

## MASTER DRAWING LIST

MAINTENANCE MANUALS		UNIT VARIATIONS															
		LE8-FA	LE8-FB	LE8-HA	LE8-HB	LE8-JA	LE8-JB	LE8-KA	LE8-KB								
NO.	TITLE																
LE8-Ø	LINE PRINTER	X	X	X	X	X	X	X	X								

USED ON OPTIONS							
NO.	TITLE	NO.	TITLE	NO.	TITLE	NO.	TITLE

REVISIONS	REV.	DATE	CHG. NO.	APP'D.	DRN.	DATE	<b>digital</b> EQUIPMENT CORPORATION <small>MAYNARD, MASSACHUSETTS</small>	
	ORIG	8/71	MISC-86	-	L. NARHI	1-27-		TITLE  LINE PRINTER
					K. GULICK	3-5-71		
					L. NARHI	3-5-71		
					L. NARHI	3-5-71		
				L. SAYLOR	3-5-71			
					FIRST USED ON			
					PDP8/E		SIZE CODE <b>A ML</b>	
					SCALE		NUMBER LE8-Ø	
					SHEET 1 OF 2		REV.	

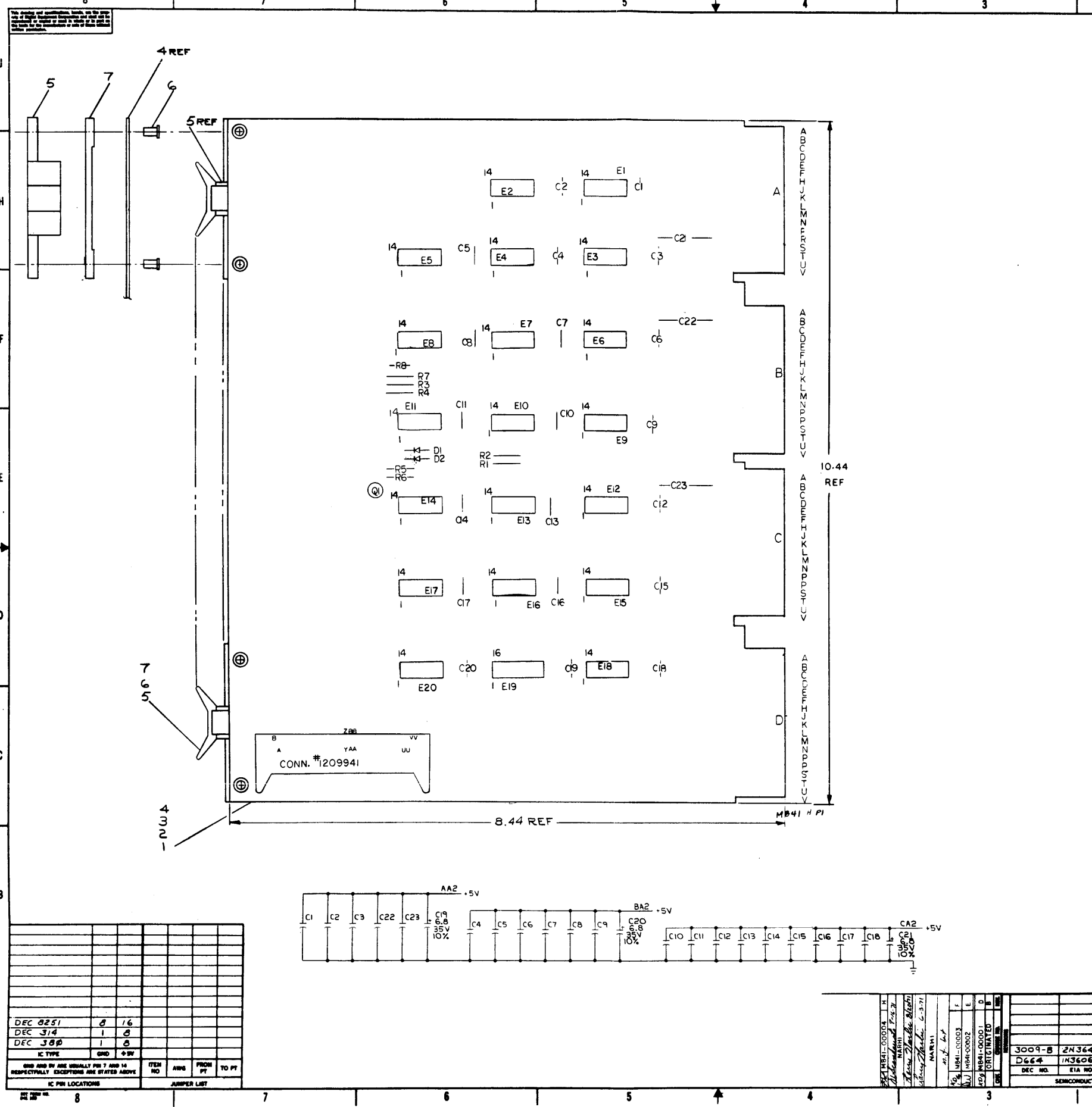
DRA 131

Dec 16-(325)-1048-N471

PRINT SET					DWG. NO.	REV. LET.	NO. OF SHEETS	TITLE	OPTION NO.	
LE8-Ø										
X					E-CS-M841-Ø-1	#	2	LINE PRINTER CONTROL	M841	
X					A-PL-LE8-Ø-Ø			PRINTER PARTS LIST		
X					A-SP-LE8-Ø-1			ENGINEERING SPECS		
X					A-SP-LE8-Ø-2			CHECKOUT PROCEDURE		
					A-SP-LE8-Ø-3			ACCEPTANCE PROCEDURE		
C					A-ML-LPØ1-Ø	#		LPØ1 LINE PRINTER		
					LIBKIT-8E-LE8	REF		PROGRAM LIBRARY KIT		
<b>TITLE</b>					LINE PRINTER			SIZE CODE	NUMBER	REV.
					SHEET 2 OF 2			<b>A ML</b>	LE8-Ø	

DRA 132

DEC 16-(325)-1048-1-N471

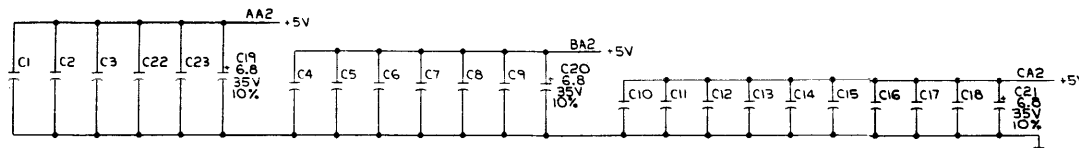


NOTES:  
 1. UNLESS OTHERWISE NOTED:  
 RESISTORS = 1K 1/4W 5%  
 DIODES .01UF 100V 20%  
 CAPACITORS = D664  
 ICS = DEC 7474

