sinker.
- (2) Attach the PTS sensor board.
- (3) Place the ball bearing in the belt driving pulley.
- (4) Put in the belt driving pulley.
- (5) Attach the timing belt motor assembly and motor heat sinker to the frame.
  - Check the gear backlash. (C should be minimum.)
- (6) Attach the paper feeding motor assembly to the frame.
  - Check the gear backlash. (C should be minimum.)



(Timing belt motor backlash)



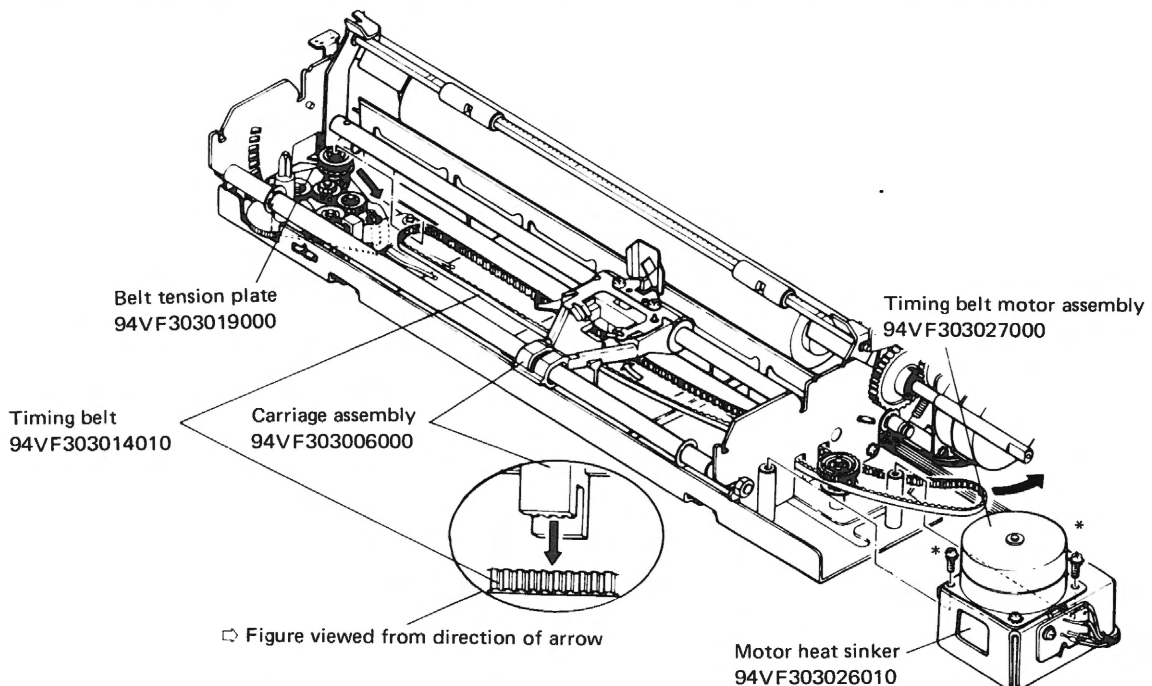
(Paper feed motor backlash)

- (7) Solder the leads of the PTS sensor board, paper feeding motor assy, and timing belt motor assy to the terminal board.
- (8) Install the timing belt on the belt driving pulley and the belt driven pulley, and lock the belt tension plate. (Refer to Page 30.)
- (9) Check the PTS signal and HP signal. (Refer to Page 26, 27.)

## 7. Timing Belt

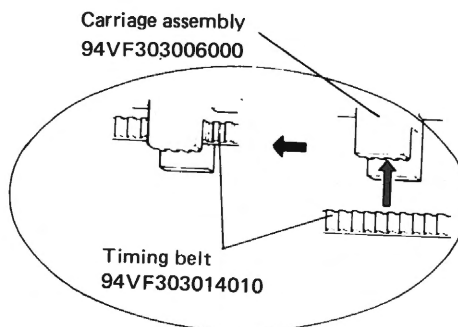
### 7-1 Disassembly

- (1) Remove the timing belt motor assembly and motor heat sinker. (2.5mm screw x 2)  
Do not mix up the screws. (Refer to \* mark in the figure.)
- (2) Pull the timing belt from carriage assembly.
- (3) Loosen the lock screw on the belt tension plate and remove the timing belt. (2.5mm screw)

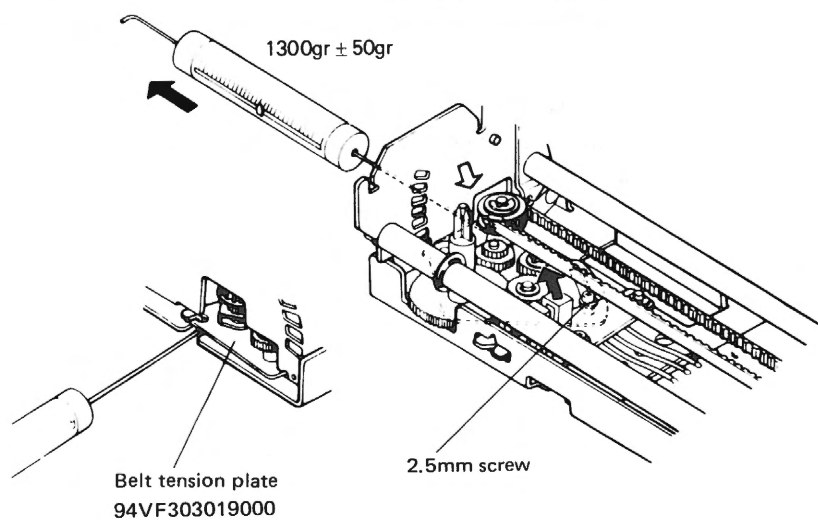


## 7-2 Assembly and Adjustment

- (1) Hang the timing belt on the belt driving pulley and belt driven pulley.
- (2) Insert the timing belt into the carriage.



- (3) Temporarily fasten the belt tension plate while gently stretching the timing belt. (2.5mm screw x 2)
- (4) Adjust the tension of the timing belt.
  - Using the hole in the belt tension plate, adjust it to its rating on the spring scale.
- (5) Tighten the lock screw after the adjustment and paint the screw to lock it.

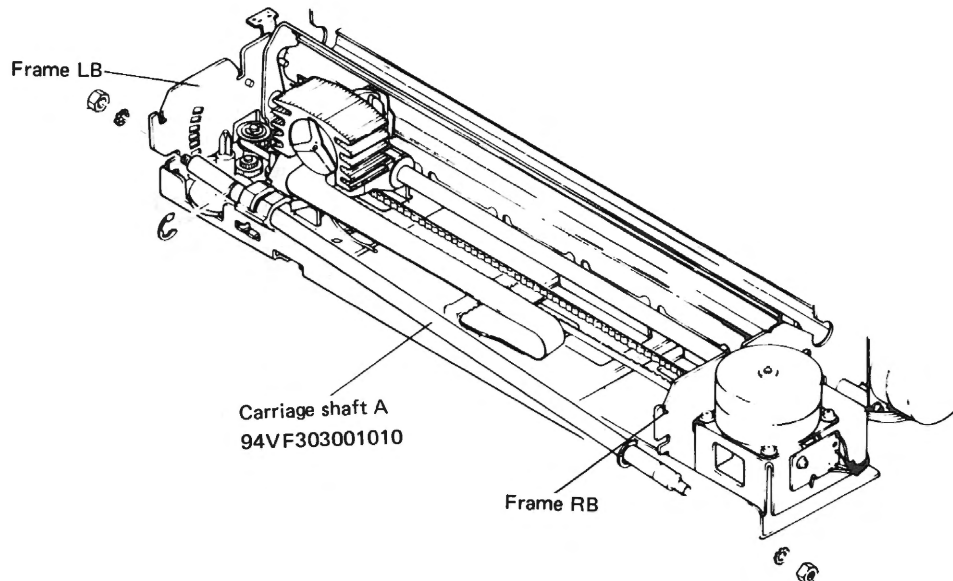




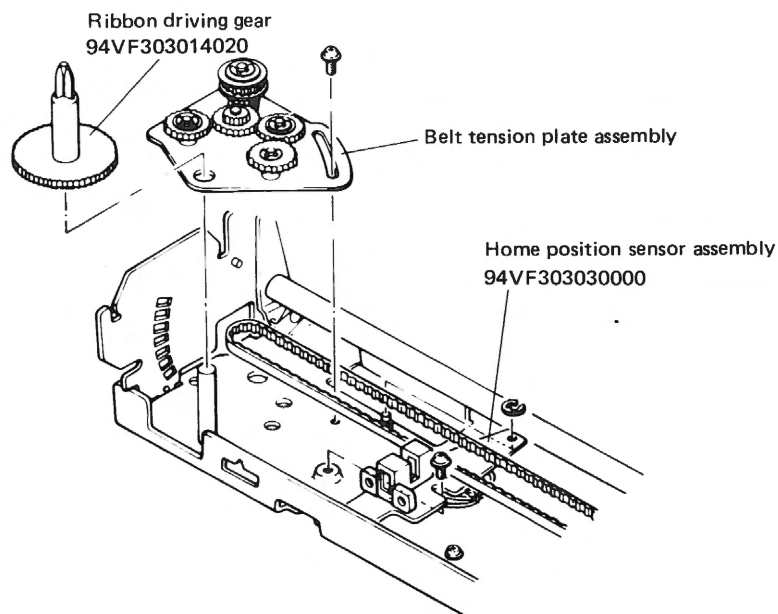
## 8. Belt Tension Plate Assembly (Including ribbon driving gear)

### 8-1 Disassembly

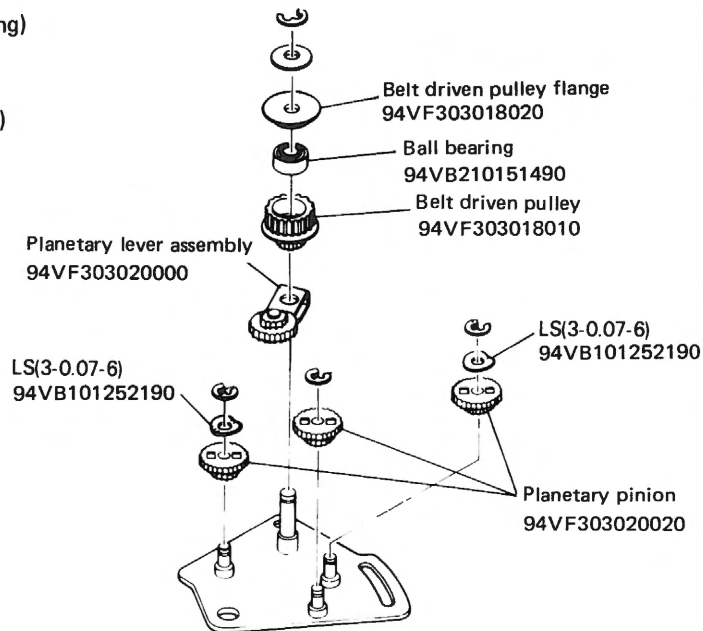
- (1) Remove carriage guide shaft A.
  - 1) Remove E ring on frame LB.
  - 2) Remove the nuts on carriage shaft A. (4N x 2)
  - 3) Move the carriage to frame LB side and pull carriage shaft A out to the right.



- (2) Move the carriage to the center between frame LB and RB.
- (3) Remove the home position sensor assembly. (2.5mm screw, E ring)
  - There is no need to remove the soldered lead wire.
- (4) Remove the lock screw for the belt tension assembly and remove the timing belt. (2.5mm screw)
- (5) Pull out the belt tension plate assembly and ribbon driving gear.

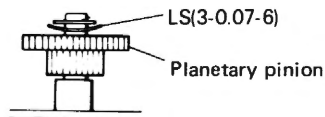


- (6) Disassemble the belt tension plate assembly.
- 1) Remove the belt driven pulley flange. (E ring)
  - 2) Pull out the belt driven pulley.
  - 3) Pull out the planetary lever assembly.
  - 4) Remove the planetary pinion. (E ring x 3)



## 8-2 Assembly and Adjustment

- (1) Assemble the belt tension plate assembly.
  - 1) Put in the planetary pinion. (E ring x 3)
    - Do not make a mistake about the direction and position of LS (leaf spring).
  - 2) Put in the planetary lever assembly.
  - 3) Put in the belt driven pulley.
  - 4) Put in the belt driven pulley flange.

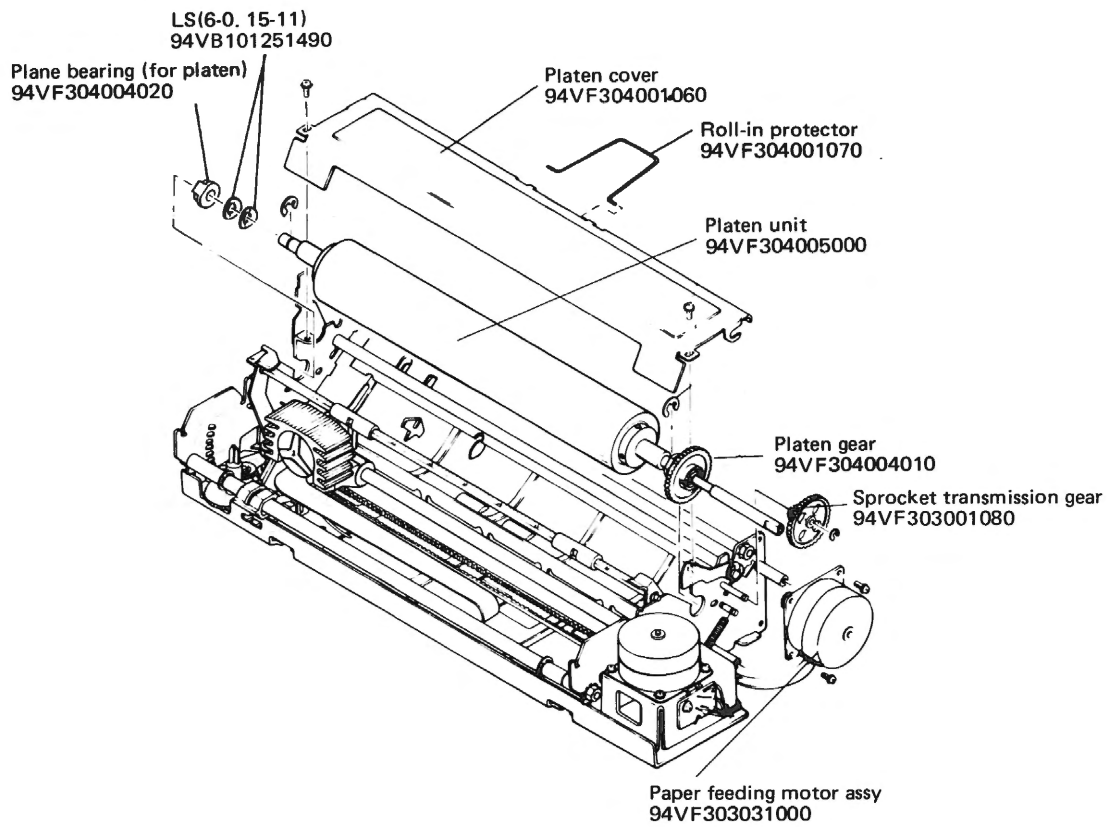


- (2) Put in the ribbon driving gear and ribbon tension plate and attach the timing belt (Temporarily fasten with 2.5mm screw.)
- (3) Attach the home position sensor assembly. (E ring)
- (4) Assemble carriage shaft A in the reverse order used for disassembly.
- (5) Adjust the belt tension properly. (Refer to section 7.2 on page 30.)
- (6) Check the HP signal and PTS signal. (Refer to section 4.2 on page 26 and section 5.2 on page 27.)

## 9. Platen (Including sprocket transmission gear)

### 9-1 Disassembly

- (1) Remove the sprocket unit. (Refer to section 1-1 on page 22.)
- (2) Remove the paper feeding motor. (Refer to section 6-1 on page 27.)
  - There is no need to remove the soldered lead wire.
- (3) Remove the sprocket transmission gear. (E ring)
- (4) Remove the platen cover. (2.5mm screw x 2)
- (5) Remove the roll-in protector.
- (6) Remove the platen unit. (E ring x 2)



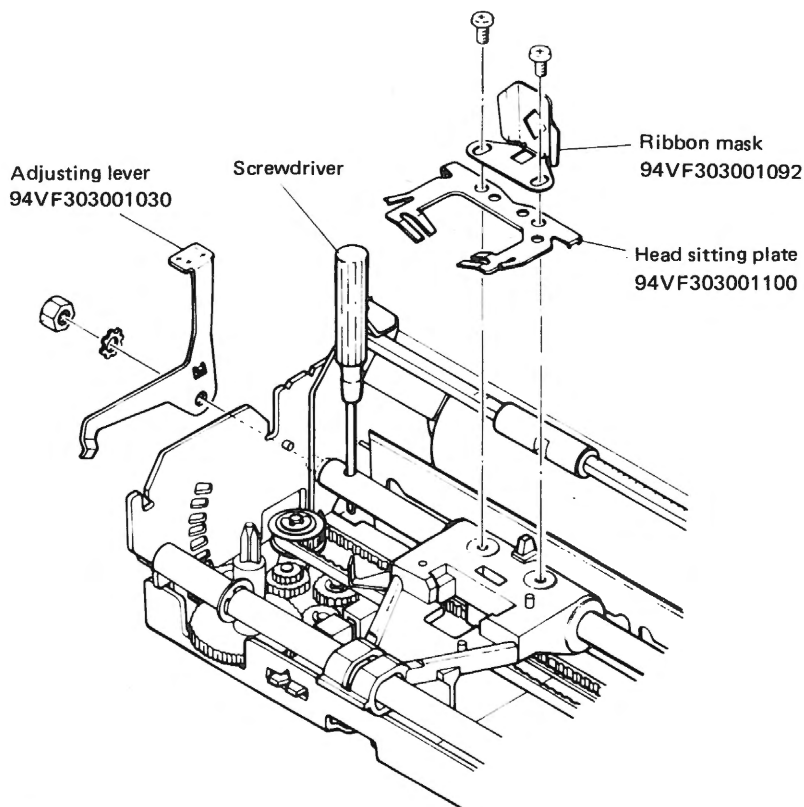
### 9-2 Assembly

- (1) Attach the platen unit. (E ring x 2)
- (2) Attach the roll-in protector.
- (3) Attach the platen cover. (2.5mm screw x 2)
- (4) Attach the sprocket transmission gear. (E ring)
- (5) Attach the paper feeding motor assy. (Refer to section 6-2 on page 29.)
- (6) Attach the sprocket unit B.

