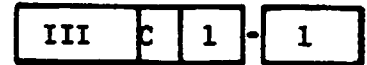


PRODUCT SERVICE NOTICE

DATE : 1/20/81



CLASSIFICATION PERIPHERALS

CATEGORY PRINTERS PLOTTERS

PRODUCT/APPL. DATA CORP CHAIN TRAIN CT-66, 44

SEQUENCE # 1

TITLE:

REPLACEMENT OF CHARACTER SLUGS IN DATA PRINTER CORP.
CHAINTRAIN PRINTER CT-6644

This PSN applies to Wang Models 2263/2263V, 5571 (425 LPM) and 5570 (600 LPM).

Currently there are two type fonts available for the Chaintrain printers. They are Courier and CT Gothic. All upper-case and upper/lower-case parallel printers and upper-case serial printers are shipped with the Gothic font. Upper/lower-case serial printers have the Courier font.

There have been a few occasions in which an upper/lower-case serial printer has been shipped with Gothic font. If, for any reason, a customer is unhappy with a chaintrain type font, it is possible to change all or part of the set of character slugs in the machine.

COURIER	726-1636	GOTHIC	96	CHAR.	01
GOTHIC	726-4165	COURIER	96	CHAR	01
	726-4164	GOTHIC	64	CHAR	



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A customer may desire a character slug change if his machine was equipped with an early CT Gothic font which had a lower-case "l" that looked like an upper case "L" with a shorter tail. The slugs containing the incorrect "L" may be replaced with the correct slugs (Wang part #726-1617¹⁶¹⁷). Each slug contains 8 characters and there are a total of 48 slugs in the train to provide a total of 384 characters. Thus, a 64 character set machine contains 6 sets of character slugs in the train (including 6 slugs with character "L") and a 96 character set machine contains 4 sets (4 slugs with a "L").

The steps that follow describe the procedure for removing and replacing character slugs. Reference is made to Figures 1 thru 8 in this PSN and the operating and maintenance manuals for the Chaintrain Line Printer.

TOOLS REQUIRED

Standard Customer Engineering Tool Kit
Type Slug Loading Rail (WL #726-9666)

1. Power down the printer and turn off the circuit breaker (CB1) on the power supply. (CB1 is accessible through an opening near the lower left corner of the rear panel of the equipment enclosure.)
2. Open yoke and remove ribbon. (If necessary refer to ribbon changing procedure in Operating Instructions for the Chaintrain Line Printer - DPC Form 600-1.)
3. Remove front yoke cover which is secured by four back-mounted hex nuts.
4. Remove character phasing control bracket but do not remove the slotted head screws adjacent to the control knob. (Refer to Parts Breakdown for Chaintrain Line Printer (DPC Form 600-4) for details of the bracket.)
5. Remove the left-hand pulley cover. (See DPC Form 600-4 for location.)

6. Remove upper ribbon sensor. (See DPC Form 600-4 for location.)
7. Using a sharp instrument, make a scribe line on the slug drive/penetration assembly along the top edge of the rear slug guide (see Figure 1). The position of the rear slug guide is critical and, when replacing it, the top edge should be carefully aligned with the scribe line before tightening the mounting screws.
8. Remove rear ribbon guard and rear slug guide each of which is secured by four socket head screws.

NOTE:

This is a good time to check the Chaintrain lubrication wick (Figure 2). Ensure that it extends from the tube sufficiently to lubricate the back of the slugs.

9. Using two screws removed in step 8 above, install the type slug loading rail (WL #726-9666) as shown in Figure 3. (This replaces the rear slug guide sufficiently to support the chain. Notice the gap through which the slug will be removed.)

CAUTION

Caution must be exercised in the following operation since the tabs are extremely fragile (see Figure 5).

10. Grasp the upper belt near a tab of the slug being removed with long-nose pliers as shown in Figure 4 and push down. (This causes the belt to bend in the middle.) Carefully work the edge of the belt out from behind the slug tab.
11. Repeat the procedure of step 10 for the other slug tab (Figure 6).
12. Remove the lower belt from the lower slug tabs - in the manner of step 10 - by pushing up to bend the belt.

13. Pull the upper belt out of the center slot of the slug (Figure 7); then do the same with the lower belt. The slug should now be free to remove.
14. Rotate the chaintrain counter-clockwise to move the slug to the access gap, then remove the slug (Figure 8).
15. Insert the new slug, taking care that the index strobe insert slot is on the top. Then rotate the chaintrain clockwise enough to secure the slug on the loading rail.
16. Starting with step 13 above, carefully reverse the procedure, working backwards to step 2 to reassemble the machine. When inserting the belts into the new slug, take care that the edges of the belts are tucked completely behind the slug tabs.
17. After reassembly, rotate the chaintrain through a complete revolution taking care to note how all slugs pass through the ribbon/slug guides. If the slugs do not pass through easily, free of any noticeable binding, it will be necessary to make a ribbon/slug guides adjustment and a character-and-index-strobe pickup adjustment. Procedures for these adjustments may be found in the Maintenance Instructions for the Chaintrain Line Printer - DPC Form 600-3.

REAR SLUG GUIDE



SCRIBE LINE

FIGURE 1 - REAR SLUG GUIDE REMOVAL

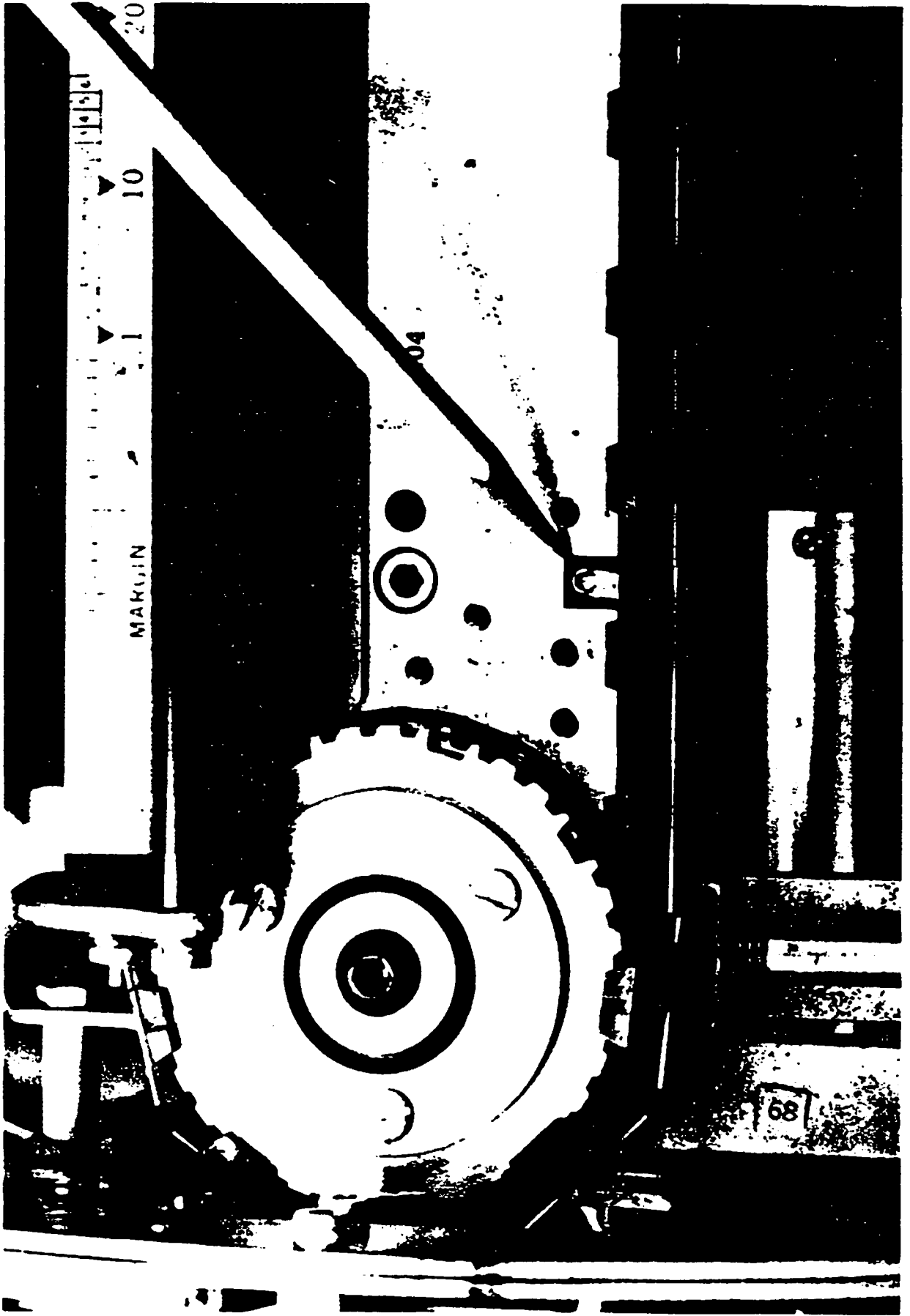
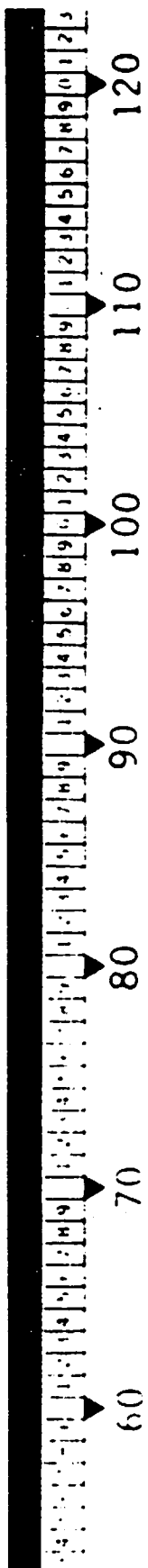


FIGURE 2 - CHAIN TRAIN LUBRICATION WICK



YOUR PRINTER
(5 MIL. NYLON)
(3 MIL. NYLON)



IMPORTANT

CLEAN RIBBON EDGE SENSORS WHEN
INSTALLING NEW RIBBON. USE HAND
CLEANER TISSUE SUPPLIED WITH RIBBON.
SEE OPERATING INSTRUCTIONS MANUAL.

85



TYPE SLUG
LOADING RAIL

GAP FOR
SLUG REMOVAL

FIGURE 3 - TYPE SLUG LOADING RAIL

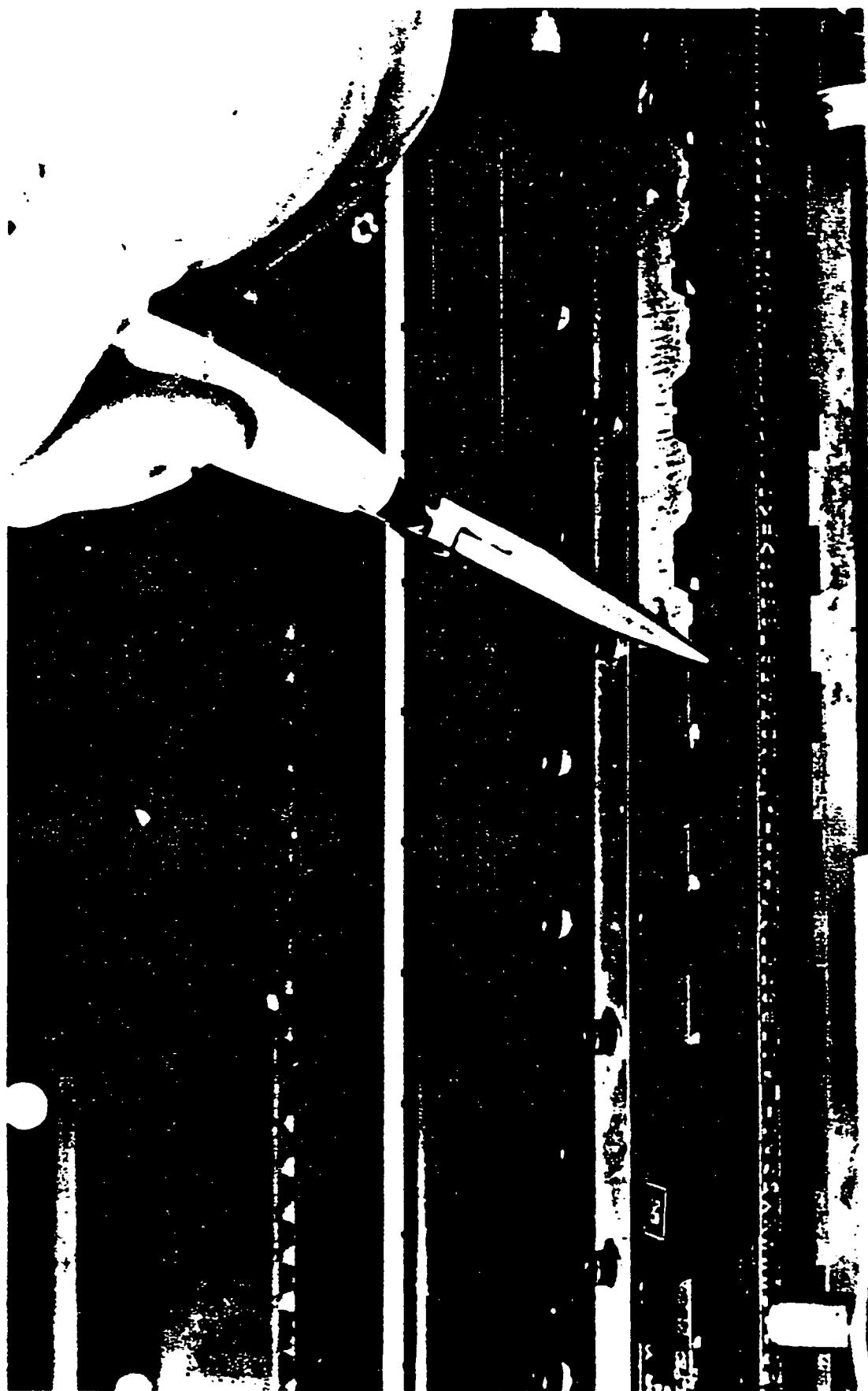
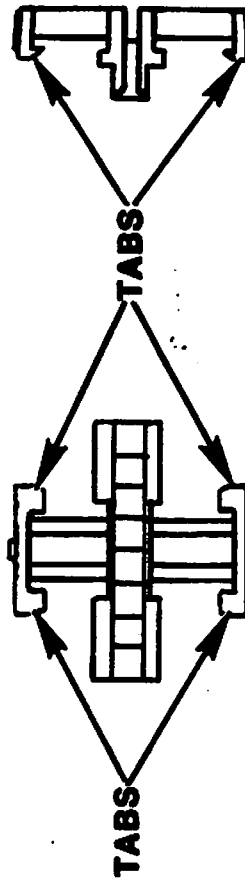


FIGURE 4 - METHOD OF REMOVING BELT



CAUTION: TABS ARE VERY FRAGILE. TAKE EXTREME CARE THAT THEY ARE NOT BROKEN OR CHIPPED DURING REMOVAL OR REPLACEMENT OF THE SLUGS. THE TABS ARE CRITICALLY IMPORTANT TO SMOOTH OPERATION OF THE SLUG TRAIN.