DEC	REV	BY	CHKD	DATE
DEC 8251	8	16		
DEC 314	1	8		
DEC 380	1	8		

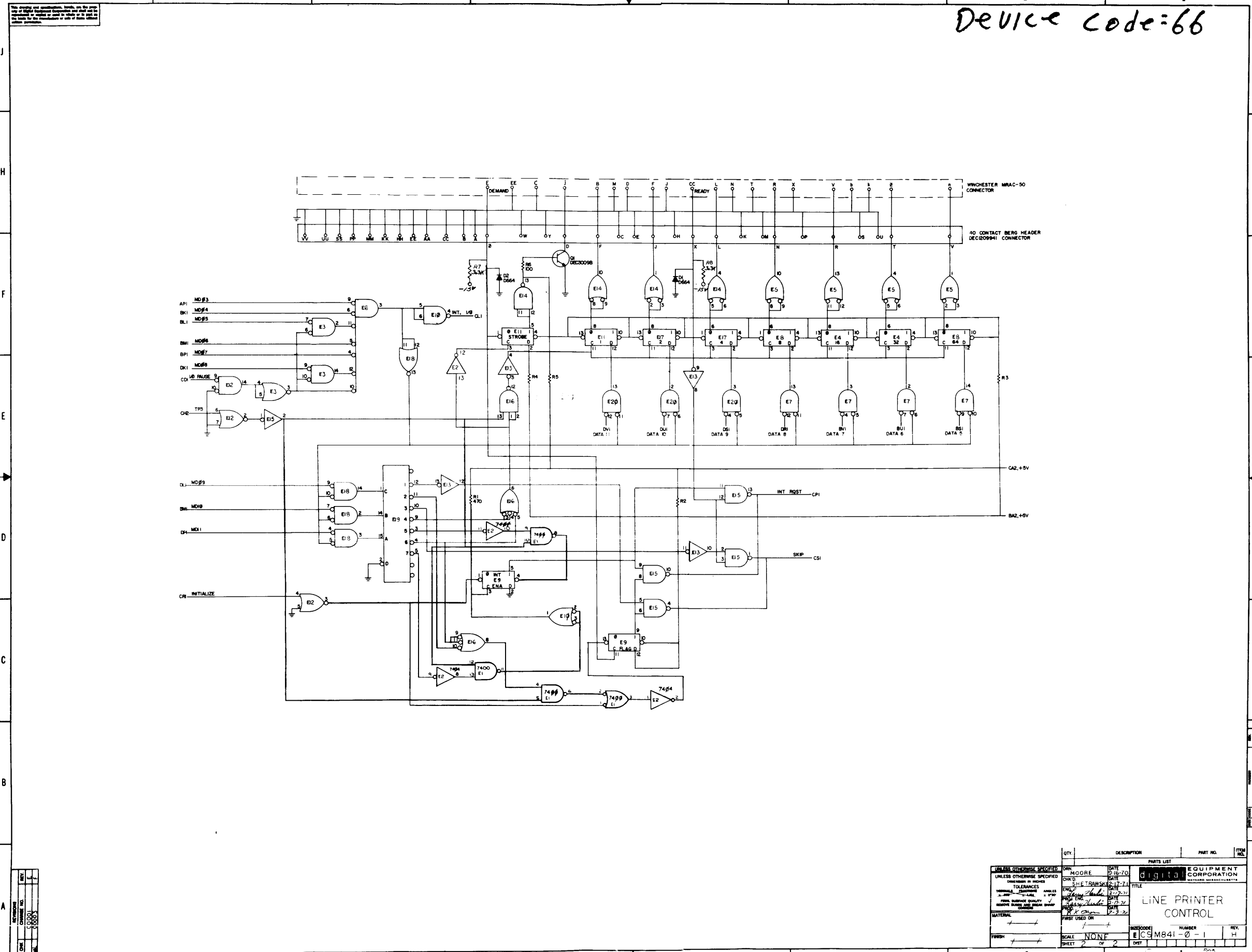
IC TYPE	QTY	REV	DATE
7474	1	1	
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7407	1	1	
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7409	1	1	
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7492	1	1	
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7494	1	1	
7495	1	1	
7496	1	1	
7497	1	1	
7498	1	1	
7499	1	1	
7500	1	1	



QTY	REF DESIGNATION	DESCRIPTION	PART NO.	REV
2	R1, R8	RES 3.3K 1/4W 5%	1300439	25
1	E19	I.C. DEC 7400	1905575	24
2	E1, E13	RES 1K 1/4W 5%	1300345	12
1	E4	RES 100 1/4W 5%	1300279	11
1	E11, E20	RES 1K 1/4W 5%	1300345	12
1	E17	RES 100 1/4W 5%	1300279	11
4	E12, E10, E18, E18	RES 1K 1/4W 5%	1300345	12
2	E3, E12	RES 100 1/4W 5%	1300279	11
1	E14	RES 100 1/4W 5%	1300279	11
4	E2, E6, E7, E9, E15	RES 1K 1/4W 5%	1300345	12
1	Q1	TRANSISTOR MKC 3009B	1203100	14
1	E2	RES 470 1/4W 5%	1300316	13
4	R1, R3, E4, E5	RES 1K 1/4W 5%	1300345	12
1	E8	RES 100 1/4W 5%	1300279	11
1	D1, D2	DIODE 1N4148	1100114	10
20	C1-C18, C22, C23	CAP .01UF 100V 20% DISC	1001610	9
3	C19-C21	CAP 6.8UF 35V 10%	1005306	8
4		WIRE (CABLE CLAMP)	1202104	7
1		STRAP 68-11 STIMPSON	9006780	6
1		HANDLE TAB CHIP-MOUNTA	9006337-06	5
1		ETCHED CIRCUIT BOARD	8006814	4
1		MODULE HISTORY LIST	8-MH-M41-4-3	3
1		ASSY/DRILLING HOLE LAYOUT	8-AH-M41-4-3-2	2
1		X-Y COORDINATE HOLE LOC.	8-CO-M41-4-3-1	1

ETCH BOARD REV		P	
EQUIPMENT CORPORATION		LINE PRINTER CONTROL	
3009-B	243646	DEC NO.	EIA NO.
D664	1N3606	DEC NO.	EIA NO.
SEMICONDUCTOR CONVERSION CHART		ECS M841-0-1	
PAGE 1 OF 2		SHEET 1 OF 2	

Device Code=66



QTY.	DESCRIPTION	PART NO.	REV.
	UNLESS OTHERWISE SPECIFIED		
	MOORE	DATE 9-16-70	
	SHE TRAWSKI	DATE 2-17-71	
	ENG.	DATE 12-27-71	
	PROG. ENG.	DATE 12-27-71	
	TEST	DATE 12-27-71	
	FIRST USED ON		
	SCALE NONE		
	SHEET 2 OF 2		
		NUMBER	REV.
	ECSM841-0-1		

EXTENSION	DATE	BY
1000		
1001		
1002		
1003		
1004		
1005		
1006		
1007		
1008		
1009		
1010		

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS <b>PARTS LIST</b>					QUANTITY/VARIATION									
MADE BY L. NARHI		CHECKED K. GULICK		SECTION	LES-FA	LES-FB	LES-HA	LES-HB	LES-JA	LES-JB	LES-KA	LES-KB		
DATE 3-5-71		DATE 3-5-71		1										
ENG Larry Starkie		PROD Larry Taylor		ISSUED SECT.										
DATE 3-5-71		DATE 3/5/71		1										
ITEM NO.	DWG NO. / PART NO.	DESCRIPTION												
1	E-UA-LP01-FA-0	LINE PRINTER 80 COL 64 CHAR 60 HZ			1	-	-	-	-	-	-	-		
2	E-UA-LP01-FB-0	LINE PRINTER 80 COL 64 CHAR 50 HZ			-	1	-	-	-	-	-	-		
3	E-UA-LP01-HA-0	LINE PRINTER 80 COL 96 CHAR 60 HZ			-	-	1	-	-	-	-	-		
4	E-UA-LP01-HB-0	LINE PRINTER 80 COL 96 CHAR 50 HZ			-	-	-	1	-	-	-	-		
5	E-UA-LP02-JA-0	LINE PRINTER 132 COL 64 CHAR 60 HZ			-	-	-	-	1	-	-	-		
6	E-UA-LP02-JB-0	LINE PRINTER 132 COL 64 CHAR 50 HZ			-	-	-	-	-	1	-	-		
7	E-UA-LP02-KA-0	LINE PRINTER 132 COL 96 CHAR 60 HZ			-	-	-	-	-	-	1	-		
8	E-UA-LP02-KB-0	LINE PRINTER 132 COL 96 CHAR 50 HZ			-	-	-	-	-	-	-	1		
9	E-CS-M841-0-1	LINE PRINTER INTERFACE			1	1	1	1	1	1	1	1		
10	D-UA-7006964-0-0	CONTROL CABLE			1	1	1	1	1	1	1	1		
TITLE		ASSY NO.		SIZE	CODE		NUMBER					REV.	ECO NO.	
LINE PRINTER CONTROL		NONE		A	PL		LE8-0-0							
SHEET 1 OF 1				DIST.										