## 10. Adjusting Lever (Including adjustment of basic space between platen and print head)

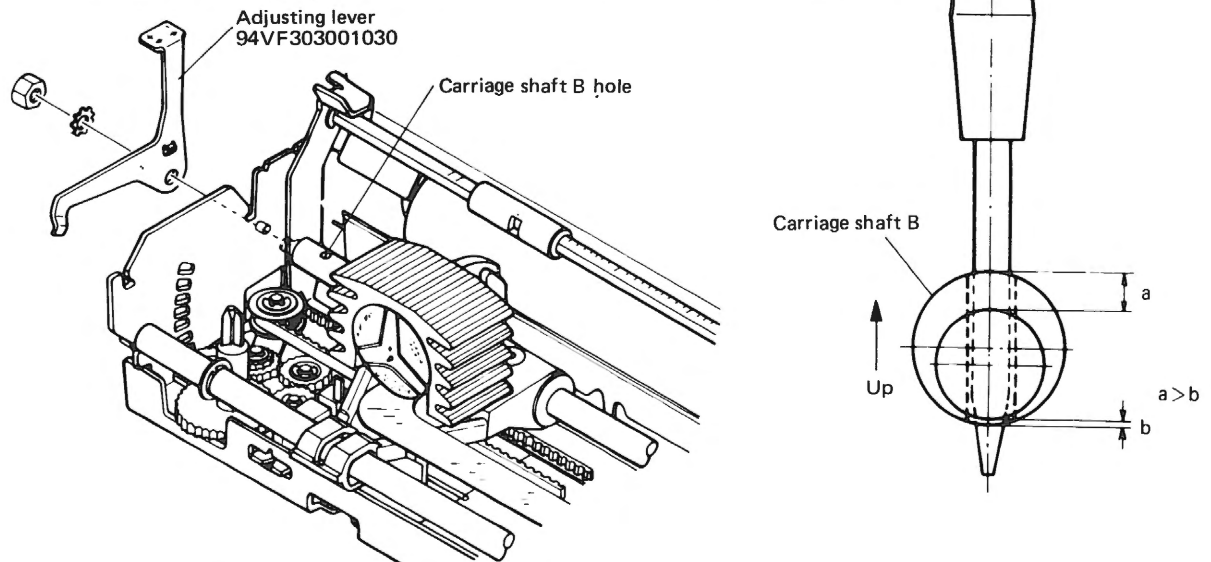
### 10-1 Disassembly

- (1) Move the adjusting lever to the middle step in the hole in frame LB.
- (2) Remove the print head unit. (Refer to section 2-1 on page 24.)
- (3) Insert a screwdriver or similar tool into the hole in carriage shaft B to stop it from turning and remove the nuts holding it. (4 N).
- (4) Remove the ribbon mask and head sitting plate. (2.5mm screw x 2)

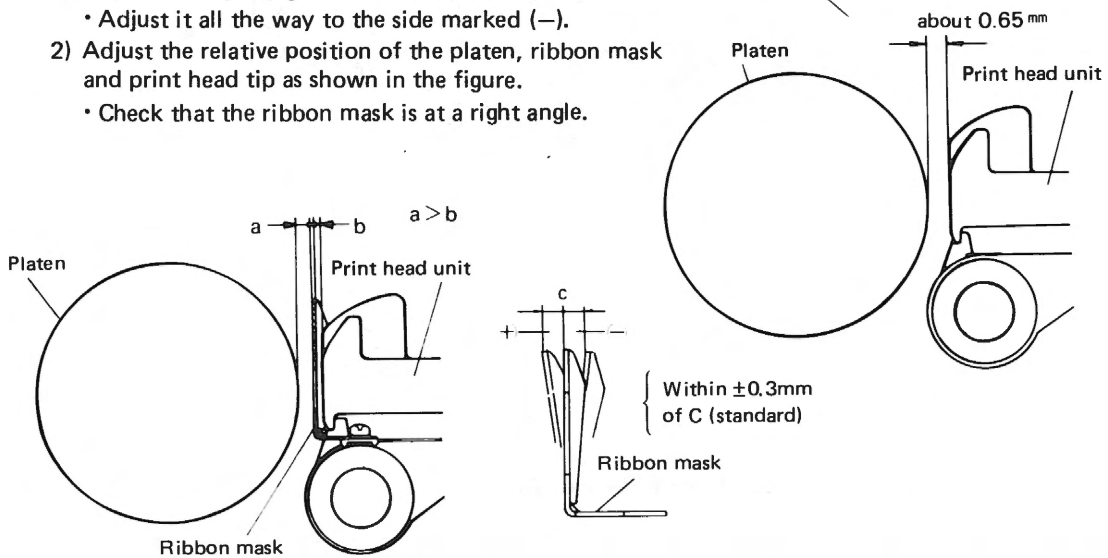


### 10-2 Assembly and Adjustment

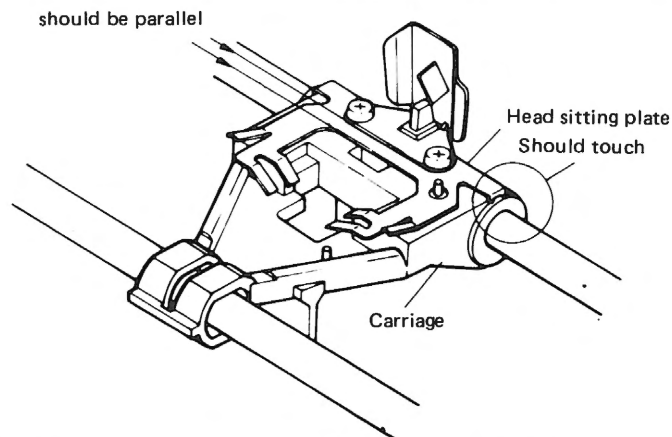
- (1) Temporarily fasten the adjusting lever. (4N)
  - Set it in the middle step of the adjusting hole.
- (2) Attach the print head unit to the carriage.
  - There is no need to insert the head cable into the head connector.
- (3) Turn carriage shaft B so the hole is up.
  - It is eccentric so pay attention to the top and bottom of the eccentric part.



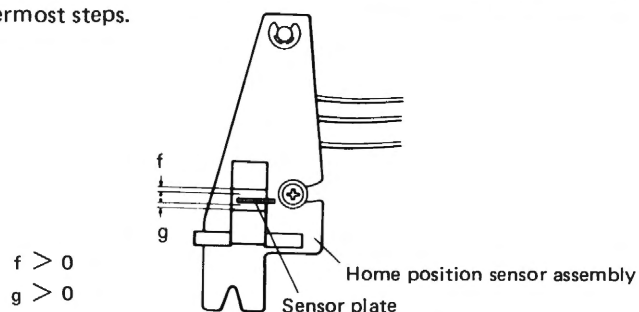
- (4) Move the carriage to the 1 side on the scale graduation.
- (5) Insert a narrow screwdriver or similar tool into the carriage shaft B hole and adjust the clearance between the dot head tip and platen by moving it forward and back.
  - [Standard clearance] 0.65mm
  - Position the carriage shaft where the platen and platen head tip lightly touch both sides of a thickness gauge.
- (6) Fix the adjusting lever
  - Tighten it so the clearance does not change.
- (7) Remove the print head unit.
- (8) Temporarily fasten the head sitting plate and ribbon mask. (2.5mm screw x 2)
- (9) Attach the print head unit.
  - Insert the head cable into the connector.
- (10) Fasten the ribbon mask and head sitting plate.
  - 1) Adjust the adjusting lever to its uppermost step.
    - Adjust it all the way to the side marked (-).
  - 2) Adjust the relative position of the platen, ribbon mask and print head tip as shown in the figure.
    - Check that the ribbon mask is at a right angle.



- 3) Put the head sitting plate approximately parallel to the side surface of the carriage and in contact with the bearing. In addition, position it so it satisfies the conditions in (2) and fasten it with screws.

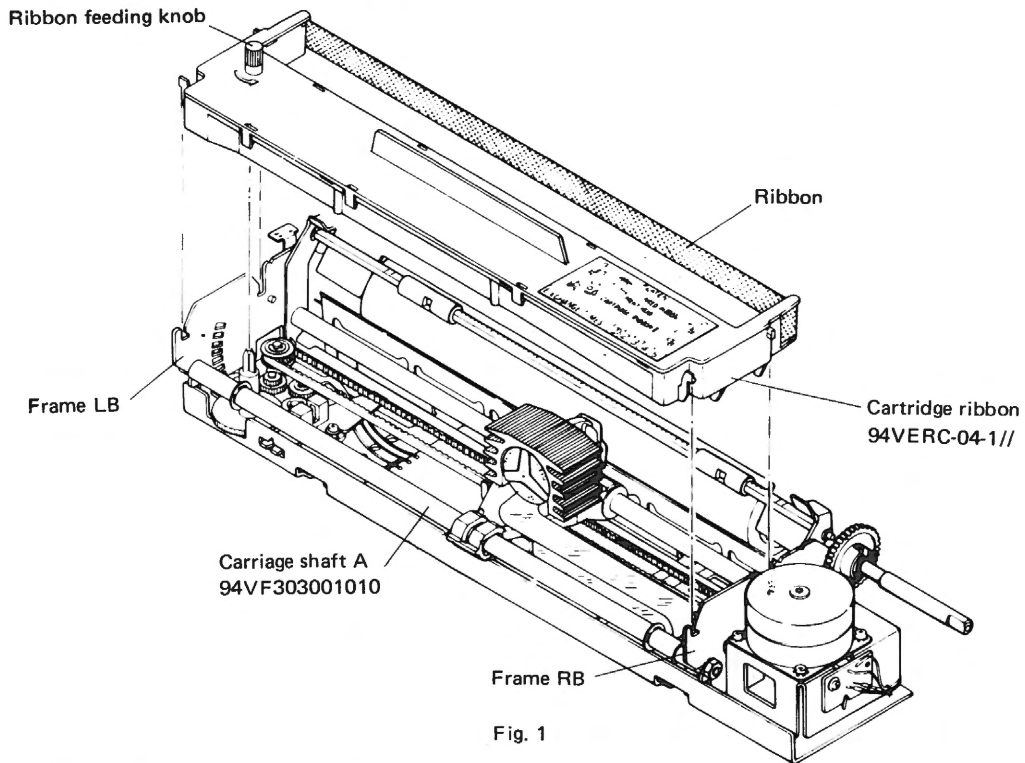


- (11) Do not touch the home position sensor assembly and carriage sensor plate when setting the adjusting lever to the uppermost and lowermost steps.



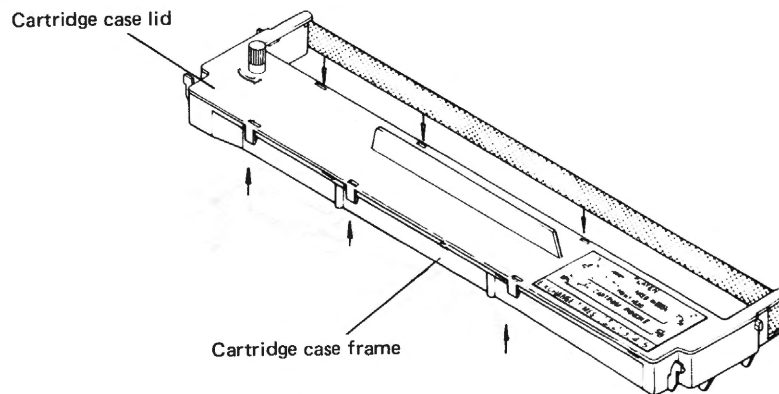
# REPLACING INK RIBBON FROM CARTRIDGE

1. Remove the cartridge ribbon from the printer.



2. Remove the cartridge case lid from the cartridge case frame.

Note: There are catches ( → ) in 6 places. When removing the lid, push the catches to the outside so they aren't bent and remove the cartridge case lid.



### 3. Remove the used ink ribbon

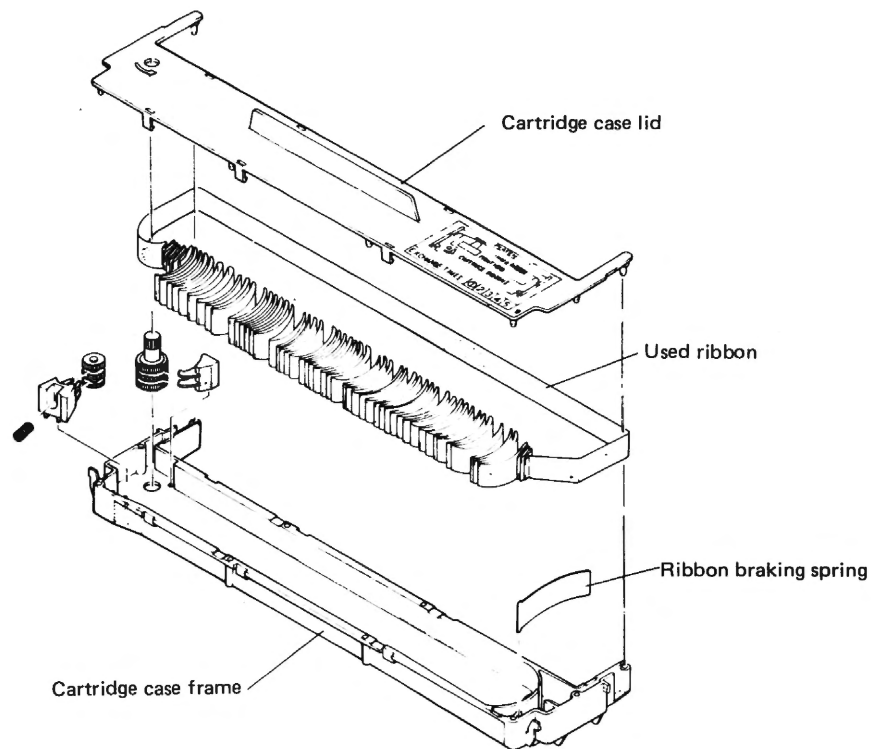


Fig. 3

Note: Fig. 3 is an illustration and there is no need to remove everything as shown. If you do remove everything, the relative positions are as shown in the figure.

### 4. Remove the new ribbon with the ribbon package from its cellophane case.

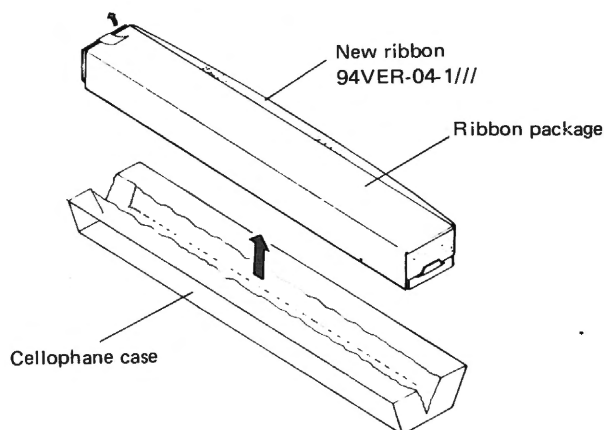
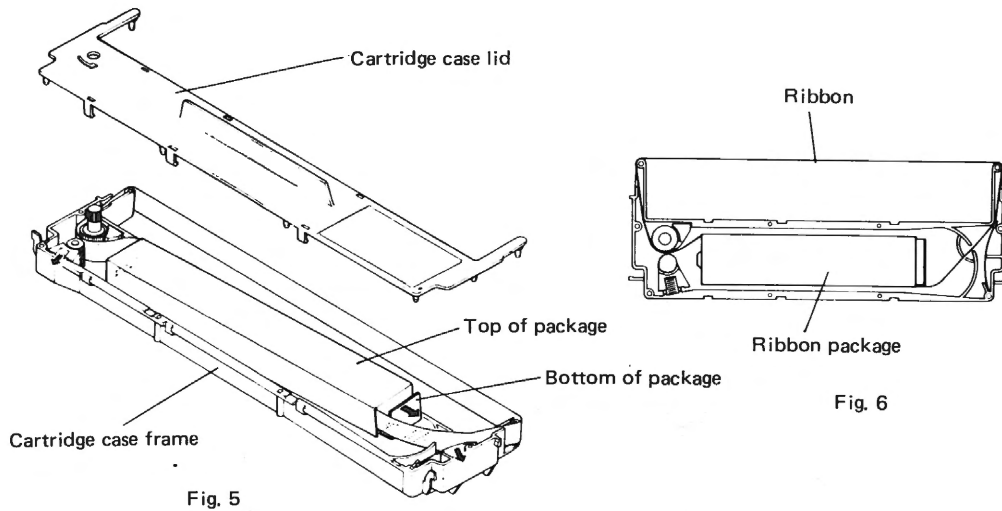


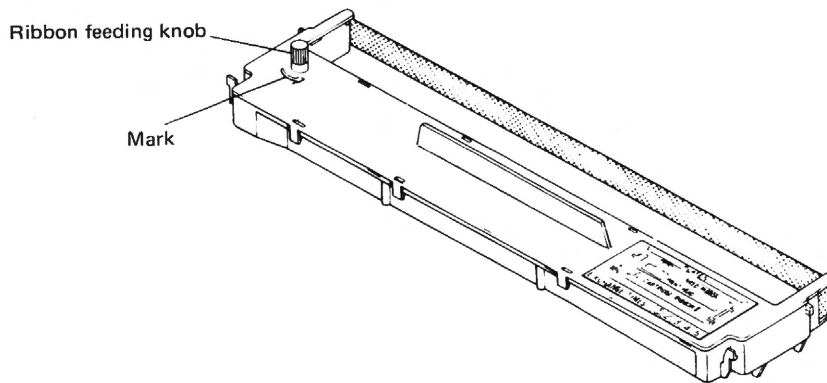
Fig. 4

### 5. Put the new ribbon into the cartridge.

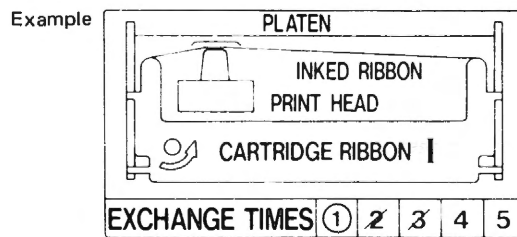
- (1) Leave the ribbon in the package and put it into the cartridge as shown in Fig. 5.
- (2) Pass the ink ribbon through the path as shown in Fig. 6.
- (3) Hold the top of the package with your hand and pull out the bottom of the package in the direction of the arrow (Fig. 5).
- (4) Remove the top of the package. (Note: The ink ribbon is not removed from the cartridge.)



6. Put in the cartridge case.
7. Turn the ribbon feeding knob in the direction marked on the cartridge and check that the ribbon is not pinched between the ribbon case.



