

digital

LT 33

Engineering Drawings

Digital Equipment Corporation

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CUSTOMER PRINT SET INDEX

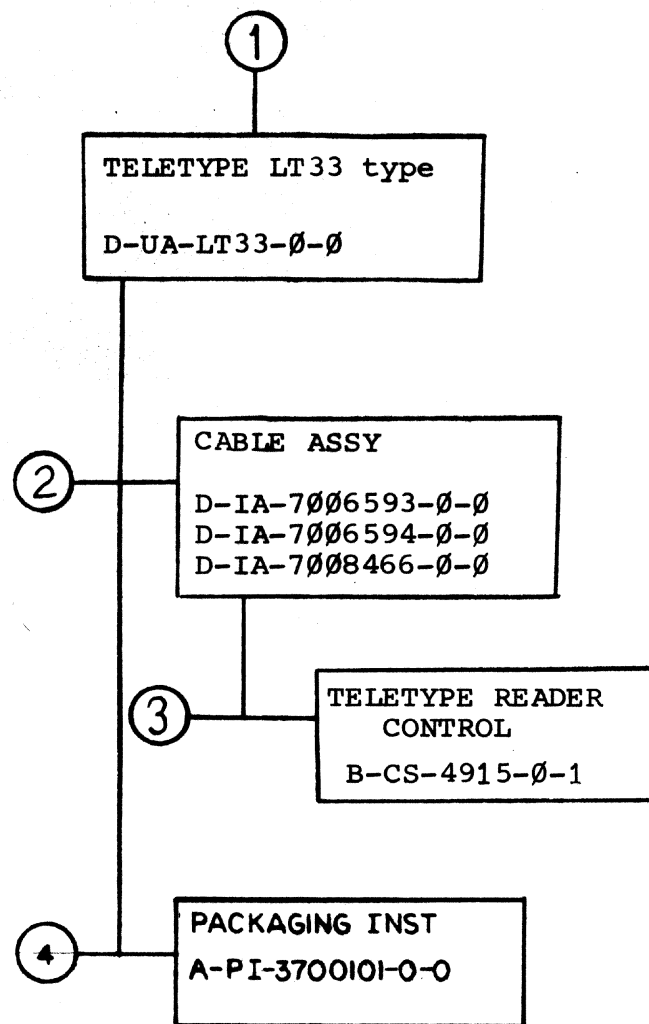
THIS IS PRINT SET

	SEQUENCE
DRAWING DIRECTORY LT33 Series	B-DD-LT33-0
SETUP & REWORK PROC. FOR 3300	
SERIES TTY WRITERS (PL)	C-PL-LT33-0-0
SETUP & REWORK PROC. FOR 3300	
SERIES TTY WRITERS	D-UA-LT33-0-0
ACCESSORY LIST LT33 Series	A-AL-LT33-0-12
RECOMMENDED SPARE PARTS	A-PL-LT33-0B-0
MAINTENANCE TOOL KIT	A-PL-LT33-ST-0
PACKING PROCEDURE	A-SP-LT33-0-10
INSTALLATION PROCEDURE	A-SP-LT33-0-11
TELETYPE INSPECTION PROC. & ADJ.	A-SP-LT33-0-13
TELETYPE READER CONTROL	B-CS-4915-0-1
READER CONTROL CIRCUITS	D-BS-LT33-B-CONT
PDP10 TELETYPE MODEL 33KSR	D-IC-LT33A-0-1

UNIT VARIATIONS		PRINT SET			
VAR	TITLE				
LT33-AA	KSR 115 V 60 Hz 4-PIN PLUG	XX			
-AB	KSR 240 V 50 Hz 4-PIN PLUG	X			
-BC	ASR 115 V 60 Hz 4-PIN X-ON	X			
-BD	ASR 240 V 50 Hz 4-PIN X-ON	X			
-CC	KSR 115 V 60 Hz MATE-N-LOK PLUG	X			
-CD	KSR 240 V 50 Hz MATE-N-LOK PLUG	X			
-CE	KSR 100 V 50 Hz MATE-N-LOK PLUG	X			
-DC	ASR 115 V 60 Hz MATE READER RUN	X			
-DD	ASR 240 V 50 Hz MATE READER RUN	X			
-DE	ASR 100 V 50 Hz MATE READER RUN	X			
-EA	ASR 115 V 60 Hz MATE MAN READER	X			
-EB	ASR 240 V 50 Hz MATE MAN READER	X			
-HC	ASR 115 V 60 Hz MATE X-ON	X			
-HD	ASR 240 V 50 Hz MATE X-ON	X			
-RA	ASR 115 V 60 Hz BURNDY READER RUN	X			
-RB	ASR 240 V 50 Hz BURNDY READER RUN	X			
-SB	SPARE PARTS KIT, ASR	X			
-ST	TOOL KIT	X			
-MA	MOD KIT ASR W076 READER RUN	X			
-MB	MOD KIT ASR MATE READER RUN	X			
-MC	MOD KIT KSR W076	X			
-MD	MOD KIT KSR MATE-N-LOK PLUG	X			

DEC 16-13251-1062-1A-R972

REVISIONS		USED ON OPTION/MODEL	DRN.	DATE	TITLE			
DATE	CHG. NO.	SEE "VAR" ABOVE	Ar KENT	21 AUG 73	TELETYPEWRITERS			
8/73	J		CHK'D.	DATE	LT33			
REVIS	REDRAWN		Allan Kent	21 Aug 73	SIZE	CODE	NUMBER	REV
LT33-8	LT33-8		PROJ ENG.	DATE	B	DD	LT33 - 0	L
1/74	K		Allan Kent	21 Aug 73	DIST			
19 Feb 74			PROD.	DATE				
6/74	L		FIELD SERV.	DATE				
LT33-10			Walter McKeuzie	8-22-73				
3 July 74								
		SHEET 1 OF 3						



TITLE	SHEET	OF	SIZE	CODE	NUMBER	REV
TELETYPEWRITERS LT33	2	3	B	DD	LT33 - Ø	L

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Table with columns for FEATURES, LINE VOLTAGE, INTERFACE CONNECTOR, KEYBOARD (UPPERCASE), PRINTER, PAPER TAPE RDR/PUNCH, ANSWERBACK, and a grid of options (-AA to -RB) with quantities (1, 2, 4, etc.).

REVISIONS table with columns: CHK, CHANGE NO., REV., ORIGINATED, DATE, BY, and description.

Notes and specifications: * NO KNOWN USAGE, ** WILL BECOME OBSOLETE WHEN PRESENT STOCK IS EXHAUSTED (SPROCKET FEED), * SEE NOTE 2.

FIRST USED ON OPTION/MODEL: UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES DECIMALS FRACTIONS ANGLES ±.005 ± 1/64 ± 0°30'

MATERIAL: UNLESS OTHERWISE SPECIFIED MATERIAL: + - FINISH: + -

DRN: S. Charter DATE: 4-20-73 CHK'D: DATE: 8/1/74 ENG: Allan Kent DATE: 11 June 73 PROJ. ENG: DATE: 22 Aug 73 PROB: DATE: 8-21-73

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS TITLE: SET UP & REWORK PROCEDURE FOR TTY3300 SERIES TTY WRITERS SIZE CODE: C/PL NUMBER: LT33-0-0 REV. B SHEET 1 OF 3

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ITEM	DWG/PART NO.	DESCRIPTION	-AA	-AB	-BA**	-BB**	-BC	-BD	-CA (OBS)	-CB (OBS)	-CC	-CD	-CE	-DA (OBS)	-DB (OBS)	-DC	-DD	-DE	-EA	-EB	-FA (OBS)	-FB (OBS)	-HA**	-HB**	-HC	-HD	-RA	-RB
21	1210563	RUBBER CAP COVER HUBBELL 7440																									1	1
22	A-DC-7409045-0-2	DECAL VOLTAGE SPEC		1			1				1	1				1	1		1							1	1	
23	1211375	FUNCTION LEVER STOP CLIP (SHORT) 186781														1	1	1									1	1
24	9107278-02	TUBING RED #18 TEF	A/R/R				A/B/R				A/R/A/R				A/R/A/R				A/R/R						A/R/A/R		A/R/A/R	
28	A-PI-3700101-0-0	CONSOLIDATED SHIPPING PACKAGE	1	1			1	1			1	1	1			1	1	1		1					1	1		
30	1204789	MOTOR 50 HZ TELETYPE 182267		1								1	1				1	1								1	1	
31	1204850	DRIVE GEAR 50 HZ TELETYPE 181855		1								1	1				1	1								1	1	
32	1204849	PINION GEAR 50 HZ TELETYPE 181851		1								1	1				1	1								1	1	
33	1204848	PLATE W/STUD TELETYPE 181850		A/R				A/R				A/R/A/R				A/R/A/R				A/R					A/R		A/R	
34	2911553	AIR DEFLECTOR TELETYPE 182183		1								1	1				1	1								1	1	
35	2911554	FAN 3 INCH TELETYPE 182181		1								1	1				1	1								1	1	
36	1211423	FUSE 1.8 AMP SLO-BLO TELETYPE 320246		1								1	1				1	1								1	1	
37	1211396	FUSE IDENT PLATE 1.8A TELETYPE 182069		1								1	1				1	1								1	1	
	PROCEDURE I	CONVERT 60 HZ MACHINE TO 50 HZ		A/R				A/R				A/R/A/R				A/R/A/R				A/R					A/R		A/R	
	PROCEDURE II a.	MODIFY LINE VOLTAGE TO 240V		X				X				X				X			X					X		X		
	PROCEDURE II b.	MODIFY LINE VOLTAGE TO 100V										X							X						X	X		
	PROCEDURE III	INSTALL DIFFERENT LINE PLUG (CAP)		X				X				X				X			X					X	X	X		
	PROCEDURE IV	INSTALL THYRECTORS	X	X				X	X	X		X	X	X		X	X	X	X	X				X	X	X		
	PROCEDURE V	ACTIVATE AUTO PUNCH						X	X															X	X			
	PROCEDURE VI	CONVERT KEYBOARD TO 8" BIT "1"														X	X	X								X	X	
	PROCEDURE VII	INHIBIT ANSWER BACK BY ENQ (WRU)														X	X	X								X	X	
	PROCEDURE VIII	INSTALL "TD" TYPEWHEEL	X	X				X	X	X		X	X	X		SEE NOTE 2		SEE NOTE 2						X	X		SEE NOTE 2	
	PROCEDURE IX	ARRANGE FOR 20mA FULL DUPLEX	X	X				X	X	X		X	X	X		X	X	X	X	X				X	X		X	
	PROCEDURE X	INSTALL 100UF CAPACITOR	X	X				X	X																			
	PROCEDURE XI	INSTALL READER RUN ASSY (4915) AND CABLE														X	X	X									X	
	PROCEDURE XII	INSTALL MATE-N-LOK INTERFACE CABLE									X	X	X						X	X								
	PROCEDURE XIII	INSTALL TELEPHONE PLUG, JACK & CABLE	X	X				X	X																X	X		X
	PROCEDURE XIV	INSTALLATION ON STAND	X	X				X	X	X		X	X	X		X	X	X	X	X				X	X		X	

REV.	
CHG	

FIRST USED ON OPTION/MODEL

UNLESS OTHERWISE SPECIFIED
 DIMENSION IN INCHES
 TOLERANCES
 DECIMALS FRACTIONS ANGLES
 ±.005 ± 1/64 ± 0°30'
 FINAL SURFACE QUALITY
 REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL
 +-----+

FINISH
 +-----+

DRN.	<i>S. Chartier</i>	DATE	4-20-73
CHK'D.	<i>D. Moroz</i>	DATE	8/22/73
ENG.	<i>Alan Kent</i>	DATE	14 June 73
PROL. ENG.	<i>Alan Kent</i>	DATE	21 Aug 73
PROD.	<i>Robertson</i>	DATE	8-21-73

NEXT HIGHER ASSY.
 D-UA-LT33-0-0

SCALE +-----+
 SHEET 2 OF 3

digital EQUIPMENT CORPORATION
 MAYNARD, MASSACHUSETTS

TITLE
 SET UP & REWORK
 PROCEDURE FOR
 TTY3300 SERIES
 TTY WRITERS

SIZE CODE	NUMBER	REV.
C PL	LT33-0-0	B

DIST.

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NOTES TO PARTS LIST

- IN ALL CASES 60 HZ MACHINES CAN BE REWORKED FOR 50 HZ OPERATION INSTEAD OF STOCKING 50 HZ UNITS. ON THE BASIS OF EXPECTED VOLUME, INITIAL 50 HZ STOCKING IS EXPECTED TO BE AS FOLLOWS (REWORK PROCEDURE I)

DESC	50 HZ P.N.	STATUS	ALTERNATIVE
KSR	3011294-02	REWORK 3011294-01	STOCK
MAN ASR(TD)	3011294-04	STOCK	REWORK 3011294-03
MAN ASR(TV)	3011294-06	REWORK 3011294-05	SEE NOTE 2
AUTO ASR	3011294-08	REWORK 3011294-07	STOCK

- WITH THE EXCEPTION OF 3011294-03 (60 HZ) AND 3011294-04 (50 HZ) (BOTH MANUAL ASR WITH "TD" TYPEWHEEL) ALL UNITS MUST BE REWORKED BY REPLACING THE "TV" TYPEWHEEL SUPPLIED WITH A "TD" TYPEWHEEL. THE -03 AND -04 MACHINES ARE SPECIALS AND MAY SOMETIMES BE IN SHORT SUPPLY. THE -05 AND -06 MACHINES MAY BE SUBSTITUTED AS FOLLOWS:

DESCRIPTION	PART NO. NEEDED	ALTERNATIVES
MAN ASR (TD) 60 HZ	3011294-03	REWORK (IX) 3011294-05
MAN ASR (TD) 50 HZ	3011294-04	REWORK (IX) 3011294-06 OR REWORK (I & IX) 3011294-05

MODIFICATION KITS

LT33-MA "ASR for 8, 8/I, 8/L, 8/S"
USE PARTS LIST FOR LT33-DC OMITTING ITEMS 1, 1A, AND 5. IN ADDITION, ONE CABLE ASSY 4915 TO W076 P.N. 7005676-1 IS REQUIRED. FOLLOW PROCEDURES FOR LT33-DC.