FIGURE 5 - CHARACTER SLUG

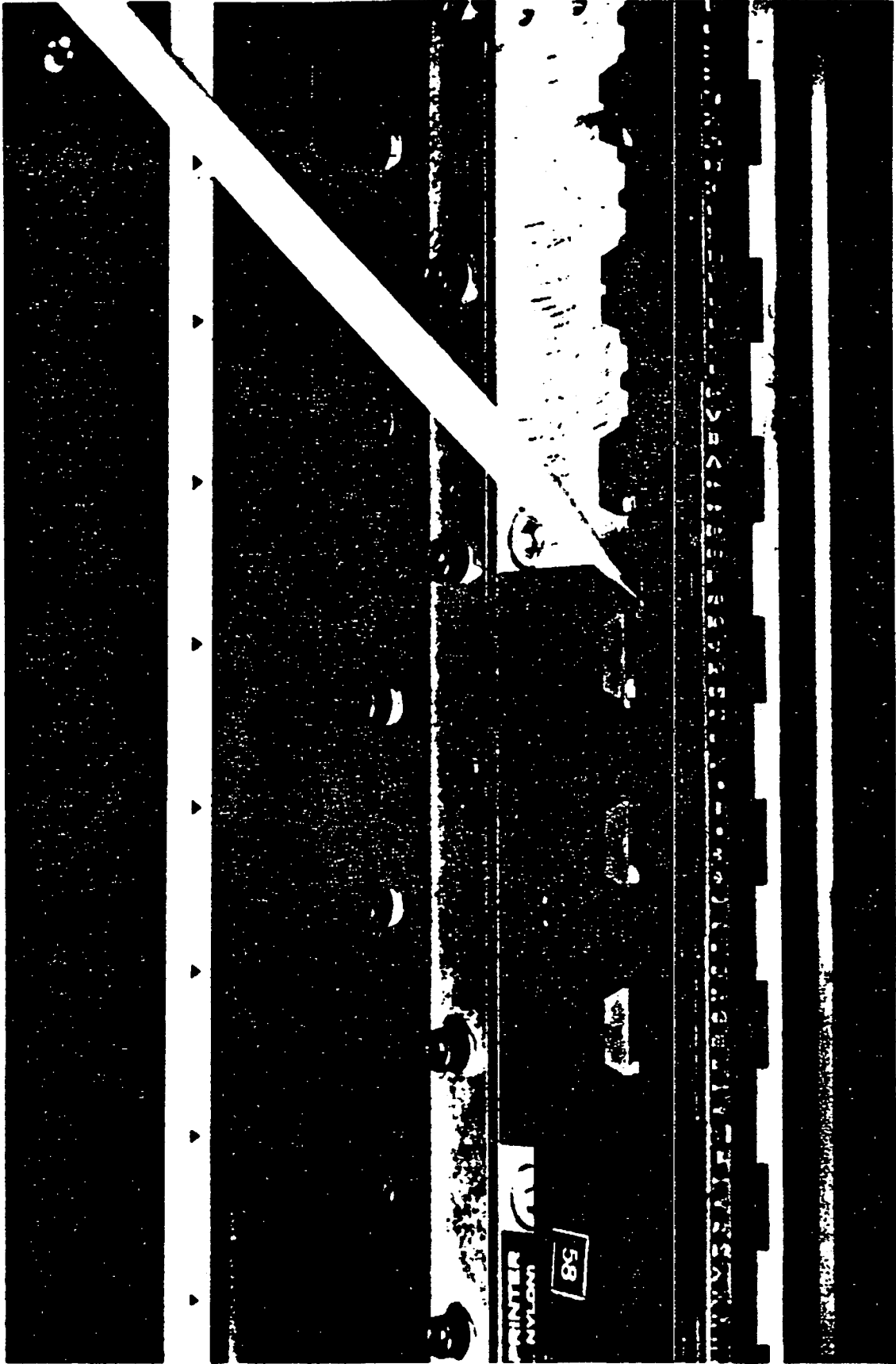


FIGURE 6 - REMOVING UPPER BELT FROM SLUG TABS.

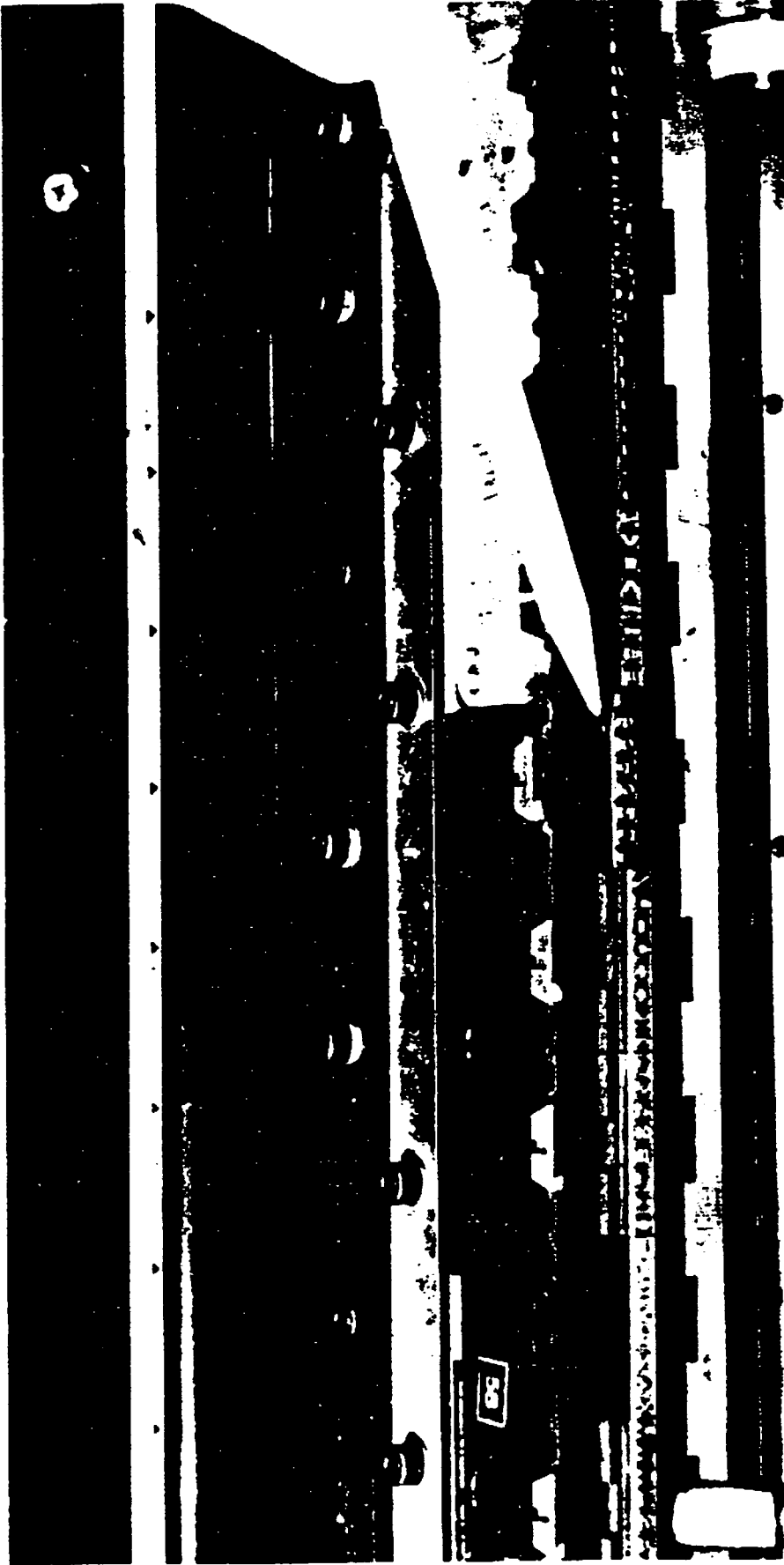
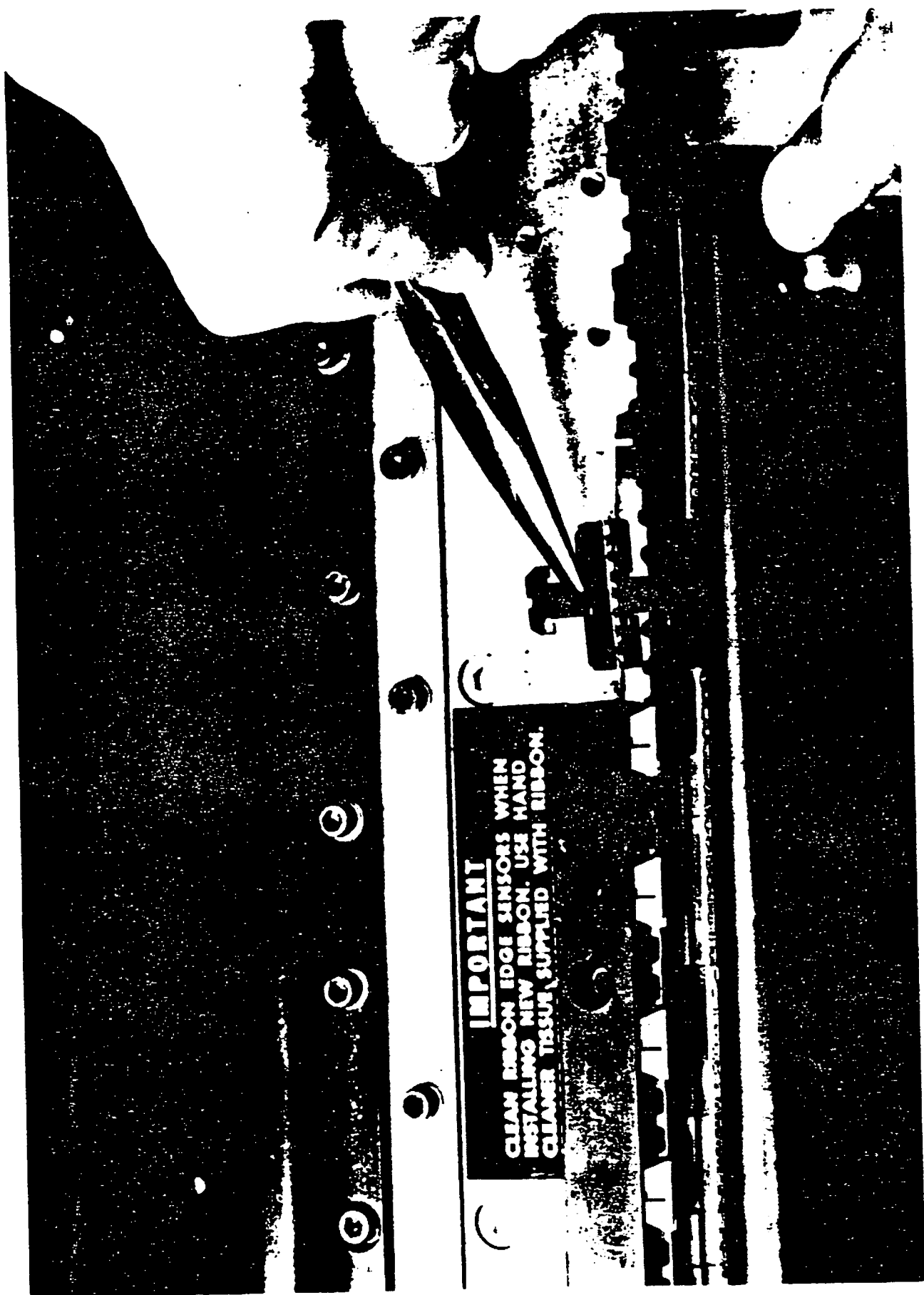


FIGURE 7 - REMOVING UPPER BELT FROM SLUG.

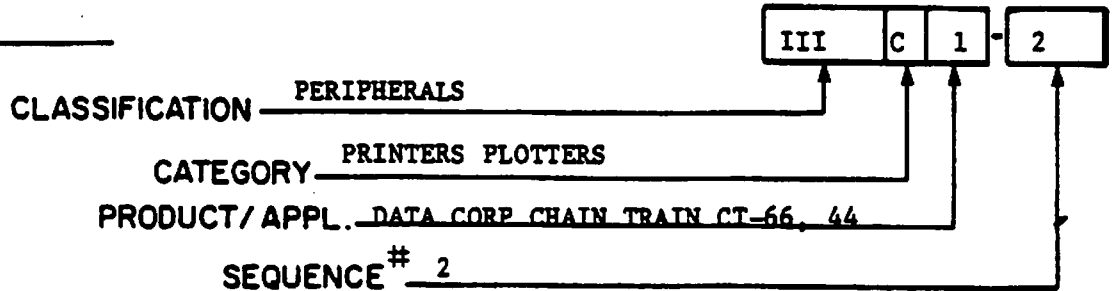


IMPORTANT
CLEAN RIBBON EDGE SENSORS WHEN
INSTALLING NEW RIBBON. USE HAND
CLEANER TISSUE SUPPLIED WITH RIBBON.

FIGURE 8 - REMOVING SLUG.

PRODUCT SERVICE NOTICE

DATE: 1/20/81



TITLE:

CORRECT PROM # FOR PROPER VFU CHANNEL SELECTION ON CHAINTRAIN PRINTERS

This PSN applies to Wang Model 2263, 2263V, 2270 and 2271 Chaintrain Printers.

Some Chaintrain printers have been shipped with incorrect code translation PROMs on the DPC to CNTX I/O adapter card (210-7387). The standard operating system for general purpose print routines uses channels 1, 5 and 8 (or 12, if 12 channel option is fitted). Some customer generated print routines specify different channels for slewing paper and will not slew correctly with incorrect PROMs. Installing the correct PROM will solve this problem.

The correct PROMs to be installed are as follows:

- * WLI #377-0355 for the 64 character set printer.
- * WLI #377-0357 for the 96 character set printer.
- * The PROM is component L12 on the 210-7387 PCB and is socket mounted for easy replacement.



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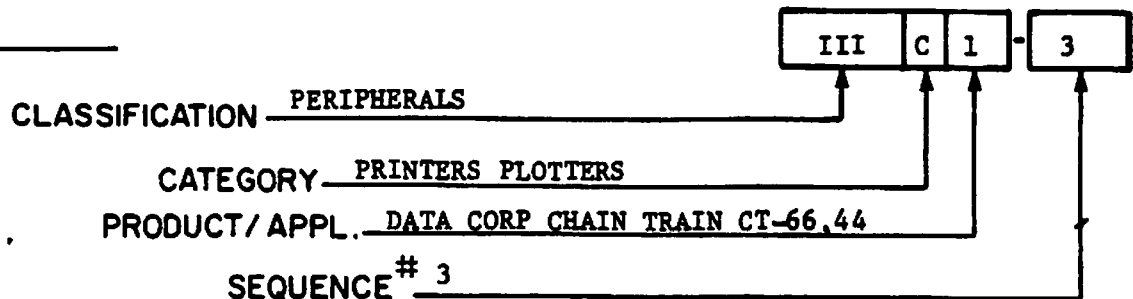
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PRODUCT SERVICE NOTICE

DATE: 1/27/81



TITLE: DATA PRINTER TYPE II STATIC IMMUNITY

This PSN applies to Models 2263, 5571 and 2263V all versions.

Some Type II data printers show intermittent problems of deselect, paper runaway, etc., which are caused by a high static electricity condition. These problems can be eliminated by taking steps to ground the printer keyboard console, the printer chassis and the top cover of the cabinet.

NOTE

This procedure is to be undertaken only on units which exhibit this static electricity problem.

A list of materials required to accomplish the required grounding follows.



ITEMS REQUIRED

- | | | | |
|----|--------------|-------------------------------|--------|
| 1. | WPN 654-0124 | Terminal Lug 1/4 Spade | QTY. 2 |
| 2. | WPN 650-9013 | 1/4-20 X 1/2 Flange Whiz-Lock | QTY. 2 |
| 3. | WPN 652-0020 | 1/4-20 Whiz-Lock Flange nut | QTY. 2 |
| 4. | WPN 220-1273 | Wire & Lug Assy. | QTY. 2 |
| 5. | WPN 651-0411 | Rivet, Pull | QTY. 4 |
| 6. | WPN 452-2190 | Grnd. Plate, B6855-0611 | QTY. 2 |

TOOLS REQUIRED

1. Rivet Gun, Pull Type
2. Electric Drill 1/4 Shank
3. Number 30 (0.128) Dia Drill Bit

GROUNDING PROCEDURE

1. Power down the printer and make sure that the circuit breaker (CB1) on the power supply is turned off.
2. Remove the nut on the front shock mount for the end of the printer chassis on which the keyboard is located. The proper nut is indicated in Figure 1.