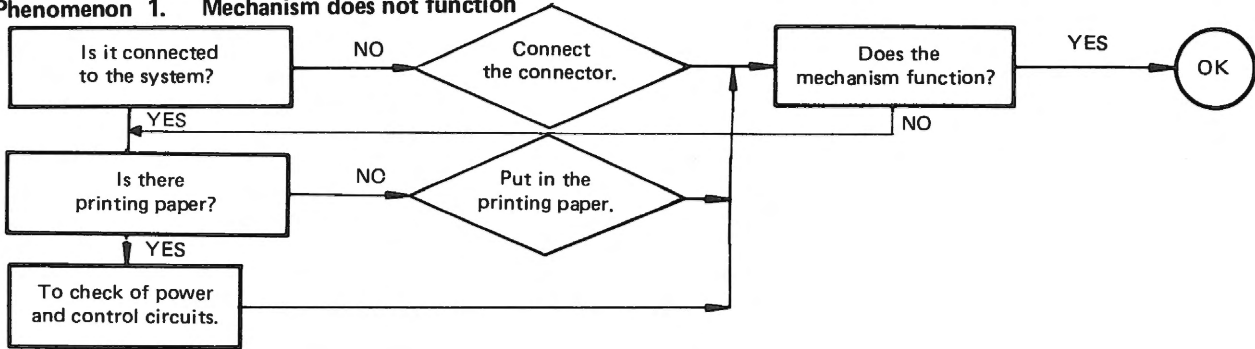
Note: After replacing the ink ribbon, make a check on the ribbon label that indicates number of times the cartridge ribbon has been replaced. After 5 checks, use a new cartridge ribbon.



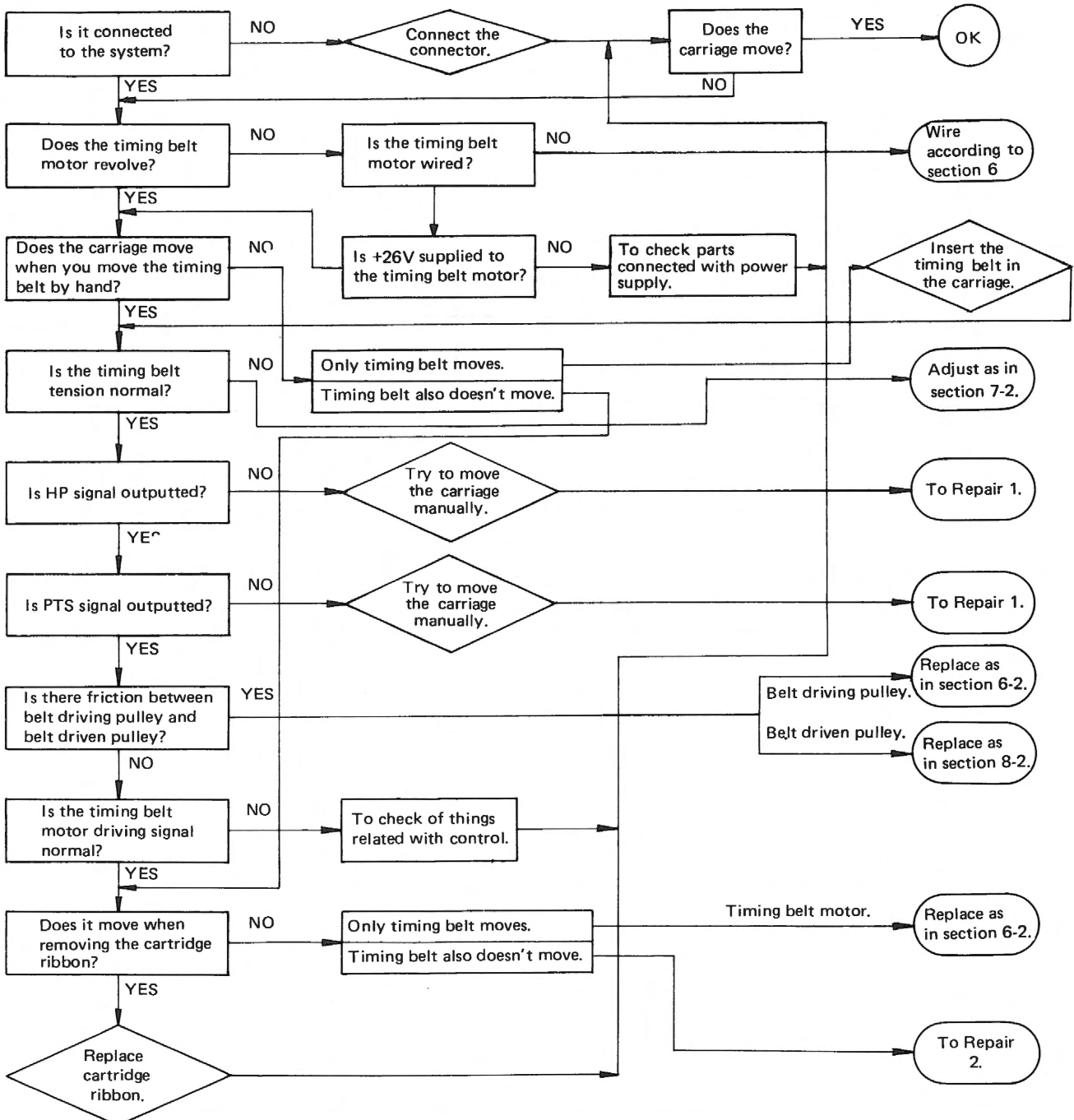


# REPAIR PROCEDURE FOR PRINTER MECHANISM

## Flow Chart to Check Cause of Defective Phenomenon 1. Mechanism does not function

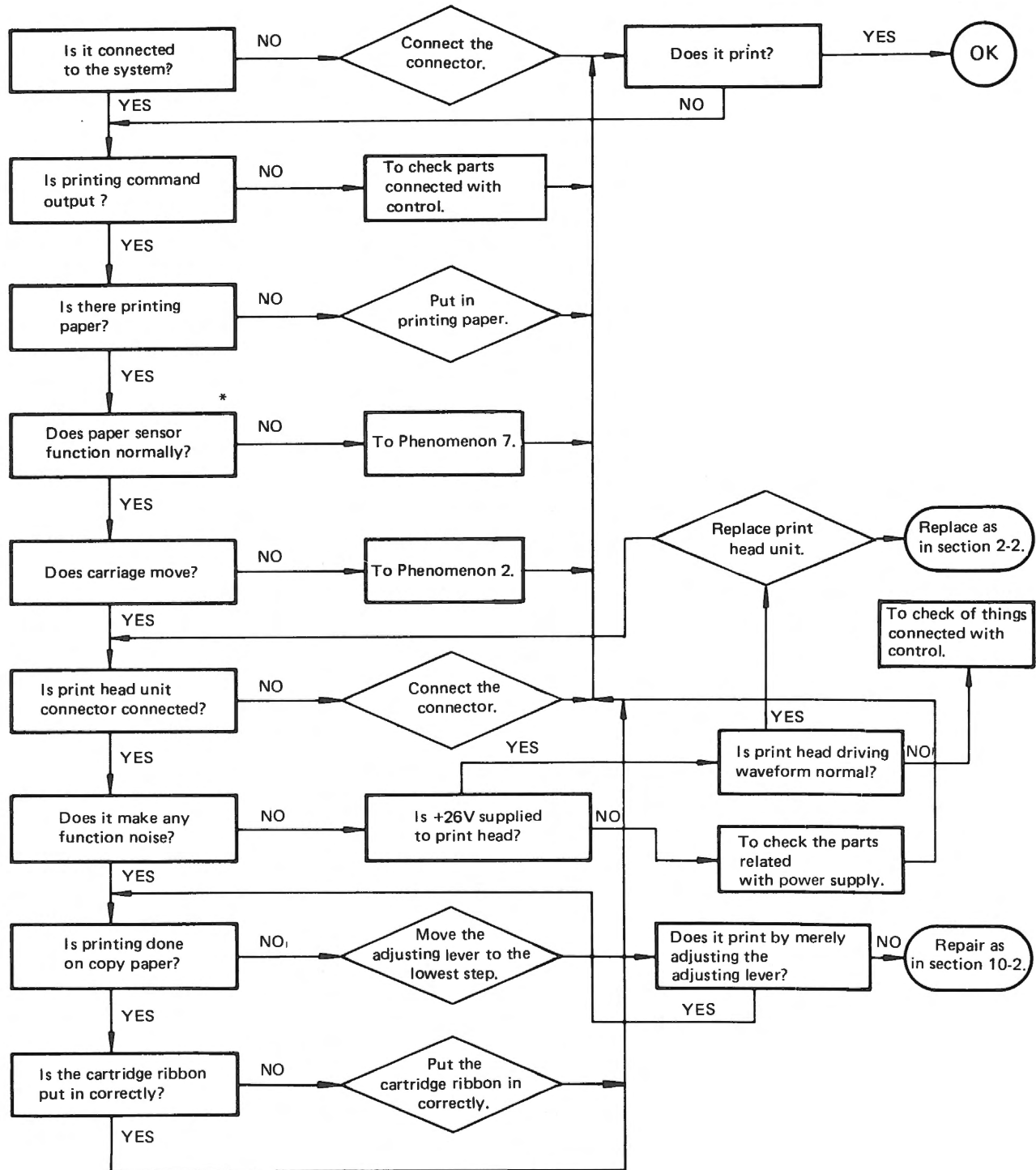


## Phenomenon 2. Carriage does not move.



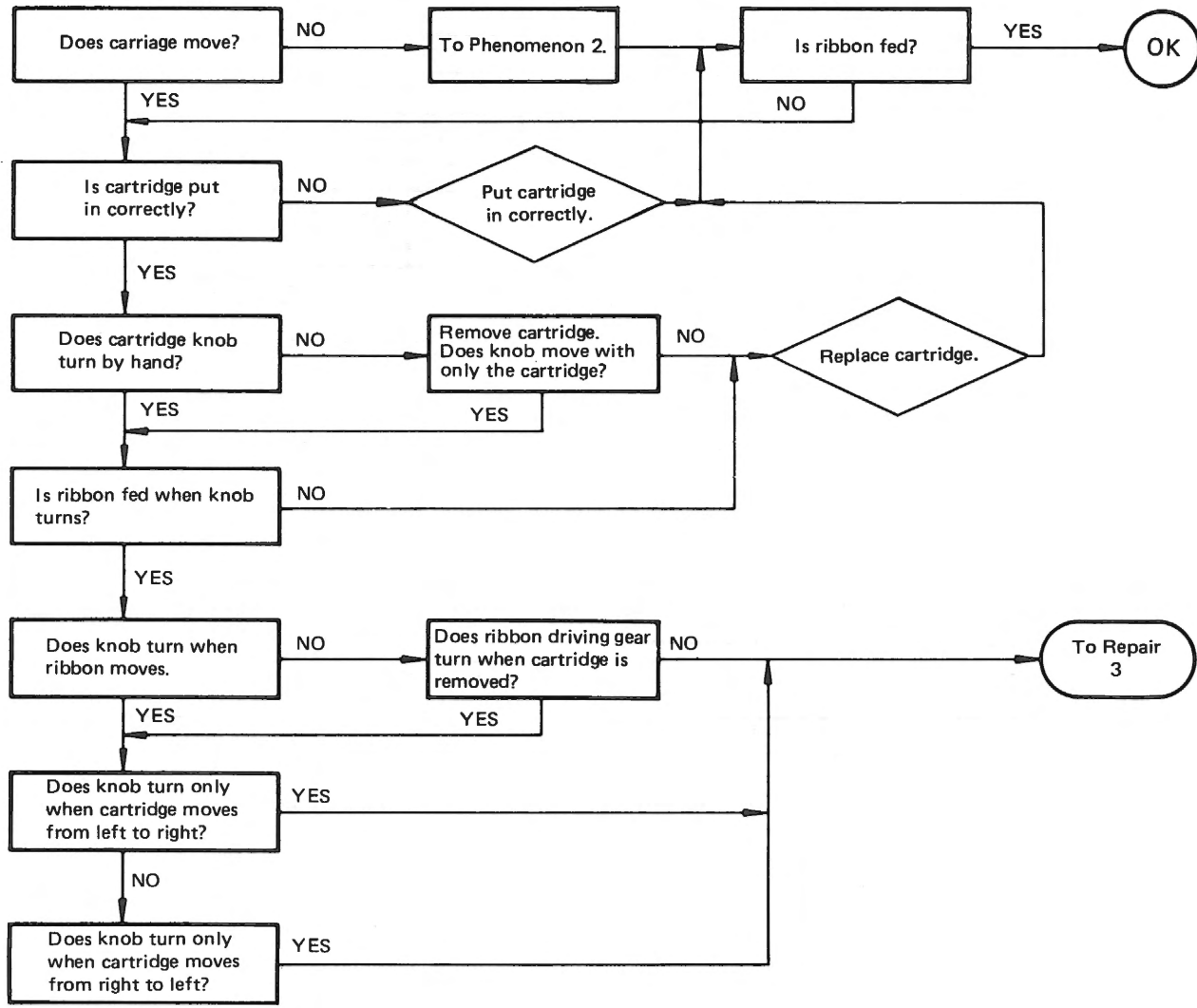
Note: Active the paper to print even if there is no need to print while checking.

**Phenomenon 3. Does not print at all.**

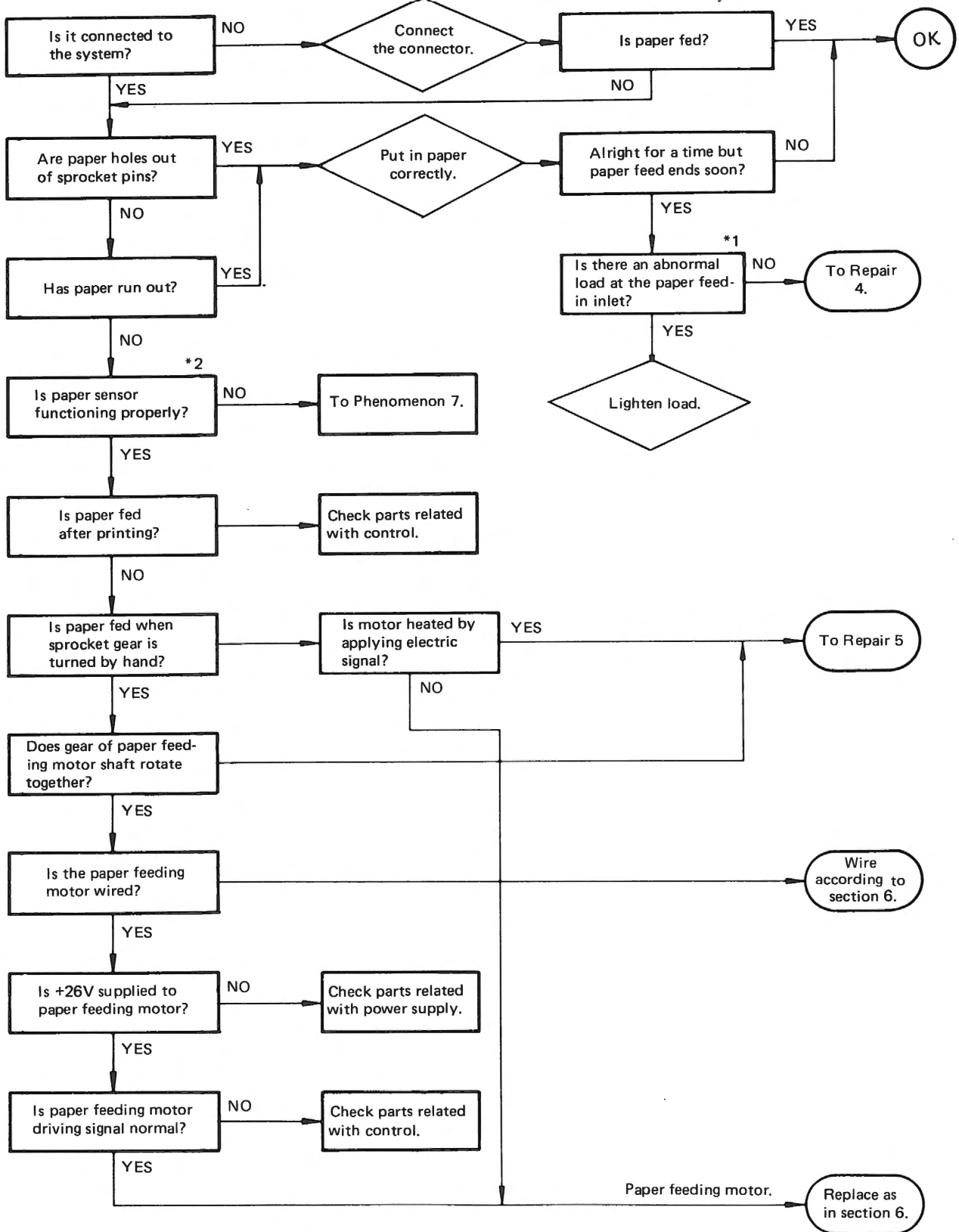


\* Remove the paper and check if there is a "clicking" sound when the sensor lever approaches the reed switch.

**Phenomenon 4. Ribbon does not feed.**



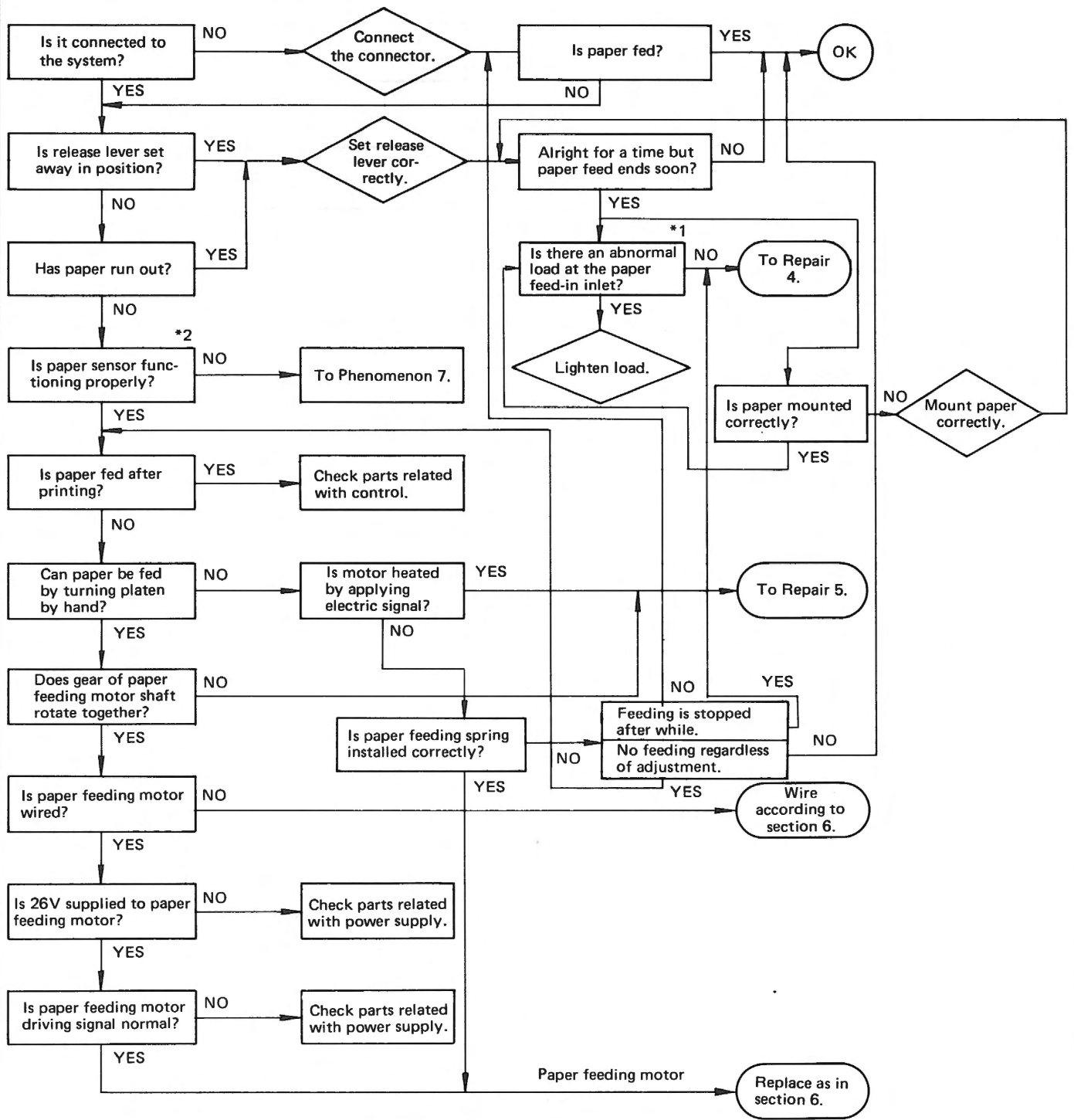
**Phenomenon 5-1 Fanfold paper is not fed.**



\* 1 Check if there is a load on the paper when it is in the paper box, system case, etc.