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**DIGITAL EQUIPMENT CORPORATION**  
**MAYNARD, MASSACHUSETTS**

**ENGINEERING SPECIFICATION** DATE 8-17-70

TITLE LE8-XX Line Printer Interface to the PDP-8/E

REVISIONS

REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE

ENG	APPD	SIZE	CODE	NUMBER	REV
Larry Narhi	<i>Larry Narhi</i>	A	SP	LE8-Ø-1	

DEC FORM NO. DRA 107

**ENGINEERING SPECIFICATION** CONTINUATION SHEET

TITLE LE8-XX Line Printer Interface to the PDP-8/E

1. OVERALL DESCRIPTION

The LE8 is an interface to several models of the Data Products Line Printer to the PDP-8/E computer. The logic is designed entirely of TTL integrated circuits for low cost and high speed.

2. GENERAL SPECIFICATIONS

2.1 The basic option consists of:

One M841 control card and  
One 80 column, 64 character line printer.

Its designation is LE8-FA.

2.2 Options to the basic control and line printer are:

LE8-FB 80 column, 64 characters 50 Hz.  
LE8-HA 80 column, 96 characters 60 Hz.  
LE8-HB 80 column, 96 characters 50 Hz.  
LE8-JA 132 column, 64 characters 60 Hz.  
LE8-JB 132 column, 64 characters 50 Hz.  
LE8-KA 132 column, 96 characters 60 Hz.  
LE8-KB 132 column, 96 characters 50 Hz.

2.3 The interface is contained on one 8½" Quad Board whose pins are defined by the 8E bus.

2.4 Temperature limits:

32 F to 155° F  
Relative Humidity: 0 to 95% non-condensing  
Power Required: 650 MA at +5 volts.

SIZE	CODE	NUMBER	REV
A	SP	LE8-Ø-1	

DEC FORM NO 16-1022  
DRA 108

TITLE LE8-XX Line Printer Interface to the PDP-8/E

## 3. PROGRAMMING

## 3.1 IOT coding is as follows:

Mnemonic	IOT	Function
PSKF	6661	Skip if Flag = 1
PCLF	6662	Clear Flag
PSKE	6663	Skip on Error or Not Ready
PSTB	6664	Strobe, Load Buffer
PSIE	6665	Set Interrupt Enable
PCLF, PSTB	6666	Clear Flag, Load Character
PCIE	6667	Clear Interrupt Enable

Note: Initialize Resets Interrupt Enable, to disable interrupts.

3.2 There are no maintenance instructions.

3.3 The line printer uses the standard ASCII character set. The least significant bit appears in AC bit 11.

3.4 There are no operator controls on the control board. Operator controls on the printer are:

Top of Form - Advances paper to top of form

Paper Step - Advances paper one line at a time,  
disabled on line.

On line/Off line - Selects mode of operation

Master Clear - Initializes printer to insure proper  
state of electronic elements.

Print Inhibit - Check out switch for hammers.

SIZE	CODE	NUMBER	REV
A	SP	LE8-0.1	

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DIGITAL EQUIPMENT CORPORATION						
MAYNARD, MASSACHUSETTS						
ENGINEERING SPECIFICATION					DATE 2/25/71	
TITLE LE8 TEST PROCEDURE						
REVISIONS						
REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE

ENG	<i>Larry Spick</i>	APPD	<i>BT Spick</i>	SIZE	CODE	NUMBER	REV
				A	SP	LE8-0-2	

DEC FORM NO. DRA 107

SHEET 1 OF 3

ENGINEERING SPECIFICATION		CONTINUATION SHEET											
TITLE LE8 TEST PROCEDURE													
1.0 EQUIPMENT <ul style="list-style-type: none"> <li>1.1 PDP8/E standard</li> <li>1.2 Heat box</li> <li>1.3 453 scope and voltage probes</li> <li>1.4 Teletype</li> <li>1.5 M841 module and 7006964 cable</li> <li>1.6 Line printer types: LE8-FA/FB 64 Char/80 Col. LE8-HA/FB 96 Char/80 Col. LE8-JA/JB 64 Char/132 Col. LE8-KA/KB 96 Char/132 Col.</li> </ul> NOTE: XA/XB means 60/50 HZ respectively. <ul style="list-style-type: none"> <li>1.7 Box of line printer paper: 80 Col - 9 7/8 x 11 inches</li> <li>1.8 High speed reader PR8/e. 132 Col - 14 7/8 x 11 inches</li> </ul> 2.0 TEST STATION SET UP <ul style="list-style-type: none"> <li>2.1 Check paperwork in the envelope making sure it is complete as required by DEC Standard # 101.               <ul style="list-style-type: none"> <li>2.1.1 Test and inspection record.</li> <li>2.1.2 Key sheet and ECO status sheet will contain both CS and etch revision.</li> <li>2.1.3 Quality Control inspection report.</li> <li>2.1.4 PDP8/E progress report (inserted at this time).</li> </ul> </li> <li>2.2 Insert the M841 module in the Omnibus per "Recommended Module Assignment List" (ASP-PDP8-E-0-4).</li> <li>2.3 Connect the 7006964 cable between the J1 connector on the M841 module and the line printer.</li> <li>2.4 After observing line printer model designation letters (50 or 60 HZ) plug in power cord accordingly.</li> <li>2.5 Turn on PDP8E power.</li> </ul> 3.0 LOADING PROCEDURE <ul style="list-style-type: none"> <li>3.1 Deposit rim loader (high speed) in PDP8E per PDP8E instruction card.</li> <li>3.2 Load binary loader using starting address of 7756 .</li> <li>3.3 Load diagnostic MAINDEC-8E-D2BB using starting address of 7777.</li> </ul> 4.0 LE8 CHECKOUT <ul style="list-style-type: none"> <li>4.1 Load paper in line printer.</li> <li>4.2 Power down the line printer, if on.</li> <li>4.3 Consult diagnostic write-up for correct program and/or operator action, starting addresses, and register switch settings.</li> <li>4.4 Operating times for the following tests:               <table border="0" style="margin-left: 20px;"> <tr> <td style="text-align: right;"><u>TEST NO.</u></td> <td style="text-align: right;"><u>RUN TIME</u></td> </tr> <tr> <td>1 Preliminary Test</td> <td>2 Pass</td> </tr> <tr> <td>2 Single Char. all col.</td> <td>2 Passes</td> </tr> <tr> <td>3 Rotating Pattern</td> <td>2 Passes</td> </tr> <tr> <td>4 Wedge Pattern</td> <td>2 Passes</td> </tr> </table> </li> <li>4.5 Tests 5 thru 7 are used for line printer alignment and adjustment only.</li> </ul>				<u>TEST NO.</u>	<u>RUN TIME</u>	1 Preliminary Test	2 Pass	2 Single Char. all col.	2 Passes	3 Rotating Pattern	2 Passes	4 Wedge Pattern	2 Passes
<u>TEST NO.</u>	<u>RUN TIME</u>												
1 Preliminary Test	2 Pass												
2 Single Char. all col.	2 Passes												
3 Rotating Pattern	2 Passes												
4 Wedge Pattern	2 Passes												

	A	SP	LE8-0-2

DEC FORM NO 16-1022 DRA 108

SHEET 2 OF 3

**ENGINEERING SPECIFICATION**

CONTINUATION SHEET

TITLE LE8 TEST PROCEDURE

4.6 Printouts should be viewed for clarity and character alignment using sample LP01/LP02 printouts for reference. Include a sample from the LE8 test in the option envelop.