3. Install as short a wipe and lug assembly (Items 1, 2, 3 and 4) as is practical between the shock mount stud and the nearest frame bolt as shown in Figure 1.
4. Connect a similar ground strap between the corresponding shock mount on the other end of the printer chassis and the nearest existing hole in the frame.
5. Remove the keyboard from the keyboard console and then remove the console from the printer chassis (see Figure 2).
6. Remove paint from the console as indicated in Figure 2, by scraping and/or sanding, then reassemble the console and keyboard.
7. Mount two ground plates on under surface of the front skirt of the cover as shown in Figure 3.
8. Remove the rubber bumpers from the two cover rests and make sure that the surfaces under the bumpers are clear. Then verify that the ground plates firmly contact the cover rests when the cover is lowered.

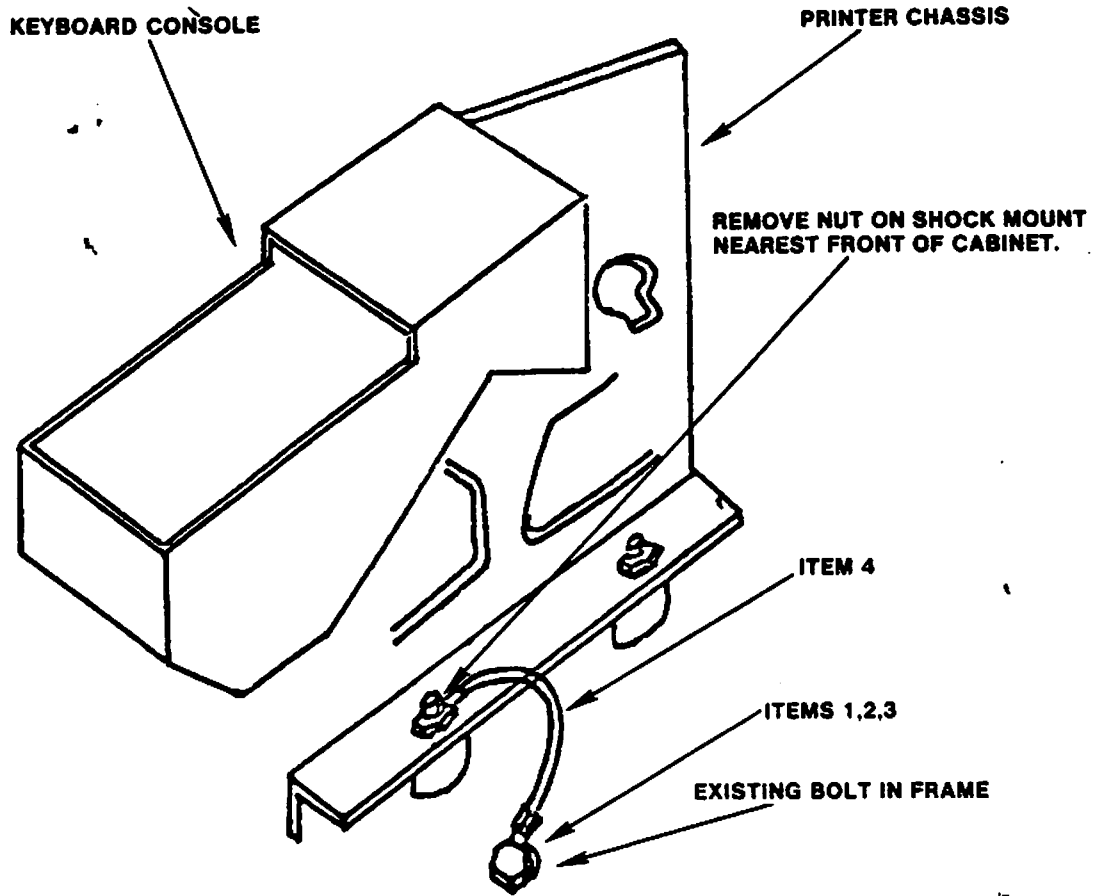


FIGURE 1 - GROUND STRAP INSTALLATION

REMOVE TWO CONSOLE
MOUNTING SCREWS
ON REAR

REMOVE PAINT 1.27cm
FRONT, BACK & INSIDE FLANGE OF
CONSOLE AS INDICATED.

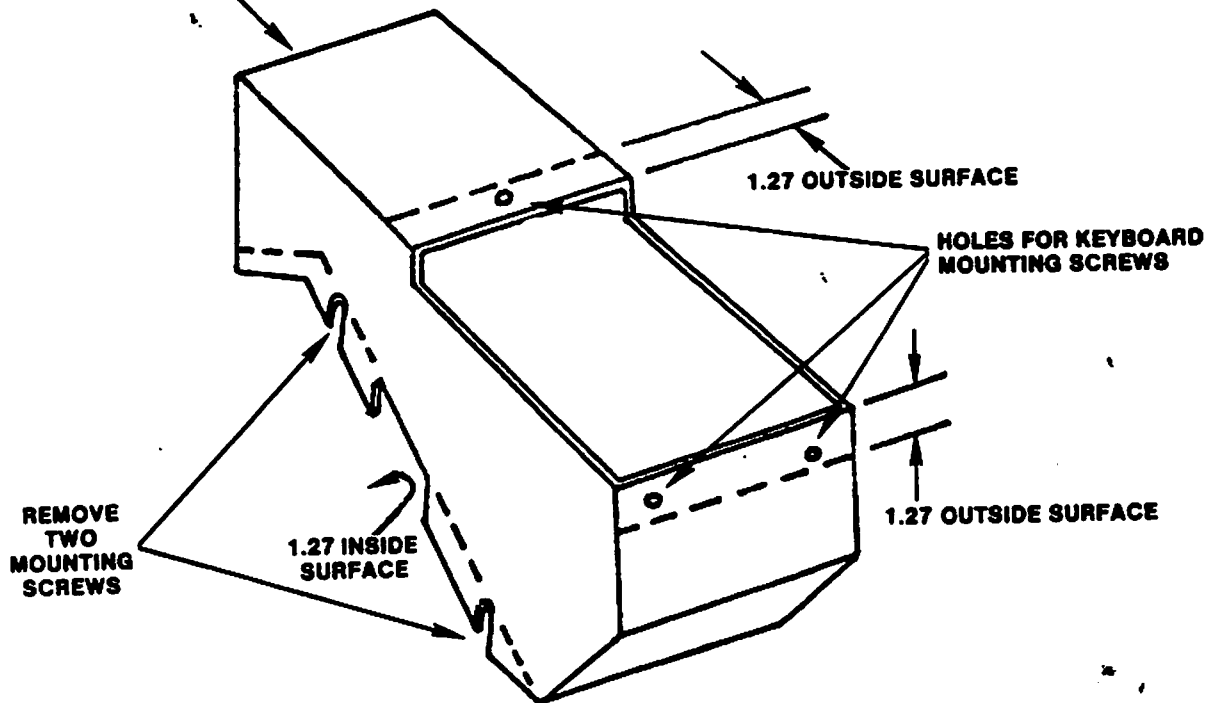
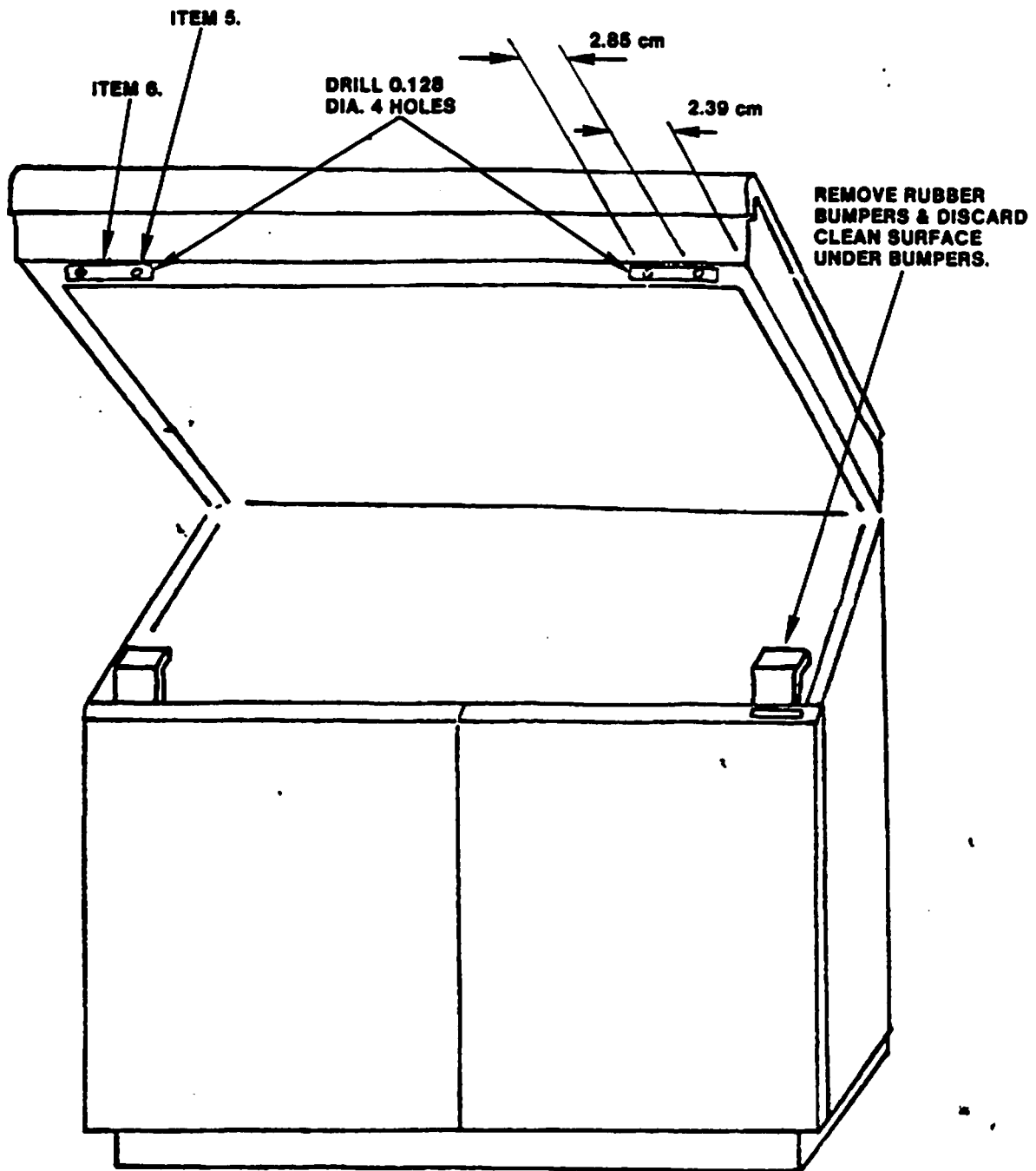


FIGURE 2 PRINTER KEYBOARD CONSOLE

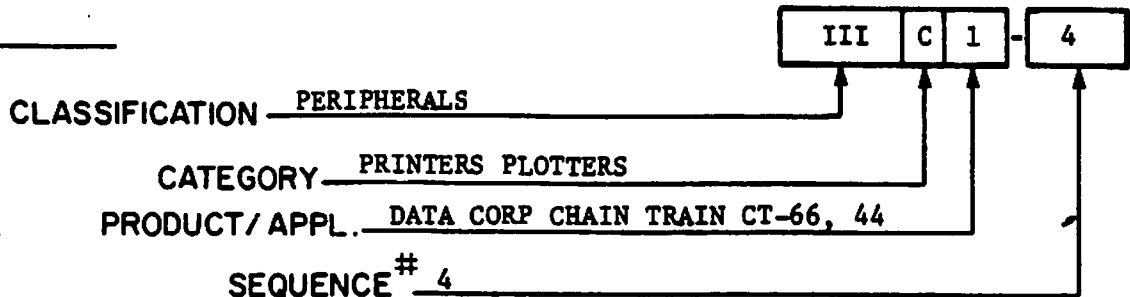


- MOUNT GROUND PLATES AS FOLLOWS:**
- 1. SCRIBE POSITION OF ITEM 6 ONTO FLANGE OF CABINET COVER.**
 - 2. REMOVE PAINT WITHIN THE SCRIBE LINES.**
 - 3. DRILL 0.128 DIA HOLE 4 PLACES AND MOUNT ITEM 6 USING RIVET ITEM 5.**

FIGURE 3 - PRINTER CABINET

PRODUCT SERVICE NOTICE

DATE: 1/27/81



TITLE:

SERIAL/PARALLEL INTERFACE FOR PRINTER OPTIONS

This PSN applies to Wang Models 5570 and 5571 Chaintrain Printers.

1. GENERAL INFORMATION

All printers used on Wang systems are parallel interface machines. On the 928 Systems, OIS (130, 140), and VS (with serial IOP) the data is sent out in a serial format. Therefore, a device is needed to convert the serial data from the CPU into the parallel data required by the printer. This conversion is accomplished by a serial-to-parallel translator - an 8080 controlled device that converts serial data to parallel data and vice versa.

Certain modifications are required in each printer to convert it from a parallel to a serial interface. These modifications are discussed in this PSN.



The serial interface printer requires microcode to perform such functions as top of form, line feed, select, print, etc. The printer will not operate unless this microcode has been loaded into the memory in the translator. Also, the printer keyboard no longer controls the printer directly when a translator is used. The printer keyboard inputs to the translator which, in turn, controls the printer. In 928 systems and OIS the microcode is loaded into the translator memory when the printer is powered up. In VS Systems with serial IOP the microcode is not loaded until a document is queued to the printer.

Different printer models need different microcode to operate. This is provided for by switch settings on the 210-7348 CPU board. Also, the 210-7446 I/O board has switches which must be properly set and some jumper connections which must be made. The switch settings and jumper connections required for the Chaintrain printer are given in this PSN.

2. REFERENCES

All communication between the master CPU and the printer is controlled by semaphores. These semaphores are instructions and data that are sent between the master CPU and the printer CPU.

Communication between the VS systems with serial IOP and the printer is essentially the same as in 928 systems. A detailed Theory of Operation of serial/parallel translators is given in the WP 10/20/30 Maintenance Manual, Vol. III (Part No. 729-0652). Further information on the interface translator assemblies may be found in Word Processing Newsletter No. 30/30A (Part No. 729-0541-1).

3. PC BOARD DESCRIPTION

A brief description of the CPU, I/O and memory PC boards used in the translator assembly follows.

210-7348 CPU Board

This board contains the 8080 CPU with its associated data and address busses. The board also contains the system timing circuits, status decoder, data and address buffers, refresh timing and parity generators and checkers, part of the data link circuit including line drivers and receivers, data detection circuits and serial/parallel register.

210-7446 I/O Boards

This board contains portions of the data link logic including the instruction register, byte timing register and DMA timing circuits. It also has the IN and OUT command decoders, printer control circuits, external status gate and data out registers.

210-7747 and 210-7547 (16K and 32K Memory Boards)

These boards contain printer memory and memory control circuits. Included are bank select, address counter, refresh counter, address mux, data in and out buffers and PROM memory with associated buffers.