\* 2 Remove the paper and check if there is a "clicking" sound when the sensor lever approaches the reed switch.

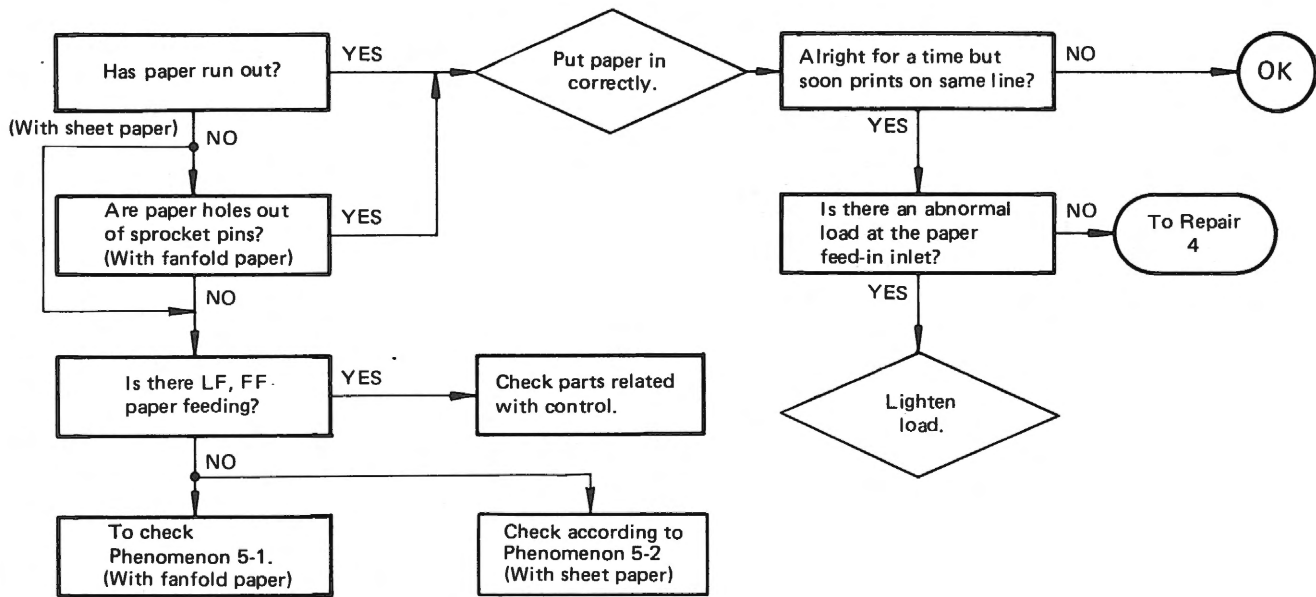
**Phenomenon 5-2 Sheet paper is not fed.**



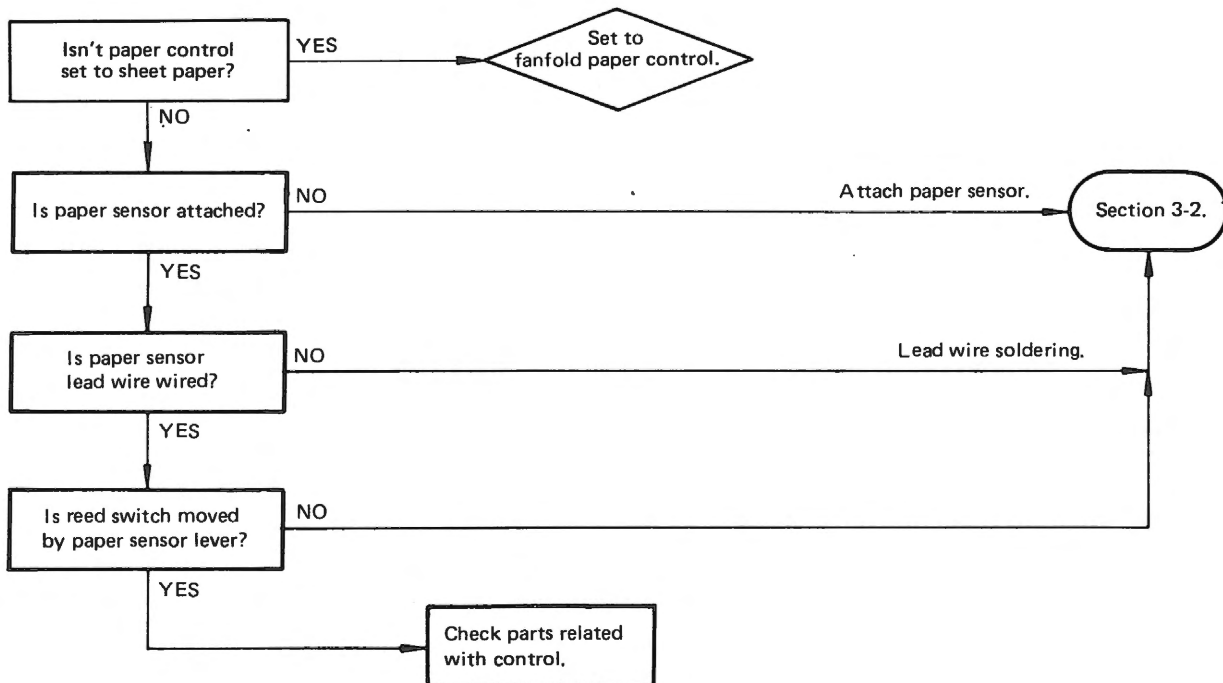
\*1 Check if there is a load on the paper when it is in the paper box, system case, etc.

\*2 Remove the paper and check if there is a "clicking" sound when the sensor lever approaches the reed switch.

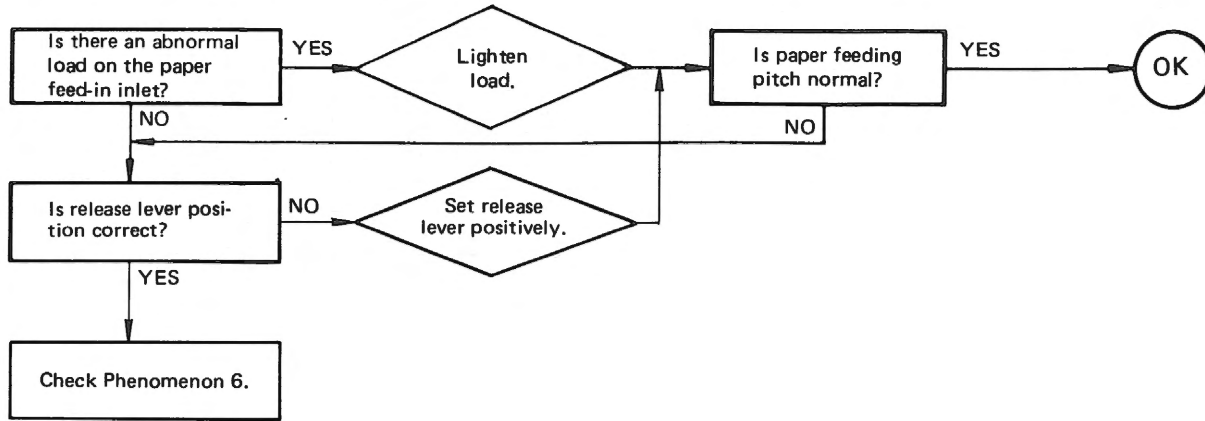
**Phenomenon 6. Prints on the same line.**



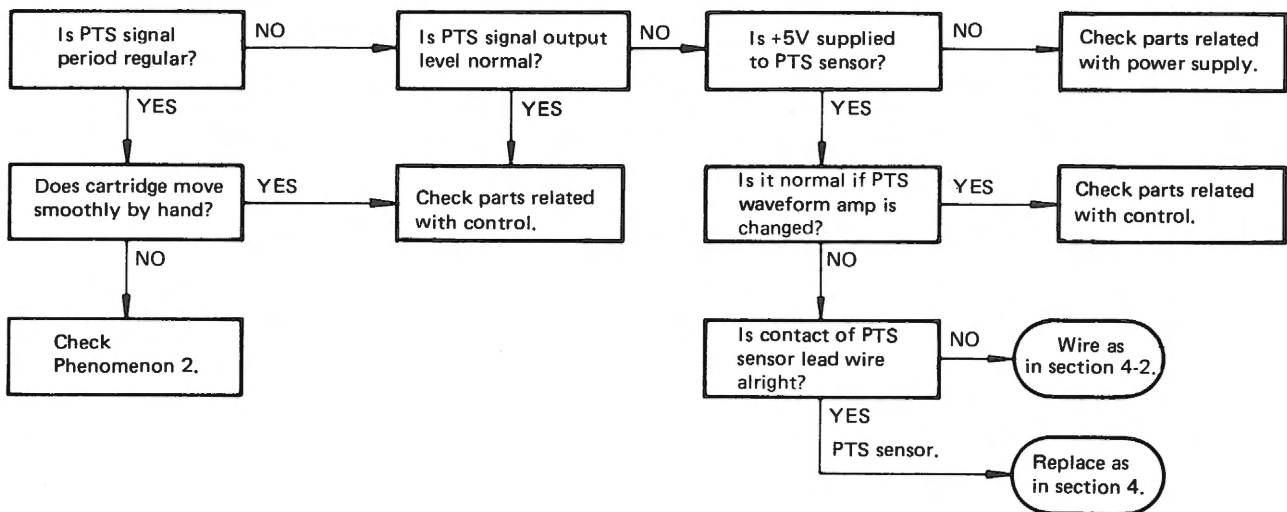
**Phenomenon 7. Prints even without paper.**



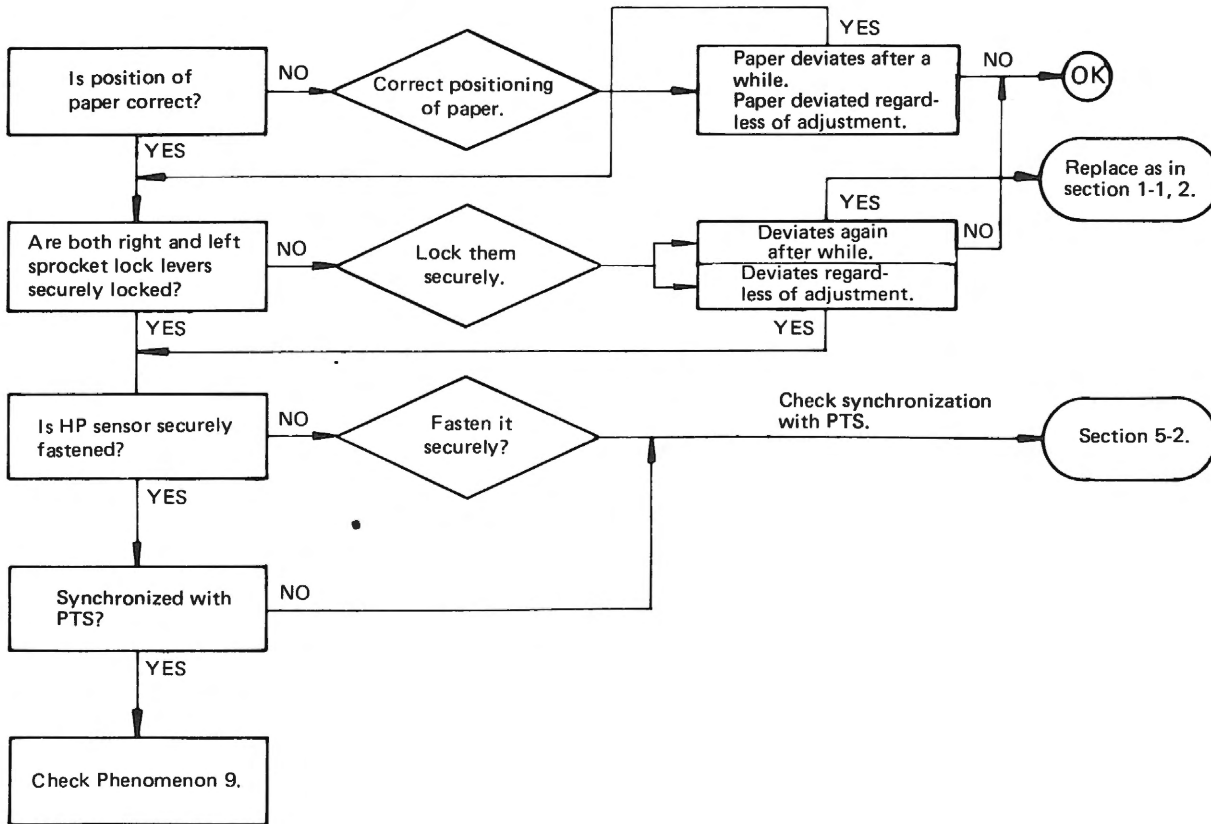
**Phenomenon 8. Paper feed pitch is abnormal.**



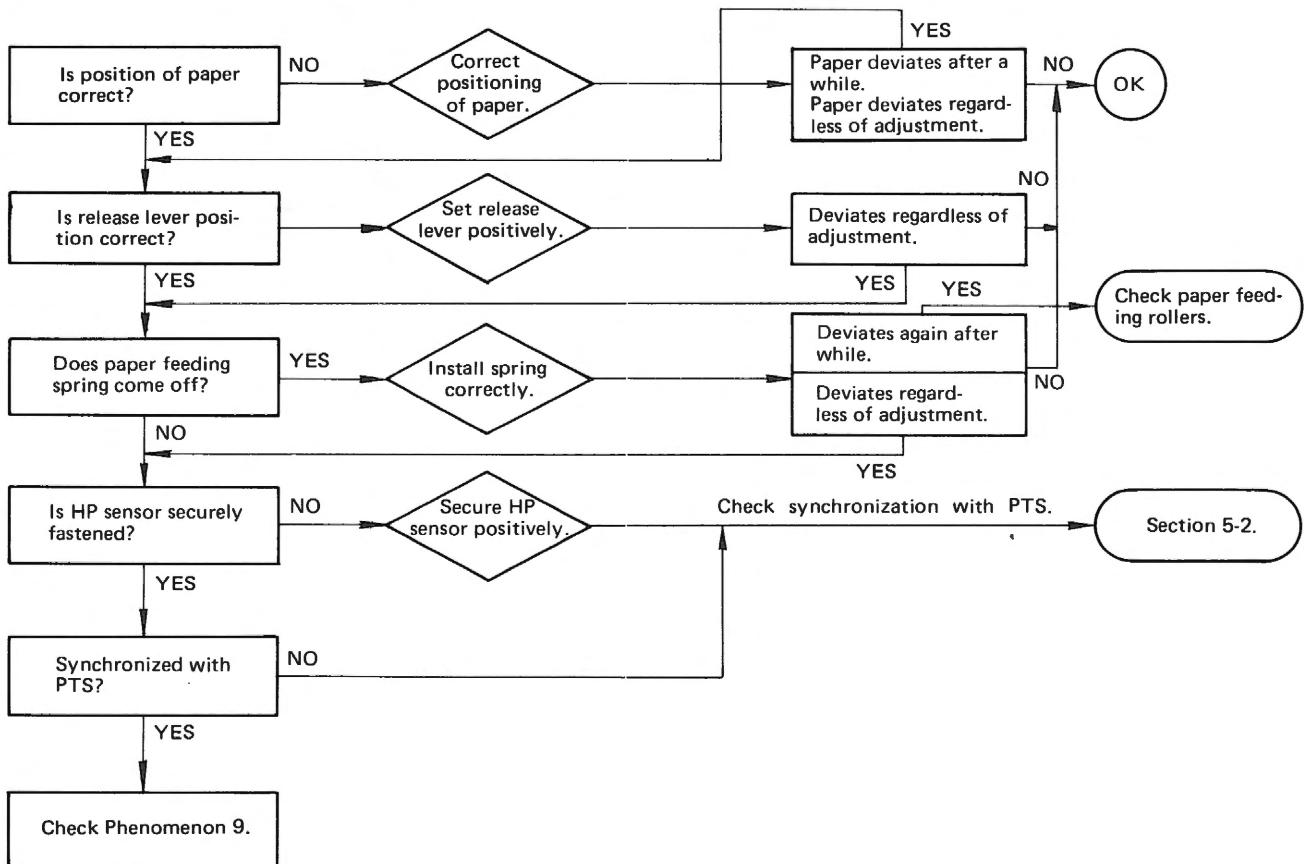
**Phenomenon 9. Density of characters varies across line.**