## 5.0 HEAT TEST

- 5.1 Heat test is to be run after successful completion of all previously indicated tests.
- 5.2 Run Tests 2, 3, and 4 with register switch 4 in the "UP" position for 5 minutes with the heat box down, ports closed and heat off. Load per loading procedure step 3.0
- 5.3 Raise the heat switch on the test station panel and once the indicator light goes off run the tests indicated, refer to 5.2 for 10 minutes.
- 5.4 Turn the heat switch off and open the two ports on the left side of the heat box.
- 5.5 Allow 15 minutes for the machine to cool before removing the heat box.
- 5.6 Terminate the test once the machine has run for 5 minutes at room temperature.
- 5.7 Power down line printer and PDP8E.

## 6.0 FINAL OPERATION AND INSPECTION

- 6.1 Disconnect the M841 module from the PDP8E and the cable between the M841 module and the line printer.
- 6.2 Check that the following paperwork has been completed:  
Envelope  
ECO Status Sheet  
QC Sheet  
S/E Progress Report

SIZE	CODE	NUMBER	REV
A	SP	LE8-0-2	

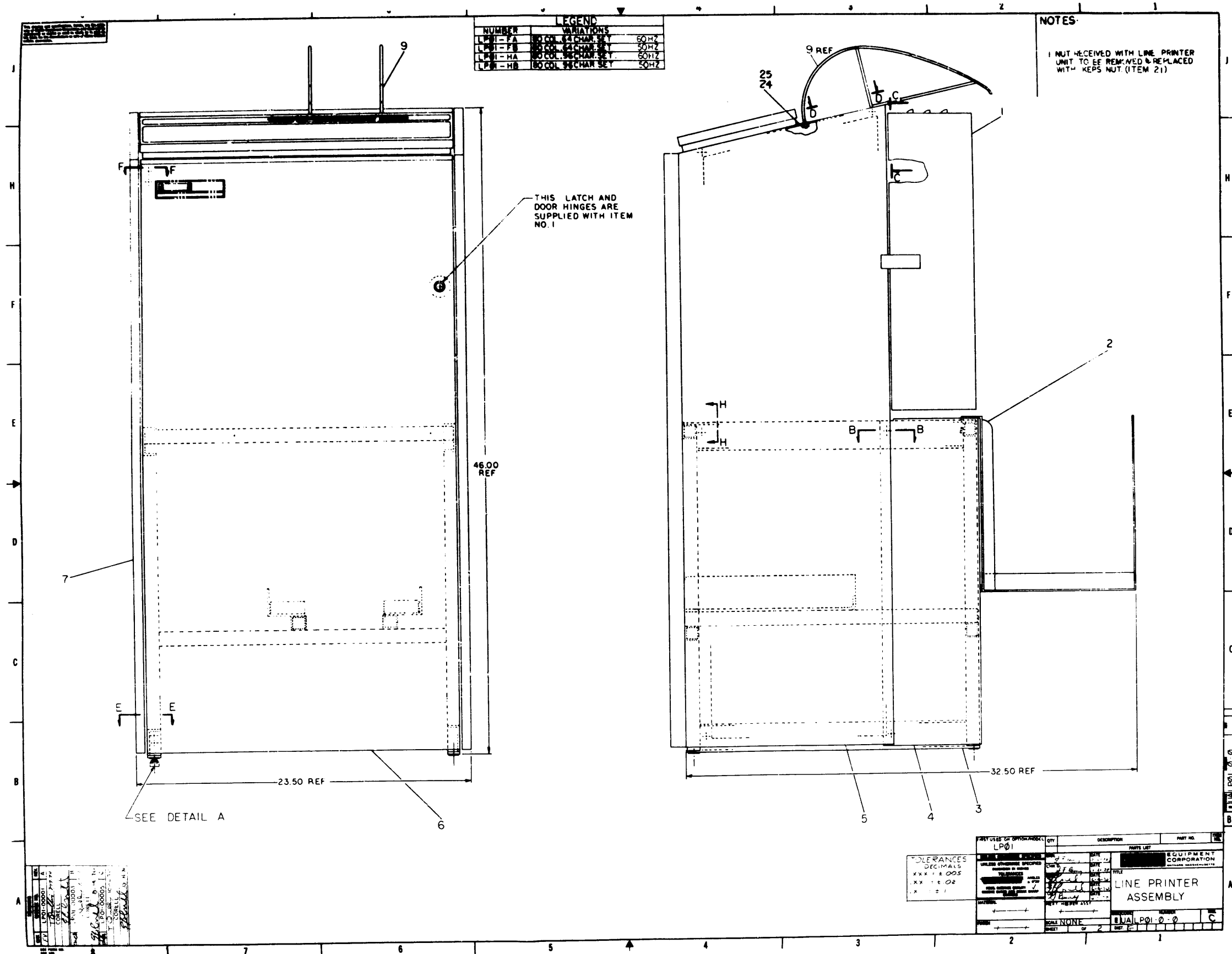


# MASTER DRAWING LIST

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DWG. NO.	REV. LET.	NO. OF SHEETS	TITLE
E-UA-LP01-0-0	C	2	LINE PRINTER ASSEMBLY
A-PL-LP01-0-0	C	2	LINE PRINTER ASSEMBLY
A-SL-LP01-0-1		1	SOFTWARE LIST
A-SP-LP01-0-2		2	TEST PROCEDURE
D-AD-7505037-0-0	D	1	LP01 FRAME TO SKID
A-PL-7505037-0-0	D	1	LP01 FRAME TO SKID
A-PI-3700016-0-0			LINE PRINTER PACKAGING INSTRUCTIONS
A-PI-3700015-0-0			LINE PRINTER PACKAGING INSTRUCTIONS

REVISIONS				DRN.	DATE	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	TITLE	
REV.	DATE	CHG. NO.	APP'D.	J. FLEMING	5/29/70			LINE PRINTER
A	6/70	00001	E.C.	CHK'D.	5/29/70			
B	7/70	00002	J.L.	ENG.	6-4-70			
C	7/70	00003	E.C.	PREL. ENG.	6-4-70	SIZE CODE	NUMBER	
D	7/70	00004	J.L.	PROD.	6-4-X			A ML
E	10/70	00005	E.C.				REV.	
FIRST USED ON					SHEET OF			
SCALE					DIST.			



**LEGEND**

NUMBER	VARIATIONS
LP01 - FA	160 COL. SECHAN SET 60HZ
LP01 - FB	160 COL. SECHAN SET 50HZ
LP01 - HA	160 COL. SECHAN SET 60HZ
LP01 - HB	160 COL. SECHAN SET 50HZ