LT33-MB "ASR for 8/E, 11, 15"
USE PARTS LIST FOR LT33-DC OMITTING ITEMS 1 AND 1A. FOLLOW PROCEDURES FOR LT33-DC.

LT33-MC "KSR for 8, 8/I, 8/L, 8/S"
USE PARTS LIST FOR LT33-CC OMITTING ITEMS 1, 1A, AND 5. IN ADDITION, ONE CABLE ASSY TTY TO W076 P.N. 7005011-1 IS REQUIRED. FOLLOW PROCEDURES FOR LT33-CC.

LT33-MD "KSR for 8/E, 11, 15"
(Also for LT33-E or -H type.)
USE PARTS LIST FOR LT33-CC OMITTING ITEMS 1 AND 1A. FOLLOW PROCEDURES FOR LT33-CC.

ALTERNATIVELY, A W078 ADAPTER MODULE ADDED TO AN LT33-MB OR LT33-MD KIT CAN BE USED WHEN AN LT33-MA OR LT33-MC KIT IS REQUIRED.

REVISIONS	REV.
CHANGE NO.	
CHK	

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES	DRN. <i>S. Carter</i>	DATE 4-20-73	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
DECIMALS	CHK'D. <i>S. Carter</i>	DATE 5-11-73		
ANGLES	ENG. <i>Allen Kent</i>	DATE 4 June 73	TITLE SET UP & REWORK PROCEDURE FOR TTY3300 SERIES TTY WRITERS	
.XXX = .005 .XX = .02 .X = .1	PROJ. ENG. <i>Allen Kent</i>	DATE 22 Aug 73		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓	PROD. <i>Frank Yeates</i>	DATE 6-20-73		
MATERIAL	NEXT HIGHER ASSY.		SIZE CODE	NUMBER
FINISH	SCALE		C PL	LT33-0-0
	SHEET 3 OF 3		DIST.	REV. B

REV. B
NUMBER LT33-0-0
SIZE CODE C

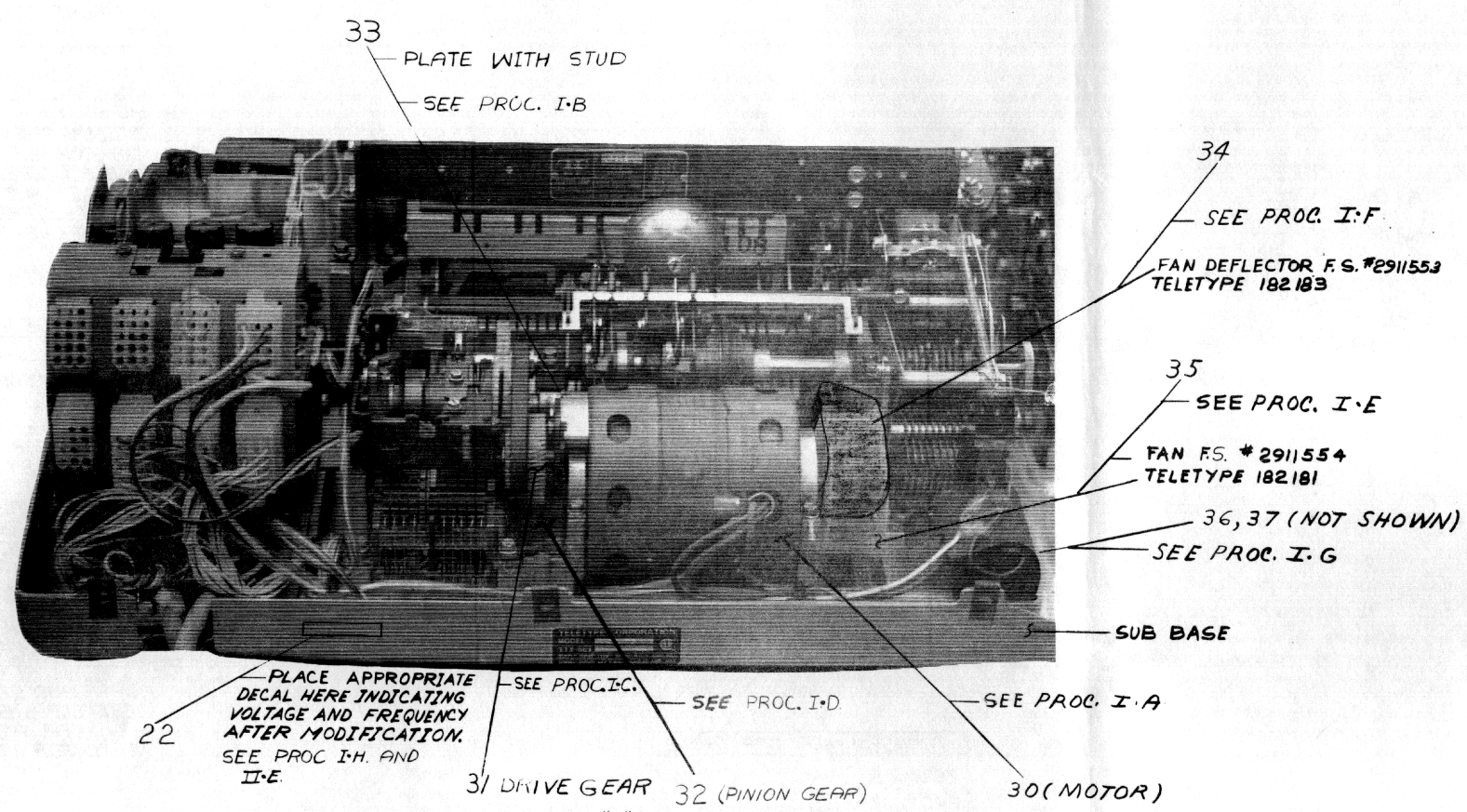
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D

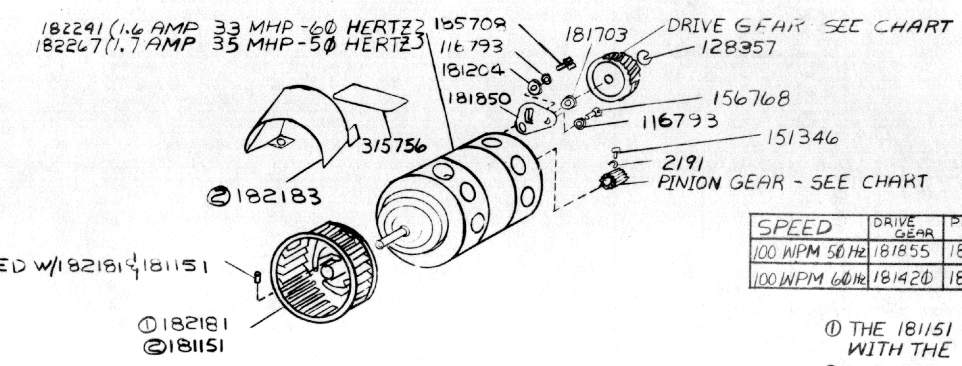
C

B

A



DETAIL "A"
(REAR VIEW WITH COVER REMOVED)



- ① THE 181151 FAN (2 1/2" DIA.) IS USED WITH THE 181870 AND 182241 MOTORS.
- ② THE 182181 FAN (3" DIA.) AND THE 182183 AIR DEFLECTOR ARE USED WITH THE 182267 MOTOR.

DETAIL "B"
MOTOR ASSY EXPLODED VIEW
(TAKEN FROM TELETYPE
SEC. 574-122-8007C
ISS. 7 PAGE 35)

- PROCEDURE I**
CONVERT 60 HZ MACHINE TO 50 HZ
SEE DETAIL A & B
- REMOVE 182241 SPLIT-PHASE START MOTOR AND REPLACE WITH ITEM #30 (NOT NECESSARY IF MOTOR IS ALREADY RATED 50/60 HZ ON NAME PLATE) IF 181870 CAPACITOR START MOTOR IS ENCOUNTERED MOTOR START CAPACITOR MUST ALSO BE REMOVED WHEN INSTALLING ITEM #30. SEE 1180 SD-B10 AND 4905 WD. (TELETYPE DRAWINGS)
 - REMOVE 181416 PLATE WITH STUD AND REPLACE WITH ITEM #33 (NOT NECESSARY WHEN 181850 PLATE WITH STUD (UNIVERSAL) IS SUPPLIED (NOW STANDARD), 181850 PART IS IDENTIFIED BY LONG ADJUSTMENT SLOT.)
 - REMOVE 181420 DRIVE GEAR AND REPLACE WITH ITEM #31
 - REMOVE 181411 PINION GEAR AND REPLACE WITH ITEM #32.
 - REMOVE 181151 FAN (2 1/2 INCH DIA) AND REPLACE WITH ITEM #35 (3 INCH DIA. FAN). (NOT NECESSARY) IF 3 INCH DIA. FAN ALREADY SUPPLIED.)
 - ADD AIR DEFLECTOR ITEM #34 OVER FAN
 - REPLACE MOTOR FUSE (2 OR 2 1/4 AMP) WITH 1.8 AMP SLO-BLO ITEM #36. CHANGE FUSE LABEL TO ITEM #37.
 - PLACE APPROPRIATE FREQUENCY DECAL ITEM #22 ON REAR OF MACHINE

REV.	CHANGE NO.	ORIGINATED	DATE
1	LT33-00008	A	1-30-74
2	LT33-00009	A	1-30-74
3	LT33-00010	B	3-5-74

REVISIONS
CHK
G. W. Kent
A. Kent
J. Chadden
Allen Kent 3 July 74

NEXT HIGHER ASSY	QTY.	DESCRIPTION	PART NO.	ITEM NO.
B-DD-LT33-0				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED				
DRN	R. Cant.	DATE	4-30-73	
CHK'D	J. B. Kent	DATE	8/22/73	
ENG	Allen Kent	DATE	14 June 73	
PROJ. ENG.	Allen Kent	DATE	14 June 73	
PROD.	F. J. Kent	DATE	8-23-73	
TOLERANCES DIMENSION IN INCHES DECIMALS FRACTIONS ANGLES ± .005 ± 1/64 ± 0'30" FINAL SURFACE QUALITY REMOVE BURRS AND BREAK SHARP CORNERS				
MATERIAL				
FINISH				
FIRST USED ON		LT33 TYPE		
SCALE		NONE		
SHEET		OF 8		
DIST.				
SIZE CODE		NUMBER		
DUA		LT33-0-0		
REV.		B		

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE
SET-UP & REWORK
PROCEDURE FOR TTY
3300 SERIES TTY
WRITERS

D

C

B

A

REV B
NUMBER LT33-0-0
SIZE CODE DUA

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**PROCEDURE II
MODIFY LINE VOLTAGE
(INSTALL TRANSFORMER)**

SEE DETAIL A, C, AND D
FOR OPERATION ON VOLTAGES OTHER THAN 115V PERFORM THE FOLLOWING OPERATIONS:

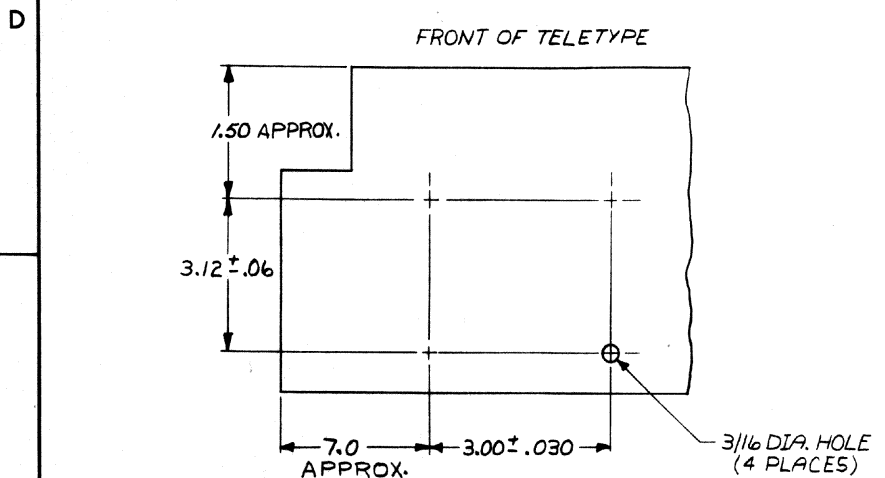
- A. DRILL FOUR 3/16 INCH DIA HOLES IN BASE MOUNTING PLATE AS SHOWN IN DETAIL "C"
- B. MOUNT TRANSFORMER ITEM #13 WITH ITEM #4 THRU ITEM #17.
- C. CUT CORDSET ITEM #18 AS SHOWN AND WIRE PER TABLE AND DETAIL "D" USING ITEM #19.
- D. PLUG TELETYPE CORD INTO FEMALE RECEPTACLE PART OF ITEM #18
- E. PLACE APPROPRIATE VOLTAGE DECAL ITEM #22 AS SHOWN IN DETAIL "A".