**Phenomenon 10-1 Printing position of 1st digit deviates. (With fanfold paper)**

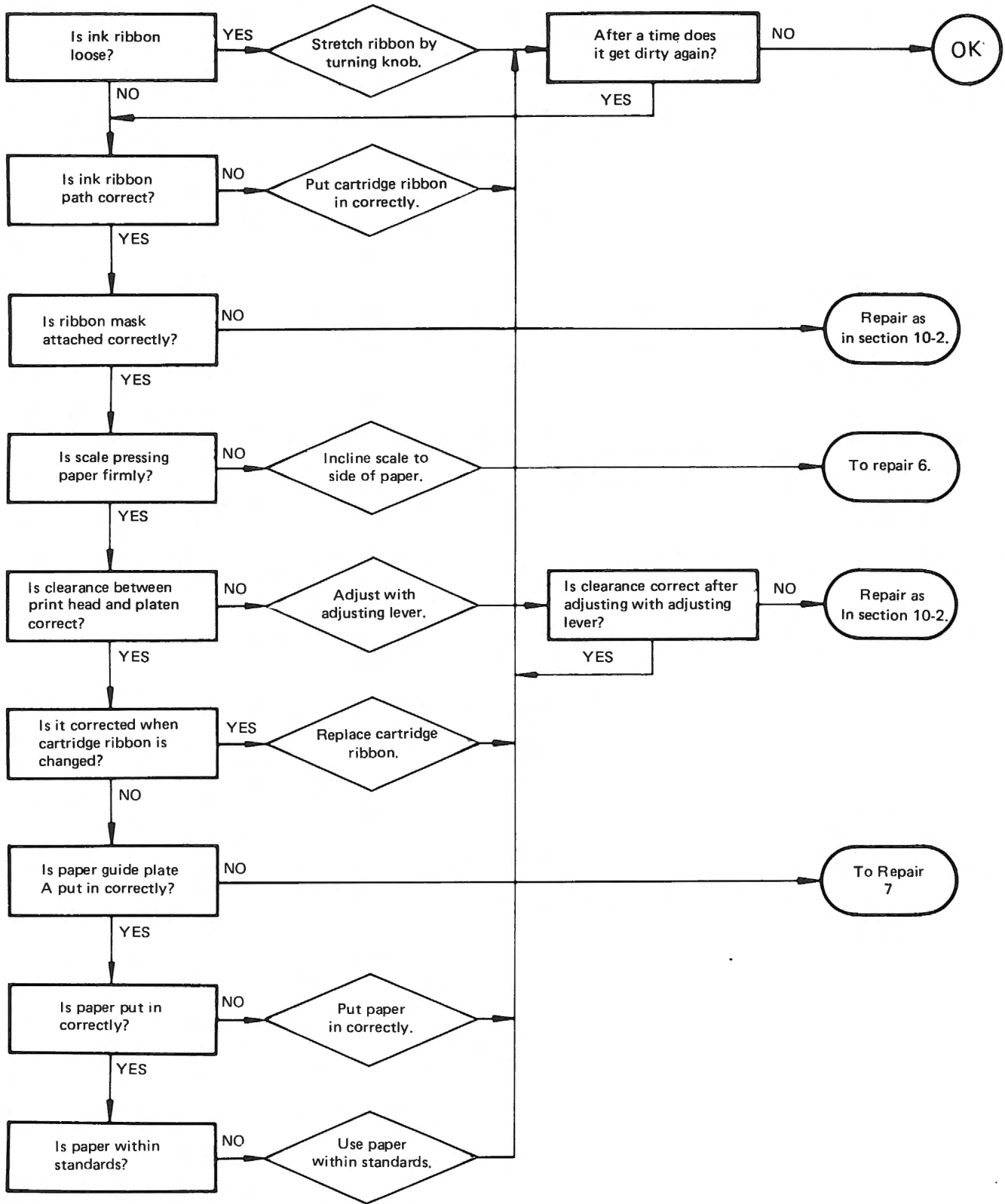


**Phenomenon 10-2 Printing position of 1st digit deviates. (With sheet paper)**

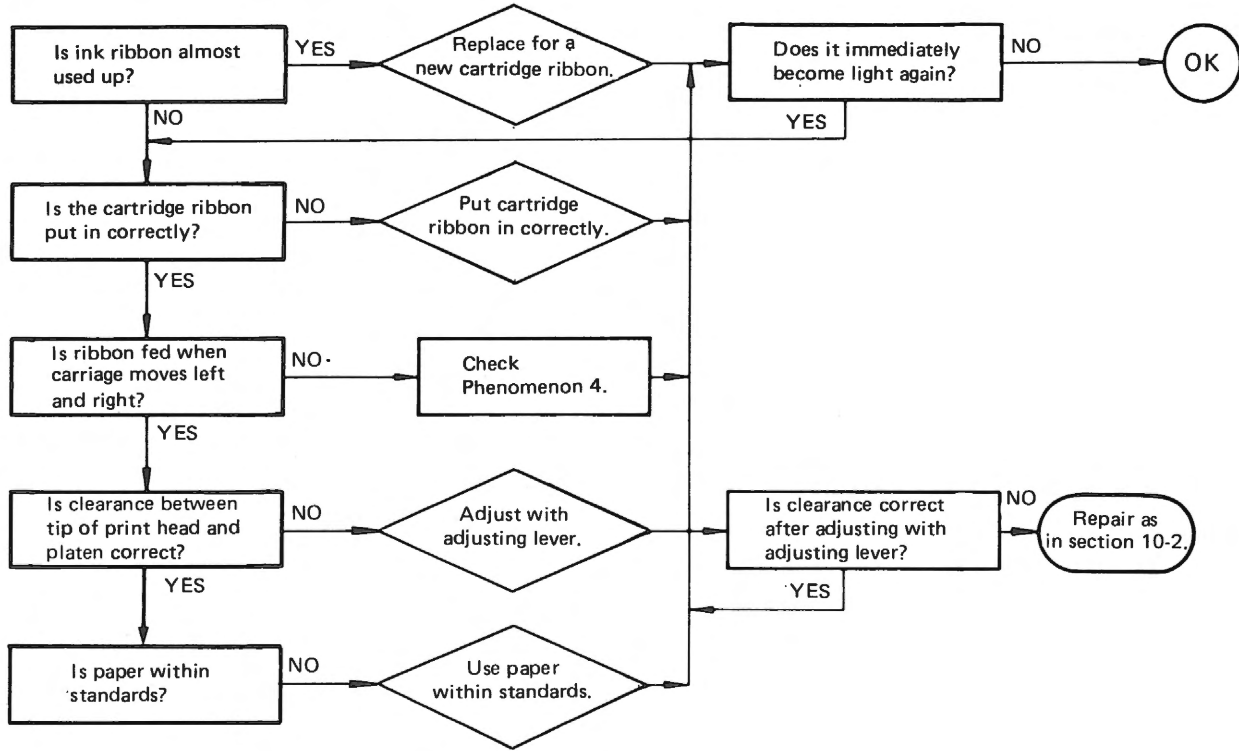




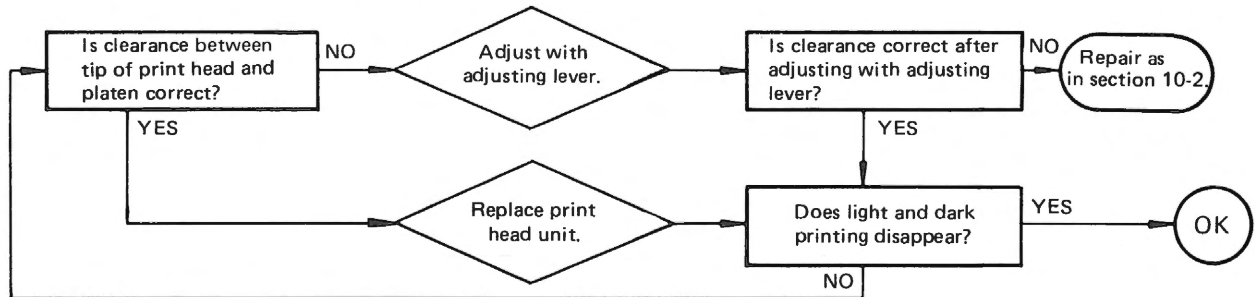
**Phenomenon 11. Printing paper is dirtied by ink ribbon.**



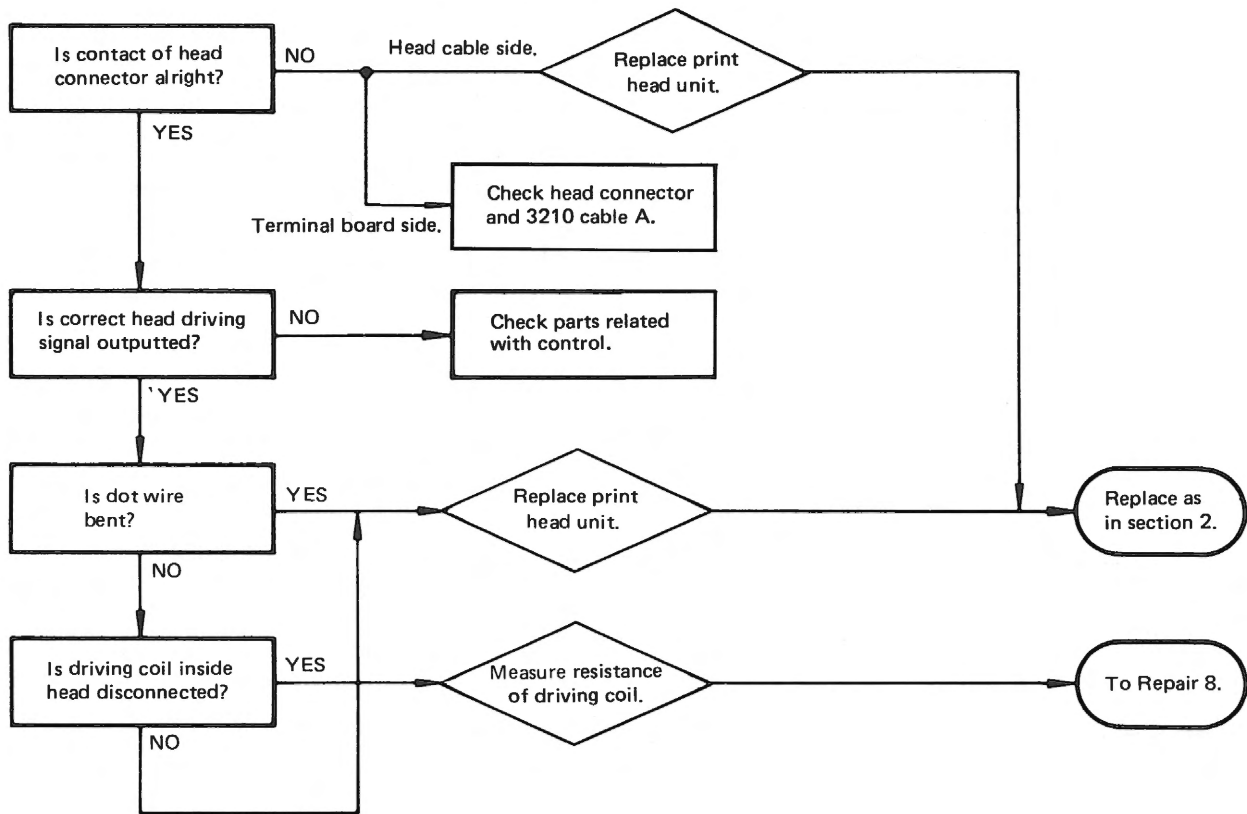
**Phenomenon 12. Printing is light.**



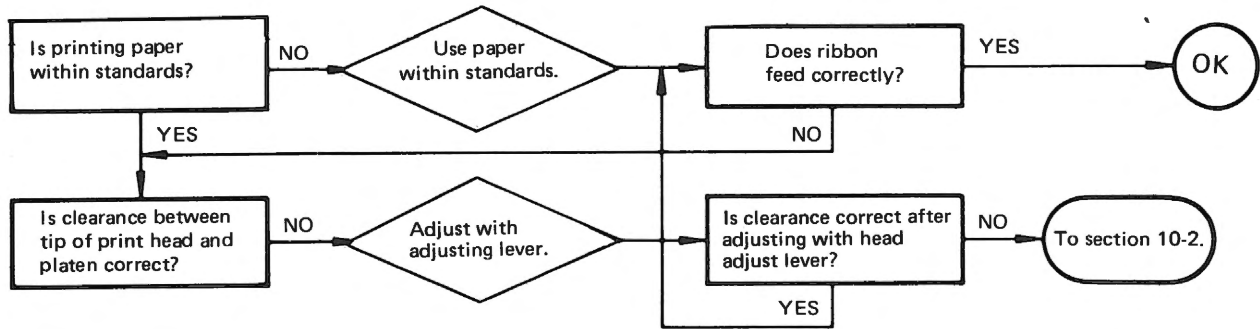
**Phenomenon 13. Printing is light and dark.**



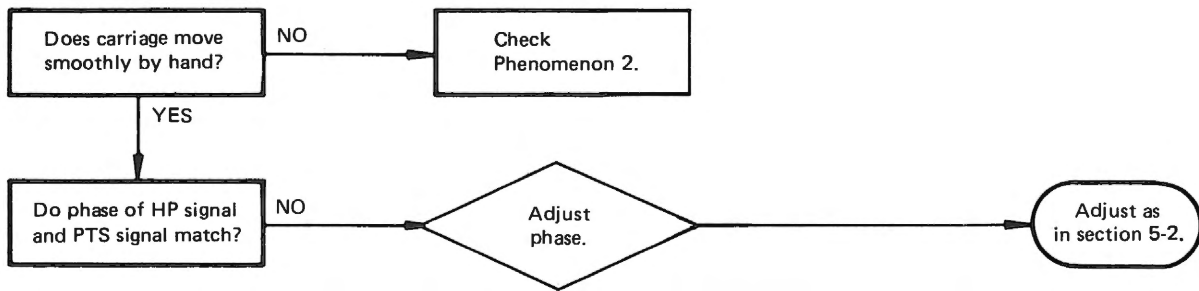
Phenomenon 14. Same dots only are usually (sometimes) omitted.



**Phenomenon 15. The ribbon winds but becomes loose.**



**Phenomenon 16. Go/return time for the carriage varies.**

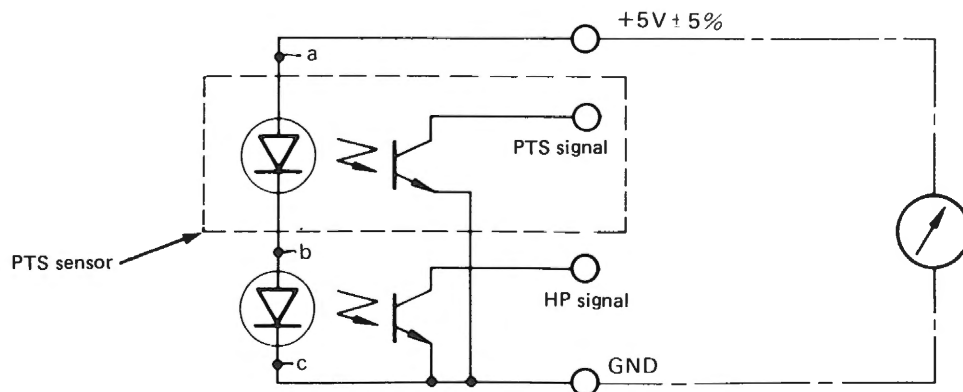


**■ Practical Method of Repair**

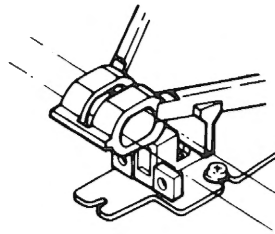
**Repair 1 PTS signal is bad, HP signal is bad**

**(1) Check points and method**

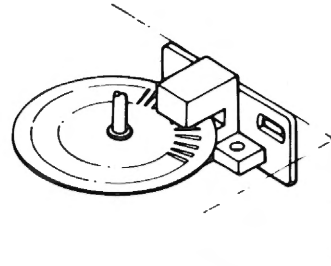
- 1) Check +5V. [Standard] +5V ±5%
- 2) Test whether LEDs are normal or not.



3) Check the waveform output by opening and intercepting the light shaft to the sensor plate.



HP sensor side



PTS sensor side



**(2) Method of Repair**

- 1) Check the parts related with the +5V power supply.
- 2) If there is no continuity between a–b, exchange the PTS sensor board assembly.
- 3) If there is no continuity between b–c, exchange the HP sensor board assembly.

**Repair 2 Timing belt does not move**

**(1) Check points and method**

- 1) Check the backlash of the gears on the belt driving pulley and timing belt motor shaft.
- 2) Check meshing of gears between belt driven pulley, planetary pinion and ribbon driving gear.

**(2) Method of Repair**

- 1) Adjust the backlash. (Refer to page 29.)
- 2) If damage, or wear, to the gears, etc. are found, replace the parts and readjust.

**Repair 3 Ribbon driving gear does not turn**

**(1) Check points and method**

- 1) When ribbon driving gear does not turn by hand
  - (a) Check meshing of gears of ribbon driven pulley, planetary pinion and ribbon driving gear.
- 2) When ribbon driving gear turns when carriage moves either left to right or right to left.
  - (a) Check meshing of planetary lever assembly and planetary pinion.
  - (b) Check the reversed revolution of the planetary lever.

**(2) Method of repair**

- 1), 2): If damage, or wear, to the gears, etc. are found, replace the parts and readjust.

**Repair 4 Paper feed-in inlet is normal but paper does not feed**

**(1) Check Points and Method**

- With fanfold paper
- 1) Check if the right and left positions of the sprocket wheel are fixed correctly.
  - 2) Check if the paper holding cover is holding the paper correctly.
  - 3) Check if the paper holding cover spring is damaged or fallen off.

- 4) Check if the sprocket lock lever is securely locked.
- With sheet paper { 5) Check the paper feeding spring for damage, set, coming off, etc.  
6) Check whether or not the paper feeding roller is installed correctly.

**(2) Method of repair**

- 1) Correct sprocket wheel positions. (Refer to page 24.)
- 2), 3), 4), 5): Replace the parts if transformation, wear, etc. are found in any parts.
- 6) Install the paper feeding roller correctly.

**Repair 5 Paper feed motor gets hot and paper does not feed**

**(1) Check Points and Method**

- 1) Check the backlash of the gear on the paper feeding motor, sprocket transmission gear, platen gear, sprocket reduction gear and sprocket gear.

**(2) Method of repair**

- 1) If damage, or wear, to the gears, etc. are found, replace the parts and readjust.

**Repair 6 Scale does not hold paper correctly.**

**(1) Check Points and Method**

- 1) Check if scale springs L and R are off and if there is wear, etc.

**(2) Method of repair**

- 1) If damage, etc. to scale spring L and R is found, change them.

**Repair 7 Paper guide plate A is bad.**

**(1) Check Points and Method**

- 1) Check if paper guide plate A is twisted and if there is a space between it and the platen.

**(2) Method of repair**

- 1) If paper guide plate A is deformed or if there is a space between the platen and it, change paper guide plate A.
- 2) Replacement procedure
  1. Remove the sprocket unit. (Refer to section 1-1.)
  2. Loosen the belt tension plate.
  3. Remove the set screws (2.5mm x 2) fastening the frame assys LB and RB to the base frame assy B.
  4. Remove the wire bundle of the motor set from the base frame.
  5. Separate the frame assys LB and RB from the base frame assy B.
  6. Replace the paper guide plate A.
  7. Paint the screw to lock it.
  8. While fastening the wire bundle of the motor set to the base frame, fasten the frame assys LB and RB to the base frame. (2.5mm screw x 2)
  9. Install the timing belt on the belt driving pulley and driven pulley, and temporarily fasten the belt tension plate. (Refer to section 8-2.)
  10. After adjusting the belt tension, fix the screw lock and paint the screw to lock it. (Refer to section 8-2.)

Notes: Pay attention to the following points in the above replacement.

**(1) In disassembly**

- 1) Do not damage leads and others by pulling etc.