**NOTES**

1 NUT RECEIVED WITH LINE PRINTER UNIT TO BE REMOVED & REPLACED WITH KEPS NUT (ITEM 21)

THIS LATCH AND DOOR HINGES ARE SUPPLIED WITH ITEM NO. 1

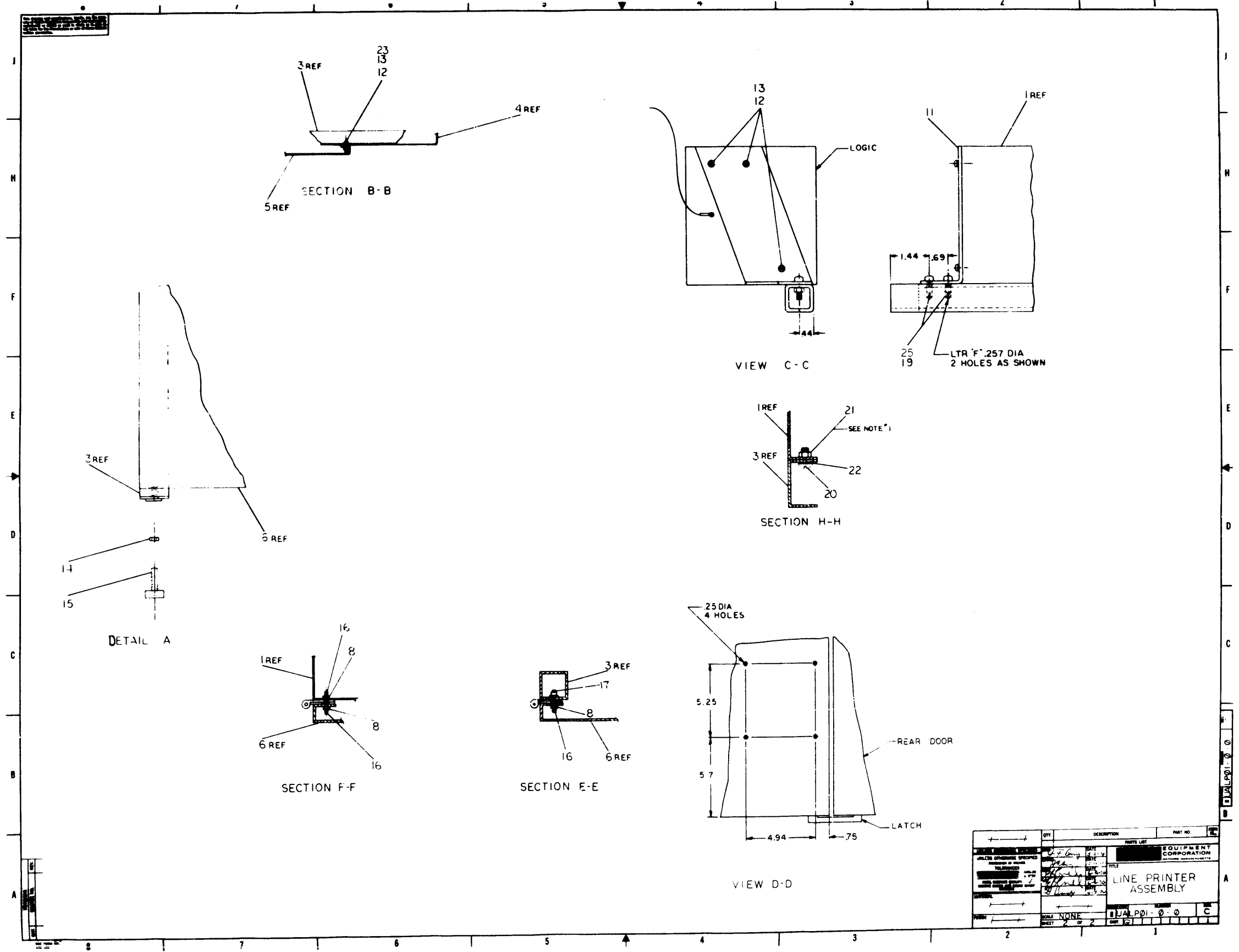
SEE DETAIL A

TOLERANCES  
 DECIMALS  
 XX ± .005  
 XX ± .02  
 X ± .1

REV	DATE	DESCRIPTION	BY	CHKD
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

PART NO. LP01  
 TITLE LINE PRINTER ASSEMBLY  
 EQUIPMENT CORPORATION  
 PART NO. LP01-0-0  
 REV. E

REV	DATE	DESCRIPTION	BY	CHKD
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				



QTY	DESCRIPTION	PART NO.
1	LINE PRINTER ASSEMBLY	11
1	LOGIC	12
1	REAR DOOR	13
1	LATCH	14
1	DETAIL A	15
1	SECTION F-F	16
1	SECTION E-E	17
1	SECTION H-H	20
1	VIEW C-C	21
1	VIEW D-D	22
1	DETAIL A	23
1	DETAIL A	25

EQUIPMENT CORPORATION  
 TITLE: LINE PRINTER ASSEMBLY  
 PART NO.: 11  
 SCALE: NONE  
 SHEET: 2 OF 2

DIGITAL EQUIPMENT CORPORATION  
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY P. MILAN  
DATE 5-19-70  
ENG E. P. CORRELL  
DATE 6-4-70

CHECKED J. FLEMING  
DATE 5-21-70  
PROD G. BUNDY  
DATE 6-4-70

SECTION  
ISSUED SECT.

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	LP01-FA	LP01-FB	LP01-HA	LP01-HB	QUANTITY / VARIATION	REV.	ECONO
1	3009766	LP 80 COL 64 CHAR SET 60 HZ	1						
1	3009767	LP 80 COL 64 CHAR SET 50 HZ		1					
1	3009768	LP 80 COL 96 CHAR SET 60 HZ			1				
1	3009769	LP 80 COL 96 CHAR SET 50 HZ				1			
2	E-1A-7407811-0-0	CATCH, PAPER	1	1	1	1			
3	D-AD-7505037-0-0	FRAME, LP01 TO SKID	1	1	1	1			
4	D-1A-7407814-0-0	COVER REAR	1	1	1	1			
5	D-1A-7407813-2-0	PANEL, SIDE (RE)	1	1	1	1			
6	E-1A-7407812-0-0	DOOR, FRONT	1	1	1	1			
7	D-1A-7407813-1-0	PANEL, SIDE (LH)	1	1	1	1			
8	9006560	NUT, KEPS #6-32 SST	8	8	8	8			
9	D-1A-7407840-0-0	GUIDE PAPER	1	1	1	1			
10	<del>9007828</del>	<del>RIVNUT #10-32-B.F.F. GOODRICH 810-130</del>	<del>2</del>	<del>2</del>	<del>2</del>	<del>2</del>			
11	C-MD-7407845-0-0	BRACKET, LOGIC SUPPORT	1	1	1	1			
12	9006022-1	SCR PHL HD PAN #6-32 X .38 LG SST	15	15	15	15			
13	9006633	WASH INT TOOTH #6	15	15	15	15			
14	9006568	NUT KEPS 5/16-18 SST	4	4	4	4			
15	9007601	LEVELER, FOOT #FB2724 OHIO NUT + ECLT	4	4	4	4			
16	9006021-2	SCR. PHL HD FLAT #6-32 X .31 LG SST	6	6	6	6			
17	9006024-2	SCR PHL HS FLAT #6-32 X .50 LG SST	2	2	2	2			
18	<del>9007651</del>	<del>WASH, EXT TOOTH #10</del>	<del>2</del>	<del>2</del>	<del>2</del>	<del>2</del>			
19	9006074-1	SCR PHL HD PAN #10-32 X.62 LG SST	2	2	2	2			

TITLE LINE PRINTER ASSY

ASSY NO. E-UA-LP01-0-0

SIZE CODE A PL

REV. C

SHEET 1 OF 2

NUMBER LP01-0-0

DIST. G

DEC FORM NO. DRA 110

DIGITAL EQUIPMENT CORPORATION  
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY P. MILAN  
DATE 5-19-70  
ENG E. B. CORRELL  
DATE 6-4-70

CHECKED J. FLEMING  
DATE 5-21-70  
PROD G. BUNDY  
DATE 6-4-70

SECTION  
ISSUED SECT.