**PROCEDURE III
CHANGE MALE CORD CAP**

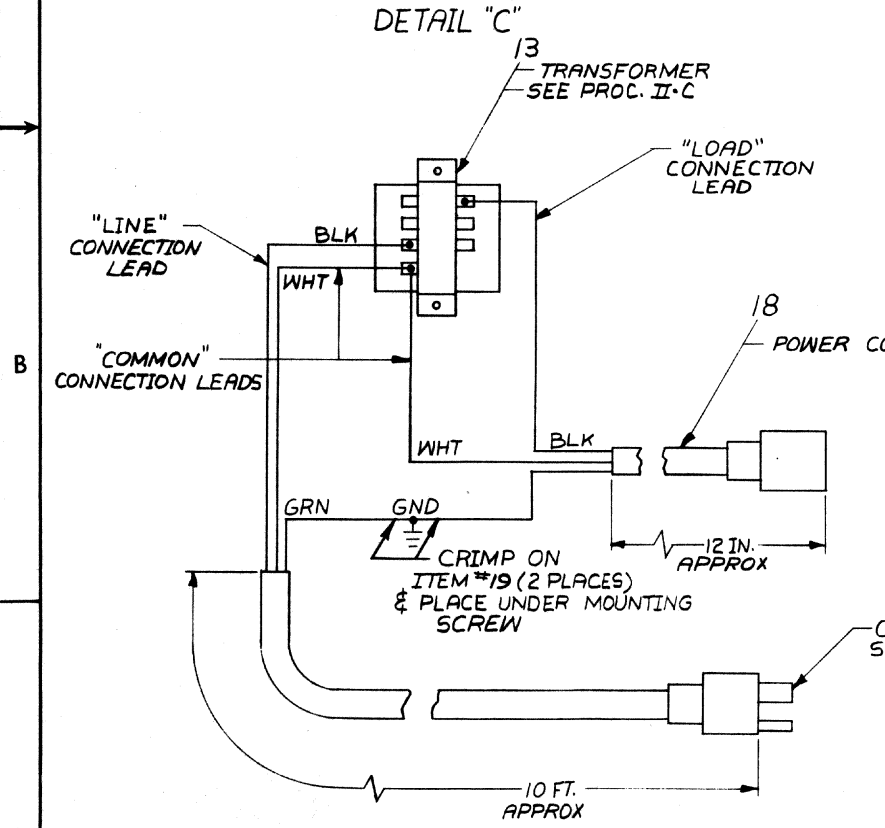
SEE DETAIL "D" AND "E"

- A. DETERMINE FROM PARTS LIST WHICH CAP IS TO BE PUT ON.
- B. IF TRANSFORMER ITEM #13 IS INSTALLED CUT OFF THE MALE CAP FROM THE CORDSET ITEM #18, OTHERWISE CUT OFF THE MALE CAP FROM THE TELETYPE CORD.
- C. SLIDE THE COVER ITEM #21 IF REQUIRED ONTO THE CORD AND WIRE THE CAP ITEM #20 AS SHOWN IN DETAIL "E".
- D. FIT THE COVER IF USED OVER THE CAP AS SHOWN IN DETAIL "E".

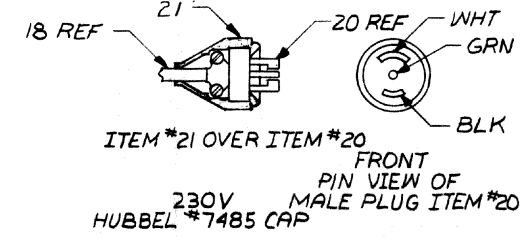
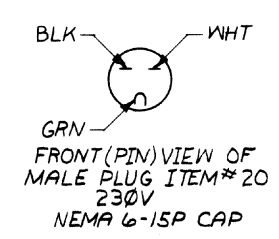
NOTE:
PDP-9 AND EARLY PDP-10 TELETYPES WERE SUPPLIED WITH A NEMA 5-15P (115V) CAP PAINTED RED WHEN WIRED FOR 190 TO 250 VOLTS



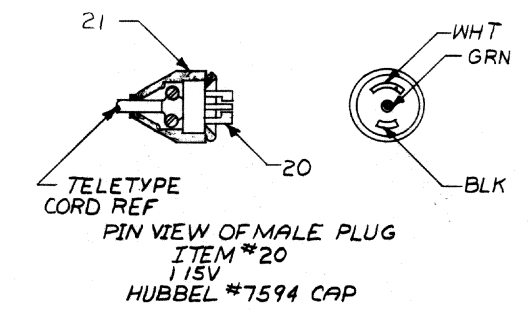
REAR OF TELETYPE
SCALE: NONE
HOLE DRILLING DIAGRAM FOR MOUNTING OF TRANSFORMER, ITEM #5, TO PLATE INSIDE BOTTOM OF BASE. (PROC. II-A)



TRANSFORMER MOUNTING & WIRING
DETAIL "D"



DETAIL "E"
CORD CAP WIRING
(PROC III)



TRANSFORMER TAP TABLE

VOLTAGE	LINE	LOAD	COMMON	VOLTAGE	LINE	LOAD	COMMON
126	6	4	C	287	3	4	C
121	5	4	C	275	2	4	C
115	6	6	C	274	3	5	C
110	5	4	1	265	1	4	C
				263	2	5	C
				260	3	6	C
				252	1	5	C
				250	2	6	C
106.	6	4	1	240*	1	6	C
100*	1	3	4	220	C	6	1
96	C	1	5	213	C	6	2
90	C	2	5	213	C	5	1
85	C	3	6	206	C	6	3
82	C	2	4	204	C	5	2
77	C	3	4	203	C	4	1
				198	C	5	3
				197	C	4	2
				193	C	4	3

* INDICATES STD FACTORY CONNECTIONS
THIS TABLE PROVIDES 115V TO THE LOAD AT THE NORMAL LINE VOLTAGE

REVISIONS

CHK	CHANGE NO.	REV

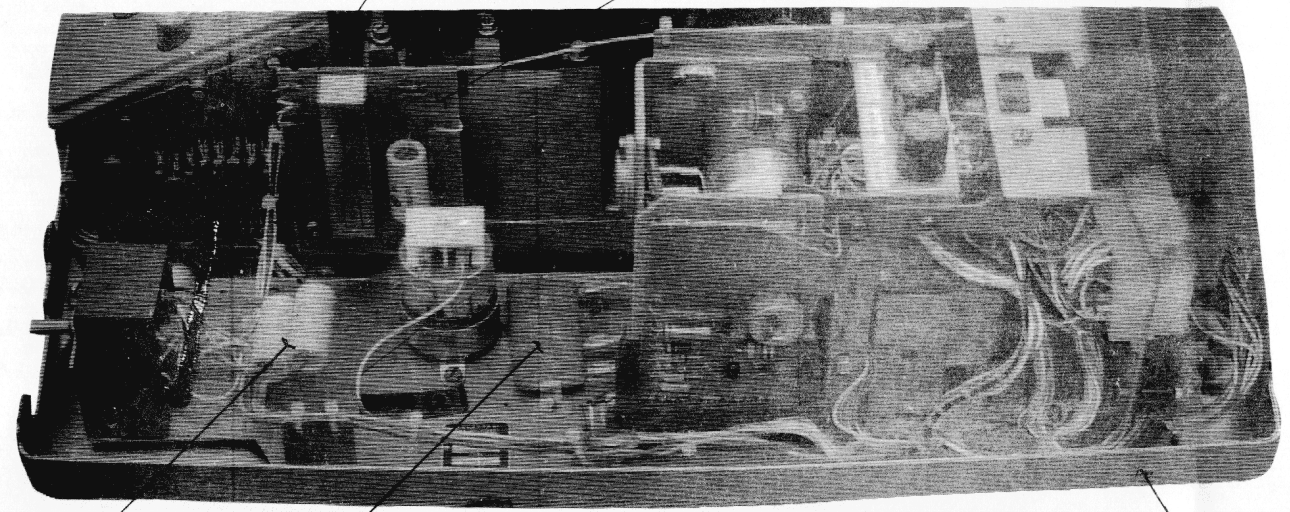
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**PROCEDURE IV
 INSTALL THYRECTORS**

- SEE DETAILS "F" & "G"
- A. CUT TUBING ITEM #24 AND PLACE ON LEADS OF THYRECTORS ITEM #8
 - B. PULL BACK THE RUBBER BOOT WHICH COVERS THE TERMINALS ON THE LINE OFF-LOCAL SWITCH
 - C. INSTALL THYRECTORS USING TERMINAL ITEM #7 PER TABLE IN DETAIL "G"
 - D. IF RELAY CONTROLLED READER (READER RUN) MODIFICATION IS NOT GOING TO BE INSTALLED (PROCEDURE XI) REPLACE RUBBER BOOT SO ALL TERMINALS ARE COVERED.

**PROCEDURE V
 ACTIVATE AUTOMATIC PUNCH
 (CONTROLLED BY DC2 & DC4)**

- SEE DETAIL "H"
- A. TO ACTIVATE THE AUTOMATIC PUNCH FEATURE (PUNCH CONTROLLED BY DC2 & DC4) REMOVE THE TWO DISABLING CLIPS SHOWN IN DETAIL "H"
- NOTE:
 TO INACTIVATE AUTO PUNCH FEATURE, INSTALL TWO TELETYPE P.N. 187001 CLIPS, ONE IN EACH SLOT SHOWN IN DETAIL "H". (RECEIVED WITH AUTO PUNCH INACTIVATED)



4915 CARD
 SEE PROC II

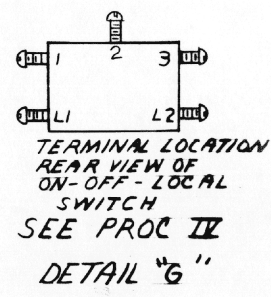
SEE CABLE VIEW
 DETAIL "R"

SUB BASE

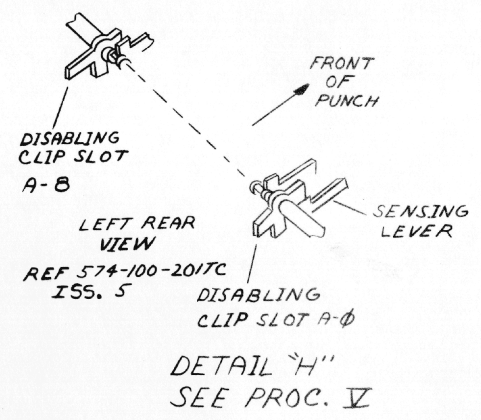
SEE PROC. IV
 6RS2OSP4B4
 THYRECTORS

SEE DETAIL "N"
 AND PROC. IX

DETAIL "F"
 (RIGHT SIDE VIEW)



FROM	TERMINAL	COMPONENT	TO	TERMINAL
L2	ITEM#7	THYRECTOR ITEM#8	2	ITEM#7
1	ITEM#7	THYRECTOR ITEM #8		

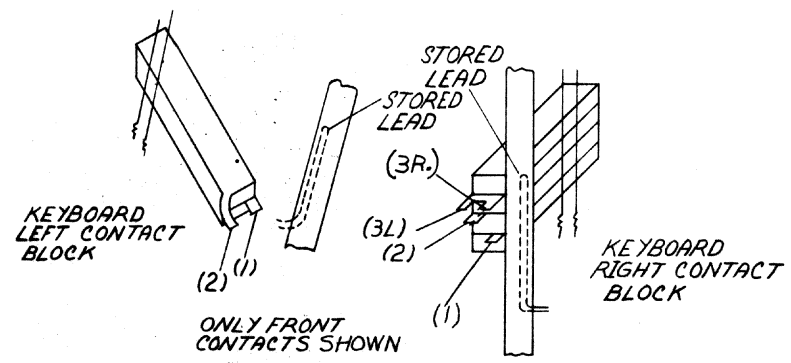


REVISIONS		
CHK	CHANGE NO	REV

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PROCEDURE VI
CONVERT KEYBOARD TO 8TH BIT MARKING (3)
 SEE DETAIL "J"
 A. LOCATE THE FRONT TAB CONNECTIONS ON THE CONTACT BLOCKS AT THE LEFT AND RIGHT ENDS OF THE KEYBOARD.
 B. REMOVE THE RED-GRN LEAD FROM TERMINAL 2 OF THE LEFT CONTACT BLOCK. SLEEVE (INSULATE) THIS WIRE.
 C. UNTIE AND UNSLEEVE THE GRN LEAD NEAR THE LEFT CONTACT BLOCK AND CONNECT TO TERMINAL 2.
 D. TIE THE SLEEVED RED-GRN LEAD TO THE NEARBY BAR.
 E. UNTIE AND UNSLEEVE THE GRN LEAD NEAR THE RIGHT CONTACT BLOCK AND CONNECT TO TERMINAL 3L.
 NOTE:
 TO INSTALL PARITY OR 8TH BIT SPACING FOLLOW CHART IN DETAIL "J".

KEYBOARD PARITY MODIFICATIONS

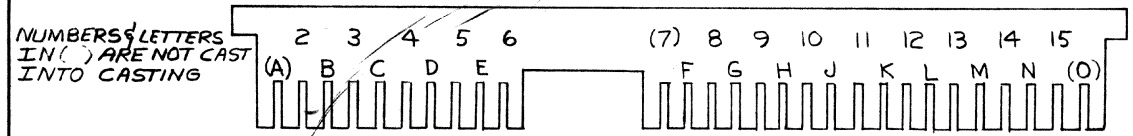


PROCEDURE VII
INHIBIT ANSWERBACK CAUSED BY ENQ (WRU)
 SEE DETAIL "K"
 A. DO NOT REMOVE ENQ (WRU) STUNT BOX PAWL OR SPRING
 B. LOCATE SLOT "15" IN CODEBAR BASKET TIE BAR.
 C. INSTALL SHORT FUNCTION LEVER STOP CLIP ITEM #23 IN SLOT 15 TO INHIBIT ENQ (WRU) INITIATED ANSWERBACK
 NOTE:
 ALSO VERIFY THAT SLOT "A" CONTAINS A LONG STOP CLIP TELETYPE P.N. 186782 AND THAT SLOT "F" DOES NOT CONTAIN A STOP CLIP.