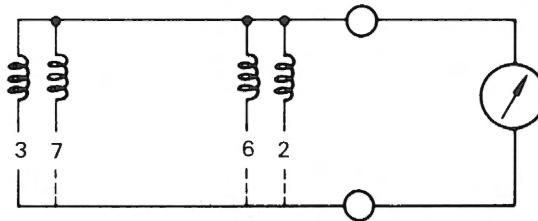
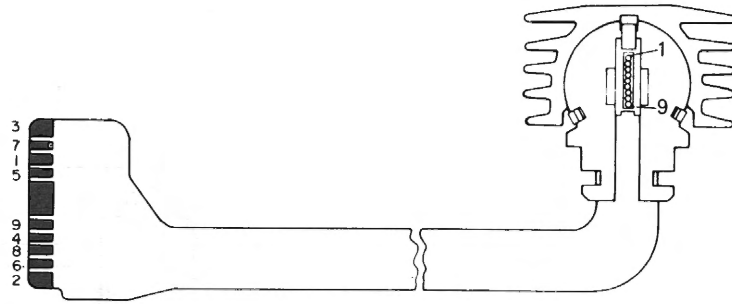
**(2) In assembly**

- 1) Exercise care not to unfasten the scale spring.
- 2) Do not damage new paper guide plate A.
- 3) Do not pinch the timing belt between frames.

## Repair 8 Check abnormalities of print head unit

### (1) Check points and Method

- 1) Measure the DC resistance of the print head unit coil. [Standard] approx.  $22\Omega$ /coil



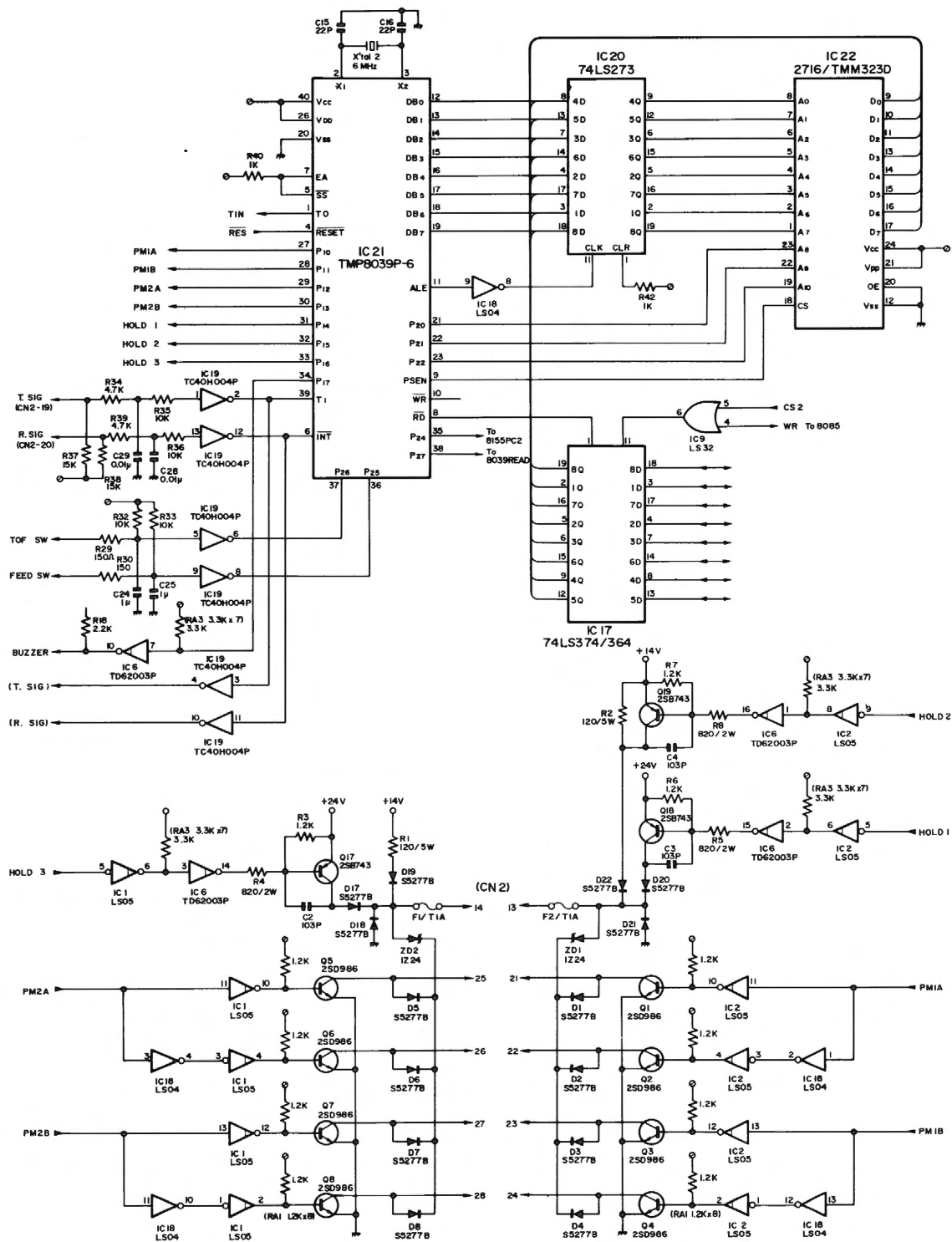
### (2) Method of repair

- 1) If DC resistance of the coil does not indicate standard, change the print head unit.

# CIRCUIT DIAGRAM AND PRINTED WIRING BOARD

Notes: The circuit diagram and printed wiring board subject change without prior notice.

## ■ CPU Board Circuits (1)



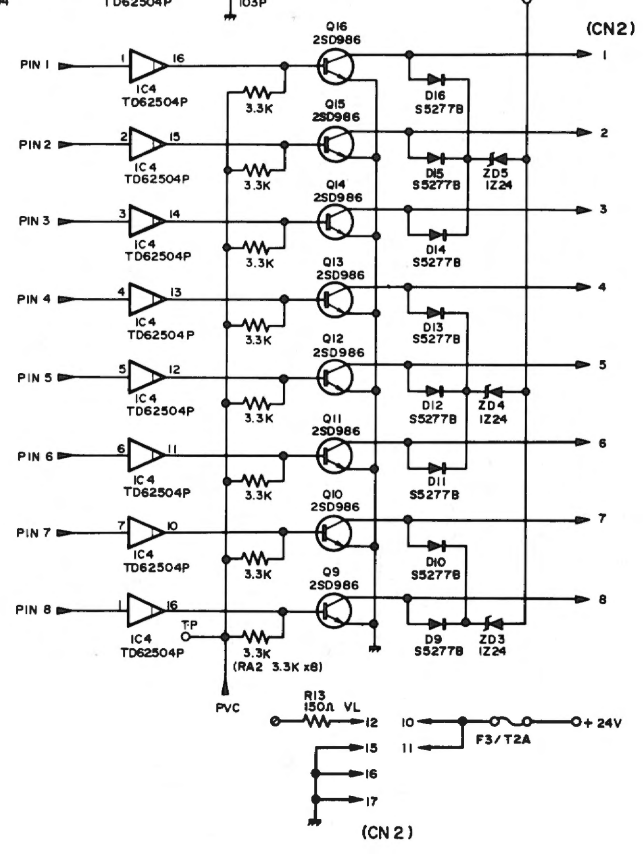
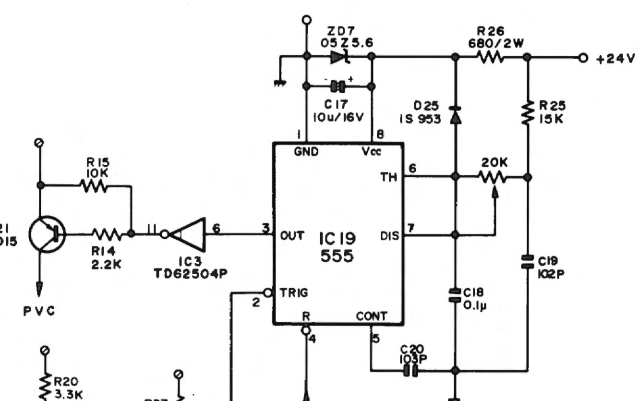
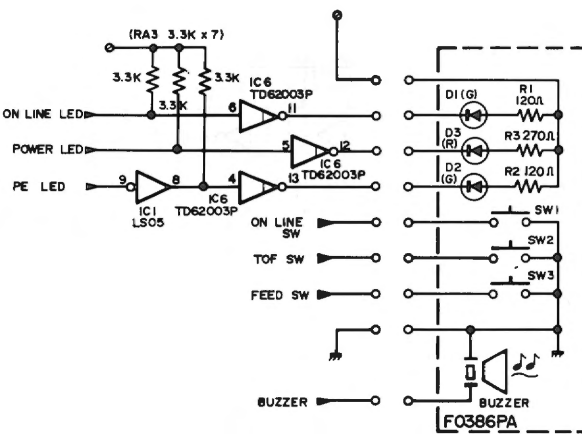
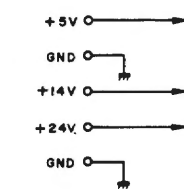
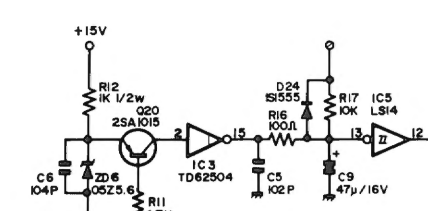
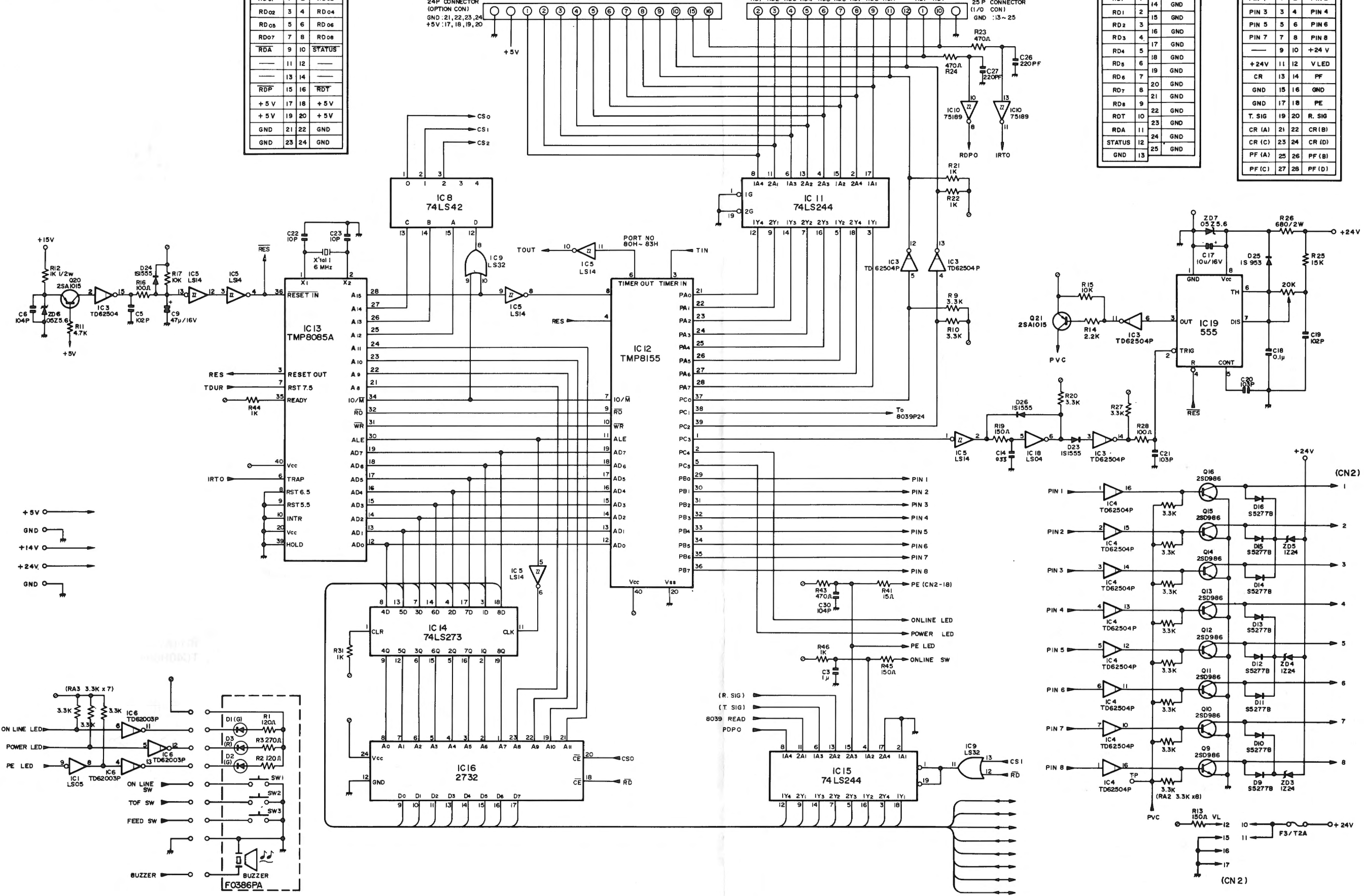
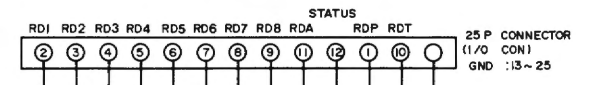
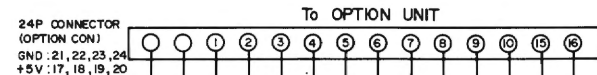


■ CPU Board Circuits (2)

OPTION CONNECTOR			
RD01	1	2	RD02
RD02	3	4	RD04
RD05	5	6	RD06
RD07	7	8	RD08
RDA	9	10	STATUS
	11	12	
	13	14	
RDP	15	16	RDT
+5V	17	18	+5V
+5V	19	20	+5V
GND	21	22	GND
GND	23	24	GND

I/O CONNECTOR			
RDP	1	14	GND
RD1	2	15	GND
RD2	3	16	GND
RD3	4	17	GND
RD4	5	18	GND
RD5	6	19	GND
RD6	7	20	GND
RD7	8	21	GND
RD8	9	22	GND
RDA	10	23	GND
STATUS	11	24	GND
GND	12	25	GND

CONNECTOR (2)			
PIN 1	1	2	PIN 2
PIN 3	3	4	PIN 4
PIN 5	5	6	PIN 6
PIN 7	7	8	PIN 8
	9	10	+24V
+24V	11	12	VLED
CR	13	14	PF
GND	15	16	GND
GND	17	18	PE
T. SIG	19	20	R. SIG
CR (A)	21	22	CR (B)
CR (C)	23	24	CR (D)
PF (A)	25	26	PF (B)
PF (C)	27	28	PF (D)



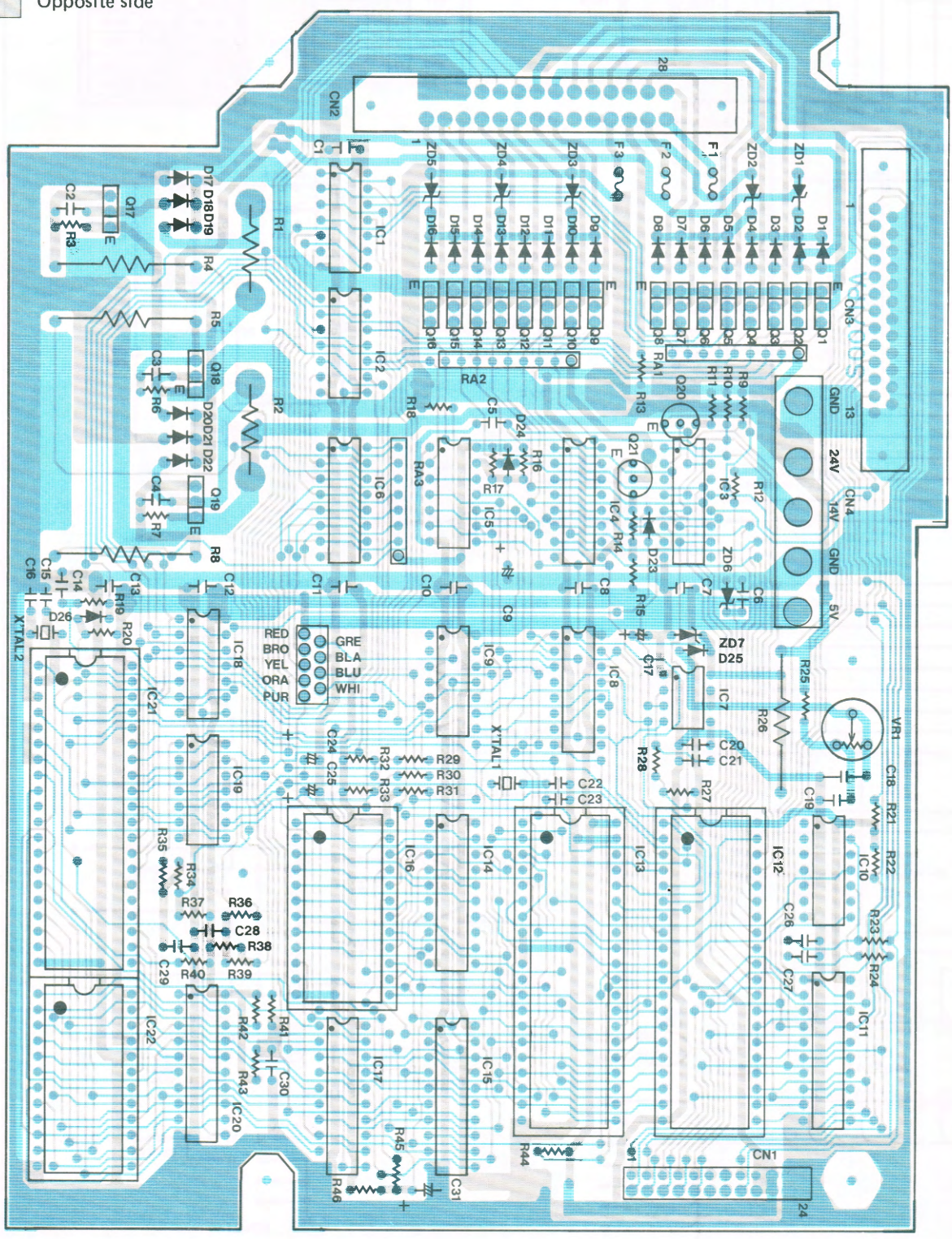
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■ PWB (CPU Board Section)

Perspective View

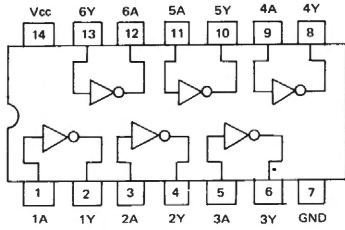
- Parts-fitted face
- Opposite side



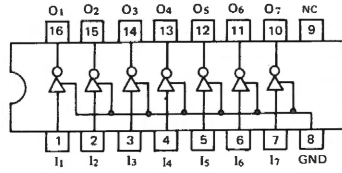
■ IC Pin Assignments (New parts)