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	LP01-FA	LP01-FB	LP01-HA	LP01-HB	QUANTITY / VARIATION	REV.	ECONO
20	9006057-3	SCR TRUSS HD 1/2-20 X .62 LG SST	4	4	4	4			
21	9007880	NUT KEPS 1/2-20	4	4	4	4			
22	9006724	WASH EXT TOOTH 1/2	4	4	4	4			
23	9006653	WASH FLAT #6	12	12	12	12			
24	9006829	SPACER 1/2 AF X 3/8 LG #10 HOLE	4	4	4	4			
25	9006565	NUT, KEPS #10-32	6	6	6	6			

TITLE LINE PRINTER ASSY

ASSY NO. E-UA-LP01-0-0

SIZE CODE A PL

REV. C

SHEET 2 OF 2

NUMBER LP01-0-0

DIST. G

DEC FORM NO. DRA 110

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS			LEGEND		QUANTITY/VARIATION					
SOFTWARE LIST			D	DOCUMENT						
MADE BY	CHECKED	SECTION	DN	DOCUMENT CHANGE NOTICE						
DATE	DATE		PA	PAPER TAPE ASCII						
ENG	PROD	ISSUED SECT.	PB	PAPER TAPE BINARY						
DATE	DATE		PM	PAPER TAPE READ-IN-MODE						
ITEM NO.	DWG NO. / PART NO.	DESCRIPTION							KIT CHECK BY DATE	INSTALLATION CHECK BY DATE
1	3609829	1 Part Paper Moore Business # 201P	2							
2	3609828	Ribbon, Line Printer 9" x 28 yards Eylon	2							
3	None	Cleaning Kit	1							
TITLE		ASSY. NO.	SIZE	CODE	NUMBER		REV.	ECO NO		
LP01 SOFTWARE KIT			A	SL	LP01-0-1					
SHEET OF		DIST.								

DEC FORM NO. DRA 120

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DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS						
ENGINEERING SPECIFICATION				DATE 8/27/70		
TITLE PRODUCTION TEST PROCEDURE FOR THE LP01 (DATA PRODUCTS 2310 LINE PRINTER)						
REVISIONS						
REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE
1.0	SCOPE					
1.1	This specification outlines the procedure to be used for acceptance of the LP01 which has the following option designations:					
1.1.1	LP01 FA					
1.1.2	LP01 FB					
1.1.3	LP01 HA					
1.1.4	LP01 HB					
2.0	APPLICABLE DOCUMENTS					
2.1	LP01 print set					
2.2	LP08 print set					
2.3	Digital Equipment Corporation "Standard Vibration Test on Flip Chip Systems" (Q.C. # 1022).					
2.4	LP08 Line Printer Test, MAINDEC-8/I-D2AA					
2.5	DEC Manual (LP08 Interface)					
2.6	Data Products Line Printer Manual					
3.0	TEST EQUIPMENT					
3.1	Any family of 8 computer					
3.2	Teletype model 33 ASR					
3.3	Moore Business Form # 911612 (6 part paper - 9 7/8" X 11")					
3.4	Moore Business Form # 201B (1 part paper - 9 7/8" X 11")					
3.5	Line Printer Control (7006716)					
3.6	3 BC08 I/O Cables					
3.7	Data Products Interface Cable (7006606)					
4.0	PROCEDURE (Using 1 part paper)					
4.1	Turn main breaker off.					
4.2	Attach interface cable and install ribbon.					
4.2.1	Turn static eliminator on. (Newer model turns on automatically)					
4.3	Place paper in printer so that it covers the hammers and the bottom paper out switch but not the top paper out switch.					
ENG	APPD	SIZE	CODE	NUMBER	REV	
		A	SP	LP01-0-2		

DEC FORM NO. DRA 107

SHEET 1 OF 2

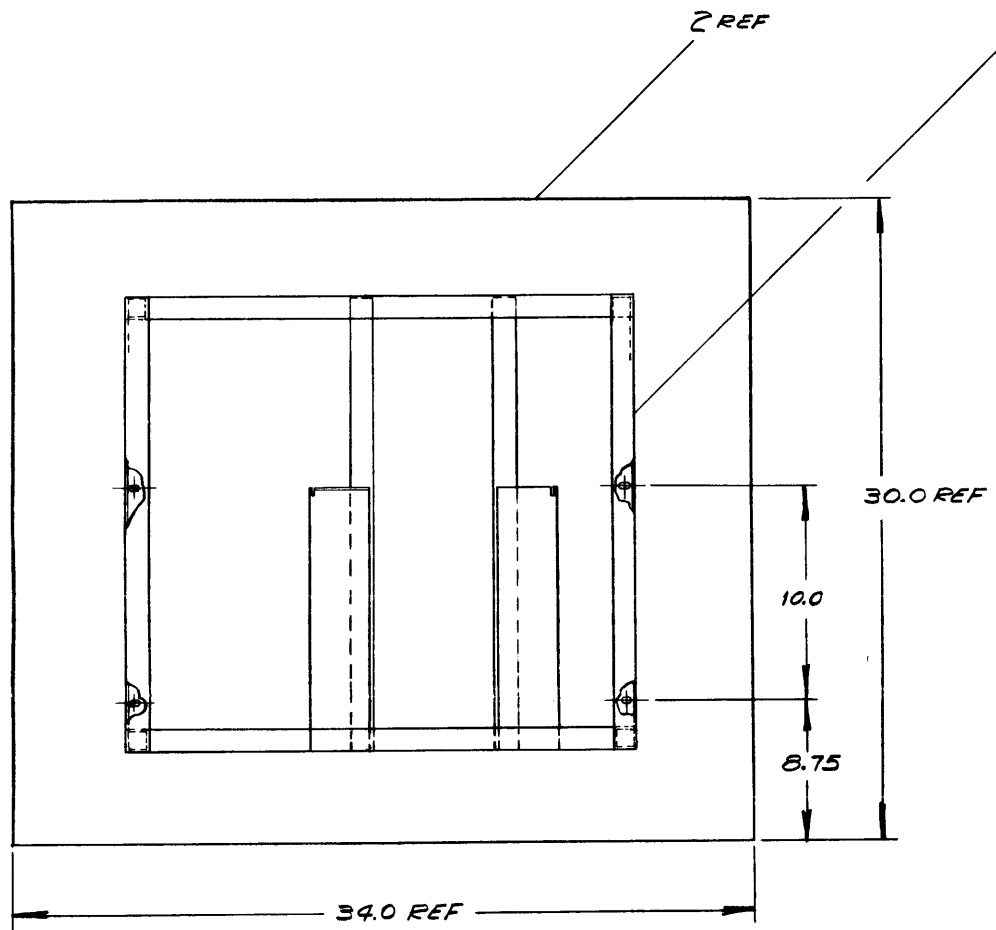
ENGINEERING SPECIFICATION				CONTINUATION SHEET		
TITLE PRODUCTION TEST PROCEDURE FOR THE LP01 (DATA PRODUCTS 2310 LINE PRINTER)						
4.3.1	Turn breaker on, "READY" light should not turn on, and "PAPER FAULT" light should be lit.					
4.4	Turn breaker off, and place paper in printer so that it covers the hammers and the top paper out switch, but not the bottom paper out switch.					
4.4.1	Turn breaker on, "READY" light should not turn on, and "PAPER FAULT" light should be lit.					
4.5	Open drum gate, remove paper; press "TOP OF FORM" switch and place in a continuous form (line up perforation with arrow).					
4.5.1	If necessary, adjust right tractor for proper paper width and tension.					
4.6	Close drum gate, "READY" should light within 15 seconds. Check "TOP OF FORM" and "PAPER STEP" switches for correct operation.					
4.6.1	Press "ON LINE" switch. Check "TOP OF FORM" and "PAPER STEP" switch. Both switches should not operate.					
4.6.2	Press "ON LINE" switch and "MASTER CLEAR" switch. Check "TOP OF FORM" and "PAPER STEP" switch. Both switches should operate.					
4.7	Press "ON LINE" switch and start MAINDEC-8/I-D2AA, beginning with part 1 of test 1, while accomplishing 4.7.1.					
4.7.1	Adjust vertical paper adjustment vernier with test running.					
4.8	Stop diagnostic from running; press "PRINT INHIBIT" switch, press "ON LINE" switch, restart diagnostic from part 1 of test 1.					
4.8.1	"PRINT INHIBIT" light should turn on and the diagnostic run as before. Continue for 1 minute.					
4.8.2	Turn "PRINT INHIBIT" switch off, press "ON LINE" switch.					
4.9	Run test 3 and vibrate modules to Digital Equipment Corporation specifications (Q.C. # 1022)					
4.9.1	Check printout for errors.					
5.0	DURABILITY TEST					
5.1	Excluding part 1 of test 1, run all parts of MAINDEC-8/I-D2AA for eight hours using single part paper at nominal line voltage of 115 volts for the 60 cycle printers, and 220 volts for the 50 cycle printers. Obtain a printout sample using both single part and six part paper.					
5.2	Make sure right tractor is adjusted and set "NUMBER OF COPIES" lever to the correct position for the two types of paper being used.					
5.3	Inspect all printout for errors.					
SIZE	CODE	NUMBER	REV			
A	SP	LP01-0-2				