OPTION	LEFT CONTACT BLOCK			RIGHT CONTACT BLOCK				SLEEVE & STORE
	TERM1	TERM2	SLEEVE & STORE	TERM1	TERM2	TERM3R	TERM3L	
EVEN PARITY (AS RECEIVED)	WHT-BLK	RED-GRN	GRN	YEL	WHT-SLATE	WHT-BLK	-	GRN
8TH BIT MARKING	WHT-BLK	GRN	RED-GRN	YEL	WHT-SLATE	WHT-BLK	GRN	-
8TH BIT SPACING (NOT USED BY DEC)	WHT-BLK	RED-GRN	GRN	YEL	-	WHT-BLK	-	WHT SLATE GRN

REFERENCES
 SEC 574-100-201 TC ISS-5
 9334 WD ISS-1
 DETAIL "J"
 SEE PROC. VI

FUNCTION BOX CASTING (REF)



NUMBERS & LETTERS IN () ARE NOT CAST INTO CASTING

CODEBAR BASKET TIE BAR

TELETYPE P.N. 186782 STOP CLIP IN A SLOT TO DISABLE AUTO CR LF ON 72ND CHAR (RECEIVED DISABLED)

REFERENCE SECTION 574-100-101TC ISS 2 FRONT SCHEMATIC VIEW OF CODE BAR TIE BAR

TELETYPE P.N. 186781 STOP CLIP IN "15" SLOT TO DISABLE WRU (ENQ) ACTIVATED ANSWERBACK

NOTE: IT IS NOT NECESSARY TO REMOVE THE WRU STUNT BOX PAWL OR SPRING

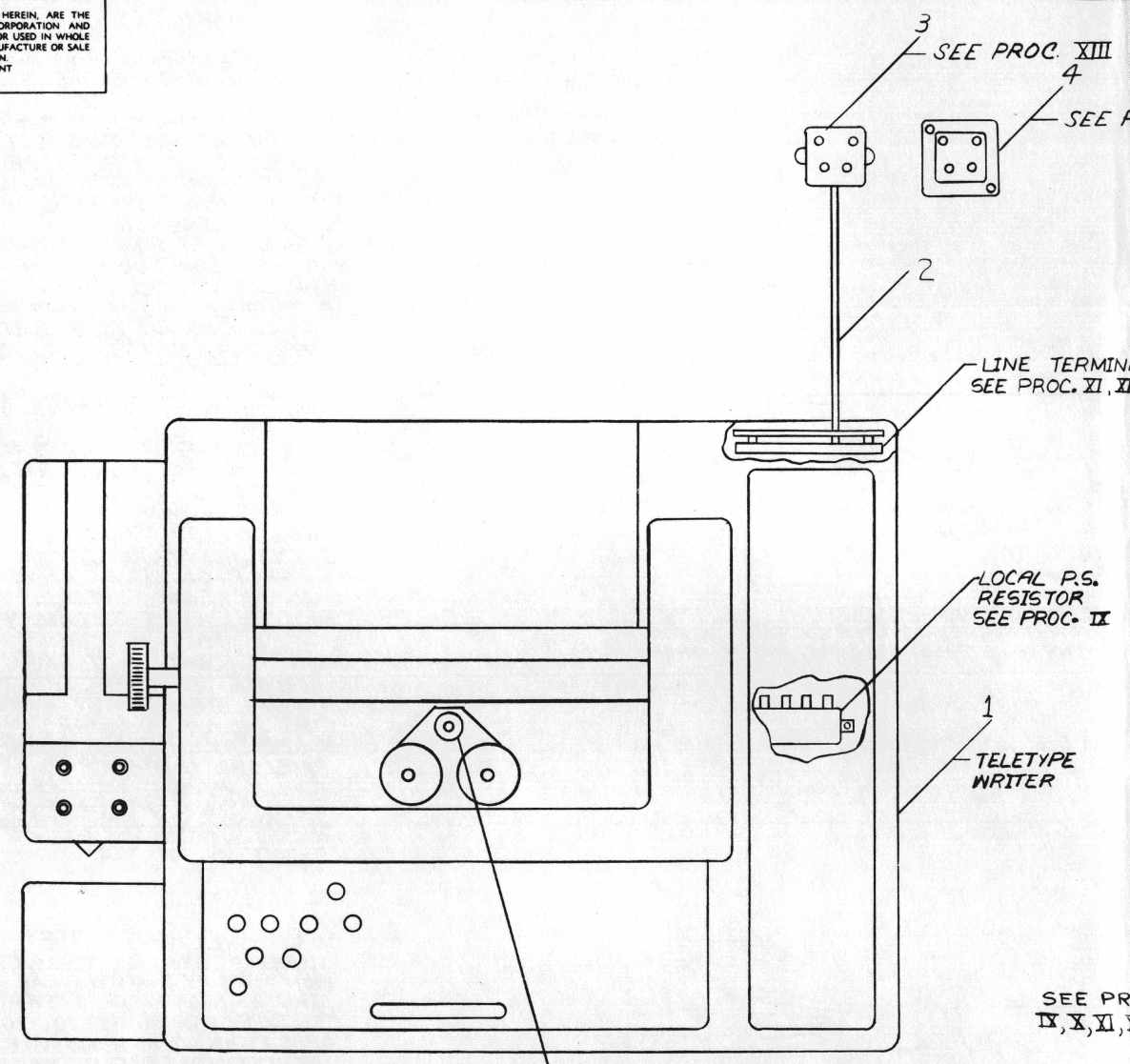
NO CLIP IN "F" SLOT ENABLES RIGHT MARGIN BELL AND END-OF-LINE BELL (RECEIVED ENABLED)

DETAIL "K"
 SEE PROC. VII

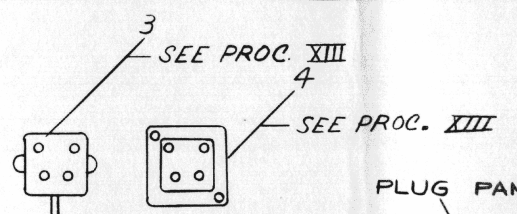
REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SET UP & REWORK PROCEDURE FOR TTY3300 SERIES TTY WRITERS	SIZE CODE	DUA	NUMBER	LT33-0-0	REV.	B
SCALE	NONE	SHEET	4	OF	8	DIST.	

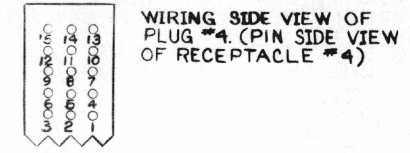
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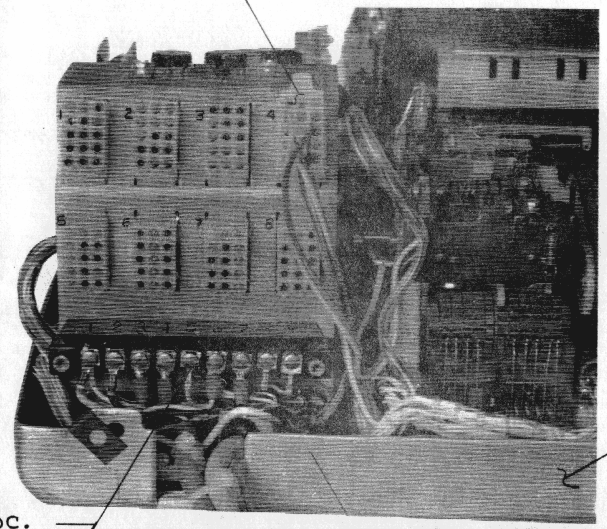
DETAIL "L"



SEE CABLE LAYOUT SEE DETAIL "F" & PROC. XI-E & XI-F



WIRING SIDE VIEW OF PLUG #4 (PIN SIDE VIEW OF RECEPTACLE #4)



SEE PROC. IX, X, XI, XII, & XIII

TERMINAL BOARD DETAIL "M"

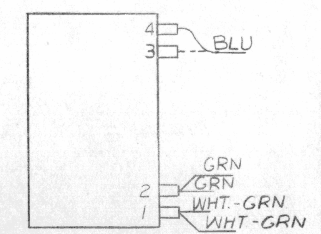
10 SECURE INTERFACE CABLE TO CALL CONTROL UNIT AND POWER CORD.

SUB BASE

- PROCEDURE VIII**
INSTALL "TD" TYPEWHEEL
SEE DETAIL "L"
- REMOVE "TV" TYPEWHEEL SUPPLIED (O = LETTER OH; 0 = NUMERAL ZERO).
 - INSTALL "TD" TYPEWHEEL USING ADJUSTING TOOL TELETYPE P.N. 180588 (O = LETTER OH; 0 = NUMERAL ZERO).
 - CHECK "FINAL PRINTING ALIGNMENT" AS SPECIFIED IN SECT. 574-122-700 TC AND REFINE ADJUSTMENTS AS NEEDED.

- PROCEDURE IX**
ARRANGE FOR 20mA FULL DUPLEX OPERATION
SEE DETAILS "F", "L", "M" AND "N"
- REMOVE BRN/YEL WIRE FROM TERMINAL 3 OF THE LINE TERMINAL STRIP AND MOVE IT TO TERMINAL 5.
 - REMOVE BLU/WHT WIRE FROM TERMINAL 4 AND MOVE TO TERMINAL 5.
 - REMOVE PURPLE WIRE FROM TERMINAL 8 AND MOVE TO TERMINAL 9.
 - MOVE THE BLUE WIRE FROM TERMINAL 3 OF THE LOCAL POWER SUPPLY POWER RESISTOR TO TERMINAL 4.

- PROCEDURE X**
INSTALL 1uF CAPACITOR
SEE DETAIL "M"
- CUT TUBING ITEM #24 AND PLACE ON LEADS OF CAPACITOR ITEM #9.
 - INSTALL CAPACITOR BETWEEN TERMINALS 3 & 4 OF THE LINE TERMINAL STRIP USING TERMINAL LUGS ITEM #7.



LOCAL PWR SUPPLY POWER RESISTOR SEE PROC IX-D DETAIL "N"

REVISIONS		
CHK	CHANGE NO.	REV.

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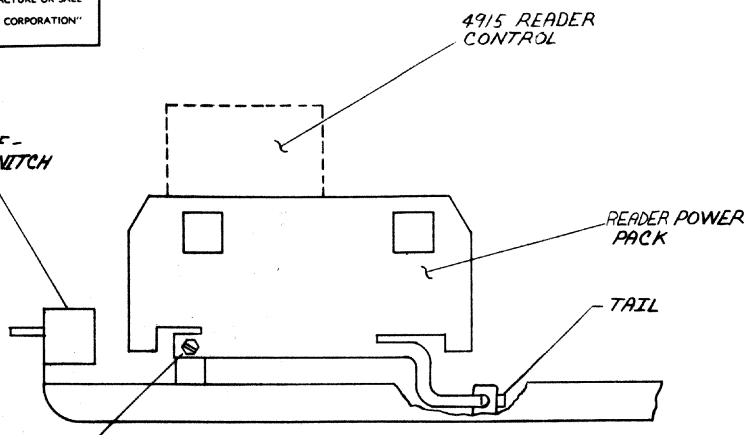
PROCEDURE XI

- INSTALL READER RUN CONTROL (4915) AND INTERFACE CABLE ASSY.**
SEE DETAILS "F", "M", "P", "Q".
- REMOVE READER POWER PACK AND SET ASIDE AS FOLLOWS (DETAIL "P"):
 - REMOVE MOUNTING SCREW (SAVE)
 - LIFT READER PACK AND UNHOOK TAIL
 - SET POWER PACK ASIDE (UNPLUG IF DESIRED).
 - INSTALL 4915 MODULE (PART OF ITEM *5) ON CALL CONTROL UNIT BRACKET AS SHOWN IN DETAIL "F" USING SCREWS ITEM *10
 - INSTALL TWO YEL/WHT WIRES FROM 4915 ON LINE-OFF-LOCAL SWITCH AS INDICATED IN DETAIL "Q" USING TERMINAL LUG ITEM *7
 - REPLACE RUBBER BOOT ON LINE-OFF-LOCAL SWITCH SO ALL TERMINALS ARE COVERED.
 - CONNECT YEL/WHT WIRE FROM 4915 TO LOCATION *7 OF RECEPTACLE *4 ON THE CALL CONTROL PANEL AS INDICATED IN DETAIL "Q" USING PIN ITEM *6
 - MOVE BROWN WIRE FROM LOCATION *11 TO LOCATION *7 OF PLUG *4 (SEE DETAIL "M")
 - INSTALL FOUR WIRES OF INTERFACE CABLE ON LINE TERMINAL STRIP:

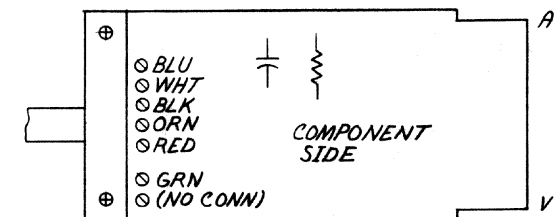
GRN	TERM *3
RED	TERM *4
BLK	TERM *7
WHT	TERM *6
- REPLACE TERMINAL STRIP COVER
H. USING TIES ITEM *11 AND *12, TIE WIRING AS SHOWN IN DETAIL "M" AND "R"
J. REINSTALL READER POWER PACK AS FOLLOWS (DETAIL "P"):
J.1. PLUG POWER PACK CABLE INTO PACK IF REMOVED.
J.2. HOOK TAIL OF POWER PACK INTO BRACKET
J.3. INSTALL MOUNTING SCREW PREVIOUSLY REMOVED.