4. PRINTER MODIFICATIONS

The serial chaintrain type printers in Models 5570 and 5571 use serial/parallel translator #279-0348. This translator contains the same internal components as the #270-0391 unit used in the LPO configuration of the 928 System, but has different outside dimensions for mounting purposes. It is placed above the card cage inside the printer cabinet. Serial data is received at the rear panel of the printer via dual coax and is then routed to the translator chassis via BNC/TNC cables. Data is then sent to the 210-7387 I/O board in the printer via a 36 pin amp connector and ribbon cable at J2. An RS232 connector plugged into the keyboard assembly is used to transmit keyboard commands to the translator assembly and printer status back to the keyboard.

The serial printer differs from the parallel printer as follows:

- a. A jumper from X to XY on the 210-7387 board suppresses automatic line feed.
- b. A new style sequencer (210-7472) to power up the translator assembly, replaces the old style sequencer (210-7382).
- c. A female outlet to provide power to the translator is wired into TB302 of the printer power supply at Tab 10 (neutral) and Tab 3 (115VAC).
- d. The PC etch at connector B slot 2, pin 3 of the 210-7388 motherboard is cut, thereby inhibiting automatic top of form.
- e. The parallel printer keyboard assembly (271-1194) is replaced with the serial printer keyboard assembly (271-1193).

TAC NL
10929
III CI

PARALLEL
271-1145
271-1194

SERIAL
271-1154
271-1193

CONTROL PANEL ATTACHED TO TOP COVER
CONTROL PANEL ATTACHED TO RT SIDE OF
PRINTER MECHANISM

5. TRANSLATOR CIRCUIT ADJUSTMENTS

The switch banks (SW1) on the 210-7348 CPU board and the 210-7446 I/O board must be set as follows:

SW1	SW1
IO! IO!	IO! IO!
IF! IN!	IF! IN!
IF! ! !	IF! ! !
IX! 1 ! !	IX! 1 ! !
IX! 2 ! !	! ! 2 IX!
! ! 3 IX!	IX! 3 ! !
! ! 4 IX!	IX! 4 ! !
! ! 5 IX!	IX! 5 ! !
210-7348	210-7446

Jumpers must be installed on the 210-7446 board as follows:

HI - out
DE - in
AC - in
AB - out
GF - out
HJ - in (L42-3 to L32-14)

Figure 1 shows the location of SW1 on 210-7348. Refer to Figure 2, for location of SW1 and the six jumpers on the 210-7446.

6. TROUBLESHOOTING

When a printer fails to operate the problem could lie in the master CPU or controller, in the cables connecting the serial/parallel translator to the CPU or to the printer, in the translator itself, or in the printer itself. A failure of the printer to IPL generally indicates that no code is being loaded into it. This condition could be caused by a problem in the master controller, in the translator or in the cabling between the two.

If the printer will IPL, a fault in the printer hardware is indicated. However, if the problem appears to be in the translator, there is no easy way to troubleshoot this unit in the field except by substituting suspected bad modules with known good ones. All cabling and internal voltages should be checked before board replacement is tried. The switches and jumpers on a replacement board should be checked for correct configuration before this board is inserted.

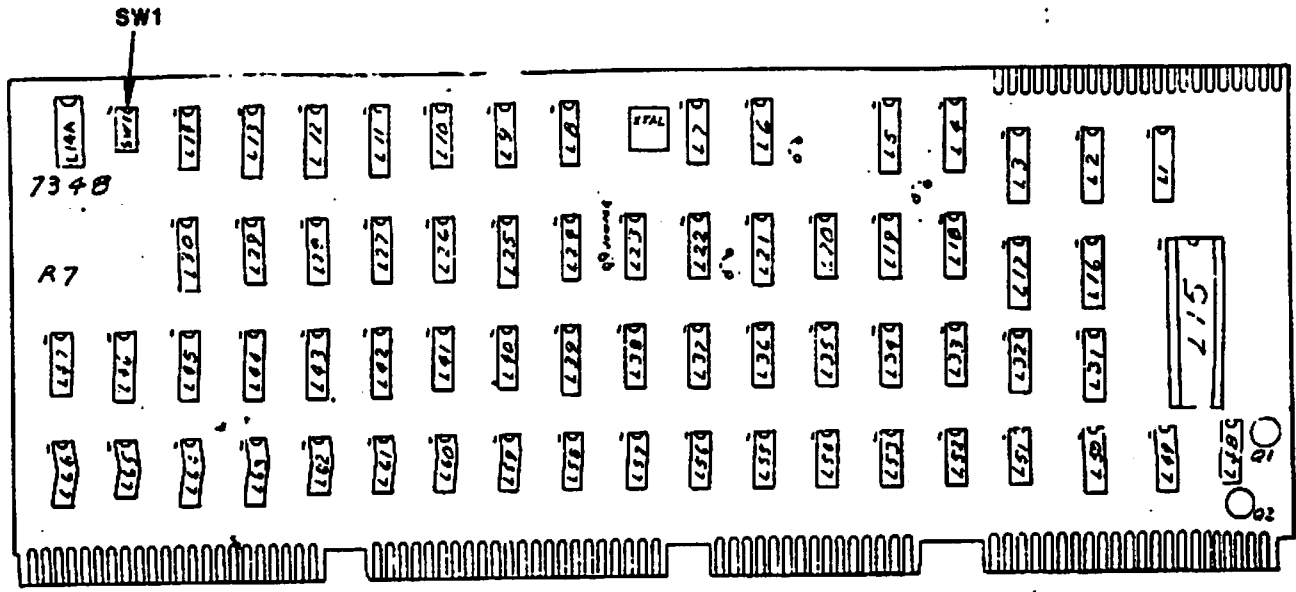


FIGURE 1 PCB 210-7348 ASSEMBLY

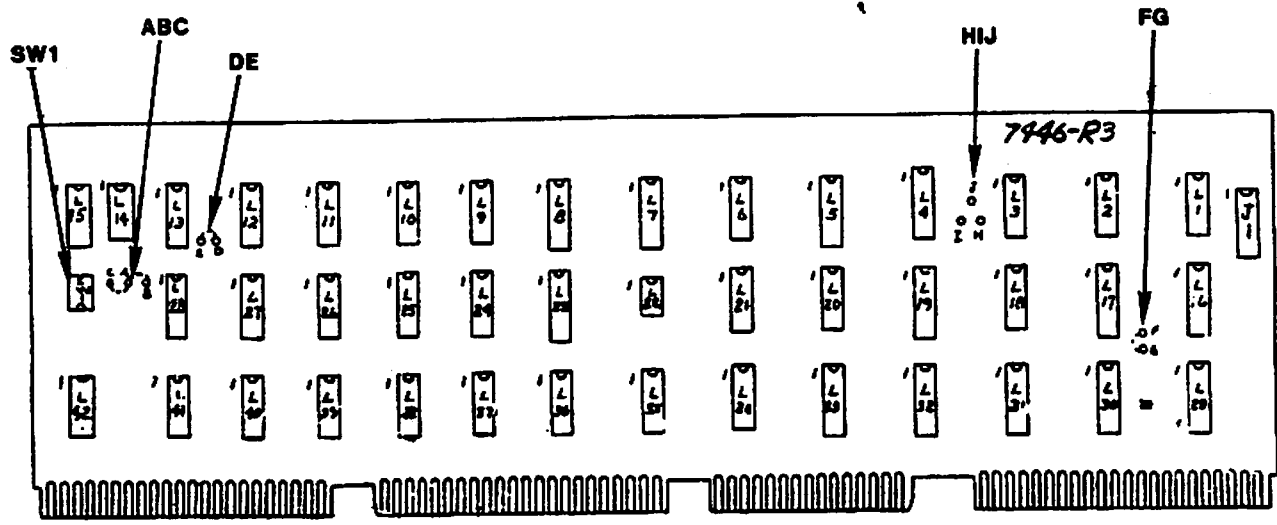
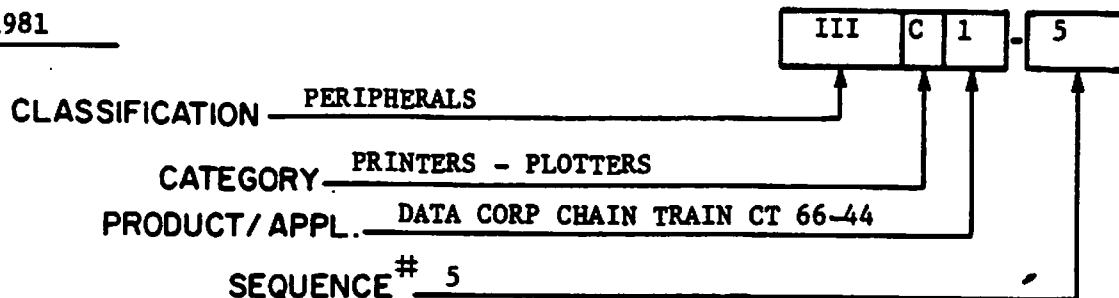


FIGURE 2 PCB 210-7446 ASSEMBLY

PRODUCT SERVICE NOTICE

DATE: June 1981



TITLE:

DATA CORP CHAIN TRAIN UNPACKING

This Product Service Notice describes the procedure for the unpacking and the unloading from the shipping pallet of the Data Corp Chain Train CT 66-44. The unpacking and unloading may be effected by means of the following steps:

1. Snip strapping bands securing the unit to the pallet.
2. Remove bolts securing the 2" x 4" board and the 2" x 6" board (items 1 and 2 respectively, Figure 1), and remove the boards from the pallet.
3. Place 2" x 4" and 2" x 6" boards as shown in Figure 2 (note that the 2" x 6" board has a beveled edge), and secure in place by means of the threaded rod (taped inside of doors on printer floor). Tighten hex nuts to secure the boards snugly against the pallet cushion blocks.
4. Remove bolts securing the two plywood ramps (item(s) 3, Figure 1) to the pallet, and remove the plywood ramps. Retain bolts, to be used in the next step.
5. Place plywood ramps as shown in Figure 3, and secure in place with the shipping bolts retained from step 4.
6. Align unit casters with ramps, and remove the unit slowly from the shipping pallet.



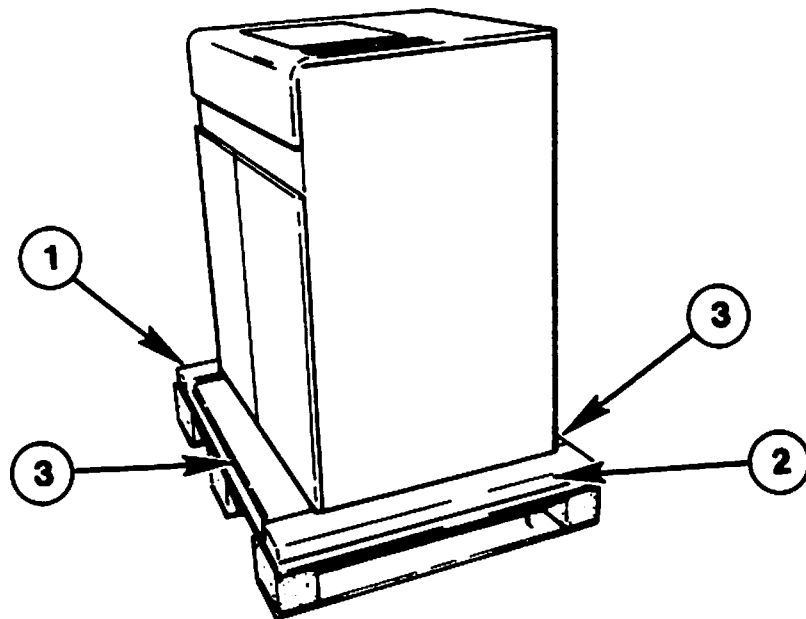


FIGURE 1

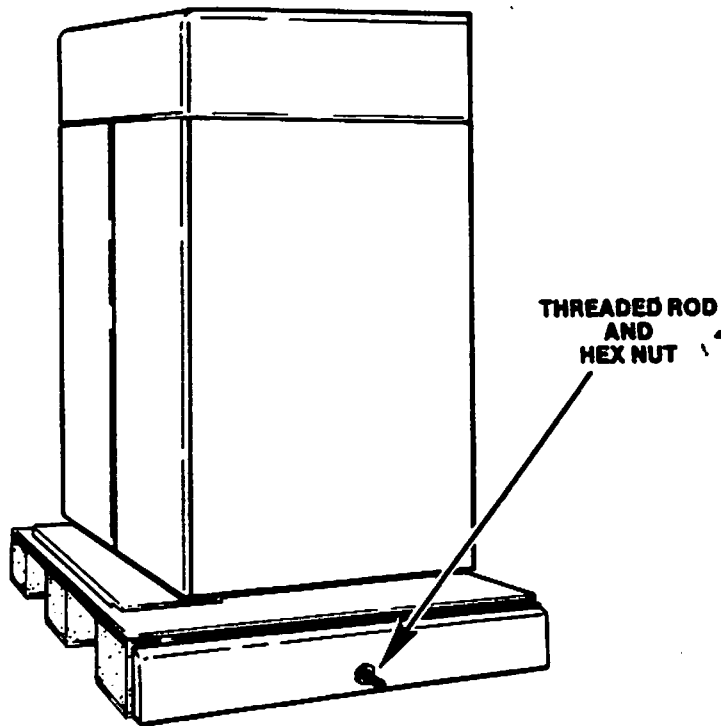
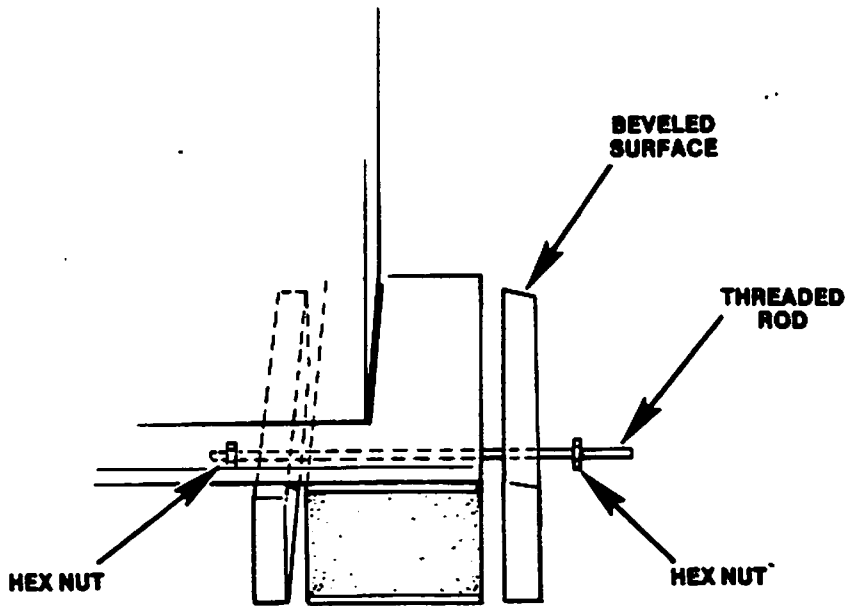


FIGURE 2

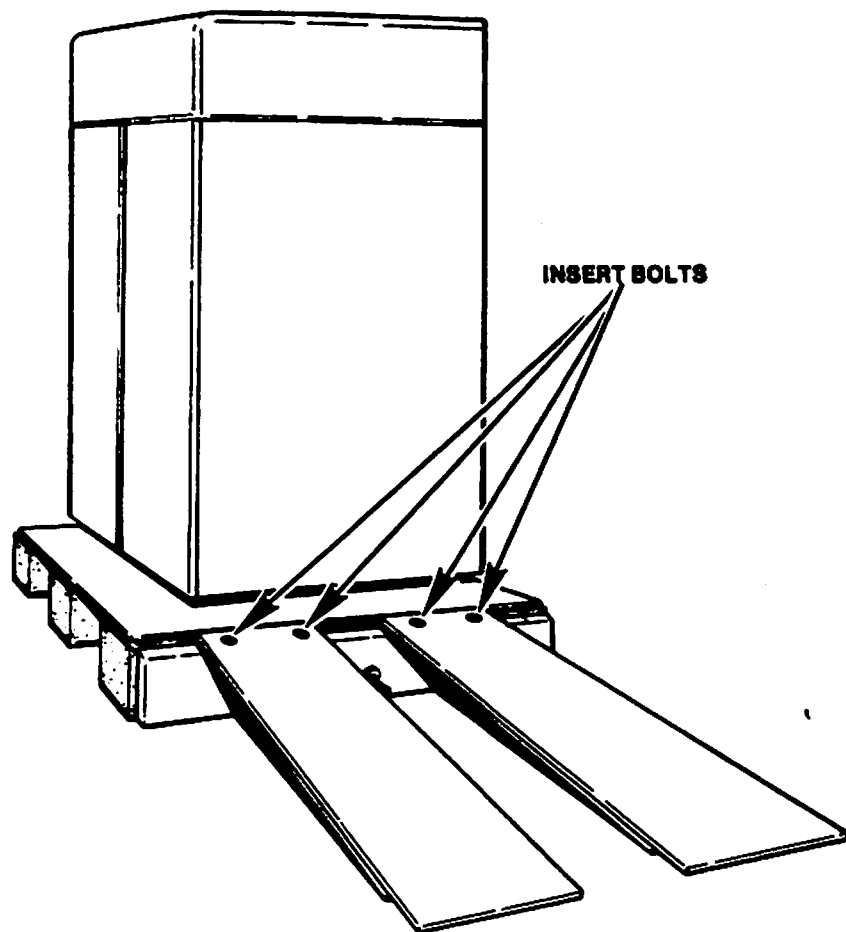


FIGURE 3

Service Newsletter

NO. 117A

PERIPHERALS #32A

November 28, 1979

This Newsletter replaces SNL #117.