DEC FORM NO. DRA 108

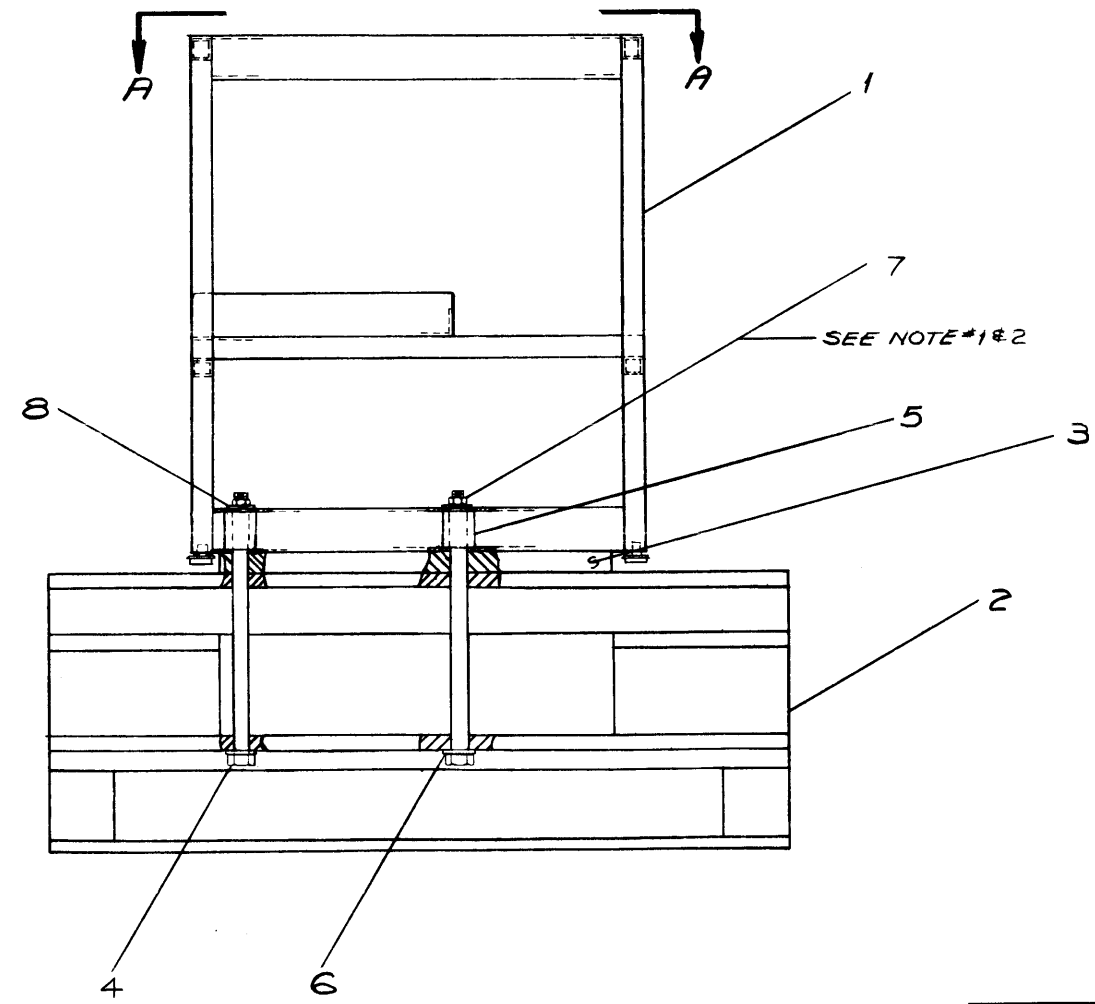
SHEET 2 OF 2

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**NOTES:**  
 1. TIGHTEN BOLTS UNTIL ETHAFOAM BLOCKS ARE COMPRESSED BY 1/16 OR 1/8 INCH  
 2. BOLT TO COME UP FROM BOTTOM WITH THREADS ON TOP SIDE OF FRAME.



VIEW A-A



REV.	CHANGE NO.	CHK.	DATE
A	LPO8-00010	J. LAWRENCE	3-19-70
B	LPO8-00011	J. LAWRENCE	5-1-70
C	LPO1-00002	J. LAWRENCE	7-7-70
D	LPO1-00005	J. LAWRENCE	9-12-70
		J. LORELL	1-10-70

FIRST USED ON OPTION/MODEL  
 LPØ8

DO NOT SCALE DRAWING	
UNLESS OTHERWISE SPECIFIED	
DIMENSION IN INCHES	
TOLERANCES	
DECIMALS	FRACTIONS
± .005	± 1/64
ANGLES	
± 0°30'	
FINAL SURFACE QUALITY	
REMOVE BURRS AND BREAK SHARP CORNERS	
MATERIAL	
FINISH	

QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST			
DRW.	DATE	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
CHKD.	DATE	TITLE	
ENG.	DATE	LPØ1 FRAME TO SKID	
PROJ. ENG.	DATE	SIZE/CODE	NUMBER
PROD.	DATE	DAD	7505037-0-0
NEXT HIGHER ASSY		SCALE	REV
D-DI-LPØ8-Ø-1		1/4	D
SHEET	1 OF 1	DIST.	

**DIGITAL EQUIPMENT CORPORATION**  
MAYNARD, MASSACHUSETTS  
**PARTS LIST**

MADE BY J. DEVIN	CHECKED V. DAMBRAUSKAS	SECTION 1
DATE 2-18-70	DATE 2-19-70	
ENG J. W. LAWRENCE	PROD <i>J. W. Lawrence</i>	ISSUED SECT. 1
DATE 2-19-70	DATE 2/19/70	

ITEM NO.	DWG NO. / PART NO.			DESCRIPTION	QTY	VAR	UNIT COST	UNIT QUANTITY	QUANTITY ISSUED
	CL	BASIC	VAR.						
1	E-IA-7407811-0-0			FRAME, LPØ8	1				
2	C- IA- 7605824-0-0			SHIPPING SKID,	1				
3	C-MD-7408030-0-0			SUPPORT SLAT	2				
4	9008857			BOLT, HEX HD 1/4-20 X 11.0 LG	4				
5	9008859			SPACER, 3/4 O.D. X 3/8 I.D. X 1 3/4 LG.	4				
6	9008858			WASH FLAT 1 1/2 O.D. 3/8 I.D. X 1/16 THK	4				
7	900 7897			NUT-NYLOK #1/4-20 HEX	4				
8	9006646			WASH, FLAT 1/2 O.D. X 9/32 I.D. X 1/16 THK	4				

TITLE LPØ1 FRAME TO SKID	ASSY NO. D-AD-7505037-0-0	SIZE CODE <b>A PL</b>	NUMBER 7505037-0-0	R.V. <b>D</b>	ECO'D LPØ1 00.05
SHEET 1 OF 1		DIST.			