ENGINEERING NOTE:
TELETYPE DRAWINGS 6353WD(33TU) AND 7833WD(33TY) SPECIFY THAT TERMINAL 3 ON LINE TERMINAL STRIP IS-(NEGATIVE) AND TERMINAL 4 IS+(POSITIVE). TELETYPE DRAWING 1180 SD(3300) DOES NOT SPECIFY. IN LOCAL AND IN HALF DUPLEX OPERATION THE KEYBOARD IS OPERATED AS IF 3 WERE+(POS) AND 4 WERE-(NEG). SINCE NOTHING IN THE KEYBOARD, READER, DISTRIBUTOR AREA IS POLARITY SENSITIVE THE CHOICE OF POLARITY DOES NOT MATTER. PROCEDURES XI AND XII ARE NOT CONSISTENT WITH PROCEDURE XIII IN THIS RESPECT.

4915 READER CONTROL INSTALLATION
(RIGHT SIDE VIEW WITH COVER REMOVED)

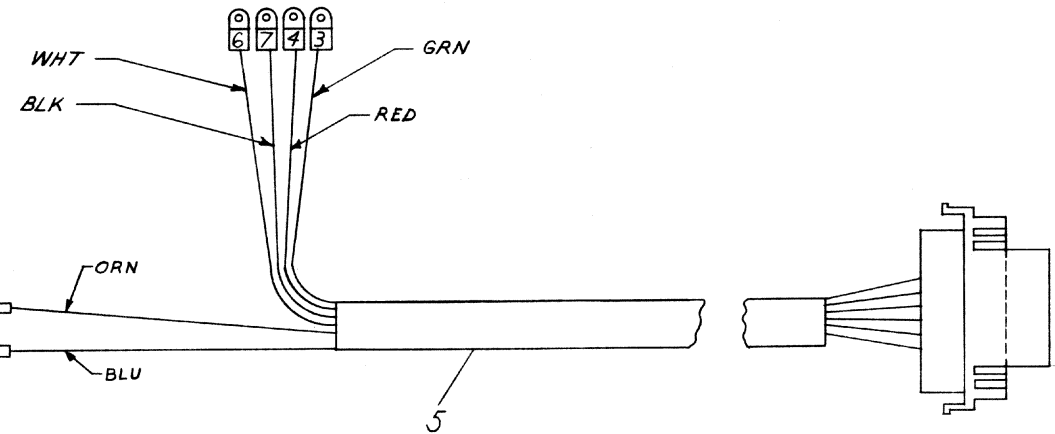


DETAIL "P"

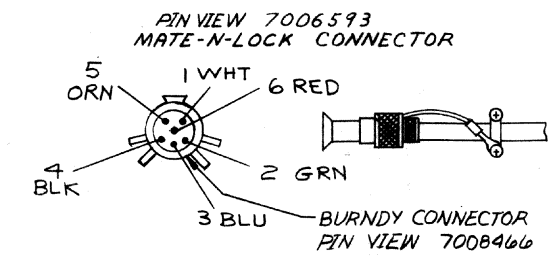


W076 REV "D" CONN (7005676)
NOTE: YELLOW IS SOMETIMES USED INSTEAD OF WHITE
GRAY IS SOMETIMES USED INSTEAD OF GREEN

CABLE CONNECTIONS TO TERMINAL BOARD
NUMBER IN LUG CORRESPONDS TO TERMINAL BOARD NUMBERS (PROC XII-G)



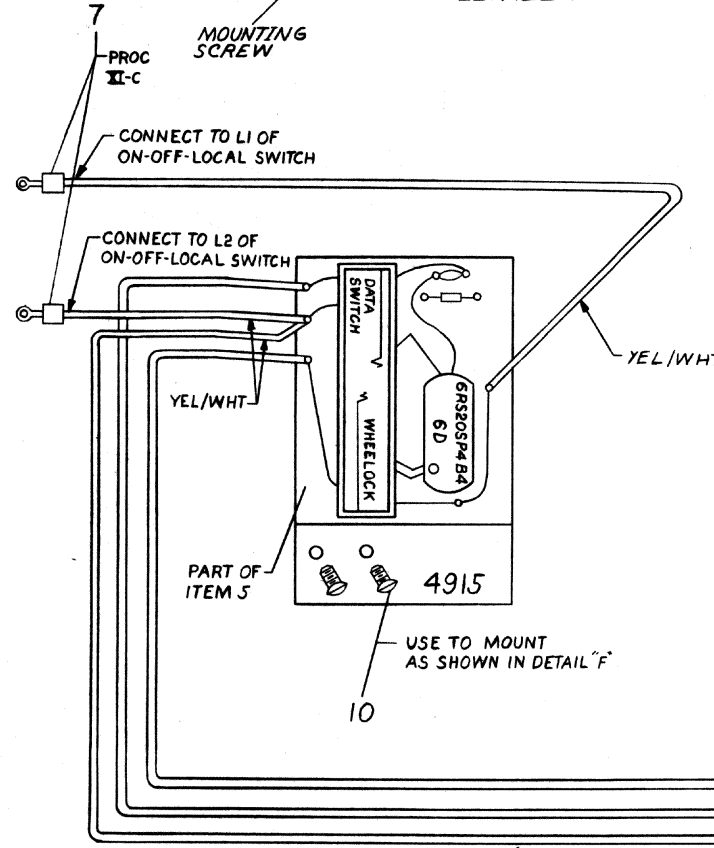
- | | |
|---|---|
| 1 | 0 |
| 2 | 0 |
| 3 | 0 |
| 4 | 0 |
| 5 | 0 |
| 6 | 0 |
| 7 | 0 |
| 8 | 0 |
- WHT PRINTER -
GRN KEYBOARD -
BLU READER RUN -
BLK PRINTER +
ORN READER RUN +
RED KEYBOARD +



TOOLS FOR BURNDY CONNECTOR
EXTRACTION TOOL RX24-3
INSERTION TOOL RTM24-3
CRIMPING TOOL M10S-1
W/DIE SET 999 & STOP BUSHING SLB1

CONNECT TO LOCATION *7 OF RECEPTACLE *4 ON THE PLUG PANEL USING *3 (MATES WITH BROWN WIRE MOVED BY PROC XI-F) SEE DETAIL "M")

DETAIL "Q"

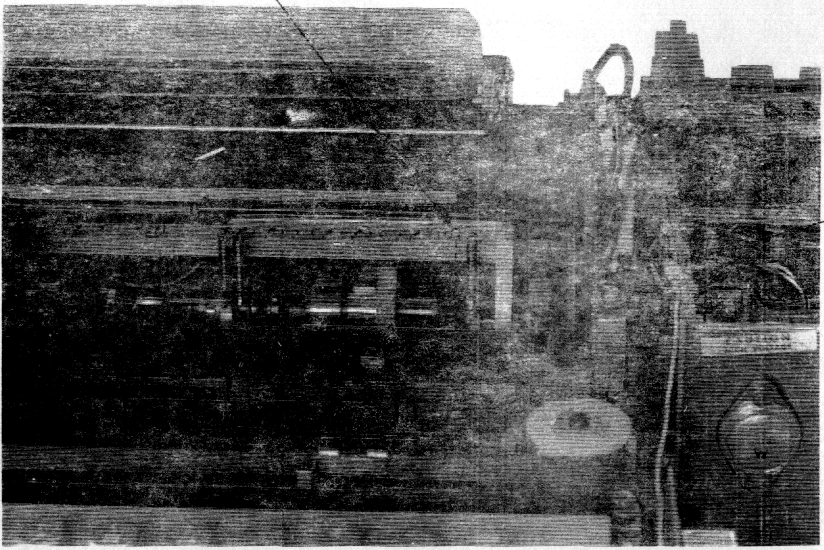


REVISIONS		
CHK	CHANGE NO.	REV.

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WRU PAWL SPRING

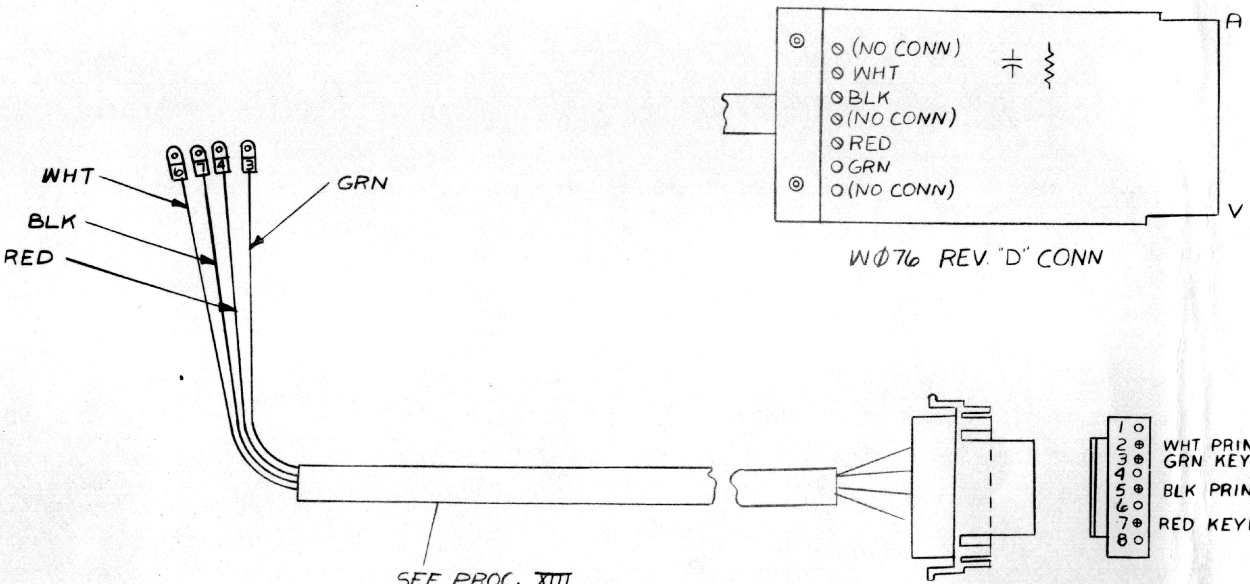
SEE PROC. VII-A
DO NOT REMOVE PARTS



DETAIL "R"

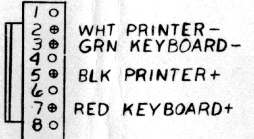
TIE WIRING
PROC. XI-H

CABLE CONNECTIONS TO
TERMINAL BOARD NUMBER IN
LUG CORRESPONDS TO TERMINAL
BOARD NUMBER



SEE PROC. XIII

DETAIL "S"



PROCEDURE XII
INSTALL MATE-N-LOCK INTERFACE CABLE

- SEE DETAILS "M" & "S"
- INSTALL FOUR WIRES OF INTERFACE CABLE ITEM #5 ON LINE TERMINAL STRIP.

GRN	TERM #3
RED	TERM #4
BLK	TERM #7
WHT	TERM #6
 - REPLACE TERMINAL STRIP COVER.
 - USING TIES ITEM #11 TIE INTERFACE CABLE AS SHOWN IN DETAIL "M"

PROCEDURE XIII
INSTALL TELEPHONE PLUG & JACK
SEE DETAIL "L", "M" & "T"

- ASSEMBLE TELEPHONE CORDSET ITEM #2 TO TELEPHONE PLUG ITEM #3 BY WIRING THE SHORT WIRE END OF THE CORDSET AS FOLLOWS:

CORDSET WIRE	PLUG TERMINAL	SIGNAL
GREEN	GN	KEYBOARD +
RED	R	KEYBOARD -
BLACK	BK	PRINTER +
YELLOW	Y	PRINTER -

- BEND TERMINAL LUGS UP AND INSERT EARBAND HOOK TAB INTO CENTER HOLE OF PLUG (SEE VIEW A-A OF DETAIL "T")
- ARRANGE WIRES TO CLEAR COVER MOUNTING POSTS AND PLACE COVER ON PLUG WITH RIDGE BETWEEN "R" & GN TERMINALS
- INSERT AND TIGHTEN THE TWO LONG SCREWS SUPPLIED WITH THE PLUG (DISCARD THE SHORT SCREW ALSO SUPPLIED)
- WIRE THE LONG WIRE END OF THE CORDSET ITEM #2 TO THE LINE TERMINAL STRIP (DETAIL "M") AS FOLLOWS