2263/2263W: UNDOCUMENTED ELECTRICAL ADJUSTMENTS

Two electrical adjustments on 2263/2263W printed circuit boards are not documented in either electrical diagrams or Data Printer Corp. ChainTrain Line Printer Maintenance Instructions manual, DPC FORM 600-3. One adjustment concerns the Paper Motion Sensor, and the other deals with signal (-)1/2" STROBE timing. This Newsletter explains the procedures for performing these adjustments. This information should be added to every Data Printer Corp. Maintenance Instructions manual.

A. PAPER MOTION SENSOR ADJUSTMENT

A potentiometer (R48) is provided on DATA PRINTER and WANG High-Speed Print Control Boards, WL #726-3205 (DPC #12036), and WL #210-7384 for adjusting the supply voltage to the Paper Motion Sensor. This adjustment allows a Customer Engineer to correct any minor discrepancy in the output voltage of the sensor without having to move the sensor. Moving the sensor achieves only a coarse setting for the sensor output voltage, while the potentiometer allows for a fine setting.

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WANG

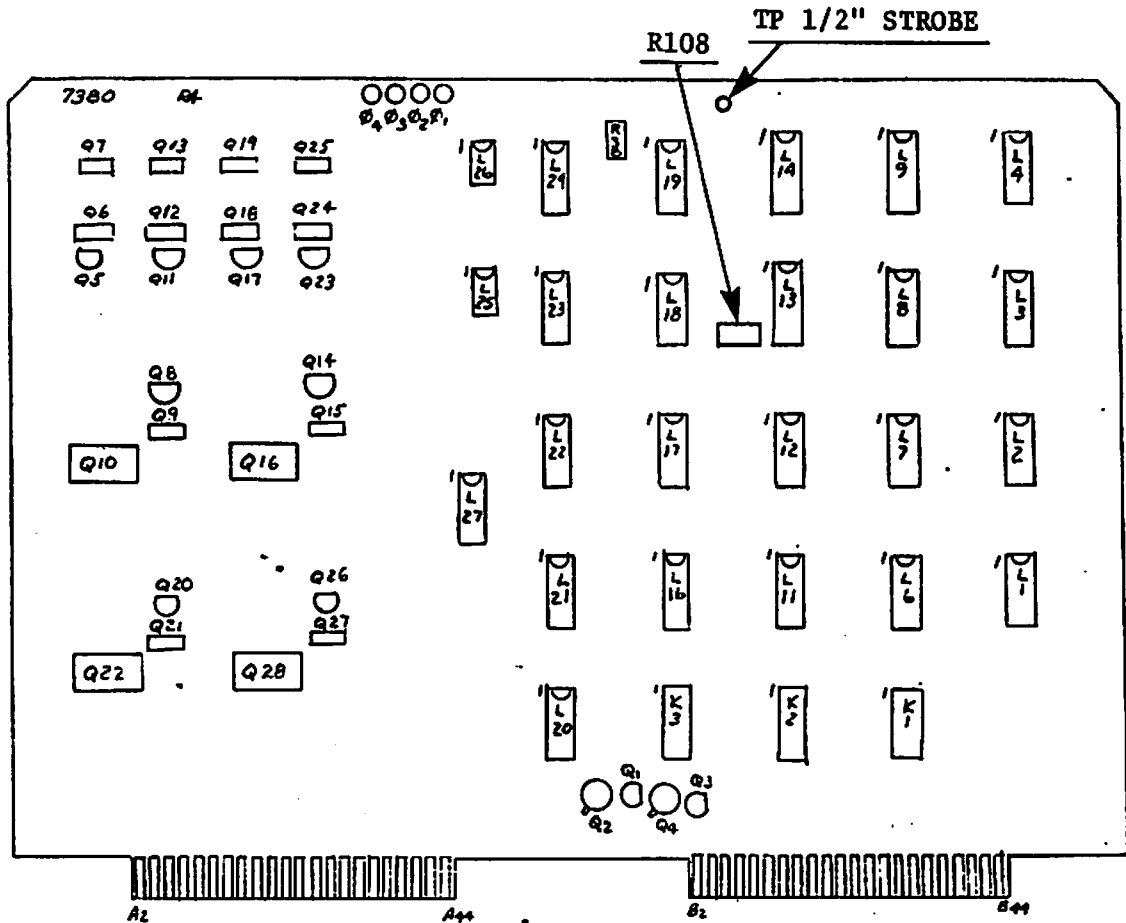
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13-266

B. TP 1/2" STROBE ADJUSTMENT

A potentiometer (R108) is provided on WANG Paper/Ribbon Control Boards (WL #210-7380) for adjusting the timing of signal (-)1/2" STROBE. To perform this adjustment, monitor the (-)1/2" STROBE test point on the 210-7380 PCB and adjust potentiometer R108 for a negative pulse width of 450 usec. This adjustment should be performed while the 2263/2263W is printing.





Service Newsletter

NO. 174

NOVEMBER 26, 1979

PERIPHERALS #49

2263 LINE PRINTER SEQUENCER BOARD

A new Sequencer Circuit Board, WLI #210-7472, has been added to the 2263 printer power supply to ensure correct powering-up of the printer. The new circuit board contains an additional triac (Q14).

Some printers have been shipped with the sequencer terminals wired incorrectly. CE's should check all newly delivered 2263 Printers to ensure that the TB2 terminals on the Sequencer Board are wired as follows:

- Terminal 4: Connects switched neutral to the serial-to-parallel converter, cooling fans, static bar, and paper puller.
- Terminal 5: Connects switched neutral to the power supply transformer via TB302.
- Terminal 7: Connects switched neutral to the motor run coil.
- Terminal 9: Connects switched neutral to the motor start coil.

The wiring diagram for TB2 is shown on page 2.

NOTICE:

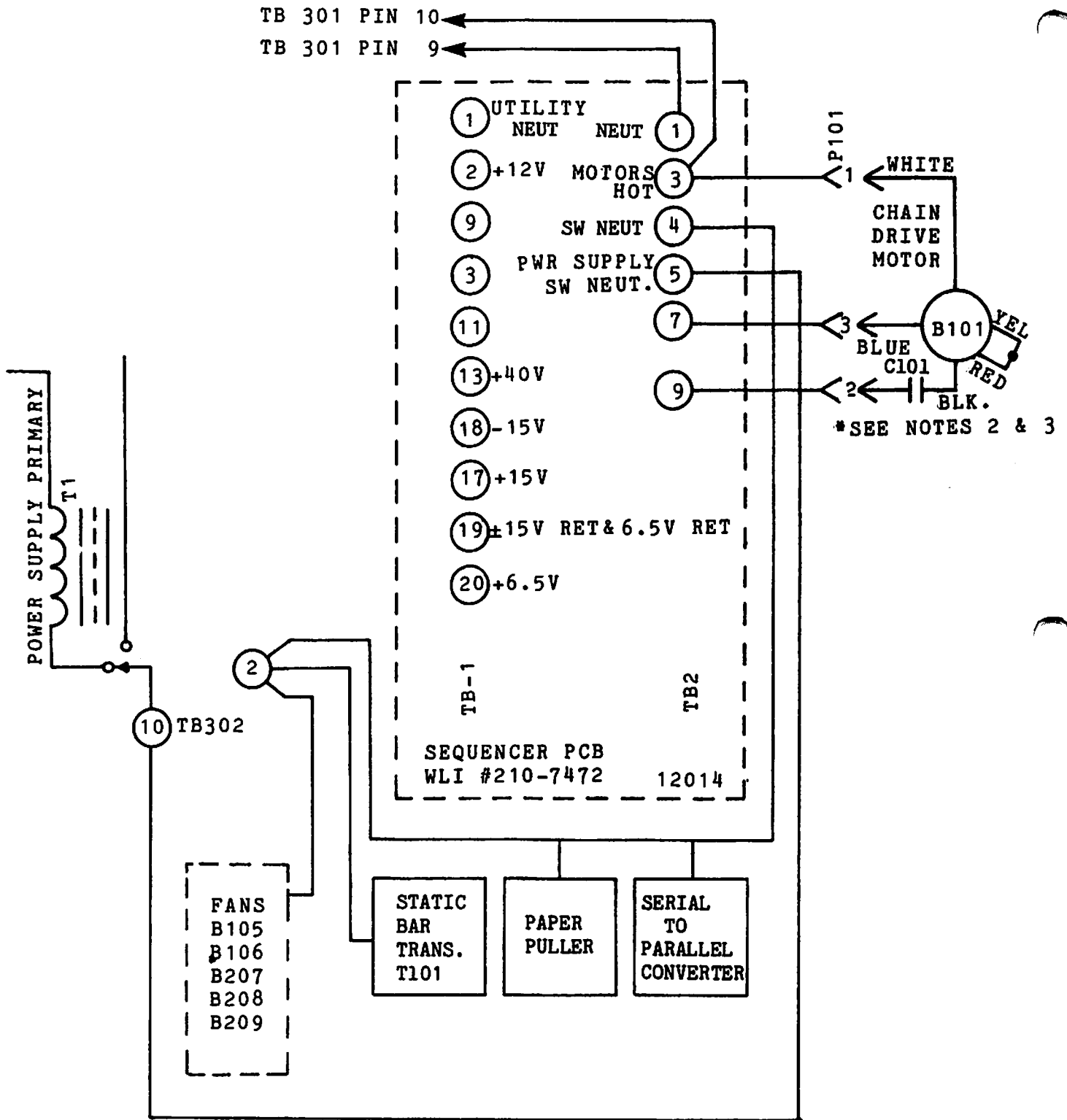
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TB2 WIRING DIAGRAM FOR
SEQUENCER PCB WLI #210-7472

Service Newsletter

NO. 179

December 13, 1979

PERIPHERALS #53

2263/2263W: ECN on 210-7381 PCB

A. INTRODUCTION:

This Newsletter documents a change to the 210-7381 PCB in the 2263/2263W Line Printer.

B. REASON FOR CHANGE:

To prevent 'STOP' (deselect) problems.

C. CORRECTION/SOLUTION:

Connect one side of C13 to $\pm 0V$. It is presently "floating".

D. PREREQUISITES:

This change applies to Art Revision-1 boards only.

E. TIME REQUIRED:

1/4 hour.

F. PARTS REQUIRED:

A short length of No. 30 gauge teflon-insulated wire (WL #600-5004).

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WANG

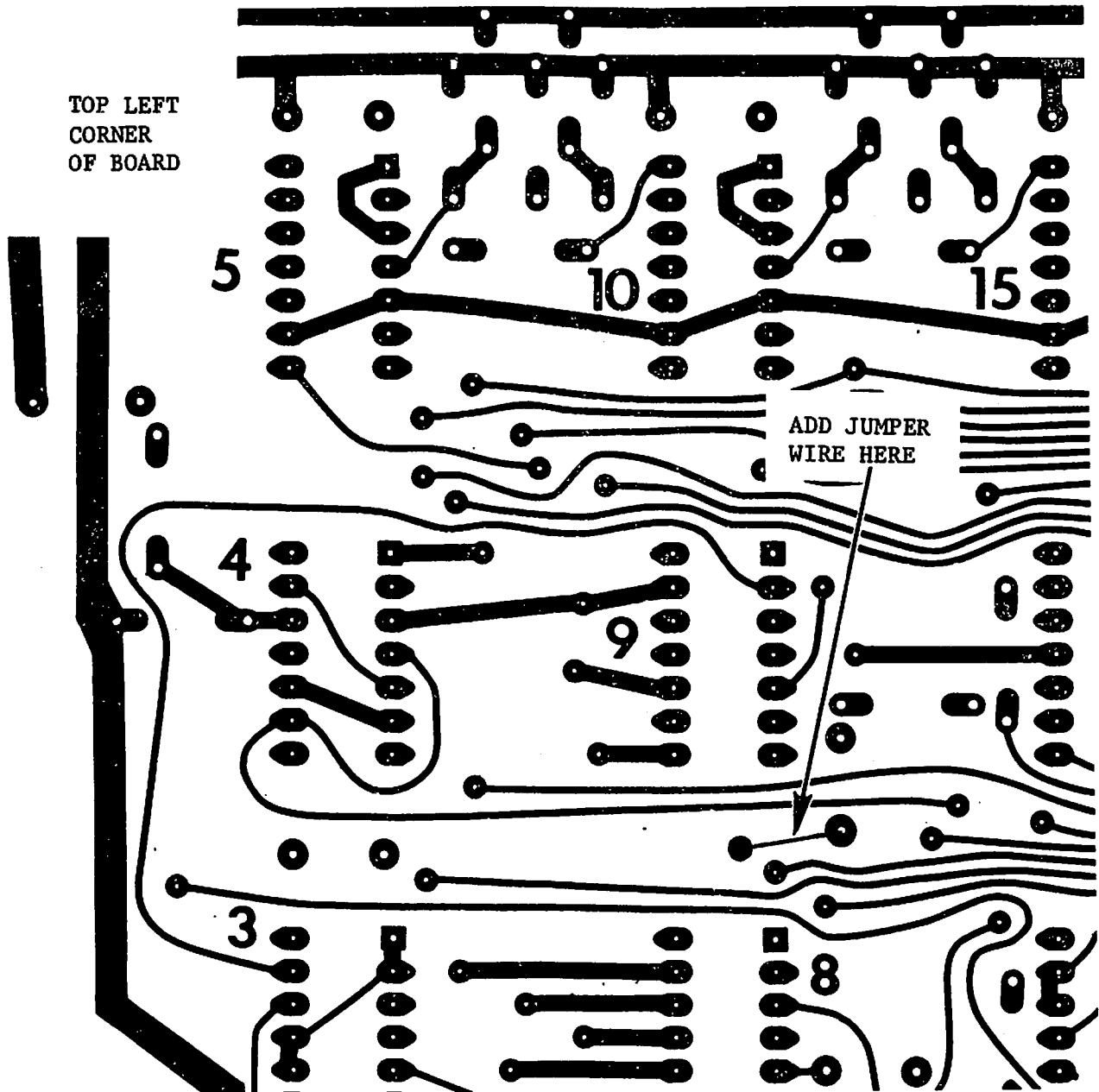
LABORATORIES, INC.