(Top View)

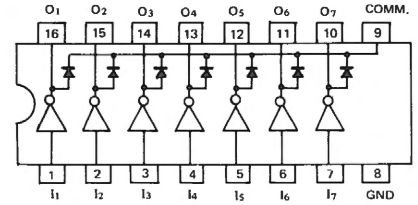
- IC1, 2 RH-iX0295PAZZ  
SN74LS05N



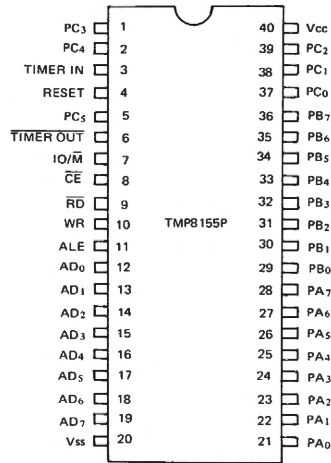
- IC3, 4 RH-iX0292PAZZ  
TD62504P



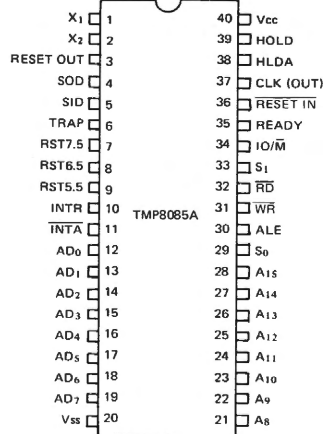
- IC6 RH-iX0272PAZZ  
TD62003P



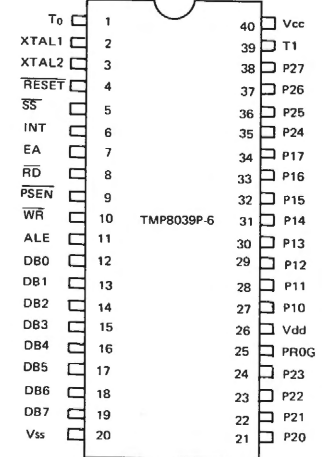
- IC12 RH-iX0249PAZZ  
TMP8155P



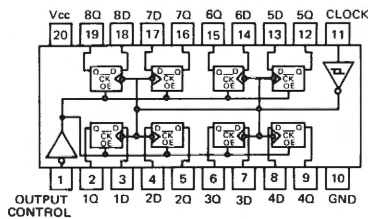
- IC13 RH-iX0294PAZZ  
TMP8085A (CPU)



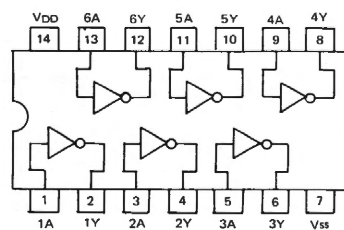
- IC21 RH-iX0248PAZZ  
TMP8039P-6



- IC17 RH-iX0296PAZZ  
SN74LS374N

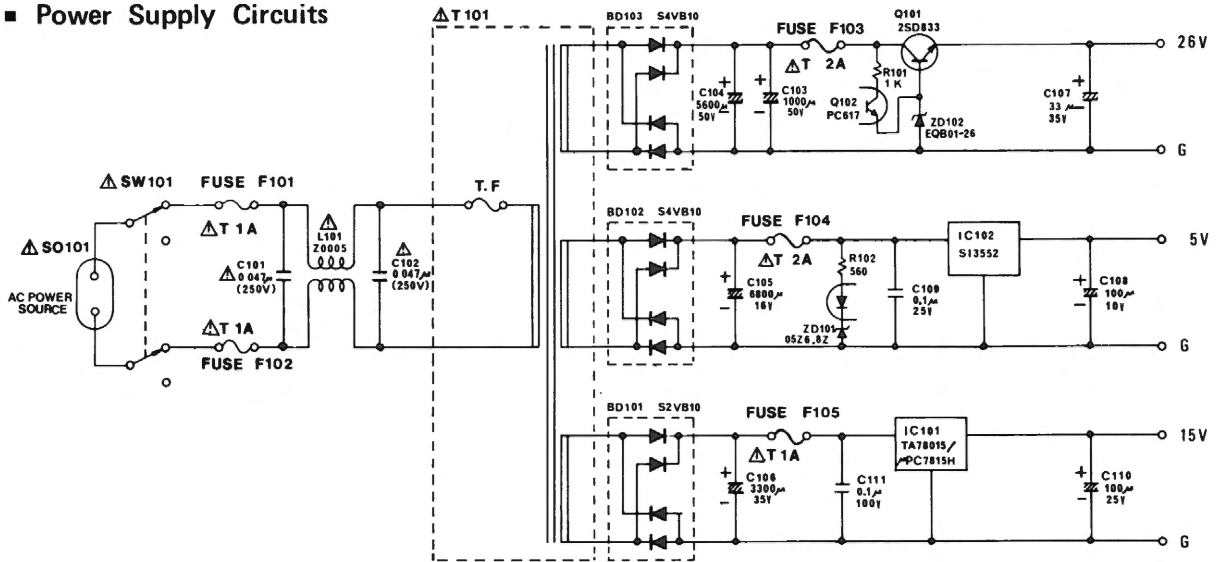


- IC19 RH-iX0293PAZZ  
TC40H004P (C-MOS)



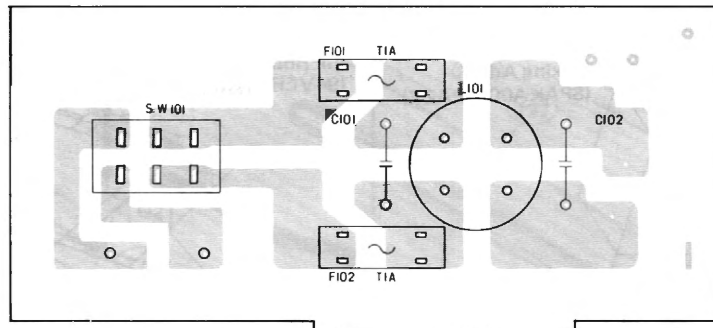
A B C D E F G H

■ Power Supply Circuits

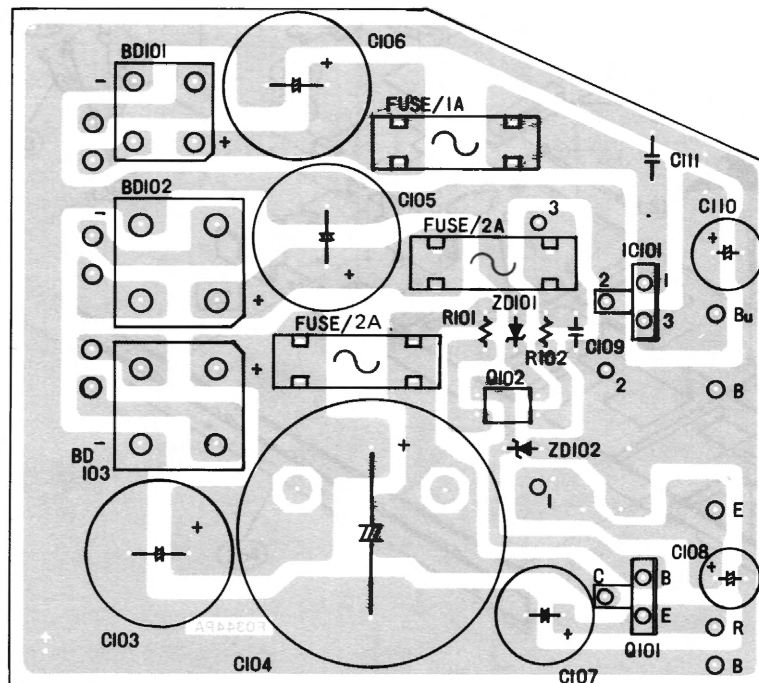


Parts marked with "△" are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

■ Printed Wiring Board (Power Supply Section)

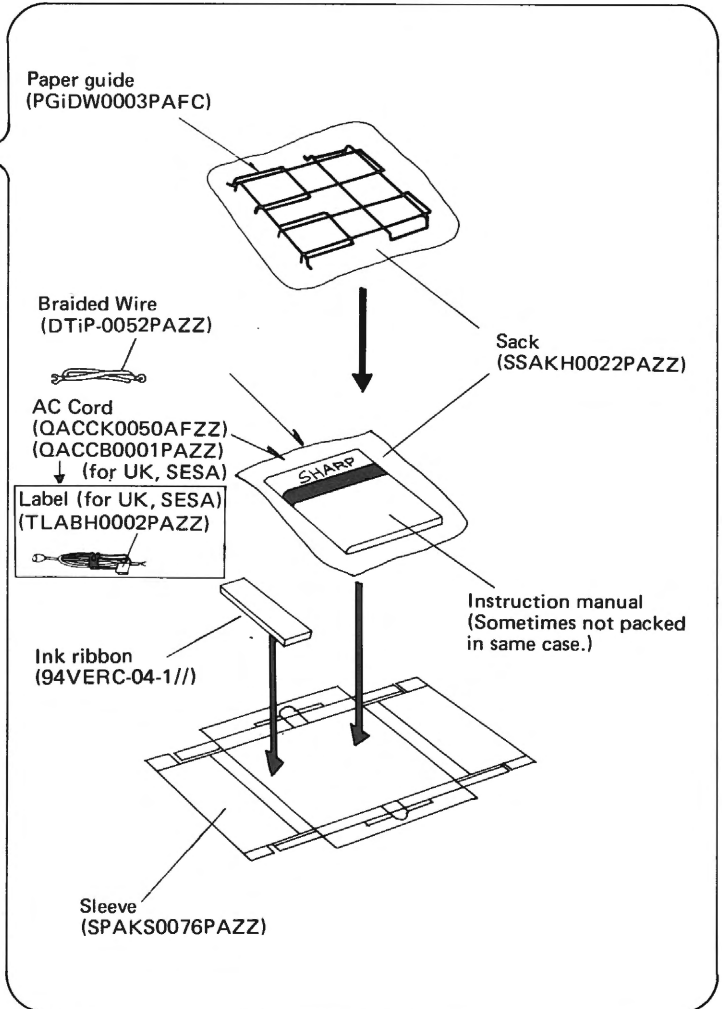
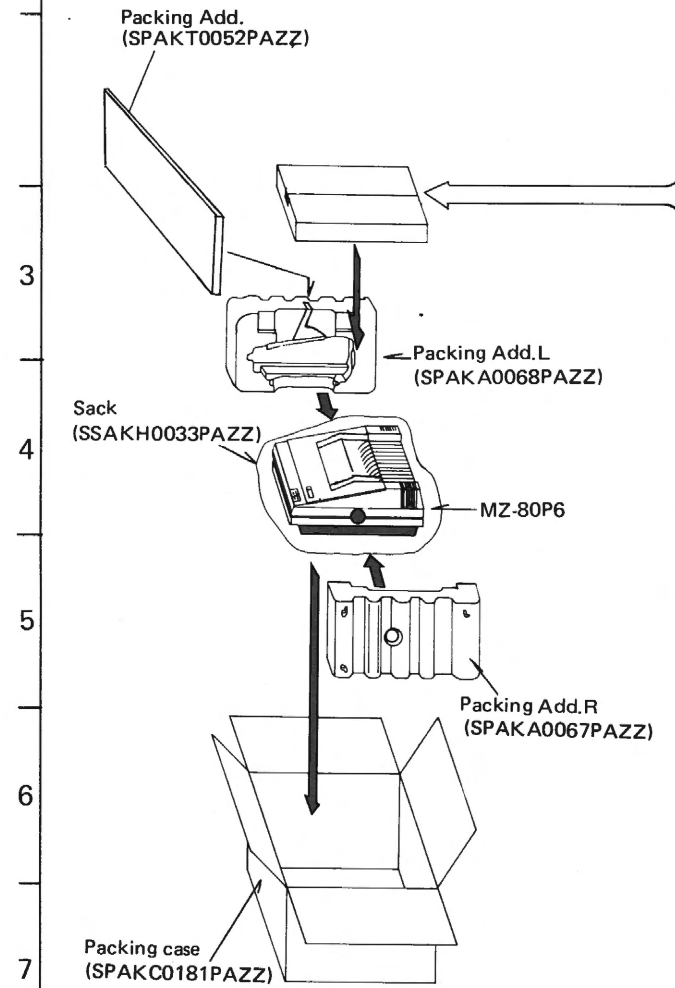


PRIMARY



SECONDARY

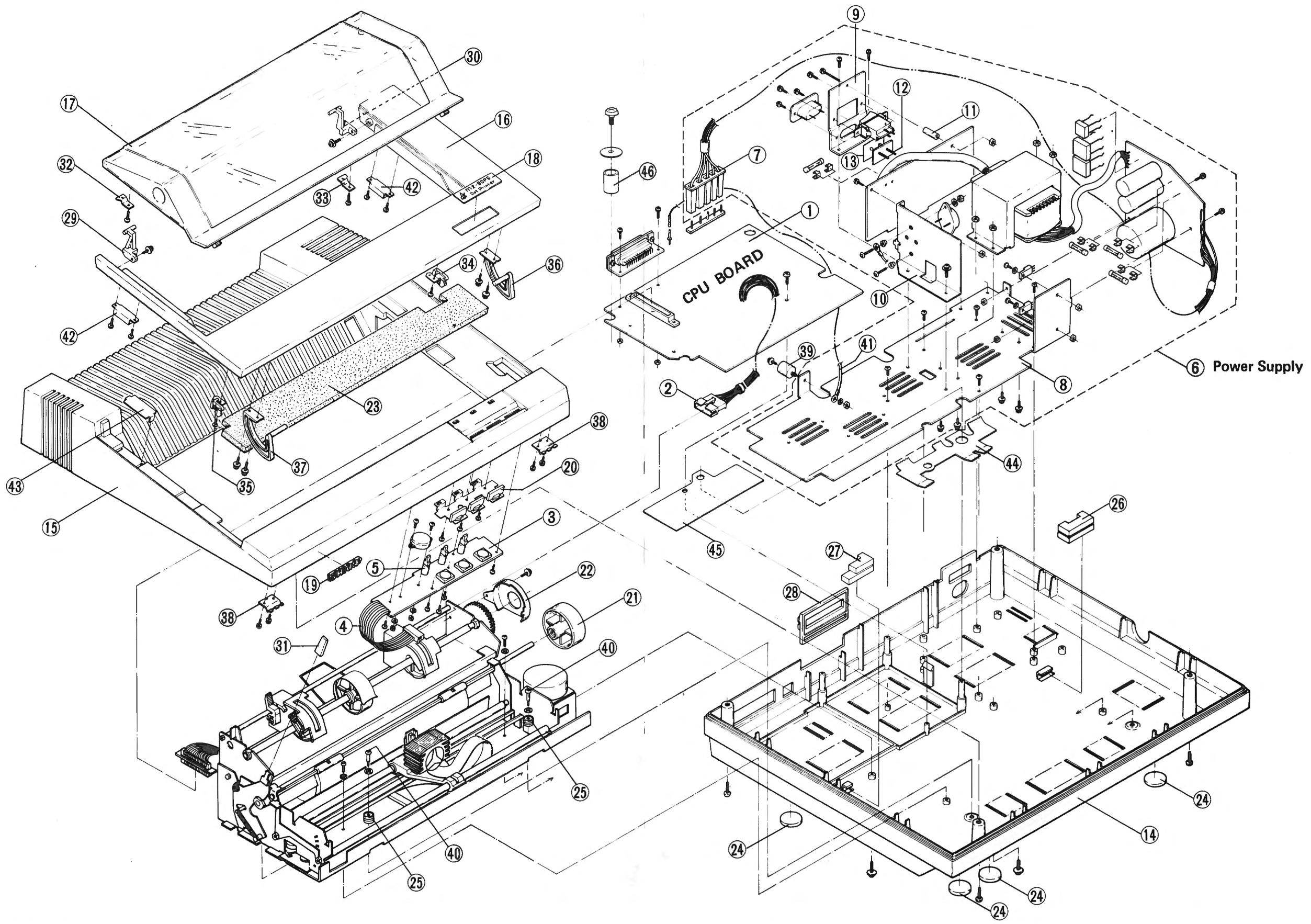
# PACKING METHOD

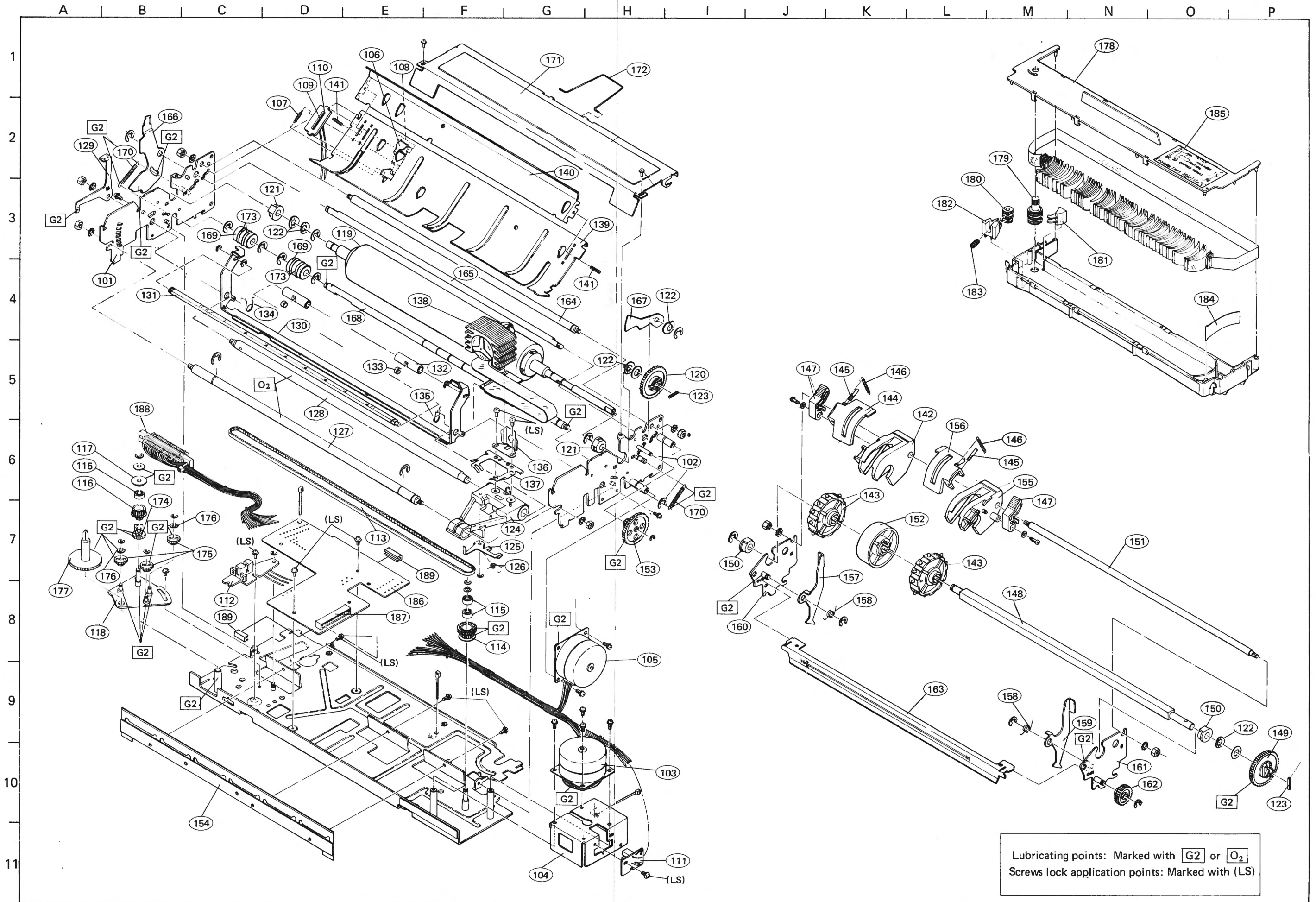


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# DISASSEMBLED VIEWS

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Lubricating points: Marked with G2 or O<sub>2</sub>  
 Screws lock application points: Marked with (LS)