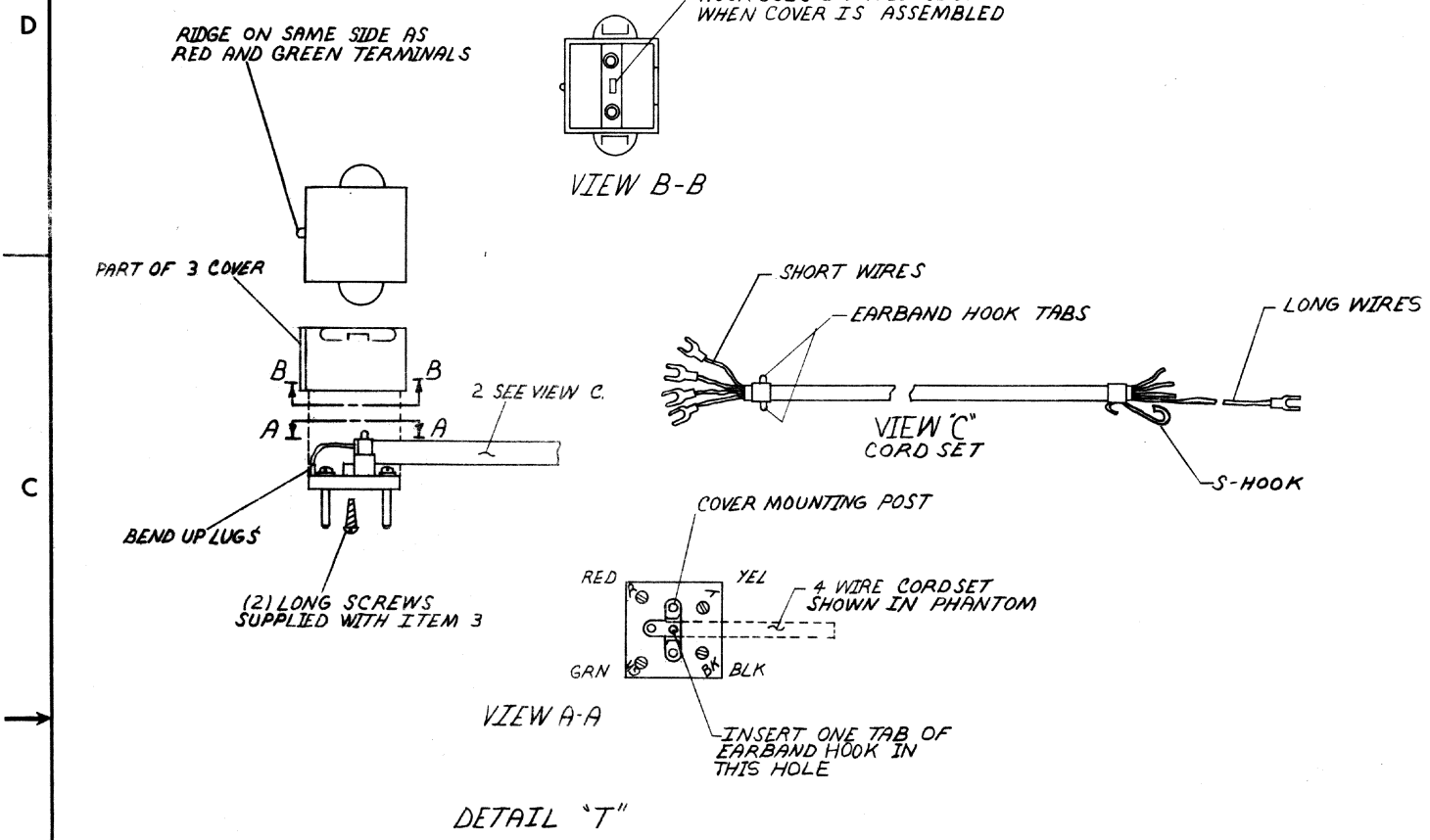
GREEN	TERM #3
RED	TERM #4
BLACK	TERM #7
YELLOW	TERM #6
- PLACE S-HOOK UNDER SCREW NEAR LINE TERMINAL STRIP TO STRAIN RELIEVE CORDSET.
- AFTER TESTING INSERT TELEPHONE PLUG ITEM #3 INTO TELEPHONE JACK ITEM #4 AND PACK SO THAT THE JACK CAN NOT BE DISLODGED.

REVISIONS		
CHK	CHANGE NO	REV

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PROCEDURE XIV
 INSTALLATION ON STAND WHEN
 INSTALLING ON STAND (AFTER
 SHIPMENT.)
 A. FOLLOW UNPACKING "PREPARATION
 FOR INSTALLATION, MOUNTING
 TYPING UNIT ON STAND" AND "FINAL
 ASSEMBLY" PORTIONS OF SECT 574-
 100-201 TC I SS.5)
 B. CONNECT GREEN WIRE SUPPLIED
 BETWEEN SUB-BASE AND STAND
 FRAME GROUND TERMINALS.

NOTE PACKING
 A. PREPARE FOR SHIPMENT BY SECURING
 MACHINE IN ACCORDANCE WITH
 A-SP-LT33-0-10
 B. PACK "SOFTWARE" LISTED ON SHIPPING
 LIST A-AL-LT33-0-12 IN ACCORDANCE
 WITH PACKAGING PROCEDURE
 A-PI-3700/01-0-0.



REVISIONS		
CHK	CHANGE NO	REV

TITLE	SET UP & REWORK PROCEDURE FOR TTY3300 SERIES TTY WRITERS	SIZE CODE	DUA	NUMBER	LT33-0-0	REV.	B
SCALE	NONE	SHEET	8	OF	8	DIST.	

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ACCESSORY LIST

LEGEND

- D DOCUMENT
- DN DOCUMENT CHANGE NOTICE
- PA PAPER TAPE ASCII
- PB PAPER TAPE BINARY
- PM PAPER TAPE READ-IN-MODE

QUANTITY / VARIATION

MADE BY J. CUDMORE	CHECKED PFYFFER	SECTION
DATE 7/21/69	DATE 7/25/69	1
ENG <i>M. Aspinwall</i>	PROD <i>M. Aspinwall</i>	ISSUED SECT.
DATE 7/28/69	DATE 7/28/69	1

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	LT33-B, -D, -E, -F, -H, TYPES					KIT CHECK	INSTALLATION CHECK	
			LT33-AA, -AB, -CA, -CB, -CC, -CD, -CE						BY	DATE
1	36-5360	ROLLS, ROLLED OILED PAPER TAPE	1							
2	36-5365	ROLL, TWX PAPER	1							
3	BULLETIN 273B	TTY MANUAL VOL #1 (VENDOR)	1							
4	BULLETIN 310B	TTY MANUAL VOL #2 (VENDOR)	1							
5	BULLETIN 1184B	TTY MANUAL PARTS (VENDOR)	1							
6	18-9137	ROLL TTY RIBBON	1							

TITLE TELETYPE WRITERS LT33 SERIES	ASSY. NO.	SIZE CODE A AL	NUMBER LT33-0-12	REV. C	ECO NO LT 33-00009
	SHEET 1 OF 1	DIST.			



DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS				QUANTITY/VARIATION										
PARTS LIST														
MADE BY J. FERGUSON		CHECKED K. GULICK		SECTION										
DATE 11-18-70		DATE 11-18-70		1										
ENG <i>D. Cloutman</i>		PROD <i>Tony Bayler</i>		ISSUED SECT.										
DATE 11-19-70		DATE 11/19/70		1										
ITEM NO.	DWG NO./PART NO.	DESCRIPTION												
1	29 11424	CIRCUIT BOARD #181821 TTY CORP						1						
2	29 11495	TAPE FEED SPROCKET #183071 TTY CORP						2						
3	29 11443	LEVER UNIVERSAL #182240 TTY CORP						2						
4	29 11144	FUSE (3.2 AMP) #120167 TTY CORP						2						
5	29 11367	DISTRIBUTOR BRUSH # 180979 TTY CORP						2						
6	29 11412	DRIVE GEAR #181411 TTY CORP						1						
7	29 11417	DRIVEN GEAR #181420 TTY CORP						1						
8	29 11411	BELT #181409 TTY CORP						2						
9	29 11376	SHAFT #181007 TTY CORP						1						
10	29 11376	BEARINGS #181002 TTY CORP						2						
TITLE		ASSY NO.		SIZE	CODE	NUMBER				REV.	ECO NO.			
LT33-B TELETYPE				A	PL	LT33-SB-0								
RECOMMENDED SPARE PARTS		SHEET 1 OF 1		DIST.										

DEC FORM NO. 16-1031
DRA 110

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS PARTS LIST					QUANTITY/VARIATION										
MADE BY J.FERGUSON		CHECKED K GULICK		SECTION											
DATE 11-18-70		DATE 11-18-70		1											
ENG <i>J. Ferguson</i>		PROD <i>Leroy Taylor</i>		ISSUED SECT.											
DATE 11-19-70		DATE 11/19/70		1											
ITEM NO.	DWG NO. / PART NO.	DESCRIPTION													
1	29 12521	SCALE, 8OZ #110443 TTY CORP				1									
2	29 12522	SCALE, 32 OZ #110444 TTY CORP				1									
3	29 12602	SCALE, 64 OZ #82711 TTY CORP				1									
4	29 12520	GAGE SET #117781 TTY CORP				1									
5	29 12532	SCREWDRIVER, OFFSET #94644 TTY CORP				1									
6	29 12524	SCREWDRIVER, OFFSET #94645 TTY CORP				1									
7	29 12525	CROCHET HOOK, NO. 8 #151351 TTY CORP				1									
8	29 12526	CROCHET HOOK, NO. 12 #151959 TTY CORP				1									
9	29 12527	SPRING HOOK PUSH #142555 TTY CORP				1									
10	29 12528	SPRING HOOK PULL #142554 TTY CORP				1									
11	29 12529	SCREW HOLDER #151384 TTY CORP				1									
12	29 12530	HAND WHEEL ADAPTOR #181465 TTY CORP				1									
13	29 12540	HANDWHEEL #161430 TTY CORP				1									
14	29 12553	CONTACT ADJUSTMENT TOOL #172060 TTY CORP				1									
15	29 12554	GAGE #180587 TTY CORP				1									
16	29 12555	GAGE #180588 TTY CORP				1									
17	29 12556	BENDING TOOL #180993 TTY CORP				1									
18	29 12557	GAGE #183103 TTY CORP				1									
19	29 12558	EXTRACTOR #182697 TTY CORP				1									
20	29 12559	TWEEZER #151392 TTY CORP				1									
21	29 12560	TOMMY WRENCH #6617 TTY CORP				1									
TITLE		ASSY NO.		SIZE CODE		NUMBER				REV.		ECO NO.			
LT33 TELETYPE MAINTENANCE TOOL KIT				A PL		LT33-ST-0				A		LT33-00002			
		SHEET 1 OF 2		DIST.											

DEC FORM NO.16-1031
DRA 110

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS PARTS LIST					QUANTITY/VARIATION										
MADE BY J.FERGUSON		CHECKED K GULICK		SECTION											
DATE 11-18-70		DATE 11-18-70		1											
ENG <i>J. Ferguson</i>		PROD <i>Leroy Taylor</i>		ISSUED SECT.											
DATE 11-19-70		DATE 11/19/70		1											
ITEM NO.	DWG NO. / PART NO.	DESCRIPTION													
22	29 12561	TOMMY WRENCH #73404 TTY CORP				1									
23	29 12562	KEY LEVER REMOVER #151383 TTY CORP				1									
TITLE		ASSY NO.		SIZE CODE		NUMBER				REV.		ECO NO.			
ASR 33 TELETYPE MAINTENANCE TOOL KIT				A PL		LT33-ST-0				A					
		SHEET 2 OF 2		DIST.											

DEC FORM NO.16-1031
DRA 110

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DIGITAL EQUIPMENT CORPORATION						
MAYNARD, MASSACHUSETTS						
ENGINEERING SPECIFICATION					DATE 5/3/68	
TITLE PACKING PROCEDURE FOR TELETYPE WRITERS LT33 SERIES						
REVISIONS						
REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE
A	CHANGED ECO	LT33-00002	A KENT	7-6-71	A. KENT	7-26-71
B	ECO CHANGE	LT33-00009	A KENT	11-73	<i>Allen Kent</i>	<i>19 Feb 74</i>

DISREGARD READER AND PUNCH INSTRUCTIONS ON KSR UNITS.

1. Put reader clip in holder; reader pins in upward position as originally received.
2. Use one tie wrap to hold carriage at left margin.
3. Mount printer unit to fiberboard platform with the eight (8) mounting screws and three (3) studs, originally provided.
4. Put chad box and copy holder in the box provided. On units where reader power pack is not already mounted inside of Teletype, also place reader power pack in the box provided.
5. Teletypes should have transformer (if previously mounted) left in base stand.
6. The four (4) mounting screws that mount the printer to the base stand should be put in a bag along with the on/off knob and the platen knob and then tied to the base stand.
7. Teletype AC cable and signal cable should be placed on the plastic cover where paper roll normally goes and wrapped in kim pack.
8. Tape down printer cover, punch paper-roller, printer paper-roller and cables of item 7 above. Additional tape should be used to secure whole cover to base.
9. Make sure that there are three (3) thumbscrews that hold teletype cover on, and four (4) screws in the front of the machine, also a screw in reader cover and one (1) face-plate for each machine.

ENG K. E. FITZGERALD	APPD	SIZE A	CODE SP	NUMBER LT33-0-10	REV B
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DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ENGINEERING SPECIFICATION DATE 5/3/68

TITLE INSTALLATION PROCEDURE FOR TELETYPE MODEL LT33 SERIES

REVISIONS						
REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE
A	CHANGED ECO	LT33-00002	A. KENT	7-6-71	A KENT	7-26-71
B	ECO CHANGE	LT33-00009	A. KENT	11-73	<i>Allan Kent</i>	<i>19 Feb 74</i>

- DISREGARD READER AND PUNCH INSTRUCTIONS ON KSR UNITS.
1. Remove all tape holding covers and cables.
 2. Remove the whole cover and in the reader, remove clip which holds reader pins in an upward position before turning machine on.
 3. On units with reader power pack shipped separately in the box, mount power supply for reader on basic stand and plug connector cable in. (Other Teletypes have reader power pack already mounted inside in the machine.)
 4. Remove tie wrap being used to hold carriage at left hand margin.
 5. Mount base to bottom of unit with screws provided.
 6. Replace cover being sure that three (3) thumbscrews, four (4) panhead screws and one (1) special screw (for reader) are correctly installed before attaching face plate and knobs.

ENG K. E. FITZGERALD	APPD	SIZE A	CODE SP	NUMBER LT33-0-11	REV B
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DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ENGINEERING SPECIFICATION

DATE 3/18/71

TITLE TELETYPE INSPECTION PROCEDURES AND ADJUSTMENTS

REVISIONS

REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE
A	CHANGE PER ECO	LT33-7	KENT	2/73	<i>Allen Kent</i>	11 Apr 73

ENGINEERING SPECIFICATION

DIGITAL

CONTINUATION SHEET

TITLE TELETYPE INSPECTION PROCEDURES AND ADJUSTMENTS

1.0 SCOPE

This procedure outlines the procedures for inspection and acceptance of the ASR 33 Teletypes. By ignoring references to the reader and punch, it may also be used for KSR 33 Teletypes.

1.1 These instructions specifically outline the requirements for DEC production standards and will be used as the basis for acceptance or rejection of vendor supplied equipment.

2.0 EQUIPMENT REQUIRED

- 2.1 Feeler gauges type TTY #117781, DEC 29-12520 or similar.
- 2.2 DEC tape gauge type T18118.
- 2.3 Reader gauge type TTY #TP183103.