ONE INDUSTRIAL AVENUE, LOWELL, MASSACHUSETTS 01851, TEL. (617) 459-8000, TWX 710 343-6769, TELEX 94-7421

Printed in U.S.A.
13-266

G. PROCEDURE:

1. Add a jumper wire on the non-component side of the board as shown in the figure below.
2. Test the modified circuit board in a printer by deselecting, and then reselecting the printer, while running an appropriate diagnostic.



Service Newsletter

NO. 180

PERIPHERALS #54

January 16, 1980

2263/2263W: ECN #13,765 on 210-7387 PCB

A. INTRODUCTION:

This Newsletter documents ECN #13,765 on the 210-7387 PCB in the 2263/2263W Line Printer. ECN #13,765 voids ECN #13,538 which voids ECN #13,282. ECN #13,765 changes the E-REV level of the 7387 board to 4.

B. REASON FOR CHANGE:

To prevent double line feeding and/or overprinting when printer is deselected, then reselected.

C. CORRECTION/SOLUTION:

Add circuitry to ensure that when a STOP condition is pending, an ACKNOWLEDGE pulse is sent to the I/O controller at the end of the current operation.

D. PREREQUISITES:

The PCB #210-7387 must be at E-REV 3 (ref: Mandatory Update Bulletin).

E. TIME REQUIRED:

1 hour.

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ONE INDUSTRIAL AVENUE, LOWELL, MASSACHUSETTS 01851, TEL. (617) 459-5000, TWX 710 343-6769, TELEX 94-7421

Printed in U.S.A.
13-266

F. PARTS REQUIRED:

One 7400 type IC, WLI #378-0002.

No. 30 gauge teflon-insulated wire, WLI #600-5004.

G. PROCEDURE: (Refer to FIGURE 1.)

NOTE:

Steps #1 and #3f are not shown in FIGURE 1.

On the component side of the board, perform the following:

1. Cut etch at L4 pin 2. Make cut at base of pin.
2. Install a 7400 type IC in location L19.
3. Add a wire FROM TO

a)	L15 pin 11	L15 pin 12
b)	L15 pin 10	L15 pin 11
c)	L15 pin 9	L16 pin 4
d)	L15 pin 8	L13 pin 4
e)	L15 pin 13	L19 pin 12
f)	L19 pin 11	L4 pin 2
g)	L19 pin 13	L13 pin 6
h)	L16 pin 3	L15 pin 3

4. Add a wire from L19 pin 7 to the $\pm 0V$ etch.
5. Change the E-REV label to 4.
6. Test the modified circuit board in a printer by deselecting, and then reselecting the printer, while running an appropriate diagnostic.
7. Update schematic to reflect this change.

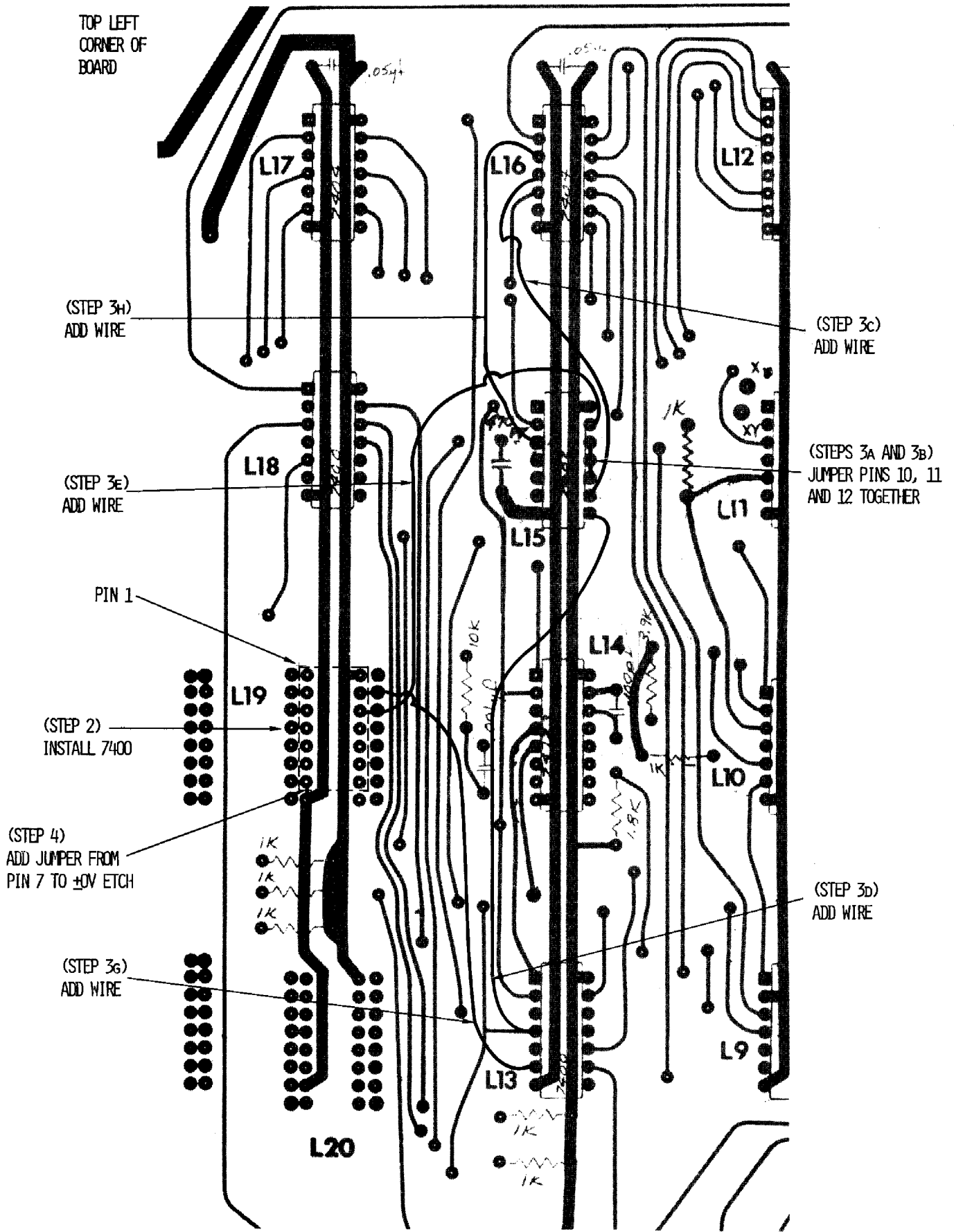
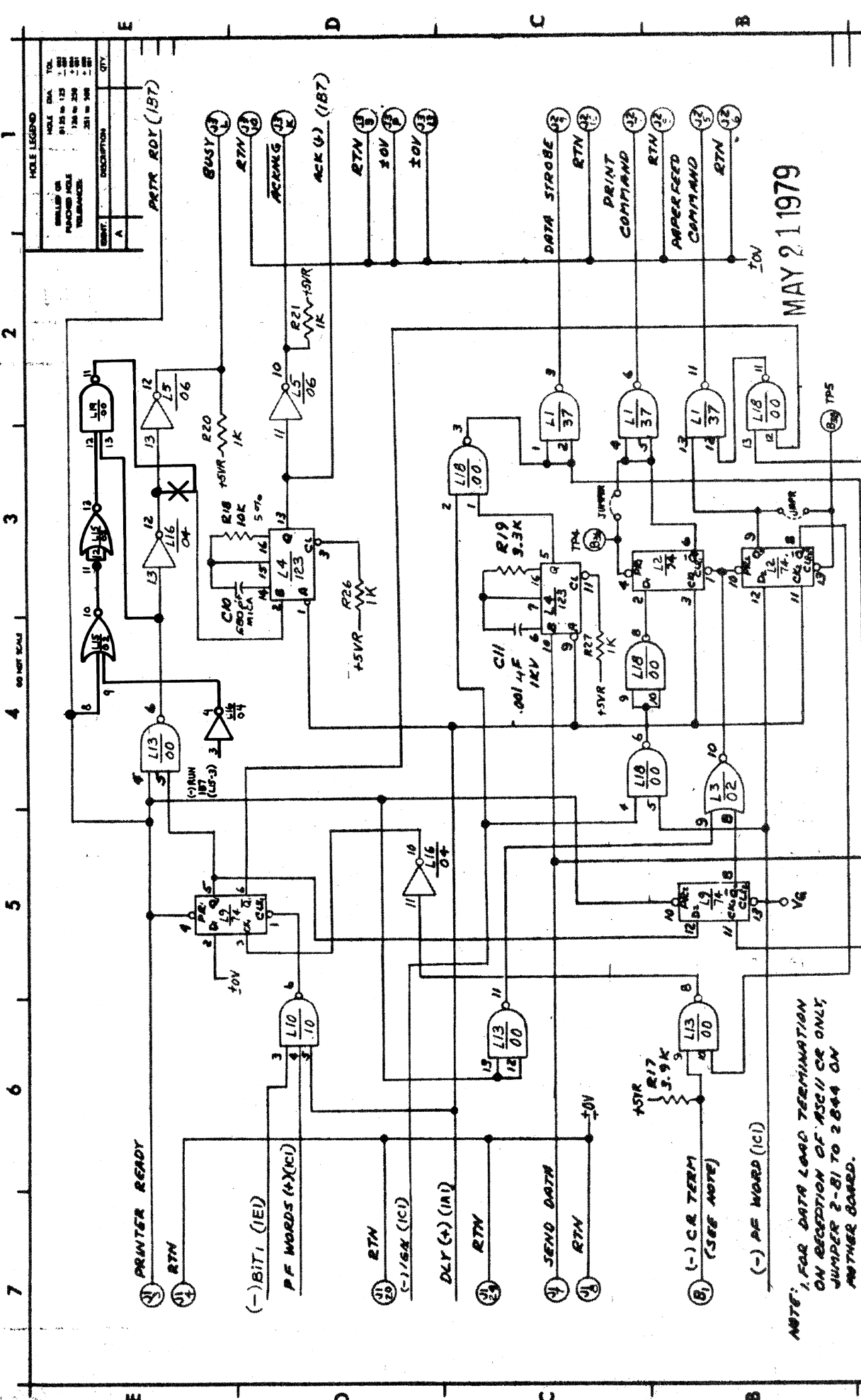


FIGURE 1.



WANG PART NO.		ITEM	QTY.	NAME	MATERIAL	DESCRIPTION
1	210-7507	1	1	WANG	2263W	DRG CNX I/O ADAPTER
2						
3						
4						
5						
6						
7						

MATERIAL	DATE	APPROVED BY	DATE
WANG	5-25-79	E ENGR	
		M ENGR	
		MFG ENGR	

WANG PART NUMBER	SIZE	DRAWING NUMBER	REV.
210-7507	C	7387	10

mike B

WANG

FIELD CHANGE ORDER

FCO NO.
1074

Equipment Affected 2263, 2263V, 5570, 5571 Data Corp Chaintrain Printer

Class Problem Only FCO Kit # 728-0090 Page 1 of 4

Org. Code 3301 (III.C.1) FCO Doc. # 729-1428 Approval Date: **JAN 18 1984**

Est. Install. Time 30 minutes Ref. ECO # 29802, 31055

1. REASON FOR CHANGE

To fix a paper-out switch problem which results in an intermittent "paper-out" indication and the printer printing over previous text upon re-selecting.

2. DESCRIPTION OF CHANGE

A capacitor is added and a resistor is changed on the 210-7386 Paper Feed Control PCA.

3. DOCUMENTATION AFFECTED

"Product Maintenance Manual, Data Printer Corp. Chaintrain Line Printer, Models CT-4964, CT-6644, CT-7484, Parts Breakdown and Electrical Diagrams," 729-0273. (Henceforth referred to as the "manual").

4. PREREQUISITE (S)

The 210-7386 PCA should be at E-Rev 1 prior to installation of this FCO.

5. INSTALLATION PROCEDURE

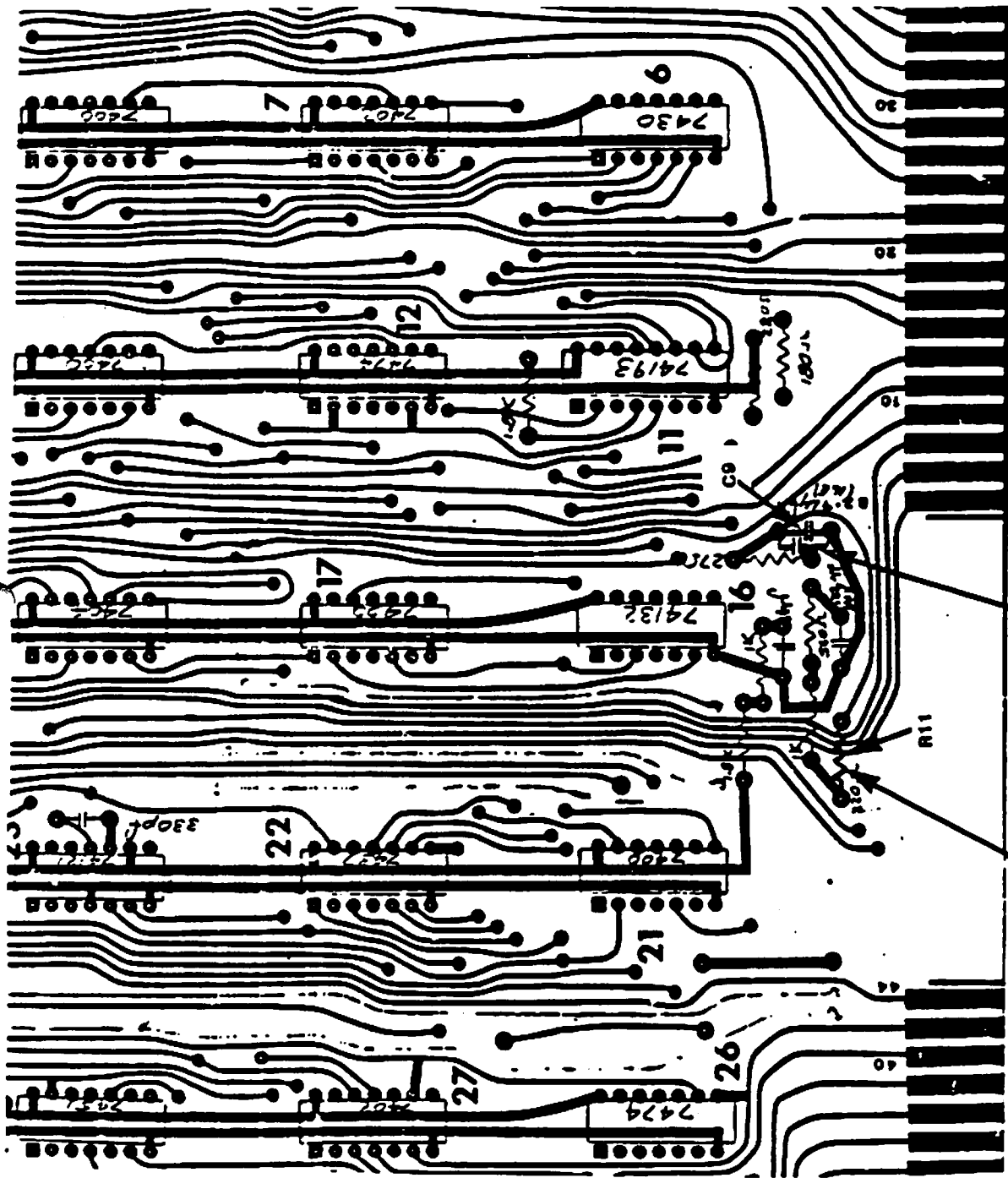
- A. Power off. Remove AC plug at wall.
- B. Remove lower rear panel. (Ref. manual p.14)
- C. Disconnect spade lug which grounds the rear panel to the cover.
- D. Remove the 210-7386 Paper Feed Control PCA from position 3 of the electronic bay assembly. (Ref. manual p.18)

Refer to Figure 1 for Steps E thru F.