# REPLACEMENT PARTS LIST

## "HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following information.

1. MODEL NAME
2. REF. NO.
3. PART NO.
4. DESCRIPTION

NOTES: Be sure to use regular parts for securing the safety and reliability of the set. Parts marked with "△" ( ) are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

### MODEL MZ-80P6

REF. NO.	PART NO.	DESCRIPTION	CODE	REF. NO.	PART NO.	DESCRIPTION	CODE
*** CPU BOARD UNIT SECTION ***							
1	DPWB-0289PAZZ	Assembled CPU Board Unit (Not replacement item)	—				
				DIODES			
				D1	RH-DX8402YAZZ	S5277B	AB
				2			
				D22	VHD1S1555//1A	1S1555	AA
				D23			
				D24			
				D26			
				D25	VHD1S953///-1	1S953	AB
				ZD1	VHD-1Z24///-1	1Z24, Zener	AD
				2			
				ZD5	VHD05Z4R7X/-1	05Z4.7X, Zener	AB
				ZD6			
				ZD7	VHD05Z5R6U/-1	05Z5.6L/U, Zener	AB
				RESISTORS			
				R1	VRW-KV3HD121J	120 ohm, 5W	AC
				R2			
				R3	VRD-RU2EE122J	1.2K ohm, ¼W	AA
				R6			
				R7			
				R4	VRS-PU3DB821J	820 ohm, 2W	AB
				R5			
				R8	VRD-RU2EE332J	3.3K ohm, ¼W	AA
				R9			
				R10			
				R20	VRD-RU2EE472J	4.7K ohm, ¼W	AA
				R27			
				R11			
				R34	VRD-ST2HF102J	1K ohm, ½W	AA
				R39			
				R12	VRD-RU2EE151J.	150 ohm, ¼W	AA
				R13			
				R19			
				R29	VRD-RU2EE222J	2.2K ohm, ¼W	AA
				R30			
				R45			
				R14	VRD-RU2EE103J	10K ohm, ¼W	AA
				R18			
				R15			
				R17	VRD-RU2EE101J	100 ohm, ¼W	AA
				R32			
				R33			
				R35	VRD-RU2EE102J	1K ohm, ¼W	AA
				R36			
				R16			
				R28	VRD-RU2EE102J	1K ohm, ¼W	AA
				R21			
				R22			
				R31	VRD-RU2EE102J	1K ohm, ¼W	AA
				R40			
				R42			
				TRANSISTORS			
Q1	VS2SD986///-1	2SD986	AF				
2							
Q16	VS2SB743///-1	2SB743	AF				
Q17							
Q18							
Q19							
Q20	VS2SA1015///-1	2SA1015	AC				
Q21							

### INTEGRATED CIRCUITS

IC1	RH-iX0295PAZZ	SN74LS05N	AE				
IC2							
IC3	RH-iX0292PAZZ	TD62504P (TR Arry)	AK				
IC4							
IC5	RH-iX0102PAZZ	SN74LS14N	AM				
IC6	RH-iX0272PAZZ	TD62003P (TR Arry)	AK				
IC7	RH-iX0134PAZZ	NE555	AG				
IC8	RH-iX0104PAZZ	SN74LS42N	AH				
IC9	RH-iX0078PAZZ	SN74LS32N	AF				
IC10	RH-iX0086PAZZ	SN75189N	AN				
IC11	RH-iX0123PAZZ	SN74LS244N	AS				
IC15							
IC12	RH-iX0249PAZZ	TMP8155P	BA				
IC13	RH-iX0294PAZZ	TMP8085A (CPU)	AZ				
IC14	RH-iX0250PAZZ	SN74LS273N	AQ				
IC20							
IC16	(Option)	CG-ROM & IC13 control					
IC17	RH-iX0296PAZZ	SN74LS374N	AN				
IC18	RH-iX0074PAZZ	SN74LS04N	AE				
IC19	RH-iX0293PAZZ	TC40H004P	AF				
IC21	RH-iX0248PAZZ	TMP8039P-6 (CPU)	BB				
IC22	DPR0M0026PAZZ	ROM & IC21 control	BB				

**IC16 (CG-ROM & IC13 control) is not standard and needs to be ordered separately.**

Available in the following model names according to the type of the applicable host computer.

Host computer	Model of ROM
MZ-80B	MZ-8BP5R
MZ-80K	MZ-8KP5R (Under development)
MZ-80A (Under development)	MZ-8AP5R (Under development)



# PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	CODE	REF. NO.	PART NO.	DESCRIPTION	CODE
R44 } R46 } R23 } R24 } R43 } R25 } R37 } R38 }	VRD-RU2EE471J	470 ohm, ¼W	AA	<b>*** SWITCH PWB UNIT SECTION ***</b>			
R26 } R41 } RA1 } RA2 } RA3 } VR1 }				VRD-RU2EE153J	15K ohm, ¼W	AA	3
<b>CAPACITORS</b>							<b>DIODES</b>
C1 } C6 } C7 } C8 } C10 } ? } C13 } C30 }	VCTYPU1BD104Z	0.1 MFD, 12V, Ceramic	AB	<b>MISCELLANEOUS</b>			
C2 } C3 } C4 } C20 } C21 }				VCKZPR1HF103P	0.01 MFD, 50V, Ceramic	AA	SW1 } SW2 } SW3 }
C5 } C9 } C14 } C15 } C16 }	VCKZPR1HF102Z	1,000 PF, 50V, Ceramic	AA				<b>RESISTORS</b>
C17 } C18 } C22 } C23 }				VCEAAU1CW476Y	47 MFD, 16V, Aluminum	AB	R1 } R2 }
C24 } C25 } C31 }	VCSACU1VE334K	0.33MFD, 35V, Tantalum	AC				R3
C26 } C27 }				VCCCPU1H3220J	22PF, 50V, Ceramic	AA	<b>POWER SUPPLY UNIT SECTION ***</b>
C28 } C29 }	VCEAAU1CW106Y	10 MFD, 16V, Aluminum	AB				6
<b>MISCELLANEOUS</b>				<b>INTEGRATED CIRCUITS</b>			
X'TAL1 } X'TAL2 }	RCRSA0013PAZZ	Crystal, 6 MHz	AP	6	DBOXD0035PAZZ	Assembled Power Supply Unit (Not replacement item) (for 240V)	—
F1 } F2 }				QFS-J0001PAZZ	Fuse, 1A	AH	<b>TRANSISTORS AND DIODES</b>
F3	QFS-J0002PAZZ	Fuse, 2A	AH				IC101
CN2	QSOCZ0017PAZZ	28-Pin Socket	AL	IC102	RH-iX0269PAZZ	Si3552, 5V-Regulator	AV
CN3	QPLGZ0086PAZZ	25-Pin Terminal	BF	<b>RESISTORS</b>			
2	DSOCN0151PAZZ	Lead Wire with 9-Pin Socket	AK	R101	VRD-RU2EE102J	1K ohm, ¼W	AA
	QLUGP0003PAZZ	1-Pin Lug	AA	R102	VRD-RU2EE561J	560 ohm, ¼W	AA
	QSOCZ0010PAZZ	24-Pin IC Socket	AF	<b>CAPACITORS</b>			
	QSOCZ0012PAZZ	40-Pin IC Socket	AH	△ C101 } △ C102 }	RC-CZ0180PAZZ	0.047MFD, 250V, Line Capacitor	
	QPLGN0504CEZZ	5-Pin Terminal	AB	C103	VCEAAU1HM108M	1,000MFD, 50V, Aluminum	AF
				C104	VCEAAQ1HC568Y	5,600MFD, 50V, Aluminum	AP
				C105	VCEAAU1CM688M	6,800MFD, 16V, Aluminum	AG
				C106	VCEAAU1VM338M	3,300MFD, 35V, Aluminum	AG
				C107	VCEAAU1VW336M	33MFD, 35V, Aluminum	AC
				C108	VCEAAU1AW107M	100MFD, 10V, Aluminum	AB

# PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	CODE	REF. NO.	PART NO.	DESCRIPTION	CODE
C109	VCTYPU1ED104Z	0.1MFD, 25V, Ceramic	AB		DTiP-0052PAZZ	Braided Wire	AT
C110	VCEAAU1EM107M	100MFD, 25V, Aluminum	AB	△	QACCK0050AFZZ	AC Cord	AQ
C111	RC-QZ0003PAZZ	0.1MFD, 100V, Film	AB	△	QACCB0001PAZZ	AC Cord (for UK, SESA)	AQ
				△	TLABH0002PAZZ	Label for AC Cord (for UK, SESA)	AC
				△	TSPCE0027PAZZ	Specification Panel (for UK)	AE
<b>MISCELLANEOUS</b>							
△ T101	RTRNP0048PAZZ	Power Supply Transformer (for 220V)	BB		TiNSE0035PAZZ	Instruction Manual (English)	BB
△ T101	RTRNP0056PAZZ	Power Supply Transformer (for 240V)	BB	42	PMAGG0003PAZZ	Magnet	AE
△ L101	RTRNZ0005PAZZ	Line Coil	AL	43	LANGF0067PAZZ	Plate (for Magnet)	AE
△ F101	QFS-C0005PAZZ	Fuse, T1A	AE	44	MSPRP0080PAZZ	Spring	AE
△ F102				45	PZETV0019PAZZ	Insulating Sheet	AC
△ F105				46	LSTYP0001PAZZ	Stay for CPU Board	AB
△ F103							
△ F104	QFS-C2002TAZZ	Fuse, T2A	AD	<b>*** PRINTER MECHANICAL UNIT SECTION ***</b>			
△ SW101	QSW-C0003PAZZ	A.C Switch	AQ	<b>FRAME COMPONENTS</b>			
△ SO101	QSOCA0003PAZZ	Appliance Inlet	AF	101	94VF304002000	Frame Assy LB	AZ
7	DSÖCN0159PAZZ	Lead Wire with 5-pin Socket	AG	102	94VF304003000	Frame Assy RB	BA
8	PRDAR0034PAZZ	Radiator	AW	<b>DRIVE MECHANICAL</b>			
	QFSHA0001PAZZ	Fuse Holder	AA	103	94VF303027000	Timing Belt Motor Assy	BV
9	LANGK0325PAZZ	Switch Fixing Metal	AE	104	94VF303026010	Motor Heat Sink	AR
10	PRDAR0043PAZZ	Sub Radiator	AG	105	94VF303031000	Paper Feeding Motor Assy	BU
11	PSPAN0005VAZZ	PWB Fixing Spacer	AA	<b>DETECTING MECHANICAL</b>			
12	QLUGP0005PAZZ	Appliance Inlet Joint Pin	AA	106	94VF310011000	PE Lever Assy A	AQ
	PZETN0009VAZZ	Insulating Washer (for TA78015)	AA	107	94VF303007020	PE Lever Spring	AE
	PSPAM0001VAZZ	Insulating Sheet (for TA78015)	AA	108	94VF310009020	PE Lever Shaft	AD
13	PSPAY0003PAZZ	Insulating Cover	AB	109	94VF303009010	PE Board	AK
<b>*** OTHER SECTION ***</b>				110	94VA170202501	Reed Switch	AK
14	GCABA8422PASA	Cabinet A (bottom)	BC	111	94VF304059000	PTS Sensor Board Assy	BD
15	GCABB8422PASA	Cabinet B (Upper)	BC	112	94VF303030000	Home Position Sensor Assy	BE
16	GCÖVA0012PASA	Cover A	AU	<b>TRANSMISSION MECHANICAL</b>			
17	GCÖVA0013PASA	Cover B	AY	113	94VF303014010	Timing Belt	BB
18	HBDGD0007PASA	Badge	AD	114	94VF303017000	Belt Driving Pulley	AH
19	HBDGB1002CES/	SHARP Badge	AC	115	94VB210151490	Ball Bearing	AY
20	DBTN-0004PASA	Button Assy	AQ	116	94VF303018010	Belt Driven Pulley	AH
21	DKNB-0002PASA	Knob with Spring	AG	117	94VF303018020	Belt Driven Pulley Flange	AE
22	PCÖVS0133PAZZ	Cover for Sprocket	AE	118	94VF303019000	Belt Tension Plate	AT
23	PKYU-0003PAZZ	Sound-Deadening Material	AF	119	94VF304005000	Platen Unit	BX
	PGiDW0003PAFC	Paper Guide	AX	120	94VF304004010	Platen Gear	AG
	PGiDP0001PAZZ	Paper Guide Roller	AG	121	94VF304004020	Platen Bearing (for Platen)	AK
24	PGUMS1010PASA	Foot	AC	122	94VB101251490	Leaf Spring (6-0.15-11)	AB
25	PGUMZ0002PAZZ	Rubber A	AB	123	94VB130103216	Spring Pin (φ2 x 14)	AB
26	PGUMZ0003PAZZ	Rubber B	AC	124	94VF303006000	Carriage Assy	AZ
27	PGUMZ0004PAZZ	Rubber C	AC	125	94VF303005010	Head Lock Lever	AK
28	GCÖVA0007PASA	Connecting Cover	AG	126	94VF303005020	Head Lock Lever Spring	AC
29	LSFTZ0011PAZZ	Stay A	AG	127	94VF303001010	Carriage Shaft A	BD
30	LSFTZ0015PAZZ	Stay B	AG	128	94VF303001020	Carriage Shaft B	BK
31	LHLDZ0012PAZZ	Holder for Release Lever	AD	129	94VF303001030	Head Adjust Lever	AN
32	LANGF0060PAZZ	Angle A	AC	130	94VF304007010	Paper Holding Lever	AQ
33	LANGF0061PAZZ	Angle B	AC	131	94VF304008010	Scale Shaft	AX
34	LSTPF2018PAZZ	Stopper A	AG	132	94VF304008020	Paper Holding Roller A	AG
35	LSTPF2019PAZZ	Stopper B	AG	133	94VF304008030	Paper Holding Spring	AE
36	LSTYM0009PAZZ	Hinge (Right)	AE	134	94VF303001060	Scale Spring L	AF
37	LSTYM0010PAZZ	Hinge (Left)	AE	135	94VF303001070	Scale Spring R	AF
38	LFiX-0009PAZZ	Hinge (R) (L) Fixing Metal	AB	136	94VF303001092	Ribbon Mask	AL
39	LB-Z0079PAZZ	Frame Ground Terminal	AG				
	LBND0001PAZZ	Cord Keeper	AC				
40	LX-BZ0076PAZZ	Screw (Special)	AC				
41	QTiPZ0022PAZZ	Tip with Lead Wire (CPU-FG Terminal)	AB				

# PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	CODE	REF. NO.	PART NO.	DESCRIPTION	CODE
137	94VF303001100	Head Sitting Plate	AH	165	94VF304001050	Release Lever Shaft	AU
138	94VF401400000	Print Head Unit	BU	166	94VF304001030	Release Lever L	AG
<b>PAPER FEEDING MECHANICAL</b>				167	94VF304001040	Release Lever R	AD
139	94VF304009011	Outer Paper Guide	BA	168	94VF304006010	Paper Feeding Shaft	BB
140	94VF304009020	Inner Paper Guide A	AV	169	94VF310006010	Paper Feeding Roller	AN
141	94VB130102916	Spring Pin (φ2 x 8)	AB	170	94VF304001020	Paper Feeding Spring	AE
142	94VF303036010	Sprocket Frame L	AX	171	94VF304001060	Platen Cover	AY
143	94VF303011020	Sprocket Wheel	AR	172	94VF304001070	Roll-in Protector	AD
144	94VF303036020	Paper Holding Cover L	AQ	173	94VF310006020	O-ring	AC
145	94VF303011060	G-Pin-	AC	<b>RIBBON FEEDING MECHANICAL</b>			
146	94VF303011040	Paper Holding Cover Spring	AD	174	94VF303020000	Planetary Lever Assy	AN
147	94VF303011050	Sprocket Lock Lever	AL	175	94VF303020020	Planetary Pinion	AG
148	94VF304104010	Sprocket Shaft	BF	176	94VB101252190	Leaf Spring (3-0.07-6)	AC
149	94VF304104020	Sprocket Gear	AK	177	94VF303014020	Ribbon Driving Gear	AN
150	94VF304004020	Sprocket Bearing	AK	178	94VF303352010	Cartridge Case Lid	AX
151	94VF304101020	Sprocket Guide Shaft	AQ	179	94VF303352030	Ribbon Feeding Knob	AK
152	94VF303010020	Paper Guide Roller	AT	180	94VF303352040	Ribbon Pressure Roller	AK
153	94VF303001080	Sprocket Transmission Gear	AK	181	94VF303352050	Ribbon Separator A	AK
154	94VF303021001	Paper Guide Plate A	AZ	182	94VF303352060	Ribbon Separator B	AK
155	94VF303037010	Sprocket Frame R	AX	183	94VF303352070	Ribbon Feeding Spring	AE
156	94VF303037020	Paper Holding Cover R	AQ	184	94VF303352080	Ribbon Braking Spring	AE
157	94VF304101030	Sprocket Mounting Lever L	AF	185	94VF303352090	Ribbon Label	AH
158	94VF304101060	Sprocket Mounting Lever Spring	AD	<b>CONNECTOR COMPONENTS</b>			
159	94VF304101040	Sprocket Mounting Lever R	AF	186	94VF304056010	Terminal Board	BF
160	94VF304102000	Sprocket Mounting Plate Assy A	AK	187	94VA260112001	Head Connector	AP
161	94VF304103000	Sprocket Mounting Plate Assy B	AL	188	94VF304057000	3310 Cable A	BM
162	94VF304101010	Sprocket Reduction Gear	AG	189	94VF303023010	Edge Cover	AC
163	94VF304101050	Paper Position Adjusting Plate	AN	<b>INK RIBBON</b>			
164	94VF304001010	Sprocket Mounting Shaft	AT	94VERC-04-1//	With Cartridge Case	BB	
				94VER-041///	Non Cartridge Case	AX	