→ ALL CHECKS ARE MADE WITH POWER OFF ←

3.0 KEYBOARD

Section 574-121-700TC, ISSUE 3, JUNE 1969, VOL. 2, Technical Manual Type ASR33 Teletypewriter.

3.1 Universal lever clearance. (Ref. Page 21)

3.1.1 The three shipping bolts that tie down the shipping pallet and printer should be loosened due to a change of condition when making the "H" lever adjustment. The bolts in question cause a compressing of the four rubber feet that the printer rests on. When the linkage to the keyboard is made, a change of .015 of an inch or more in relationship to the universal reset lever. In correction to this problem, the teletype unpacker should loosen all three bolts and, after completion of the teletype checkout, should retighten prior to reinsertion into the packing box.

3.1.2 Minimum .014", maximum .030" clearance between latch lever and universal lever.

4.0 TYPING UNIT

Section 574-122-700TC, Issue 4, August 1969, Vol. 2, Technical Manual Type ASR33 Teletypewriter.

* 4.1 Distributor shaft and play (Ref. Page 11)

4.1.1 Minimum .001", maximum .012" clearance between left bearing and clutch gear assembly.

ENG <i>W.P. Miller</i>	APPD <i>W.P. Miller</i>	SIZE A	CODE SP	NUMBER LT33-0-13	REV A
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ENGINEERING SPECIFICATION

0191131

CONTINUATION SHEET

TITLE TELETYPE INSPECTION PROCEDURES AND ADJUSTMENTS

- * 4.2 Distributor clutch adjustment. (Ref. Page 13)
 - 4.2.1 With clutch released, leading edge of trip lever should come approximately in the center of the shoe lever.
 - 4.2.2 With clutch latched, shoe lever should be minimum flush, maximum .015" beyond rearmost surface of trip lever.
 - 4.2.3 With clutch latched, advance distributor brush holder in its driving direction until it stops and releases. It should restore to normal position.
- 4.3 selector cam end play. (Ref. Page 18)
 - 4.3.1 Disengage selector clutch, move mainshaft toward the right, minimum .002", maximum .012" clearance measured between left end bearing and collar.
- * 4.4 Code bar and function clutch adjustment. (Ref. Pages 22 to 24)
 - 4.4.1 When disengaged, the upper surface of the trip lever and shoe lever should be approximately flush. When released, the leading edge of the shoe lever should come to the center of the notch on the trip lever.
- * 4.5 Selector clutch adjustment. (Ref. Page 27)
 - 4.5.1 When disengaged, the upper surface of the trip lever and shoe lever should be approximately flush. When released, the leading edge of the shoe lever should come to the center of the notch on the trip lever.
- * NOTE: When all clutches are adjusted, reverse the rotation of the mainshaft by hand, with all clutches latched. The mainshaft should rotate freely, if it does not, the clutch adjustments must be measured according to the teletype manual.
- 4.6 Blocking lever adjustment. (Ref. Page 39)
 - 4.6.1 Set range finder to 72, set up an all marking code combination in selector. Release code bar clutch, cycle by hand, all code bars should go marking and a slight vertical movement of some blocking levers should occur as the code bars pass beneath the blocking levers.
- 4.7 Print Suppression. (Ref. Pages 37 and 47)
 - 4.7.1 Print suppression latch horizontal clearance between right side of print suppression latch and print suppression code bar should be min. .010", max. .025" (machine in restored position.)

SIZE A	CODE SP	NUMBER LT33-0-13	REV A
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ENGINEERING SPECIFICATION

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CONTINUATION SHEET

TITLE TELETYPE INSPECTION PROCEDURES AND ADJUSTMENTS

- 4.7.2 Print suppression latch vertical clearance between upper part of print suppression latch and print suppression code bar should be min. .005", max. .020". (mach.in rest, pos).
 - 4.8 Carriage freedom of horizontal movement. (Ref. Page 51)
 - 4.8.1 The carriage should move freely side to side with no binding. Make any necessary roller and belt adjustments. (Ref. Pages 51, 52, 54 and 57)
 - 4.9 Rear rail adjustments. (Ref. Page 53)
 - 4.9.1 Set up number one code bar in marking position and move carriage side to side. There should be no visible difference between the number one shift slide and the right reset guide plate when in the right or left margins.
 - 4.10 Front rail and print hammer trip lever release adjustments. (Ref. Page 62)
 - 4.10.1 Clearance should be minimum .030", maximum .060" measured between print hammer trip lever and print bail.
 - 4.10.2 Adjustments should remain constant in both margins to within .010".
 - 4.11 Dash pot adjustment. (Ref. Page 80)
 - 4.11.1 Typing unit piston should return freely into the dash pot cylinder from any position when moved toward the right margin and released by hand.
 - 4.12 Line feed adjustment. (Ref. Pages 84 to 92)
 - 4.12.1 Set up a line feed code in the selector. Release the code bar and clutch. Cycle by hand, while holding the platen detent pawl away from the ratchet until the platen is fully advanced by the feed pawl. At this point slowly release the detent pawl into the ratched gear. There should be very little rotation of the ratched gear as the pawl seats into the gear.
 - 4.12.2 If adjustments are necessary, refer to Pages 84 to 92.
- APPLY POWER ←
- 4.13 Answer back mechanism, operation under power. (Ref. Pages 132 to 146)
 - 4.13.1 Turn on punch, press "here is" key, see that punch punches blank tape. If not, refer to adjustments Pages 132 to 146.

SIZE A	CODE SP	NUMBER LT33-0-13	REV A
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TITLE TELETYPE INSPECTION PROCEDURES AND ADJUSTMENTS

→ TURN POWER OFF ←

5.0 READER

Section 524-124-700TC, Issue 3, June 1969, Vol. 2, Technical Manual Type ASR33 Teletypewriter.

5.1 Horizontal and vertical clearance between trip lever and armature extension. (Ref. Pages 6 and 7)

5.1.1 With reader trip lever fully forward, clearance between reader trip lever and armature extension, should be minimum .008", maximum .020".

5.1.2 With the armature held all the way down, clearance between reader trip lever and upper part of the armature, should be minimum .001", maximum .010" as the reader trip lever passes over the armature extension.

5.2 Reader trip contacts. (Ref. Page 8)

5.2.1 The clearance should be minimum .025", maximum .040" when measured between the contacts when they are open.

5.3 Feed pawl and blocking pawl adjustments. (Ref. Pages 13 and 15)

5.3.1 With the machine power on, energize reader armature by tripping reader trip solenoid. Insert TP183103 Gauge between upstop bracket and upstop shoulder screw. Gauge should enter friction tight, if not follow Teletype Manual for adjusting sequence.

5.3.2 With the reader in the rest position, the clearance should be minimum .001", maximum .008" when measured between the feed pawl and the ratchet tooth.

5.3.3 With the reader in rest position the clearance should be minimum .001", maximum .003" when measured between blocking pawl and the ratchet tooth.

SIZE A	CODE SP	NUMBER LT33-0-13	REV A
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TITLE TELETYPE INSPECTION PROCEDURES AND ADJUSTMENTS

6.0 PUNCH

Section 574-125-700TC, Issue 4, June 1969, Vol 2, Technical Manual Type ASR33 Teletypewriter.

6.1 Sensing lever down stop.

6.1.1 Check screws securing the punch drive arm assembly to the rocker shaft are tight.

6.1.2 Push sensing levers down by hand, see that they limit on the down stop before they leave the guide post. Position guide post as required to attain this condition.

6.2 Tape nudger adjustments. (Ref. Page 8)

6.2.1 Two screws that couple the rocker shaft and punch drive bail must be tightened during the checkout period and also be a quality control check item.

6.2.2 Manually rotate the main shaft until the tape nudger is in the fully driven position, the clearance between the tape nudger and the rear roller should be minimum .030" and maximum .080".

6.3 Total punch operation in static state. (Ref. Pages 5 to 12)

6.3.1 Put an all marking code in selector, cycle by hand until the feed pawl is fully rearward, at this point check the following:

A. With the feed wheel ratchet fully detented, move the feed pawl out of engagement with the gear, release slowly and see that it re-enters the gear with no perceptible clearance.

B. The clearance between the sensing levers and the function pawl should be minimum .005", maximum .020".

6.3.2 Continue to cycle by hand until the punch drive link is fully forward. The clearance between the punch pin drive levers and the bottom surface of the punch die block assembly, should be minimum .017", maximum .037". (Ref. Page 9)

6.3.3 Complete the cycle by hand, the clearance between the stripper bail and sensing pawl should be minimum .001", maximum .012". (Ref. Page 7)

6.4 Turn the power on, punch some tape and check for proper registration with DEC tape gauge T18118.

SIZE A	CODE SP	NUMBER LT33-0-13	REV A
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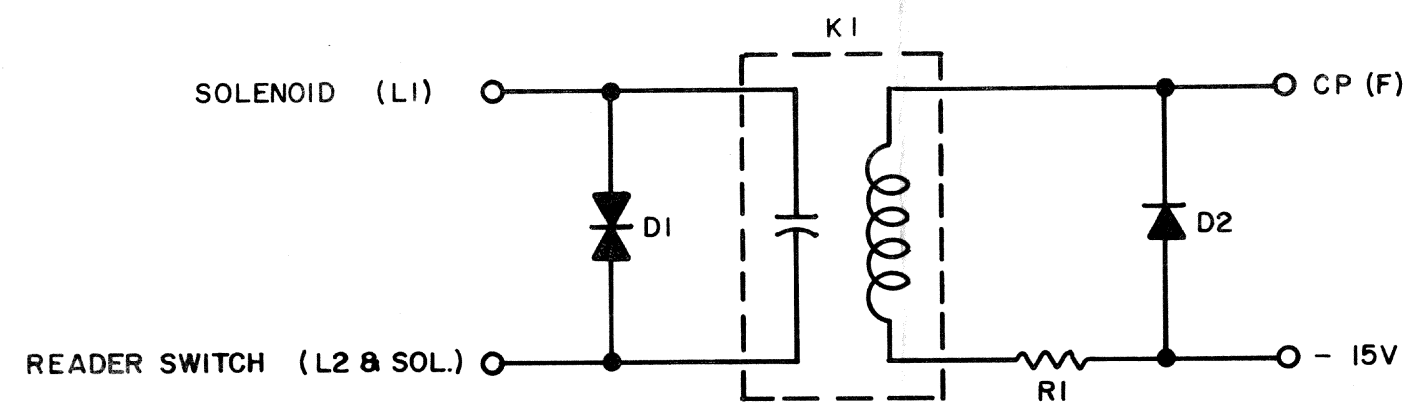


TITLE TELETYPE INSPECTION PROCEDURES AND ADJUSTMENTS

6.4.1 Adjust spring to obtain proper registration within one half hole over entire gauge. (Ref. Page 12)

SIZE	CODE	NUMBER	REV
A	SP	LT33-0-13	A

THIS SCHEMATIC IS FURNISHED ONLY FOR TEST AND MAINTENANCE PURPOSES. THE CIRCUITS ARE PROPRIETARY IN NATURE AND SHOULD BE TREATED ACCORDINGLY. COPYRIGHT 1965 BY DIGITAL EQUIPMENT CORPORATION