- E. Change R11 from a 220 ohm 1/4W 5% resistor (330-2023) to a 6.8K ohm 1/4W 5% (330-3069).

Tech Ops <u>1-18-84</u> <i>[Signature]</i>	Logistics <u>1-18-84</u> <i>Karen Luomo</i>	Originator <u>1/18/84</u> <i>Mary Keady</i>	FCO Coordinator <i>John Proulx 1/18/84</i>
---	--	--	---

- F. Add a .1uf capacitor (300-1918) in parallel with C9. Do this by hook soldering the leads of the .1uf capacitor to the leads of C9.
- G. Check for solder splashes, cold joints and shorts.
- H. Remove the E-Rev 1 sticker from the 210-7386 PCA. Place an E-Rev 2 sticker on the upper right corner of the circuit side of the 210-7386 PCA.
- I. Reassemble the unit by reversing Steps A - D above.
- J. Document installation of the FCO by completing a Call Report or Activity Report.



ADD A .1UF
CAPACITOR
(300-1018)

CHANGER11 TO
6.6K OHM 1/4W 5%
RESISTOR
(330-3059)

FIGURE 1 210-7386 PCA, RESISTOR/CAPACITOR LOCATIONS, COMPONENT SIDE

6. CHECK-OUT PROCEDURE

Check the list below and run the appropriate printer diagnostic:

<u>System</u>	<u>Test</u>	<u>Part #</u>
VS	5571 Chaintrain Printer Test	702-0246
2200 VP/MVP	Peripheral Diagnostic	702-0079
2200 LVP/SVP	LVP/SVP System Exerciser	732-0002C
OIS	5571 Chaintrain Printer Test	760-1098

7. FCO KIT PARTS LISTING

KIT #728-0090

<u>Item</u>	<u>Qty</u>	<u>Description</u>
729-1428	1	FCO Document 1074
330-3069/4B	1	6.8 ohm Resistor 1/4W 5%
300-1918	1	.1uf Capacitor
615-1283-2	1	E-Rev 2 Sticker

8. FCO KIT AVAILABILITY DATE

FCO Kit# 728-0090 will be available January 30, 1984. To obtain it, place a routine order through the Logistics Order Processing System.

9. REMOVED PARTS DISPOSITION

Discard the removed 220 ohm resistor (330-2023).

10. MISCELLANEOUS

N/A



NO. 169	DATE: 5/24/78
CATEGORY PERIPHERAL #20	
SUBJECT 2263 CHAINTRAIN PRINTER	

ARTWORK ERRORS ON WANG BOARDS

Artwork errors exist on some Wang versions of the Model 2263 Chaintrain Printer boards. These problems, described below, concern artwork revision 0 boards only. Approximately 25 boards are affected.

1. On the 210-7385 H. S. Print Timing Generator Board, an etch is missing between connector B40 and IC L1 pin 5. Without this etch, the printer will print random characters until the chain reaches operating speed.
2. On the 210-7382 Sequencer Board, an etch is missing in the crow bar circuit, making it inoperative. Pin 14 of IC's L5, L6, and L8 are tied together, but they are not tied to VCC as they should be. This will not affect the performance of the printer, but it should be corrected as soon as possible in order to restore this important safety feature. The crow bar circuit protects the hammer actuator coils during a hammer driver circuit failure.

To correct these artwork errors, add bus wire jumpers in place of the missing etches.

CHAINTRAIN PRINTER

34

DEFECTIVE RIBBONS

Date Printer Chaintrain ribbons have a fabric mesh located at both ends of the ribbon.

This fabric mesh should pass light and is utilized to detect "End of Ribbon".

At present there exists two types of fabric mesh on the 725-0162 ribbon.

- A. A dark ink colored mesh which works correctly and should not introduce any ribbon reversing problems.
- B. A lighter colored mesh (off-white) which inhibits the passing of light, thereby causing intermittent ribbon reversing problems.

Ribbon "B" can be exchanged at no cost to customers through Returned Goods Supplies Division, telephone number 1-800-225-0234.

Ribbons 725-0162

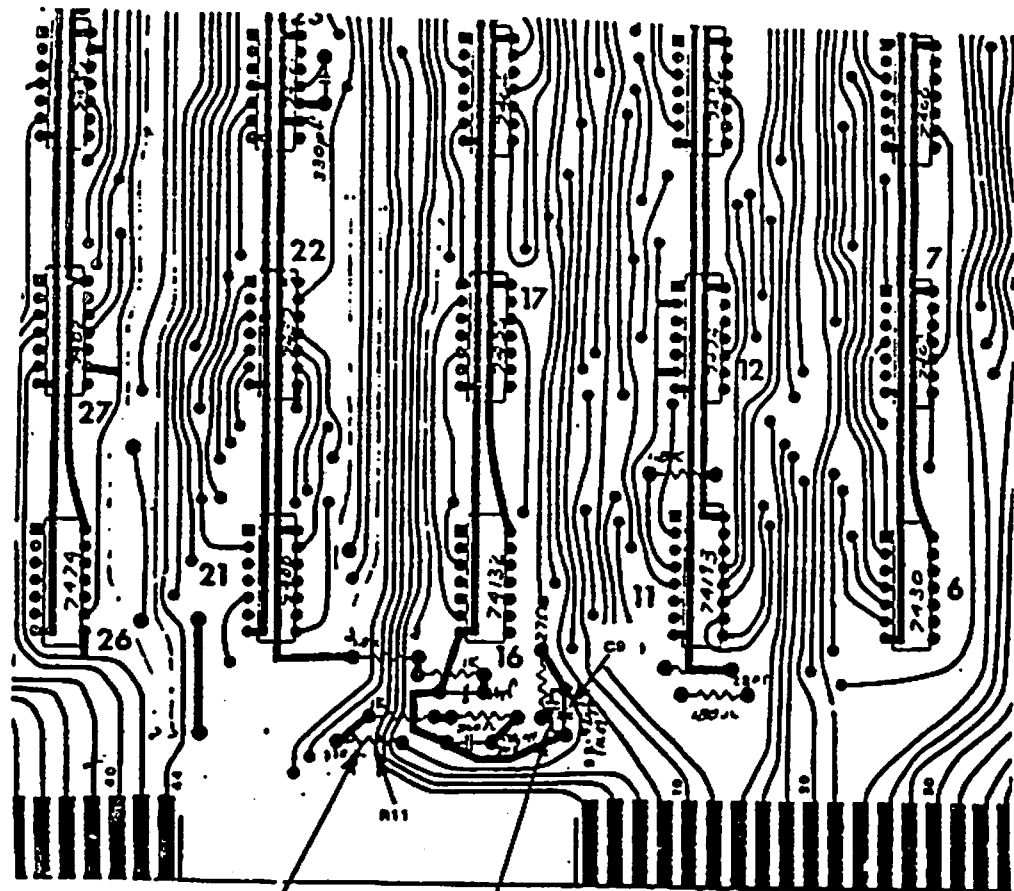
2263/2263V/5570/5571 CHAINTRAIN PRINTER**Intermittent Paper Out:**

FCO 1074 has been released and corrects a problem with intermittent paper out indications whereupon reselecting the printing causes the next line of print to overprint the last line.

This involves changing one resistor and adding one capacitor on the 210-7386 Paper Feed Control Board.

1. Change R11 from a 220 Ω 1/4 W resistor (330-2023) to a 6.8 Ω 1/4 W (330-3069).
2. Add a .1 μ f capacitor (300-1918) in parallel with C9.
3. Change E-Rev. number on upper right corner of etch side to 2.

728-0090 FCO 1074 Kit



CHANGE R11 TO
6.8K OHM 1/4W 5%
RESISTOR
(330-3069)

ADD .1UF
CAPACITOR
(300-1918)

TAC

Problem Call

Control Number 08302039

Contact Name WAYNE WYETTE Position CE
Rdb # 7725 Tdx # Phone # 703 276 0034 Ext #

System Type VS 65 Device Type 5571
Utility Name Software Level

Method of Call P T = Telex, P = Phone, M = Memo, E = Ems
Has the Area or District been contacted
N A = Area, D = District, B = Both, N = None
Is this inquiry pertaining to a National Account ?
U Y = Yes, N = No, U = Unknown

Use the following area to describe the site that created this request

Cust/Office Name DARBY CUSHMAN Phone # 202 439 2929
Address 4101 City State
On Site Contact Name

Problem (*) Solution (+)

*EMP 32747

*DISP N/A

*CHAIN TRAIN PTR KEEPS HANGING WHEN NEXT DOC HAS BEEN SENT

*AND PRT ITS GOING OFF LINE

9/28/88: MOST LIKELY PROB W/ INTERFACE BRD, BLK BOX, OR
STATIC XSFRMR. SHOULD ALSO CHECK FOR CABLE DAMAGE
ESPECIALLY ON CABLE UP TO CONTROL PANEL. CE NOT ON
SITE. NEEDS TO ALSO CHECK JUMPERS & SW SETTINGS
ASSOCIATED W/ BLK BOX AS THESE VERY W/ SETUP. CE
NOT ON SITE. (20MIN) MIKEB

11/1/88: CE BACK ON SITE. GAVE CE SW & JUMPER SETTINGS FOR
THE BLACK BOX. SW SETTINGS ON THE 7348 WERE SET
FOR DAISY & THE JUMPERS WERE WRONG ON THE 7446.
CE TO ALSO CHECK THE CABLE FROM THE BLK BOX TO THE
CONTROL PANEL TO INSURE PROPERLY CONNECTED & NOT
DAMAGED. WILL MAKE CORRECTIONS TO BLK BOX, VERIFY
IT'S V'S & RIPPLE, & TEST OUT. IF STILL NOT WORK-
ING WILL TRY BRDS FROM OTHER BLK BOX TO SEE IF CAN
COME UP IN ANY COMBO W/ 1 GOOD BLK BOX. (20MIN)MB

11/2/88: PRINTER WAS NOT PRINTING YESTERDAY BECAUSE HAD SET
UP ON NEW PORT BUT HAD NOT REBOOTED SYS TO GET ON
NEW GEN. NOW BACK TO WHERE WILL PRINT 1ST DOC THEN
MUST POWER OFF TO PRINT NEXT. HAPPENS W/ 3 DIFFER-
ENT BLK BOXES & 3 I/O BRDS. CE TO TRY LOADING NEW
@MC2263S UCODE, NEW CONTROL PANEL (271-1154), DIS-
CONNECTING STATIC XSFRMR, & GO THRU ALL PRINTER
BRDS IF NEED BE. (20MIN) MIKEB

11/22/88: LEFT MESSAGE AT OFFICE TO CALL. (5MIN) MIKEB
+STARTED HAVING PROB IN LOCAL. ADJ R48 ON THE PRINT CONTROL
+BRD UNTIL STARTED WORKING & NO PROB SINCE. R48 ADJ THE V

+FOR THE PAPER MOTION SENSOR. CLOSE CALL.

(10MIN) MIKEB

WANG

LABORATORIES, INC.

CUSTOMER ENGINEERING
TECHNICAL ASSISTANCE CENTER
NEWSLETTER

#10407

III.C.1

PERIPHERALS-PRINTERS/PLOTTERS-DATA CORP CHAIN TRAIN CT 66.44.

TOPIC: CHARACTER SLUG/BELT REPLACEMENT PROCEDURE.

Special Tool Required:

Type Slug Loading Rail - P/N 726-9666

1. Power down printer.
2. Remove paper and ribbon.
3. Remove front doors.

NOTE: All figure and item numbers refer to DPC
600-4 manual.

4. Remove yoke side covers, Fig. 2, Item 18.
5. Remove the lefthand and righthand yoke top covers, Fig. 2, Item 23 and 24.
6. Remove ribbon cover guard, Fig. 2, Item 17.
7. Remove front yoke cover, Fig. 1, Item 56.
8. Remove lefthand pulley cover, Fig. 58A, Item 11.
9. Remove upper ribbon edge sensor, Fig. 58A, Item 11.
10. Remove phasing bracket subassembly, Fig. 58A, Item 8.
11. Loosen four bolts attaching the jackshaft bracket, Fig. 63, Item 3, to angle bracket, Fig. 63, Item 2. Slide the jackshaft bracket to the left and relieve tension on the Chaintrain drive belt, Fig. 58A, Item 58.
12. Remove the pick-up mount assembly, Fig. 68, Item 4.

NOTE: When replacing this assembly, do not overtighten the post nut, Fig. 68, Item 6. The pick-up mount must move freely for the operators phasing adjustment.

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TECHNICAL ASSISTANCE CENTER
NEWSLETTER

#10407

III.C.1

PERIPHERALS-PRINTERS/PLOTTERS-DATA CORP CHAIN TRAIN CT 66.44.

TOPIC: CHARACTER SLUG/BELT REPLACEMENT PROCEDURE. (continued)

13. Remove the drive belt from top of slug drive pulley, Fig. 68, Item 2, and slide it out of the way toward jackshaft assembly.

14. Remove the rear ribbon guard, Fig. 59, Item 31.

NOTE: Some of the rear slug guides, Fig. 59, Item 22, have a slot cut in them just to the right of center. This slot can be used for loading and unloading the type slugs.

NOTE: Check the Chaintrain lubrication wick, Fig. 59, Item 32. Ensure that it extends from the tube far enough to lubricate the back of the slugs.

15. If a slot does not exist in the rear slug guide, use a sharp instrument to outline the position of the guide bar and remove it.

16. Using two screws removed in Step 15, install the type slug loading rail (P/N 726-9666) to the left of the slot in the casting.

17. Close the yoke to gain easy access to the upper and lower belt.

NOTE: If only slug replacement is required, continue from Step 18. If the belts are being replaced, proceed to Step 24.

18. Position the slug to be removed on the loading rail. Place both thumbs on the outer edge of the belt, one on each side of the post holding the belt in position.

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TECHNICAL ASSISTANCE CENTER
NEWSLETTER

#10407

III.C.1

PERIPHERALS-PRINTERS/PLOTTERS-DATA CORP CHAIN TRAIN CT 66.44.

TOPIC: CHARACTER SLUG/BELT REPLACEMENT PROCEDURE. (continued)

19. Apply pressure toward the print face. As the belt bends, push it toward the front of the printer until the outer edge clears the tabs, leaving the inner edge of the belt seated in the tab closest to the print face. Use the same method to release the outer edge of the bottom belt from the tabs.

NOTE: Replacing the slug will be easier if the outer edge of both belts are released from the slug on each side of the slug being replaced.

20. Position the slug to be removed in front of the slot cut in the casting. While holding the top post of the slug, pull both belts free of the tabs closest to the print face and remove the slug.
21. Position the print face of the new slug between the two belts. Insert the inner edge of each belt into the tabs closest to the print face.
22. Slide the slug back on to the loading rail. Use the method described in Steps 19 and 20 to insert the outer edge of the belt into the tabs.
23. After all slugs have been replaced, remove the type slug loading rail and work backwards from Step 15 to reassemble the printer.

STEPS 24 THROUGH 39 ARE FOR BELT REPLACEMENT:

24. Remove the upper end and upper central ribbon/slug guides, Fig. 59, Item 24, 25 & 28.
25. Begin with any slug that is on the loading rail. Place both thumbs on the outer edge of the top belt, one on each side of the post holding the belt in position.