DEC FORM NO 16-1027  
DRA 123



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DIGITAL EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS				
PACKAGING INSTRUCTION			REV: _____	DATE: _____
TITLE Line Printer LP01			_____	_____
Material Requirements				
Quantity	Identification No.	Purchase Specification	Description	
1	17-340230025800-0	99-05021	Outer shipping carton	
4			Steel corner supports	
A/R			Tri-wall clips	
2			Straps	
Packaging Instructions				
Step	Procedure			
1.	If desired, temporarily nail two cleats to the shipping skid as shown in Figure 1.			
2.	Place the outer shipping carton over the Line Printer and let it rest on the cleats.			
3.	Fasten the shipping carton to the skid using Tri-wall clips, spaced approximately six inches apart.			
4.	Install four steel corner supports on top of the shipping carton and secure the carton to the skid by strapping the outer carton in two places.			
5.	Remove the two cleats.			
ENG	APPD	SIZE	CODE	NUMBER
J. W. Lawrence	J. W. Lawrence	A	PI	3700016-0-0

DEC 8-1031

SHEET 1 OF 2

PACKAGING INSTRUCTION		CONTINUATION SHEET	
TITLE Line Printer LP01			
<p style="text-align: center;">FASTEN ALONG THIS LINE "B"</p>			
		STEEL CORNER SUPPORTS 4 PLACES	
		TRI-WALL CLIPS 4 SIDES	
		TEMPORARY CLEAT 2 PLACES	
Figure 1			
MI-0054			
J. W. Lawrence	J. W. Lawrence	SIZE	CODE NUMBER
A	PI	A	3700016-0-0

DEC 8-1031

SHEET 2 OF 2

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**DIGITAL EQUIPMENT CORPORATION  
MAYNARD MASSACHUSETTS**

**PACKAGING INSTRUCTION**

**TITLE** Line Printers 30-09766, 30-09767,  
30-09768 and 30-09769

**REV:** \_\_\_\_\_ **DATE:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Material Requirements

<u>Quantity</u>	<u>Identification No.</u>	<u>Purchase Specifications</u>	<u>Description</u>
1		C-IA-7605824-0-0	Shipping skid
1	3-340230023400-0	9905022	Stitched sleeve and telescoping cap
4			1/4-20x8 lg. hex head bolts
4		9007897	1/4-20 Nylok hex nuts
4		9008858	1-1/2 O.D. 3/8 I.D. x 1/16 thick flat washer.
2			Steel corner support straps
A/R			Tri-wall clips

Packaging Instructions

- | <u>Step</u> | <u>Procedure</u>  |
|-------------|---|
| 1.          | Secure the Line Printer to the skid using the four bolts, nuts, and washers as shown in Figure 1.   |
| 2.          | Place the Stitched Sleeve as shown in Figure 2 and fasten it to the skid with Tri-wall clips placed approximately 6 inches apart from each other. |
| 3.          | Place the telescoping cap on the sleeve and strap it in two places using steel corner supports on the cap, as shown in Figure 2.                  |

<b>ENG</b> W. Lawrence	<b>APPD</b> W. Lawrence	<b>SIZE</b> A	<b>CODE</b> P	<b>NUMBER</b> 3700015-0-0
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**PACKAGING INSTRUCTION**

**CONTINUATION SHEET**

**TITLE** Line Printers 30-09766, 30-09767, 90-09768 and 30-09769

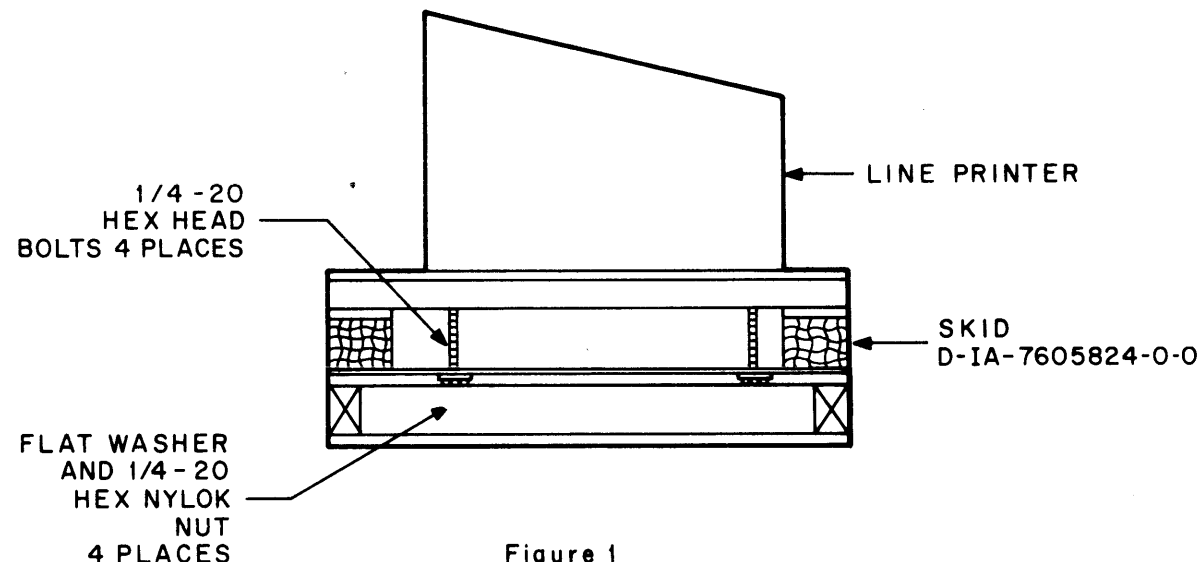


Figure 1

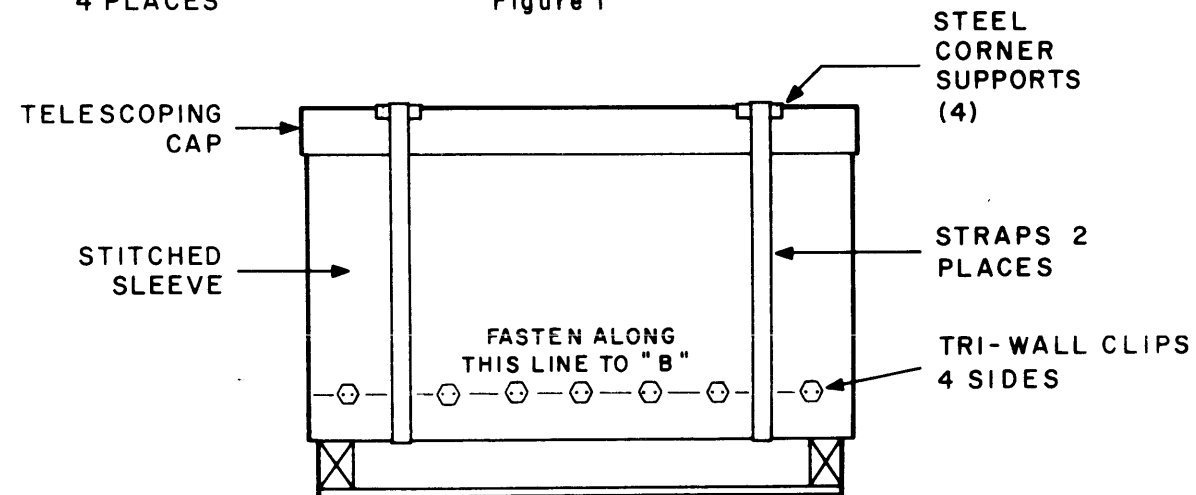


Figure 2

MI-0055

<b>ENG</b>	<b>APPD</b>	<b>SIZE</b> A	<b>CODE</b> P	<b>NUMBER</b> 37 00015-0-0
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