NOTE:
K1 HAS NO OUTER SHIELD

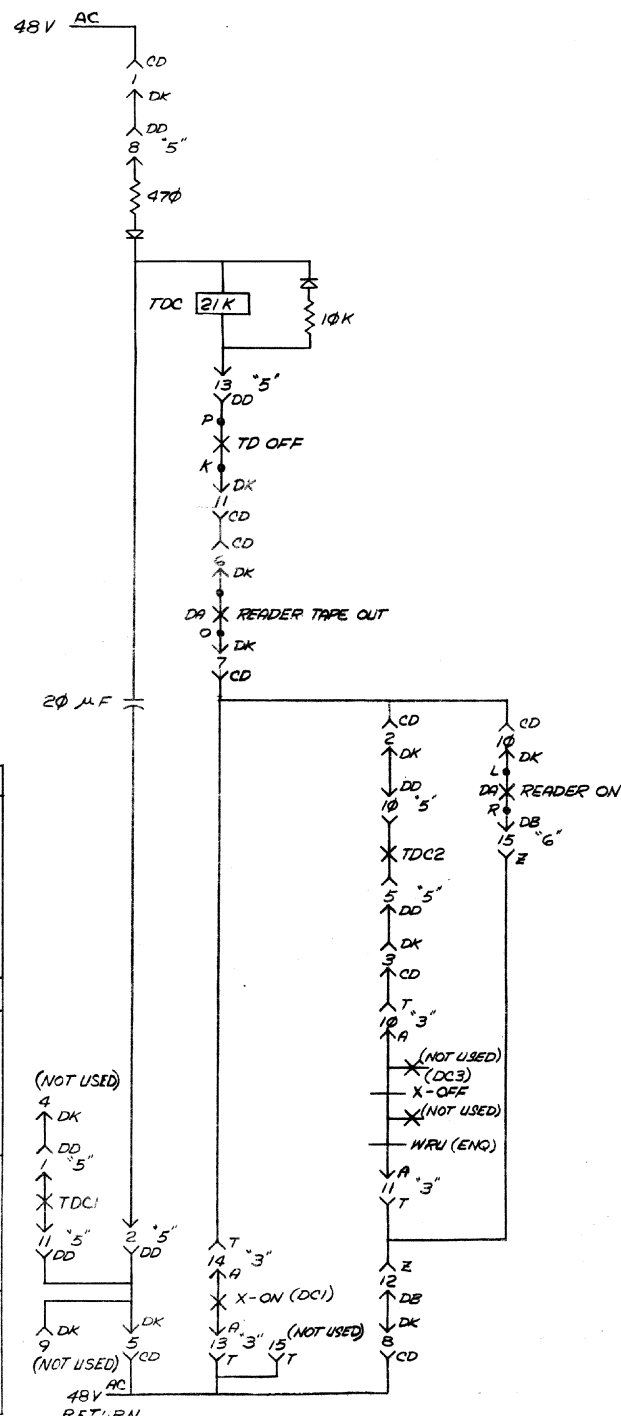
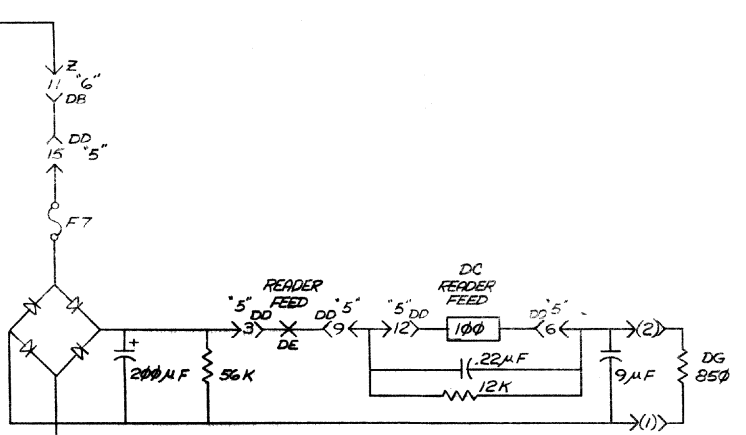
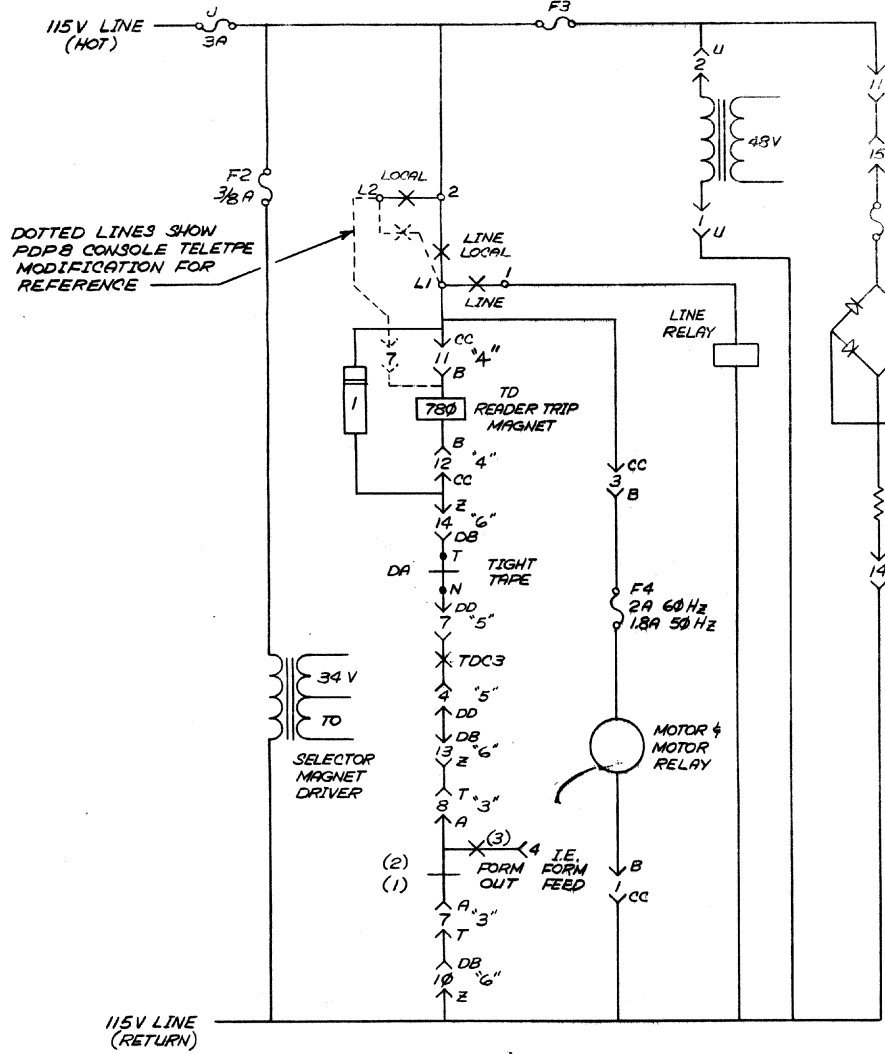
K1	RELAY, REED 12VDC #30002 1D1	1203193
R1	RES. 120 1/4W 10% CC	1301418
D2	DIODE D664	1100114
D1	DIODE 6RS 20SP4B4	1100106
	PARTS LIST	A-PL-4915-0-0
REFERENCE DESIGNATION	DESCRIPTION	PART NO.

REVISIONS CHK CHG NO. REV. REV. & REDR. 6886 A REV. 6886 A	DRN. I. HAHN	DATE 5-11-65	TRANSISTOR & DIODE CONVERSION CHART			TITLE TELETYPE READER CONTROL 4915			
	CHK'D R. SILVERMAN	DATE 6-24-65	DEC	EIA		SIZE B	CODE CS	NUMBER 4915-0-1	REV. A
	ENG. D.A. WHITE	DATE 5-24-65	D664	IN3606					
	PROD.	DATE	20SP4B4	SAME					
					MAYNARD, MASSACHUSETTS			PRINTED CIRCUIT REV. D	

PINK

DIST. 324 434 435

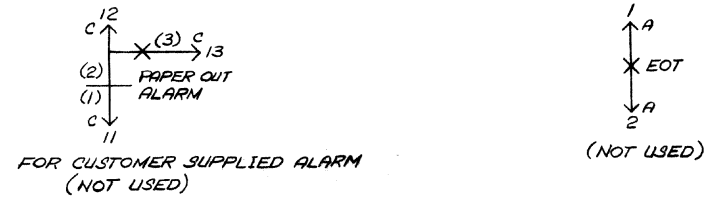
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240V TRANSFORMER TAP TABLE				CONNECTOR CORRESPONDENCE			
VOLTAGE	LINE	LOAD	COMMON	MARKED	FIXED HALF	CABLE HALF	
250V 30				1"			
240V 20				2"			
230V 10				3"			
		0.6 110V		4"	T	A	
		0.5 105V		5"	CC	B	
		0.4 100V		6"	DD	-	
				7"		DB	
				8"			
287	3	4	C	126	6	4	C
275	2	4	C	121	5	4	C
274	3	5	C	115	6	6	C
265	1	4	C	110	5	4	I
263	2	5	C	106	6	4	I
260	3	6	C	100	1	3	4
252	1	5	C	96	C	1	5
250	2	6	C	90	C	2	5
240	1	6	C	85	C	3	6
220	C	6	1	100	1	3	4
213	C	6	2	96	C	1	5
213	C	5	1	90	C	2	5
206	C	6	3	85	C	3	6
204	C	5	2	100	1	3	4
203	C	4	1	96	C	1	5
198	C	5	3	90	C	2	5
197	C	4	2	85	C	3	6
193	C	4	3	82	C	2	4
				77	C	3	4

THIS TABLE PROVIDES 115V TO THE LOAD AT THE NOMINAL LINE VOLTAGE

FIRST USED ON OPTION/MODEL
PDP10



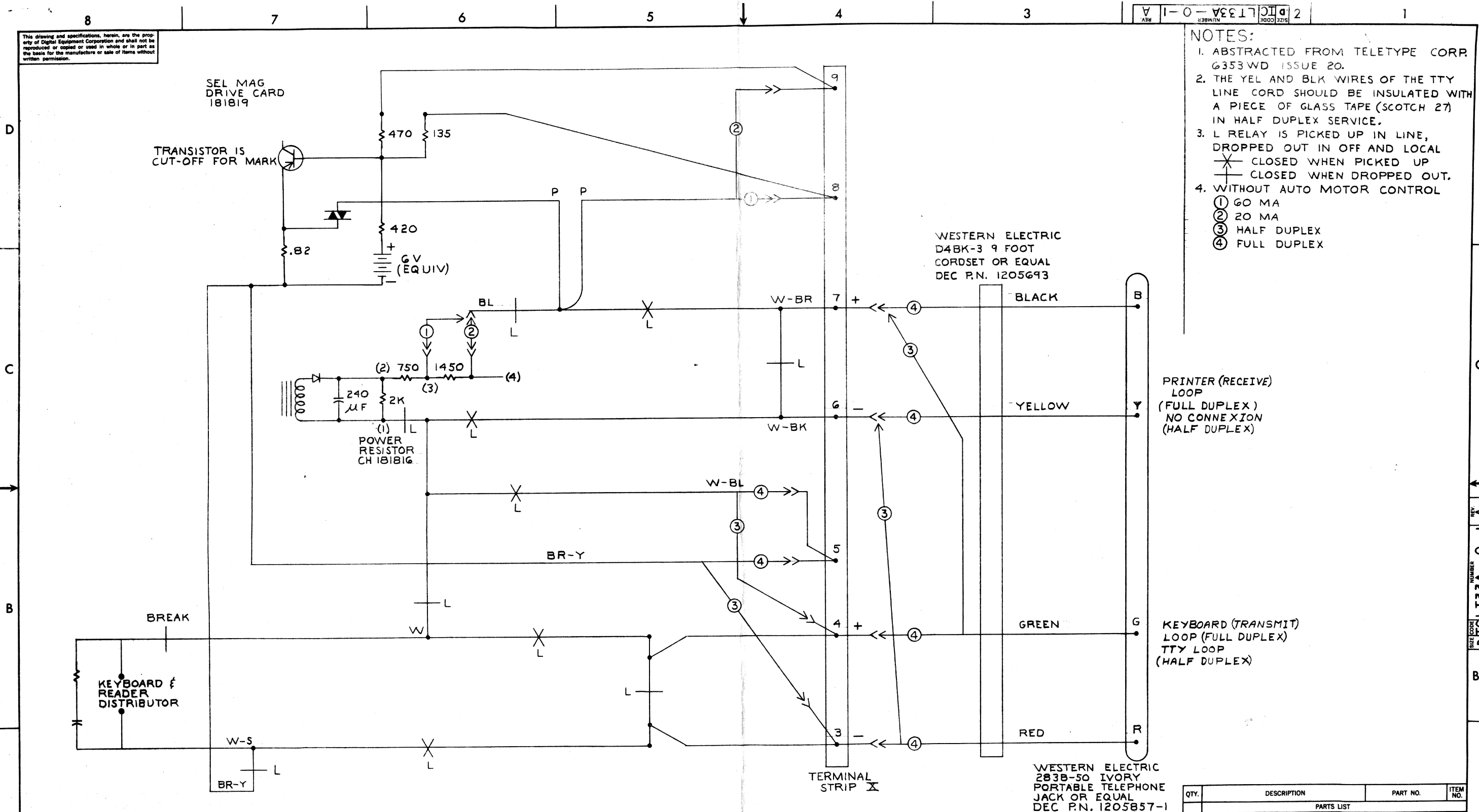
REV.	CHANGE NO.	DATE
A	LT33-00002	7-15-71
B	LT33-00003	28 July 71

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'	DATE 9/23/68 CHK'D ENG. Allen Kent PROJ. ENG. Allen Kent PRD. J. J. Wilson	DATE 30 Jan 70 DATE 30 Jan 70 DATE 2-9-70	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
MATERIAL FINISH	NEXT HIGHER ASSY A-ML-LT33-BA-0	SCALE SHEET 1 OF 1	TITLE READER CONTROL CIRCUITS (ISOLATED DIAGRAM) (TIMESHARING ASR 33)
SIZE CODE D BS LT33-B-CONT		NUMBER REV B	

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NOTES:

1. ABSTRACTED FROM TELETYPE CORP. 6353WD ISSUE 20.
2. THE YEL AND BLK WIRES OF THE TTY LINE CORD SHOULD BE INSULATED WITH A PIECE OF GLASS TAPE (SCOTCH 27) IN HALF DUPLEX SERVICE.
3. L RELAY IS PICKED UP IN LINE, DROPPED OUT IN OFF AND LOCAL
 X CLOSED WHEN PICKED UP
 + CLOSED WHEN DROPPED OUT.
4. WITHOUT AUTO MOTOR CONTROL
 ① 60 MA
 ② 20 MA
 ③ HALF DUPLEX
 ④ FULL DUPLEX



PRINTER (RECEIVE) LOOP
(FULL DUPLEX)
NO CONNECTION
(HALF DUPLEX)

KEYBOARD (TRANSMIT) LOOP (FULL DUPLEX)
TTY LOOP (HALF DUPLEX)

WESTERN ELECTRIC
283B-50 IVORY
PORTABLE TELEPHONE
JACK OR EQUAL
DEC P.N. 1205857-1

REV.	DATE	BY
1	3/19/68	D. Haly
2	25 MAR 68	Allen Kent
3	14 APR 68	Allen Kent

UNLESS OTHERWISE SPECIFIED	DRN	DATE	3/27/68
UNLESS OTHERWISE SPECIFIED	CHKD	DATE	3/19/68
DIMENSION IN INCHES	ENG.	DATE	25 MAR 68
TOLERANCES	PROJ. ENG.	DATE	25 MAR 68
DECIMALS FRACTIONS ANGLES	PROD.	DATE	14 APR 68
± .005 ± 1/64 ± 0°30'			
FINAL SURFACE QUALITY			
REMOVE BURRS AND BREAK SHARP CORNERS			

QTY.	DESCRIPTION	PART NO.	ITEM NO.
	PARTS LIST		
	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS		
	TITLE PDP 10 TELETYPE MODEL 33KSR		
	SIZE CODE	NUMBER	REV.
	DICLT33A-0-0	0-1	A
	SCALE	DIST.	
	SHEET 1 OF 1		

SIZE CODE NUMBER REV
DICLT33A-0-1-A