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NEWSLETTER

#10407

III.C.1

PERIPHERALS-PRINTERS/PLOTTERS-DATA CORP CHAIN TRAIN CT 66.44.

TOPIC: CHARACTER SLUG/BELT REPLACEMENT PROCEDURE. (continued)

26. Apply pressure toward the print face. As the belt bends push it toward the front of the printer until the outer edge clears the tabs, leaving the inner edge of the belt seated in the tab closest to the print face. Rotate the belt and do the same to the next slug. Repeat until the outer edge of the top belt has been released from all slugs.
27. Cut the top belt and carefully remove it from the type slugs.
28. Using the method described in Steps 25 and 26, release the outer edge of the bottom belt from a slug positioned on the loading rail.
29. Move the slug to the right until it is in front of the slot cut in the casting and remove it from the belt. Repeat until all slugs have been removed from the belt.
30. Mark the position of idler and the drive pulleys. Cut the bottom belt and remove it.
31. Clean the yoke assembly, the idler and drive pulleys, the type slugs and the miscellaneous parts removed when the printer was disassembled.
32. Line the idler and drive pulleys up with the marks made in Step 30 and install a belt on the top pulley. Mark one tooth of the belt that is seated in a large groove on the drive pulley, then rotate the belt and verify that the marked tooth falls into a large groove on the idler pulley.
33. While rotating the belt, force it down to the bottom pulleys. Verify the marked tooth falls into a large groove on both pulleys.
34. Install the second belt on the top pulleys. Again mark one tooth in a large groove and verify it falls into a large groove on the other pulley.



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NEWSLETTER

#10407

III.C.1

PERIPHERALS-PRINTERS/PLOTTERS-DATA CORP CHAIN TRAIN CT 66.44.

TOPIC: CHARACTER SLUG/BELT REPLACEMENT PROCEDURE. (continued)

35. Position the marked tooth in front of the slot on the casting. Place the print face between the two belts. Lift each belt and place the inner edge into the tabs closest to the print face.

36. Move the slug on to the loading rail and insert the outer edge of both belts into the tabs using a method similar to the one described in Steps 25 and 26.

NOTE: Refer to DPC 600-1, Table 5 for proper slug sequence.

37. After the slug is in place, rotate the belt one complete revolution to insure the slug rides through both pulleys properly.

38. Continue to add the print slugs to the right of the first slug by repeating Steps 35 and 36. After all of the slugs have been replaced, rotate the belt through several revolutions to lubricate all of the slugs.

39. Remove the type slug loading rail and work backwards from Step 15 to reassemble the printer.

NOTE: All required adjustment specifications are covered in CPC 600-3.

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NEWSLETTER

#10526

III.C.1

PERIPHERALS-PRINTERS/PLOTTERS-DATA CORP CHAIN TRAIN CT 66.44.

TOPIC: DATA PRINTER CYCLES

Determining which cycle (load, print or paper feed) a failing chain printer is in, will divide trouble shooting time by 3.

Load cycle (-) PR RDY 4A8 M.B.

Print cycle (-) Print 5A44 M.B.

Paperfeed cycle (-) VF busy 3A28 M.B.

In all three cases the cycle is active low (-).



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NEWSLETTER

#10526

III.C.1

PERIPHERALS-PRINTERS/PLOTTERS-DATA CORP CHAIN TRAIN CT 66.44.

TOPIC: MISSING PRINT CYCLE.

Chain speed - The data printers time between index pulses is a determinant which allows a print cycle, if the chain is up to speed. The index pulse can be scoped at 5B4 on the motherboard. The following are maximum times between pulses to permit print. In each instance a longer time between pulses could prevent a print cycle. A few milli-seconds wider will stop or prevent a print cycle from ever occurring.

<u>Character Set</u>	<u>Print Speed</u>	<u>Time Between Indexes</u> <u>Milli-Seconds</u>
64	600 L.P.M.	78 M.S.
96	430 L.P.M.	116 M.S.
64	443 L.P.M.	112 M.S.
96	315 L.P.M.	168 M.S.
64	300 L.P.M.	170 M.S.
96	200 L.P.M.	255 M.S.

If the time between indexes is larger than above, check entire chain drive mechanism (belts, pulleys, shafts, motor).

Note: Disconnect all power while checking chain drive system, also see if the chain lubricant bottle has lubricant above the wick. A dry or drying chain mechanism will slow down the chain due to friction.

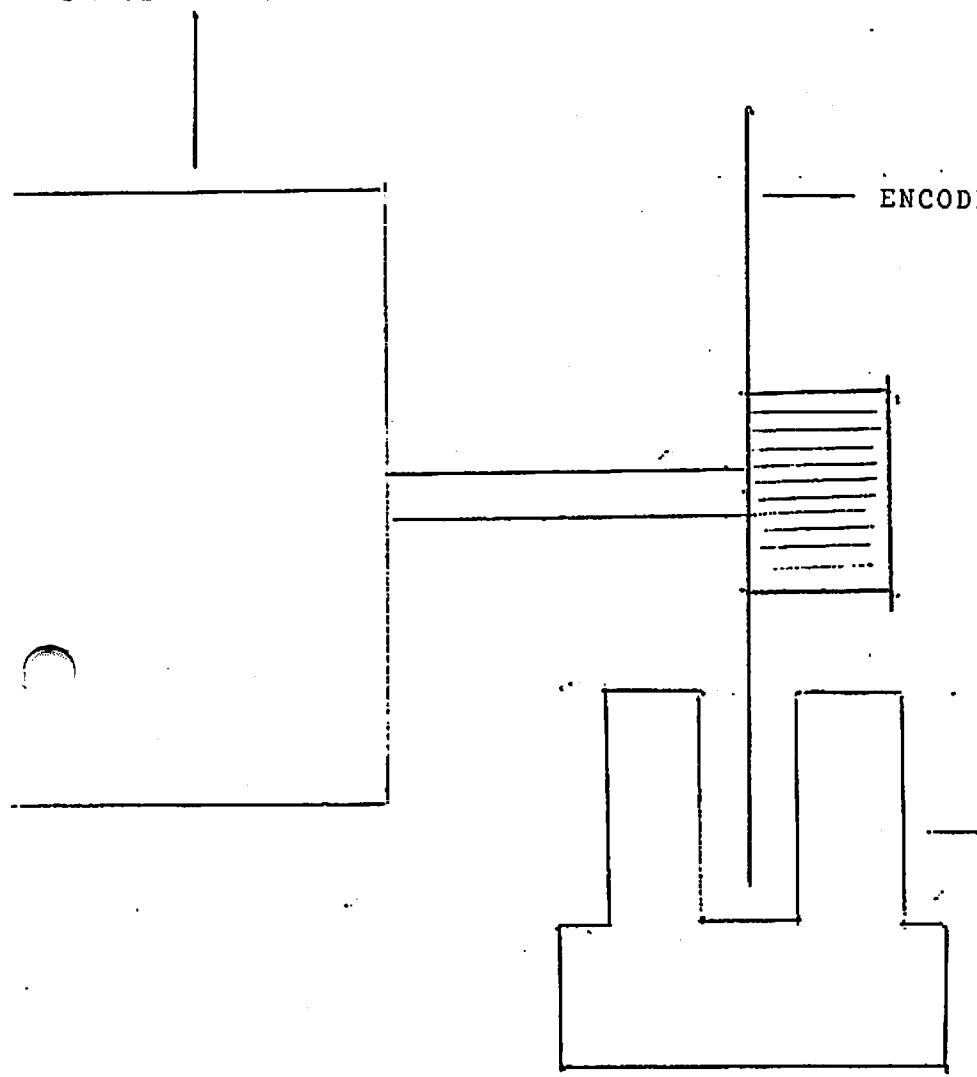
Index pulse generation can be checked by the procedure on page 3-23 in the Data Printer Maintenance instructions DPC form 600-3.

DRIVE MOTOR

ENCODER DISK

SENSOR ASSEMBLY

Position disk in the middle of the sensor



WANG

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NEWSLETTER

#10609

III.C.1

PERIPHERALS-PRINTERS/PLOTTERS-DATA CORP CHAIN TRAIN CT 66.44.

TOPIC: 12 CHANNEL VFU UNITS ON CHAINTRAIN PRINTERS

When using the 12 channel VFU unit on chaintrain printers, channel 1 T.O.F. must be aligned with the truncated sprockets. These sprockets will be shorter than normal or painted yellow. They will always be every third sprocket.

This alignment is necessary to insure that line counts begin in alignment with 1/2" strobe. Otherwise, line counting will not begin until 1/2" strobe is sensed and would print at a higher line count from T.O.F. than desired.

CUSTOMER ENGINEERING
TECHNICAL ASSISTANCE CENTER
NEWSLETTER

#10929

III.C.1

PERIPHERALS-PRINTERS/PLOTTERS-DATA CORP CHAIN TRAIN CT 56.44.

TOPIC: CONTROL PANEL DIFFERENCES FOR PARALLEL TO SERIAL
CONVERSION OF THE 2263.

REGARDING PARALLEL TO SERIAL CONVERSION OF THE 2263 CHAINTRAIN PRINTER (PSN# III.C.1.4), THERE IS MORE THAN ONE P/N FOR THE KEYBOARD ASSEMBLY. IF THE CURRENT P/N FOR THE KEYBOARD IS 271-1145, THE REPLACEMENT IS 271-1154 TYPE I. IF THE KEYBOARD IS 271-1194, THE REPLACEMENT IS 271-1193 TYPE II. THIS IS NOT EXPLAINED IN THE PSN.

THE ABOVE INFORMATION SHOULD BE IDENTIFIED AS ADDITIONAL INFORMATION NEEDED TO PERFORM THE PARALLEL TO SERIAL CONVERSION OF THE CHAINTRAIN PRINTER. THE REASON IS THAT THERE ARE TWO TYPES OF WANG PRINTER CABINETS ON WANG MANUFACTURED CHAINTRAINS. ON THE TYPE I CABINETS, THE CONTROL PANEL IS ATTACHED TO THE TOP COVER. ON THE TYPE II CABINETS, THE CONTROL PANEL IS ATTACHED TO THE RIGHT SIDE OF THE PRINTER MECHANISM. EACH TYPE HAS BOTH A PARALLEL AND A SERIAL CONFIGURATION. THEREFORE, THERE ARE FOUR DIFFERENT KINDS OF CONTROL PANELS, EACH WITH ITS OWN WANG P/N. THESE ARE IDENTIFIED ABOVE AND IN TAC NEWSLETTER #10113, CATEGORY III.C.1.

CUSTOMER ENGINEERING
TECHNICAL ASSISTANCE CENTER
NEWSLETTER

#40131

3301

PERIPHERALS-PRINTERS/PLOTTERS-DATACORP CHAINTRAIN

TOPIC: FCO 1074-2263, 2263V, 5570, 5571 DATA CORP CHAINTRAIN
PRINTER

FCO 1074, released on January 18, 1984, documents ECO#'s 29802 and 31055. The change fixes a paper-out switch problem which results in an intermittent "paper-out" indication and the printer printing over previous text upon re-selecting.

The change involves adding a capacitor and changing a resistor on the 210-7386 Paper Feed Control PCA. To obtain the FCO kit, place a routine order through the Logistics Order Processing System for WLI# 728-0090.

M-E-M-O-R-A-N-D-U-M

To: All Customer Engineers
From: The Technical Assistance Center
Date: February 18, 1982
Subj: CHAINTRAIN POWER SUPPLY PROBLEM

Be aware of a possible problem when removing and replacing the power supply on the 2263/5570/5571 Chaintrain printers.

A possibly serious wiring problem has been discovered on three machines, to date. On TB301, a jumper wire connects TB301-6 to TB301-4. This jumper should have a number "4" and a number "6" label on each of the lugs. On the three machines previously noted, the jumper wire was labled with an "11".

IF EITHER END OF THIS JUMPER IS ATTACHED TO TB301-11, IT TIES THE ij/-15V and 6.3V RETURN LINES TO 115VAC. THIS CAN CAUSE SEVERE DAMAGE TO THE PRINTER.

If you have any questions regarding this problem, please don't hesitate to contact us.

This problem was reported to the Technical Assistance Center by Norman Schmidt from the Carmel, Indiana office.

Regards,

The Technical Assistance Center

0021D

CUSTOMER ENGINEERING
TECHNICAL ASSISTANCE CENTER
NEWSLETTER

#20615

III.C.1

PERIPHERALS-PRINTERS/PLOTTERS-DATA CORP CHAIN TRAIN CT 66.44.

TOPIC: H.S. ROM PRINTER CONTROL PCB UPDATE, WHEN USED WITH
FRENCH AZERTY SLUG SET

The following modification must be installed in the H.S. Rom print control PCB (OEM #12036 Wang #726-3205).

This modification prevents the chain from rotating continuously on power up and allows the chain to time-out after printer is de-selected.

1. Cut etch from IC #16, pin 9 to IC #16 pin 10.
2. Jumper from IC 27 pin 1 to IC #16 pin 9.

Azerty character set prom #OEM 12470B is used in this particular application.



TECHNICAL SERVICE BULLETIN

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MATRIX ID. 3301 PRODUCT/RELEASE# 2263W, V/5571

TITLE: Chaintrain Printer Motherboard Conversion

PURPOSE:

To convert a 64 character set motherboard to a 96 character set motherboard.

EXPLANATION:

The conversion applies to the following models of chaintrain printers:

- a) 2263W-3 c) 5570
- b) 2263V-3 d) 5571

The models listed above use the same motherboard, whether it's a 64 character set or 96 character set printer. All motherboards stocked are 64 character set boards and are easily converted to 96 character set motherboards.

COMPONENT:

The motherboard (210-7388) has three jumper wires to be removed and five jumper wires to be added.

<u>Description</u>	<u>64 Character set P/N</u>	<u>96 Character set P/N</u>
Motherboard	210-7388	210-7388

Pin Locations:

Connector 4

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+++++++
1 + o  A  o + 2
3 + o      o + 4
!         !
41 + o     o + 42
43 + o     o + 44
++        ++
++        ++
1 + o  B  o + 2
3 + o      o + 4
!         !
6.5v 41 + o     o + 42  6.5v
0v   43 + o     o + 44  0v
+++++++

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Wiring side of motherboard

The deletions and additions are done on the wiring side of the motherboard. Connectors on the motherboard are split into two sections, which are one above the other. The top section is designated 'A' and the bottom section 'B'. Each section has 44 pins that are separated into two rows of 22 pins. Odd numbered pins are on the left. The first character of a pin address calls out the card location. The next selects the 'A' or 'B' section of the connector. The last character identifies the pin. For example, pin 4A3 would translate into card location 4, connector 'A' second pin down on the left.

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MATRIX ID. 3301 PRODUCT/RELEASE# 2263W, V/5571

TITLE: Chaintrain Printer Motherboard Conversion

PURPOSE (cont'):

Motherboard Configuration Chart:

1. Motherboard conversion jumper chart

a) Remove:	<u>Jumper</u>	<u>Pin</u>	<u>To</u>	<u>Pin</u>
	1	4A3		4A5
	2	5A20		5B11
	2	6B7		6B44

b) Add:	<u>Jumper</u>	<u>Pin</u>	<u>To</u>	<u>Pin</u>
	1	4A20		5A20
	2	4A22		4B32
	3	4B12		4A5
	4	5A9		6B7
	5	6B5		6B44

Installation of the above jumpers completes the conversion to the 96 character set motherboard. To convert back to the 64 character set motherboard, swap the add and remove headings in the configuration chart.

NOTE: This conversion is not intended to upgrade a 64 character set printer to a 96 character set printer.

GROUP: Peripheral Hardware Support Group MAIL STOP: 0125

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